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## *Original Articles*

# THE TUBERCULOSIS MOVEMENT

## RECENT OBSERVATIONS WITH REFERENCE TO CERTAIN CLINICAL ASPECTS *

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Tuberculosis, of all communicable diseases, has in the past decade enlisted the best efforts of medical workers in all civilized countries. There have resulted laborious scientific research, detailed clinical study, effective organization for its control, valuable investigation of a sociologic and economic nature, and an almost inexhaustible supply of literature. In view of the innumerable factors inherent in a problem of such magnitude, it is impossible here to attempt a consideration of other than a single phase to which my attention of late has been directed.

Unusual opportunities for comparative observation sometimes affording approximate accuracy of conclusions are given to physicians residing in favorable climates. From an experience of eighteen years in Colorado, I venture to allude to certain recent tendencies of the profession with reference to a disease in which unfortunate results are often quite conspicuous.

It is evident that a most frequent disease concerning which serious errors of diagnosis and treatment seem almost impossible, continues, nevertheless, to present grievous difficulties in its early recognition and rational management. That this should be true in view of the active educational propaganda appears remarkable. A scrutiny of conditions, however, discloses the fact that to some extent, paradoxic as it may seem, the campaign against tuberculosis has been indirectly responsible.

### CONSERVATISM VERSUS MEDICAL FADS

Following the greater impetus to the tuberculosis movement and the added incentives for clinical proficiency, there has apparently developed a growing inclination toward refinements of diagnosis and conventionalities of treatment. In the midst of the present enthusiasm regarding the new methods of diagnosis and the advantages of the sanatorium is there not manifested a disposition to exalt the practical utility of several diagnostic and therapeutic agencies to a point far above their true value? A just and well-proportioned estimate of the relative importance attaching to some clinical features may not always be entertained if judicious conservatism is opposed by prevailing medical fads. In the same way efforts to develop a comprehensive and effective system of prevention must fail of the fullest success unless cognizance is taken not only of fundamentally important factors, but also of all possible negative phases. To determine their legitimate scope it is as essential to avoid an exaggeration of their advantages as to admit their value within proper limitations. Thus, while institutions for the care of tuberculous invalids are demanded to satisfy individual and social requirements in the cause of prophylaxis, their overwhelming value in therapeutic management and their unvarying applicability to all classes and conditions have not so far been subject to demonstrable proof. Although a vitally important factor in the general problem of tuberculosis, the practical usefulness of the sanatorium consists largely in its coordinated relation to other valuable measures of prevention and management.

It is well to inquire to what extent, if any, as a result of the increasing interest in tuberculosis, pulmonary invalids are profiting by earlier diagnosis and more prompt recourse to favorable climates. My recent experience has been materially different in some respects from that of previous years.

### EARLY DIAGNOSIS

In the past a serious reflection has been the delay in recognizing the disease, occasioned in many instances by an incomplete review of the history, a superficial inquiry regarding the subjective symptoms, an inadequate and hasty examination, and failure to examine the sputum. Errors of diagnosis were not then referable to the absence of *x*-ray equipment, lack of familiarity with laboratory technic, the impracticability of utilizing guinea-pigs for animal experimentation, or of employing tuberculin in subcutaneous injection. In the majority of instances the simpler means of diagnosis were sufficient to have warranted a much earlier recognition of the disease. Many patients were sent to health resorts only when the disease had become most active and extensive, months after a diagnosis of malaria, bronchitis, typhoid fever, influenza or catarrhal laryngitis had been made. I have previously reported that in a series of 2,300 patients the average period of delay following the recognition of the disease before arrival in Colorado was eighteen months.

### SOME CLINICAL FINDINGS

Among the last 313 invalids coming under observation since the compilation of other statistics, the physical examination of the chest was entirely negative as regards tuberculosis in 90 instances, or more than one-quarter of the total number. Bacilli were not found in the sputum in 87 cases. They were occasionally recognized, however, in the absence of physical signs of tuberculous involvement, and *vice versa*. Of the doubtful cases without either physical or bacteriologic evidence of tuberculosis a tuberculin test was negative in 41; 87 presented a vague, ill-defined history of indisposition with suspicious subjective manifestations during from two weeks t [redacted] otwithstanding the short duration of these cases, it is of interest to note that the average period of delay for the entire 313 patients is sixteen and one-quarter months, which is nearly as large as that previously reported. This is explained by the fact that, despite the unusually large number of doubtful cases, 125 patients, or about two-fifths of the entire group, were found on arrival to be in advanced stages. That the condition was truly desperate in so large a number is shown by the death of 62, although the period of observation has been comparatively short. Sixteen individuals were sent home as utterly hopeless cases. It thus appears that out of 313 new arrivals 90 are classed as doubtful and 125 as very advanced, leaving a relatively small number exhibiting definite infection of incipient or moderate degree.

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* Read before the Chicago Medical Society, Nov. 3, 1909.

On the basis of the physical examination, bacteriologic findings and tuberculin test, 41 patients are adjudged non-tuberculous. Among a somewhat larger number the previous diagnosis was justly subject to suspicion, there being no substantial confirmation of an active tuberculous infection, although in some instances a positive cutaneous reaction had been obtained. The condition was apparently chronic bronchitis with or without emphysema in 14 instances, non-tuberculous bronchiectasis in 4, pulmonary abscess in 2, pleural effusion in 4, empyema in 1, pericarditis in 1, probably pulmonary syphilis in 2, tuberculosis of the peritoneum in 4, tuberculosis of the intestine without pulmonary infection in 3. Of the remaining cases without physical or bacteriologic evidences of tuberculous pulmonary involvement, the symptoms were largely those of anemia, neurasthenia and recent bronchitis without material loss of weight or elevation of temperature.

Among the clearly tuberculous cases, nephritic complications with albuminuria were present in 25 instances and incurable infection of the larynx in 15. Intestinal tuberculosis was demonstrable in 7; 29 had been treated for somewhat prolonged periods for supposed typhoid fever or malaria, while 19 exhibited a distinct pneumonic onset, and in 12 of these the disease pursued the characteristic course of acute pneumonic phthisis. A considerable number reported that the condition had been regarded as catarrhal or tuberculous laryngitis, local applications having been applied during a period of many months, although no visual appearance of laryngeal involvement was subsequently exhibited. Several cases of many years' standing conformed strictly to the fibroid type. Patients with marked shortness of breath from extensive emphysema and beginning cardiac dilatation were occasionally observed.

### CORRECT INTERPRETATION OF PHYSICAL SIGNS

It was, perhaps, to have been expected from previous observations that many cases would represent either advanced stages of the disease or important complications. That so large a proportion exhibited doubtful or negative evidences of tuberculosis has been a source of considerable surprise. Had my experience in this respect been radically different from that of local confrères, I might be forced to acknowledge a personal deficiency in physical diagnosis as the primary factor. Inasmuch, however, as other clinicians in Colorado have noted the same discrepancies, it is fair to assume that at least a partial explanation may be found in attempted over-niceties of diagnosis.

While the tendency toward greater skill in physical examinations is assuredly to be commended, a note of warning may be sounded lest, in our enthusiasm for that which is new, due importance be not attached to the old-fashioned methods without which positively accurate results are often unattainable. Correctness of interpretation is often quite as essential in the problem of diagnosis as a keen recognition of somewhat obscure physical signs. Logical deductions must be based on a comprehensive and selective review of all clinical and laboratory data, rather than on a single objective manifestation of uncertain significance. In the formation of positive conclusions a wise discrimination is necessary regarding the relative importance and frequency of the various physical signs of incipient tuberculosis. An appreciation of their comparative value is not always afforded when efforts are directed largely to the perfection of ultra-refined aspects of diagnosis. Some thought to be characteristic of the disease are inconstant and others devoid of definite meaning.

For practical purposes a working familiarity with the more common signs, and their grouping in connection with suggestive facts pertaining to the history and symptoms, are more necessary for the general practitioner than attention to features of exceptional occurrence, difficult recognition and doubtful import. That physicians in some instances are prone to find too much on physical examination is evidenced by the multiplicity of detail sometimes reported with reference to the finer shades of respiratory sounds in different regions of the chest.

It is impossible here to discuss at length the merits of the slight modifications of normal vesicular respiration occasionally recognized at a very early age, or to review the diagnostic value of deviations from normal apical percussion outlines of clinical interest in cases with moderate involvement.

In the presence of tiny foci of infection it may be difficult to appreciate visual changes in the contour or movement at the apex. Palpation at such a time may also fail to disclose a retardation or deficiency of the inspiratory expansion. Even a well-defined variation from the normal percussion boundaries may not be indicative of tubercle deposit. In cases with moderate infection it is not invariably pronounced, and at an incipient stage is usually absent altogether. The accurate determination of resonant borders in early phthisis is an accomplishment not easily acquired save by constant practice. Krönig has called attention to a typical condition of the lungs found in some patients with nasal obstruction. He reports a fibrous induration with collapse and shrinkage of the apex as the result of the inhalation of dust by such individuals. In spite of the percussion signs suggesting tuberculosis, this may be excluded on the basis jointly of the clinical course, the negative bacteriologic findings, and the failure of the tuberculin reactions. Philip, of Edinburgh, deprecates the want of refinement in percussion methods, and calls attention to a certain adaptation of this means of diagnosis called "tidal percussion." This consists of percussing alternately during expiration and full inspiration in order to determine the limitation of tidal movement and ascertain the degree of functional activity. While recent clinical observations have tended to corroborate the advantages said to be acquired by the application of this method in some instances, the fact remains that its significance is subject to considerable variation.

### AUSCULTATORY SIGNS

Inspection, palpation and percussion are often available for the recognition of long-standing tuberculous processes, and are occasionally of contributory value in

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cases of recent infection. In general practice, however, the diagnosis of incipient phthisis will be made in most cases through recourse to auscultation. As a rule, in cases of recent infection the evidence to be derived by this method relates to the detection of fine, adventitious elements more than to definite changes in the pitch, quality, rhythm or intensity of the respiratory sounds. It has been my observation that the auscultatory signs of chief importance in early tuberculosis consist of faint, scarcely recognizable clicks, at the end of inspiration following a cough, sometimes without pronounced modification of respiratory sounds. They are often obscure if the cough be too violent or the inspiratory effort unduly vigorous. While especial significance attaches to the presence of unilateral râles at the apex, a not uncommon and sharply localized site of their occurrence may be under the clavicle, in the axilla, and in the upper interscapular space frequently opposite the spine of the scapula. I have occasionally recognized very tiny, semidry clicks in the interscapular region without other physical evidence of the slightest tuberculous involvement either in this region or at the apex.

In emphasizing the vast importance of râles as a factor of diagnosis, due cognizance is taken of the conflicting opinions entertained by other observers. Some regard a roughened breathing, variously termed "cogwheel," "harsh," "rude," "interrupted" and "granular" respiration, as of paramount value in the early determination of tuberculous lesions. Turban regards the so-called rough breathing as one of the most important changes of the normal breath sounds. He distinguishes this from ordinary vesicular respiration "in that it appears to be composed of a series of sounds in rapid succession." Grancher alludes to this anomalous form of respiration and calls attention to the absence of softness or smoothness. He describes a harsh respiration, which may be dry, hard or rasping, with or without adventitious sounds, and occurring both in inspiration and expiration, especially the former. Turban, Grancher and Dettweiler have ascribed the origin of rough breathing to a partial obstruction of the finer air passages. It is, of course, readily conceivable that an initial tubercle deposit may encroach on the finer bronchioles to such an extent as to render the air channel narrow and uneven. A slight obstruction of the air current produced by the localized congestion of the mucous membrane in tiny bronchial ramifications may modify the character of respiratory sounds sufficiently to suggest their designation as "rough," "harsh," "interrupted" or "sticky." Sahli believes that this form of breathing is attributable to the presence of secretion in the bronchioles. He states: "When these added sounds can be distinctly differentiated as such from the breath sounds, we speak of râles; if not, they merely give an impure, rough character to the vesicular breathing."

It is apparent that the same sound may be variously interpreted according to the understanding and experience of examiners. It may remain largely a matter of personal equation whether or not the breath sounds in certain instances may be designated as merely impure and roughened or of the vesicular type supplemented by adventitious sounds. In making case records it has been my custom for many years to define apical sounds more or less analogous to what some would term rough breathing as "very fine, semidry râles." Their distinct recognition, of course, justifies their inclusion in the category of râles, although they are quite different in character from the crackling or bubbling adventitious sounds so common in tuberculosis. Roughness of the breath sounds as contrasted with the ordinary smoothness or softness of the respiration is undoubtedly of some provisional diagnostic value in obscure cases. The significance, however, of these modifications of normal breath sounds, including feebleness of respiration, appears decidedly inferior to that of localized râles which are so frequently overlooked. As the descriptive appellation "harsh" is used synonymously with sharpened, puerile breathing relating strictly to an increase of intensity, it is apparent that to avoid confusion this term should not designate the impure vesicular respiration of early phthisis.

### INTERPRETATION OF HEMORRHAGE

The diagnostic significance of pulmonary hemorrhage is sometimes subject to erroneous interpretations. A hemorrhagic onset of tuberculosis is not uncommon even without previous subjective symptoms or physical signs. A strong suspicion of incipient tuberculosis is, therefore, awakened by the occurrence of hemorrhage in individuals of apparently robust health. If, however, there are associated loss of weight, elevation of temperature and cough, although without physical signs, a provisional diagnosis of tuberculosis may be warranted. In the absence of definite physical evidences it is important to eliminate all other conditions possibly responsible for hemoptysis. A moderate number of hemorrhagic patients have been observed who presented every apparent subjective indication of pulmonary tuberculosis, yet the bleeding was found dependent on other causes. I have elsewhere reported instances of cardiac disturbance, including mitral disease, a dilated and hypertrophied right ventricle, cases of purpura hemorrhagica and vicarious menstruation, illustrating the danger of mistakes in diagnosis through incorrect interpretations of recurring pulmonary hemorrhage.

Pulmonary syphilis and chronic influenza are not such infrequent causes of erroneous diagnosis as might perhaps be expected. The clinical manifestations and even the physical signs may resemble so closely those of pulmonary tuberculosis as to preclude their differentiation save on the basis of the bacteriologic findings or specific tests.

### MANAGEMENT OF PATIENTS

To resume the summary of the cases recently observed it may be stated that several invalids presented the history of a six months' or one year's sojourn in local sanatoria, and some reported an attempted enforcement of the so-called "sanatorium régime" outside of institutions. Many had been informed by their medical attendants that the disease could assuredly be arrested at home, that climate was of no avail, and that tuberculin therapy was of undoubted efficacy as a routine measure of treatment. A large number had been subjected to this, and a few to medication with the various vaccines. The extent to which the mercury treatment had been employed is also worthy of note. Superalimentation had occasionally been enforced, regardless of digestion, circulation or elimination. Fresh air had often been sought even at the expense of fatigue, the necessity of rest in addition to outdoor living not always being recognized as essential. Varying degrees of exercise had been permitted or demanded, irrespective of the temperature or pulse. In many cases attention to the smaller details of therapeutic management had been strangely lacking, although much greater insistence had been made than in former years on the observance of precautionary measures.

Almost without exception patients had been instructed with reference to the necessity of rigid compliance with hygienic rules. In general, emphatic attention had been called to the responsibility devolving on the consumptive to safeguard the interests of others. Not infrequently, accompanying members of the family were found in a state of anxious trepidation from the fancied dangers of exposure, notwithstanding a proper disposal of the sputum and the maintenance of the utmost cleanliness. Laudable as have been the personal efforts in the cause of prevention, it has occasionally appeared that a higher regard was exhibited for the preservation of others than for the protection and restoration of those already afflicted. In one instance, a young woman of neurotic type with moderately advanced phthisis was advised in detail as to her obligation to society, but received almost no information concerning the conservation of strength and the proper individual application of the principles of daily living. In other cases of incipient type the hygienic and dietetic management had been elaborated to such an unnecessary degree as to result in the later moral incapacitation of the invalid. Habits of idleness were engendered which at a later time had been extremely difficult to overcome. An aversion to employment of any kind is not uncommonly noted among individuals who have been subjected for prolonged periods to the demoralizing and degenerative effect of protracted indolence.

The important educational influence accruing from residence in institutions for consumptives has sometimes been perverted to such an extent as to render the patient difficult of subsequent management. Preconceived ideas as to the possible gravity of the condition, the avoidance of drugs and the relative value of various therapeutic procedures have often become a source of considerable embarrassment in the treatment of the clinical manifestations and in the resourceful control of the tuberculous individual. An unreasoning prejudice against the administration of any medicine whatever is somewhat in vogue. In consequence it is sometimes hard to overcome the scruples of phthisical patients against the judicious administration of remedies to control untoward symptoms. Invalids trained to the doctrine of medicinal nihilism are not inclined to yield a ready assent to the employment of appropriate medication even for the suppression of pulmonary hemorrhage, the restoration of disordered digestion, and the relief of various disturbed functions.

There has been displayed at times an unfortunate neglect to observe the importance of an appropriate social environment. The quiet régime of invalidism has often been found seriously disturbed by accompanying members of the family, and particularly by the presence of little children. While in some cases a discreet and intelligent companion may aid in promoting the comfort and contentment of the invalid and insure a more faithful compliance with instructions, it is impossible to overestimate in others the injury inflicted through the absence of tact, perversions of judgment and obliquities of disposition. Children, through the necessity for added care and the greater difficulties in securing suitable accommodations, incumber to no small extent the progress of tuberculous invalids. While so delicate a matter must remain a subject for careful individualization, experience has shown that in the majority of cases the most satisfactory results are attained by the segregation of the patient. That so many children have been permitted to accompany their parents in search of health is perhaps worthy of comment.

A considerable number of patients have presented the history of a severe pulmonary hemorrhage immediately preceding their departure from home. Not infrequently this has been followed by recurrences *en route* and during the first few days in Colorado. It is found that a rather large proportion of the hemorrhages observed are but repetitions of an initial hemorrhage experienced shortly before arrival. While approximately but one-fourth of all invalids may be expected to exhibit a recurrence in Colorado, this proportion would be materially diminished were patients cautioned to defer their journey until the tendency to hemorrhage had been suppressed.

### SENDING INDIGENT PATIENTS TO HEALTH RESORTS

Attention has been called by various writers to the undesirability of sending indigent consumptives to health resorts. While emphasizing the folly of permitting destitute invalids who are hopelessly advanced to experience inevitable hardships, a difference of opinion may well be entertained as to the expediency of restricting the importation of those not absolutely impecunious. Under certain conditions of supervisory direction a limited financial status is no insuperable obstacle to recovery. Despite embarrassed resources, final success may be achieved as a result of unusual opportunities which cannot always be attained at home. This subject is worthy of more extended consideration than is possible at this time, but attention may be called to the importance of ascertaining accurately in advance as to the expense necessary to provide proper accommodations, and to the likelihood of obtaining light out-of-door employment for those with incipient infection and dependent on their own efforts for support. That such process of reasoning is not always applied is shown by the history of a clergyman with his wife and four children reduced to the point of abject penury. He had been prevailed on to resign from a sustaining parish and seek a new field of labor in Colorado. Although contributions had been sufficient to meet the expense of transportation, no provision was made for subsequent care. The possible suffering, however, was mitigated to a degree by the fact that the general condition was excellent and the physical and bacteriologic evidences entirely negative. No response was obtained to the ocular tuberculin test.

Apropos of the foregoing considerations the brief report of the following case may be of interest:

> A young man immediately on arrival in Colorado presented a letter of introduction from an acquaintance stating that the invalid on account of the advanced stage of the disease had been denied admission to a well-known state sanatorium. A request was made that he should be cared for without expense and assisted in securing a position. The young man was exceptionally well nourished, without fever or other symptoms suggestive of tuberculosis other than the history of a slight chronic cough which had been subject to occasional exacerbations during the fall and winter months. Examination of the chest was negative, as was also the sputum. There was no response to the tuberculin test. It was ascertained that he had been examined by the medical superintendent of a state sanatorium, who submitted to him the following in writing: "The report of your examination yesterday afternoon shows your case to be moderately advanced and suitable for admission when we have vacancies for cases of this class. At present the sanatorium is full and we have many accepted applicants waiting. I beg to state that I should think the climate of Texas or California would be very suitable to your case."

Even on the assumption that an accurate diagnosis had been established, the unqualified statement regarding California or Texas was, to say the least, somewhat indefinite, if not equivocal. The folly of such direction is appreciated when one considers the enormous area included within the limits of what was described as an appropriate climate. Bearing in mind the vast divergence in climatic conditions it is conceivable that on the basis of the information imparted the youth might be expected to profit as well in the heat and humidity of Galveston as in the dry and rarefied atmosphere of El Paso, or in the rainy, foggy districts of California, as in the southerly mountainous regions. If the diagnosis had been correct, the advice as given was radically incomplete. Fortunately, no more serious consequences were involved than the despair incident to the alleged advanced infirmity, the disappointment resulting from the loss of a position, and the expense involved by a trip across the continent.

### DEDUCTIONS

Speaking broadly, an analysis of the cases observed during the past year discloses a few significant facts. It is shown that in the present zeal to recognize tuberculosis at an early period an increasing number of patients are hurried to sanatoria or health resorts on a mere suspicion of the infection. Patients without well-defined constitutional symptoms or physical signs are thus subjected to great hardships incident to change of residence, loss of business, separation from family, and other deprivations. It is well known that in many sanatoria an absolute diagnosis is often quite impossible, as approximately 50 per cent. of the inmates do not have tubercle bacilli in the sputum, while very many are without loss of flesh, elevation of temperature, or acceleration of pulse.

It is also clear that for other patients disastrous delays in seeking climatic aid are occasioned by the enthusiasm of medical attendants relative to the supposed advantages of treatment in back yards. In view of recent observation it is impossible to avoid the conclusion that faith in the curability of tuberculosis at home is responsible in large measure for the desperate condition of many consumptives who finally make the journey to a distant clime.

Evidence is not wanting to suggest that rational ideas of management are not always entertained concerning a class of people demanding the greatest conservatism and stability of judgment. Not only are misconceptions sometimes exhibited relative to the efficacy of rest, discretion in diet and caution in specific medication, but delusions as well regarding the value of climate in properly selected cases. Were an unreasoning prejudice replaced by a more accurate knowledge of the various climatic attributes which are capable of producing a direct influence on the organism, much of the wretchedness and disappointment resulting from injudicious advice would assuredly be averted.

Waiving any discussion concerning the comparative merits of the sanatorium and a wisely directed climatic change, it may be submitted that patients in comfortable circumstances should receive such advice as will offer the most favorable opportunities for a speedy restoration to health. It has been amply demonstrated that a large proportion of patients in the incipient stages, through proper methods of living and supervision, may secure an eventual arrest of the infection. It has also been shown by autopsy investigations that this occasionally takes place as a result of inherent individual resistance, notwithstanding unhygienic surroundings, excessive exposure and improper food or clothing. While in many early cases the patients are likely to exhibit gratifying improvement without recourse to change of climate, it does not follow that all patients in incipient stages can achieve a complete and enduring arrest, although the balance may be turned temporarily in favor of recovery. On the other hand, despite strict conformity to a suitable régime at home, procrastination in seeking climatic aid is often attended by unfortunate results.

The choice of climate should resolve itself in all cases into a question of individual fitness. The peculiarities of temperament, the widely differing pathologic processes, the degree of functional disturbance, and other important considerations, emphasize the importance of the utmost discrimination in the matter of climatic selection. This should be adjudged for each pulmonary invalid strictly on the merits of the case, with full cognizance of the import attaching to all modifying circumstances.

It is essential that consumptives, regardless of their status, should be duly impressed by their local physicians with the necessity of conforming to systematic management. That highly improper instructions have been given in so many cases seems almost incredible.

In May of the present year I received the following letter from an inmate of a sanatorium in another state: "I am a patient of Dr. ———, and he advises my trying Estes Park for the summer. He has referred me to you for information regarding the accommodations." In my reply attention was called to the fact that it would be impossible to give detailed advice without definite knowledge as to his individual needs and requirements. A few weeks subsequently the patient reported in person that he had been instructed to consult me solely with reference to accommodations; that his medical adviser had imparted full information as to his condition, and that a physical examination or medical supervision during the summer months was unnecessary. The patient was much emaciated, markedly dyspneic, with pronounced elevation of temperature and greatly accelerated pulse, and yet contemplated, under the advice of his physician, a sojourn in an altitude of 7,500 feet. It was ascertained that for six years the patient had remained under the care of the same medical attendant and exhibited at no time evidence of material improvement. There had been a loss of twenty-eight pounds in weight, a daily elevation of temperature of 100 F. or over, and constant shortness of breath. Despite the occurrence of several hemorrhages, tuberculin had been given during a continuous period of two years, a maximum dose having been reached of 650 milligrams. It was stated to the patient that the results were eminently satisfactory, but that a temporary change to a higher elevation was desirable.

Some significance attaches to the fact that similar errors of diagnosis and treatment have been perpetrated not solely by general practitioners (as might have been supposed), but also by those whose opportunities and equipment should have precluded such possibility. It has been my observation that in the majority of cases the family physician has not shirked his responsibilities in the treatment of pulmonary invalids. Others through literary contributions have accomplished much good in arousing the interest of the profession and in spreading the cause of education among the masses.

Laboratory opportunities and equipment, an aptitude for sociologic study, administrative qualifications and years of scientific research, no matter how capable and conscientious the individual, do not always render him a skilful clinician. A satisfying direction of the pulmonary invalid in individual instances may require of the physician more than skill in diagnosis or familiarity with modern therapeusis. For the wise preliminary guidance of these patients the necessary qualifications are manifold and most exacting. Comprehensive attention to special indications representing questions of personal equation is sometimes possible only by dint of much interested effort. It is primarily essential to conduct a careful investigation not only of all phases of the disease, together with its possible complications, but also of all factors pertaining to the patient, including temperamental proclivities, financial resources, domestic relations and social tendencies. Only from a critical analysis of the various features relative to the invalid and an infinite regard for detail may the general principles of treatment be applied to the best possible advantage. While an aptitude for work of this character may not always be expected of busy practitioners, it is nevertheless fitting to emphasize its importance that the interests of consumptives may be more fully subserved. Finally, in the diagnosis and management of tuberculosis it is well to follow the scriptural advice, to "prove all things; hold fast to that which is good."

1437 High Street.

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# MODERN ANTISEPTIC SURGERY

## AND THE RÔLE OF EXPERIMENT IN ITS DISCOVERY AND DEVELOPMENT *

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The subject naturally divides itself into three parts: (1) the conditions before the introduction of the antiseptic method by Lister; (2) the means by which his system was discovered and developed, and (3) the conditions existing after the introduction of the method, i. e., at the present time.

My surgical life covers all three of these periods since I graduated in medicine in 1862, some years before Lister began his work. I have, therefore, fought my way from the horrors of the preantiseptic days up to the delights of the present antiseptic days.[1]

### I. THE PREANTISEPTIC PERIOD

In my early surgical experience every accidental wound and every surgical operation (that is, an intentional wound) was followed by inflammation and suppuration, i. e., the discharge of "pus" or "matter." This was not only constantly expected as an unavoidable process of Nature and believed to be needful for healing, but was constantly realized. Hence the pus was called "laudable" pus! How well I remember forty years ago at the beginning of each winter's session when I was the assistant of the late Professor Samuel D. Gross, his turning to the orderly and saying to him, "To-morrow, Hugh, I shall lecture on suppuration. Go over to the hospital in the morning and get a cupful of pus for my lecture." Pus, mark you, was always "on tap," so to speak, though the little hospital contained only a dozen beds!

Perhaps the best way to give the reader an idea of wound conditions at that time will be to describe an ordinary operation and its results. We will suppose that it is an amputation. The surgeon approached the operation with the clean hands of a gentleman. He usually wore an old coat covered with dried blood spots from previous service. His finger-nails very likely were long and no special attention was given to them. The instruments were taken out of a velvet-lined case and were as clean as ordinary table-knives would be. The operation was done without any preliminary cleansing of the skin other than to remove any visible dirt. If the knife happened to fall on the floor it was picked up, rinsed in a basin of ordinary water and used as it was. The marine sponges then always used were washed clean in ordinary water and used over and over again even after being saturated with foul pus. The blood-vessels were tied with ordinary silk; one end was cut short, the other one hung out of the wound. After an amputation of a fleshy thigh I have often seen 25 or 30 such "ligatures," as they are called, gathered into two bundles, one at each end of the wound. The flaps were then sewed together with an ordinary needle and thread and the stump dressed first with an old rag (which, however, would be ordinarily clean) or scraped lint spread with some simple grease. Over that would be placed some other rags, lint, cotton, or other dressing, and finally a bandage. During the Civil War these greasy dressings gave place to simple cold-water dressings.

By the second day the patient would begin to have considerable fever. By the third or fourth the temperature would rise to what we now know (for medical thermometers were not in general use in that early day!) to about 103, 104 or 105 F. Then we would poultice the wound. Every few hours the patient would be disturbed, a new poultice put on to replace the old one, now cold, foul and ill-smelling, and by this time bathed with pus. I have often seen the pus escaping by the tablespoonful and the wounds alive with squirming maggots resembling chestnut worms. By this time also it was hoped that the silk ligatures, with which the arteries had been tied, had literally "rotted" loose and each one of them was gently pulled on to the discomfort of the patient. Care was taken that the ligatures with knots tied on them (in order to distinguish those that secured the large blood-vessels) should not be pulled on severely until probably the tenth or twelfth day. Meantime the patient was tossing about the bed with pain, with thirst, without appetite, without sleep except such as morphin would secure. This at the same time dried up all the secretions, producing constipation and other evils.

By about the tenth to the fourteenth day, suppuration having been fully established and quantities of pus pouring from the wound, the fever would subside and the wound would begin slowly to heal. Of course, the healing could not be complete so long as the silk ligatures were still protruding from the wound. Sometimes they did not become detached for even months or years, but more commonly all of them would rot loose in from ten days to three weeks. When the silk ligatures on the large blood-vessels came away, if the healing process had formed in the blood-vessels a firm clot, which had become adherent, and, so to speak, "corked" it up, all went well. But, as very frequently happened, when the ligature and the rotten end of the artery were pulled off and there was no clot to act as a stopper, "secondary[2] hemorrhage" followed. This often came on after the patient's wound had been dressed and the surgeon had left, and, if so, very likely the first notice that the nurse had that anything was wrong would either be the gasping for breath of the patient or his moans and cries, or sometimes by the blood which had not only saturated the mattress, but had even appeared in a pool on the floor.

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* This paper is one of the series prepared for and reprinted by the Council on Defense of Medical Research of the American Medical Association for circulation among the public. This fact accounts for its popular style and the frequent use of non-technical terms. Twelve of these pamphlets are now ready, taking up the relations of animal experimentation to ethics, diagnosis, cancer, vaccination, the live stock industry, tuberculosis, typhoid, dysentery, rabies, surgery, internal secretions, protozoan tropical diseases, etc.

[1] In this article I use the word antiseptic as the more popular one to include also the aseptic method.

[2] So called to distinguish it from "primary hemorrhage," *i. e.* the bleeding occurring at time of the accident or operation.

How fatal were such hemorrhages may be seen from the fact that in 2,235 cases of hemorrhage in the Civil War 61.7 per cent. of the patients died.[3]

I shall never forget one night about ten days after the battle of Gettysburg, when it was my business as "officer of the day" to attend to all emergency cases. That night I was called to five cases of secondary hemorrhage. To indicate what a difference there is between modern and ancient conditions, in the thirty-four years since October, 1876, when I began the practice of the antiseptic method, I have not seen as many cases of secondary hemorrhage as I treated in that one night.

It was a rare thing for any patient after such an operation to get well under three or four weeks, and it was not uncommon for healing to be delayed for three or four months, so that, in spite of the great mortality, the wards of the hospitals were cumbered with convalescent patients. The rare case in which healing took place by "first intention," i. e., at once, was recounted as a triumph. To-day it is precisely the reverse. The case in which healing does *not* occur primarily and at once is regarded as a disaster.

But a prolonged convalescence was the least of the evils to which a patient was subject. A large majority of the wounds were followed by erysipelas, by lockjaw, or by blood poisoning, and hospital gangrene sometimes became a veritable plague. Gangrene in various forms during the Civil War was rife and often fatal. In 2,503 cases 1,142 patients died, a mortality of 45.6 per cent.[4] In one variety which was frequent, hospital gangrene, a simple flesh wound scarcely larger than the bullet which made it, became larger and larger till a hand would scarcely cover it and it would eat into the tissues until one could put half his fist into the sloughing cavity.

Of 505 cases of lockjaw (tetanus), 451 were fatal, a mortality of 89.3 per cent.[5] Pyemia or blood poisoning was terribly frequent and almost as fatal as it was frequent, for of 2,818 cases in the Civil War 2,747 patients died, or 97.4 per cent![6] When a joint was opened or wounded, the result was frequently either amputation or death, or not uncommonly amputation and death. Of 2,382 wounds of the knee-joint alone for which amputation was performed 1,212 patients died, a mortality of 51 per cent., and of 973 similar wounds for which amputation was not performed 591, or 61 per cent. of the patients died.[7]

Fractures, as most people know, are divided into two kinds: simple fractures in which the skin is unbroken, and compound fractures in which the broken bone protrudes through the skin. Simple fractures nearly always heal with relatively little pain and slight fever; but in the preantiseptic days when the skin was broken and the bone protruded two out of three patients with these compound fractures were sure to die.

Moreover, certain regions of the body were forbidden ground unless the surgeon were absolutely compelled to invade them. No one would open the head if he could possibly avoid it. No one would dare to make an incision through the abdominal wall into the cavity of the abdomen unless a bullet or a dirk had gone before him and opened the way. The reason for our hesitation was that death stalked behind us.

How eloquent is the statement of Sir Samuel Wilks,[8] that "the change came home to me in an almost startling manner from what I witnessed in the post-mortem room. Some time before [i. e., before Lister's discoveries], when reading a paper on pyemia (blood poisoning), I had no difficulty in collecting 100 cases which had occurred within a very short time previously, when suddenly this terrible malady disappeared—it was gone never to return." So, too, lockjaw (tetanus), except in accidental cuts that have been neglected and have not received proper surgical care, has almost completely disappeared. Again, at the present day one practically never sees erysipelas after operations; and in order to find illustrations of hospital gangrene to show to my classes for the last thirty years I have had to rely on pictures from the Surgical History of the Civil War and other similar sources, for I have not seen a single case in private or hospital practice since I first adopted the antiseptic method in 1876.

### II. THE DISCOVERY AND DEVELOPMENT OF THE ANTISEPTIC METHOD[9]

Neither time nor space will allow me to describe the many earlier steps. Schwann, in 1837, in studying putrefaction, reached the conclusion that it was not the gases of the air, especially the oxygen, as was then universally believed, that caused putrefaction, but organic particles which floated in the air and which could be destroyed by heat. In 1854 Schröder and Dusch showed that putrefaction did not occur in organic fluids in flasks if the air entering the flasks was simply filtered through cotton wool. Pasteur, in 1864, showed that it was necessary neither to heat the air nor thus to filter it, for if the air merely entered through a tortuous tube in which the dust could settle before it reached the fluid no change took place in the fluid, or if flasks containing a material which would putrefy were left open in a place where the air had been undisturbed sufficiently long to allow the dust to settle, as, for example, in a cellar, no decomposition took place and no growth appeared in such fluids.

Lister naturally was profoundly impressed by these studies of Pasteur and he proceeded to make many experiments to confirm or disprove them. Among them I will only relate the following:[10] Lister filled four glass flasks one-third full of urine and drew out the neck of each flask with a spirit lamp into a tube less than one-twelfth of an inch in diameter. Three of these long open tubes were then bent at various angles downward, while the fourth, equally narrow, was left short and vertical. Each flask was then boiled for five minutes, after which they were left with the ends of the small necks still open. Through these open mouths the air, including its oxygen, would pass out during the heat of the day and pass in during the colder night. The boiling was to kill any organisms in the liquid or on the sides of the glass. The object of the bending of the three necks downward was to allow the air to pass in and out, but to intercept the particles of dust, which, according to the germ theory, caused putrefaction. The germs, being heavier than air, could not rise in the bent necks. The fourth neck, however, being short and vertical, not only allowed the air to pass in and out, but gave a very narrow but real opportunity for dust and germs to fall into the liquid. If any of these were living organisms they could produce putrefaction. In a short time the vessel with the short and vertical neck showed growths of mold and the liquid changed its color, showing chemical changes; but in the three flasks with bent necks the urine *after four years was entirely unaltered.* A year after the commencement of the experiment a little of the urine in one of the flasks with a bent neck was poured into a wine-glass; it had not lost its original acidity and normal odor and a microscope showed not the minutest organism. In two days it was most offensive, and under the microscope already teemed with organisms. The other three flasks were subjected to a further severe and rather amusing test. Two years after the beginning of the experiment Lister had to transport them from Glasgow to Edinburgh on the railway when he was appointed to the chair of surgery in Edinburgh. He took charge of these flasks himself, "nursing them carefully," as he says, "to the amusement of my fellow travelers." In the drive from the station to his house the violent rocking of the carriage churned up the contents of the flasks till the upper part was full of a frothy mixture of this proved putrescible liquid with the atmospheric gases; yet after two years more no decomposition had taken place.

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[3] Med. and Surg. Hist. War of the Rebellion, Part 3, Surg. Vol., p. 765.

[4] Ibid., p. 824.

[5] Ibid., p. 819.

[6] Ibid., p. 858.

[7] Ibid., p. 367.

[8] Royal Com. on Vivisection, 1907-08, Q. 7,750.

[9] See Lord Lister's Collected Papers, Oxford, 1909 (later reference to these Collected Papers will be indicated simply by "Lister, vol. —, p. —)," Brit. Med. Jour., Dec. 13, 1902. The Lister number celebrating the fiftieth anniversary of his receiving his degree, and Lister's Huxley Lecture in the same journal, Oct. 6, 1900, and Cameron's "Lister and the Evolution of Wound Treatment, etc.," Glasgow, 1907.

[10] Lister: ii, 173; Brit. Med. Jour., 1871, ii, 225.

The explanation of this convincing experiment was simply this: The germs in the atmosphere could not rise against gravity in any of these tubes bent downward and so could not gain access to the urine. This easily preserved a decomposable fluid for four years, although the air passed in and out freely every day. But the urine in the flask with the straight but very narrow neck in a few days had undergone decomposition. The only difference between the flasks was that the three bent tubes prevented the entrance of the germs, though not of oxygen or other constituent of the air, while the straight but equally narrow tube allowed the germs to enter through in very small quantities, and yet these few grew and produced putrefaction.

In order still further to confirm this experiment, however, Lister tested these bent tubes by the condensed beam of light which Tyndall had used and found that they were optically empty.[11]

These experiments convinced him that it was not the oxygen or any other gas in the air that caused inflammation and suppuration, but that these were caused by *the minute organisms suspended in the air.* In dressing a wound, then, the problem was how to exclude not the air or its oxygen, which was impossible, but how to exclude the organisms in the air. This could be done by applying a dressing saturated with some material capable of destroying the life of these germs. This was the basis of the antiseptic method.[12] It must be remembered that at that time we were wholly ignorant of what now everybody knows, that there are hundreds of different kinds of germs or bacteria. Even the greatest scientists were then groping in the dark seeking for the light by observation and especially by experiment.

About that time Lister was much struck with an account of the effect of mingling phenol (carbolic acid) with the sewage of the town of Carlisle, England.[13] He proceeded, therefore, to experiment with it in compound fractures. I have already stated how fatal a compound fracture was in those days. Indeed, Mr. Syme, the great Edinburgh surgeon, predecessor and father-in-law of Lister, was inclined to think that, on the whole, "it would be better if in every case of compound fracture of the leg amputation were done without any attempt to save the limb." The marked success which followed his dressing these compound fractures[13, 14] with carbolic acid led him then to experiment with its use in abscesses.[13, 14, 15] This was followed again by such remarkable success that he was led to try it in accidental wounds and finally to intentional and extensive wounds, i. e., surgical operations.[16]

Practically the progressive introduction of the antiseptic system from compound fractures up to deliberate surgical operations was one vast experiment in the human living body—an experiment justified, as all the world well knows, by its splendid and continuing results. Yet when in 1880 or 1881 Lister wished to make additional experiments on animals to perfect his method still further, so stringent was the law in England that he was obliged to go to the Veterinary School at Toulouse, France.[17]

Like many surgeons, Lister had noticed the fact that a needle or a bit of glass would often lie for an indefinite period in the body without producing inflammation or pus, but that a bit of silk or linen thread was sure to produce pus. He believed the reason was that the thread was porous and that its interstices contained these germs which no one had then seen and identified, and that they gave rise to decomposition and produced the pus. So, Lister, from his previous experiments with phenol (carbolic acid), believed that if the thread with which an artery was tied were steeped in phenol and both the ends of the silk were cut short it might be left in the wound without producing any inflammation or suppuration. The wound could then be closed at once—an immense gain, for it would heal at once. "Before applying these principles on the human subject," he says, "I though it right to test them on one of the lower animals."[18] Accordingly, Dec. 12, 1867, he tied the great blood-vessel in the neck of a horse, having steeped the silk for some time in a solution of phenol. Both ends were cut short, the wound was entirely sewed up and treated with phenol dressings. Ten days after the operation the dressings were removed, the wound was healed, and there was no pus! Thirty-nine days after the operation he carefully examined the artery which he had tied. The operation was a complete success, the blood current had been entirely arrested and the thread had been covered in by dense fibrous tissue. Thus encouraged, he says: "I felt justified in carrying a similar practice into human surgery."[19] Jan. 29, 1868,[20] he saw a woman, 51 years old, with an aneurism as large as a large orange in the upper part of the left thigh. (An aneurism, I should explain, is a dilated portion of an artery, the yielding of the wall being due to disease of the wall of the blood-vessel. This dilatation continues to increase in size till finally the wall of the artery is so thin that it bursts and the patient dies from hemorrhage.) On the following day he tied the woman's artery with a piece of silk which had been steeped for two hours in phenol.

The wound was treated like that in the horse's neck, i. e., both ends of the ligature were cut short, the wound again entirely closed and a phenol dressing applied. The patient was immediately relieved of the pain she had previously experienced; she had no fever, the pulse was practically normal the entire time, and "her appetite, which had been absent during the four weeks of agony that preceded the operation, returned two days after it."[21] She made a perfect recovery. November 30, ten months after the operation, she suddenly expired. Fortunately, Lister himself had the opportunity of making the post-mortem. He found that her death was due to the bursting of a similar aneurism inside of the chest. Examining the artery which he had tied, he found that the silk had almost all disappeared, but that there was a little fluid around the remnant of the ligature, which probably would have developed into a small abscess and might have caused great mischief had she lived longer. This, therefore, suggested to him the expediency of substituting for the silk some other substance which would be more readily absorbed.[21]

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[11] See Tyndall's charming lecture on Dust and Disease, in Fragments of Science, 1871, p. 275. Appleton & Co.

[12] Lister: ii, 37; Brit. Med. Jour., 1867, ii, 246.

[13] Lister: ii, 3; Lancet, 1867, i, 326, 357, 387, 507; ii, 95.

[14] Lister, ii, 3. 32, 37; Brit. Med. Jour., 1867, ii, 246.

[15] Lister, ii, 32, 36, 42; Brit. Med. Jour., 1867, ii, 246.

[16] Lister, ii, 188, 199, 256, etc.; Brit. Med. Jour., 1871, ii, 225; Edinburgh Med. Jour., 1871-2, xvii, 144; Edinburgh Med. Jour., 1875-6, xxi, 193, 481.

[17] Lister, ii, 281; Lancet, 1881, ii, 863, 901; Tr. Internat. Med. Cong., London, 1881, ii, 369.

[18] Lister, ii, 63; Lancet, 1867, ii, 668.

[19] Lister, ii, 65; Lancet, 1867, ii, 668.

[20] Lister ii, 88; Lancet, 1869, i, 451.

In Philadelphia years before Dr. Physick had already tried animal ligatures made of buckskin, Dorsey those of kid, Hartshorn had used parchment, and Bellenger and Eve the tendon of the deer, but for various reasons these had all been abandoned. Lister determined to try catgut. Although he had great confidence in the use of catgut steeped in a solution of phenol, yet he says[22] "in order to put the antiseptic animal ligature to the test, I made the following experiment," for only by experiment in an actual living body of animal or man could the question whether it was actually safe or not be surely answered. Dec. 31, 1868, he tied the right carotid artery in the neck of a healthy calf at several places with different kinds of animal ligature, including catgut. All were cut short except one end of the catgut, which was purposely left three-quarters of an inch long to determine what would become of this foreign material. The wound was completely closed and dressed. After ten days the dressings were removed and the wound found quite dry. Thirty days after the operation Lister says, on dissection, he was struck with the entire absence of any infection or inflammatory thickening in the vicinity of the blood-vessel. On exposing the artery itself he was greatly disappointed at first to find the ligature to all appearance still there and as large as ever. On more careful examination, however, he found that this apparent ligature was not the catgut ligature at all, but that this ligature had been transformed into bands of living tissue, making the artery not weaker, as silk often did, but stronger than ever at the point where it was tied. The knots had disappeared and also the three-quarters inch of catgut purposely left. Everything had been absorbed.

Even one not a surgeon can see what an enormous difference in rapidity of healing without inflammation, pain or other serious disturbance of the body this use of catgut with immediate total closure and healing of the wound provided. Before Lister, the old ligatures hanging out in bundles were always inviting infection, suppuration, erysipelas, lockjaw, blood-poisoning, hospital gangrene and death. No patient was absolutely safe till the wound was absolutely healed and this often required weeks or months. With the catgut ligature, both ends being cut short, the wound closed at once, and, the ligature being absorbed, the wound healed in less than a week, not uncommonly in three or four days, with little, if any, immediate suffering and without any ultimate danger of those many serious complications above mentioned. But no one not a surgeon can appreciate to the full the meaning of these brief words. While the patient made a smooth and speedy recovery without complications, the surgeon slept the uninterrupted sleep of the just, secure against wearing anxiety on account of sudden hemorrhage or insidious infection. The heart-breaking tragedies which often made the surgeon wish he were a hod-carrier or even in his grave are now but specters of a horrid past.

As I have said, we had no idea at first of the enormous variety and different characters of the germs. In his early studies on putrefaction, Lister spoke of them in a general way as "germs," because the various species of plants (for they are plants and not animalculæ) had not been distinguished. Now there are scores and even hundreds of known varieties. Many of these simply cause putrefaction or decomposition and are not in themselves capable of giving origin to any particular disease. Other varieties, each one of which causes a special disease and can cause no other disease, have been isolated and identified. Some of these germs cause medical diseases, with which I have nothing to do here. The germs of lockjaw, tuberculosis, anthrax (wool sorters' disease), erysipelas, glanders, etc., are among the most virulent foes with which the surgeon has to contend.

How have these been identified and how do we prevent their entrance into the system of the patient? The process is very simple to describe, but very complicated and difficult practically. Let us take the case of lockjaw for instance. A peculiar kind of germ, looking a good deal like a tack with a straight body and a large head at one end, was discovered by animal experiments by Nicolaier in earth and dust in 1884.[23] In 1889 Kitasato, the Japanese bacteriologist,[24] first obtained it in pure culture, former experimenters having failed because they did not know that it only grows well when oxygen is excluded.

But how do we *know* that this tack-like germ and it alone is the cause of lockjaw?

First, in a patient ill with lockjaw, this particular bacillus or germ must be discovered.

Second, a pure culture of it must be produced; that is to say, the tetanus bacillus must be separated from all other germs and cultivated by itself. Third, some of this pure culture of tetanus unmixed with any other germs whatever must be injected into an animal to see point-blank whether this particular bacillus will produce lockjaw. Fourth, from the body of this animal the same germ that was injected must be recovered. Fifth, with a pure culture of this recovered bacillus the cycle must be begun over again and completed sufficiently frequently to assure the experimenter that the connection between the disease and the germ is not accidental, but essential and invariable. Sixth, no other germ used in the same way must produce lockjaw.

In this same manner the germs that produce inflammation and suppuration, which are *the* ever-present danger to the surgeon, have been identified, and also, what is equally important, the places where they and many others exist. In this way we have determined the fact that, while there are some in the air, they are few in number and so constitute a small though a real danger. But the places where they are found and are most dangerous are on the skin and clothing of the patient, the hands of the surgeon and especially under his finger nails and at the roots of his nails, on instruments, dressings, silk, catgut, and other things used for ligatures; in fact, practically every material that one can think of.

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[21] Lister, ii, 89; Lancet, 1869, i, 451.

[22] Lister, ii, 93; Lancet, 1869, i, 451.

[23] Deutsch. med. Wchnschr., 1884, No. 52, p. 842.

[24] Deutsch. med. Wchnschr., 1889, No. 31.

We know now how all-pervading they are. We know, too, that phenol (carbolic acid), corrosive sublimate and other chemicals, or that boiling for a certain time, or heating to a certain degree and for a certain time, will kill these germs. Thousands of such painstaking researches in test-tubes and by many other bacteriologic methods have been carried out all over the world by men either wholly unpaid, working for the love of truth and love of their fellow creatures, or paid but meager pittances. Then when a discovery seems to have been made comes the needful, the finally convincing, the unavoidable experiment—in a living body itself. The only question is should Lister have made this final test first on a horse and a calf, or on two human beings? Can any one with a sane, well-balanced mind hesitate as to the answer?

### III. THE RESULTS

The results of the establishment of the antiseptic method have been so extraordinary as to be incredible were it not for ample testimony the world over. They have been already stated in part, but a few words more must be added.

At present before an operation is begun the patient's skin, the surgeons' and the nurses' hands are scrupulously disinfected, sterile gloves are usually worn and every person is clothed in a disinfected gown. The instruments, dressings, ligatures, everything that is to come in contact with the wound, is carefully disinfected. Disinfected gauze "sponges" are used once and then discarded.

It is almost impossible for any one not a surgeon to understand how different are the results from this radical change of methods. No change of climate from fierce mid-winter storms to lovely summer breezes or autumn golden harvest could be greater. Most wounds now heal within a few days, one might almost say without the patient's being sick. Compound fractures and opened joints heal as if there had been no break in the skin. Arteries can be tied anywhere without fear of secondary hemorrhage. The abdomen is now fearlessly opened.

A woman with an ovarian tumor no longer has an operation postponed until it is very dangerous but inevitable, but by early operation is relieved almost without danger, even from tumors so large as to weigh twice as much as the patient herself. When I was assistant to Dr. Washington Atlee in the late sixties, before the antiseptic period, two out of three of his ovariotomy patients died, yet he was the then most famous operator in America. Now any surgeon who loses more than five out of 100 is looked at askance by his colleagues, and many, many hundreds of cases have been operated on with a mortality falling even below 1 per cent. There is not an organ in the abdomen that has not been attacked; organs which formerly when diseased could not be touched because death was almost sure to follow are now operated on every day. In fact as I once described it, the abdominal cavity is almost the surgeon's play-ground! The stomach, the intestines, the liver, the gall bladder, the pancreas, the spleen, the kidney, every organ is operated on, and with extraordinary success. Did space permit, a more detailed statement could be given, but it could scarcely be more convincing.

In obstetrics the same happy results have followed the introduction of the antiseptic method. Puerperal or child-bed fever, which not uncommonly used to kill one-half or two-thirds or even three-fourths of the women in the maternity wards of a hospital, now is practically unknown except in the neglected cases brought into the hospital at a late date, and the preantiseptic general mortality in maternity cases has been reduced from 10 per cent. or more to 1 per cent. and less. Brain tumors, abscesses and other diseases of the brain formerly inevitably caused death, for we never dared to touch them. Now the number of recoveries is very large. Compound fractures now have a mortality of 2 or 1 per cent. or less, instead of over 60 per cent. and now very rarely require amputation; and amputations formerly followed by death in one-half the cases have a mortality of 10 per cent. or less. In general, both the soldier and the sailor are provided with the first aid packet, which contains an antiseptic dressing. This has enormously diminished the mortality of wounds received in battle.

Perhaps no better evidence of the value of the antiseptic method in civil life can be adduced than the results in three hospitals. In Munich[25] the General Hospital was excessively unhealthy. Blood poisoning was very frequent and hospital gangrene, which had appeared in 1872, had become annually a more and more frightful scourge until 1874, when *80 per cent.* of all wounds that occurred in the hospital, whether accidental or inflicted by the surgeon, were attacked by it! At the beginning of 1875 Nussbaum introduced the antiseptic treatment. From then on till Lister's visit, presumably in the summer of 1875, *not one single case* of hospital gangrene had occurred and only one case of blood poisoning, and that a doubtful one. Erysipelas was rare and mild instead of being very prevalent and severe, and the convalescent wards, which formerly had been filled to overflowing, stood practically empty. In Halle,[26] Volkmann was operating in an extremely unhealthy hospital in small, overcrowded wards, with the toilet rooms opening directly into them and a large drain running directly underneath. It was so bad that it had been condemned to demolition. After his introduction of the antiseptic method in 1872, no single patient suffering from compound fracture in which conservative treatment was attained had died either from the fracture or from a necessary amputation, nor was there a single death from secondary hemorrhage or gangrene. No case of blood poisoning had occurred for a year and a half, though 60 amputations had been done. Hospital gangrene had entirely disappeared and erysipelas was extremely rare and mild.

Perhaps, however, the most extraordinary success was obtained by Lister[27] in his own wards in Glasgow. Lister was professor of surgery in Glasgow from March, 1865, till the autumn of 1869, but in that brief period he introduced measures that were absolutely revolutionary. The Royal Hospital in Glasgow was overcrowded, and in some parts of the building the conditions were so frightful that the wards had to be entirely shut up for a time. Lister's own account of this is interesting. He says:

> "A crisis of this kind occurred rather more than two years ago in the other male accident ward on the ground floor, separated from mine merely by a passage twelve feet broad, where the mortality became so excessive as to lead, not only to closing the ward, but to an investigation into the cause of the evil, which was presumed to be some foul drain. An excavation made with this view disclosed a state of things which seemed to explain sufficiently the unhealthiness that had so long remained a mystery. A few inches below the surface of the ground, on a level with the floors of the two lowest male accident wards, with only the basement area, four feet wide, intervening, was found the uppermost tier of a multitude of coffins,

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[25] Lister, ii, 248; Brit. Med. Jour., 1875, ii, 769.
[26] Lister, ii, 250; Brit. Med. Jour., 1875, ii, 769.
[27] Lister, ii, 124; Lancet, 1870, i, 4, 40.

which had been placed there at the time of the cholera epidemic of 1849, the corpses having undergone so little change in the interval that the clothes they had on at the time of their hurried burial were plainly distinguishable. The wonder now was, not that these wards on the ground floor had been unhealthy, but that they had not been absolutely pestilential. Yet at the very time when this shocking disclosure was being made, I was able to state, in an address which I delivered to the meeting of the British Medical Association in Dublin[28], that during the previous nine months, in which the antiseptic system had been fairly in operation in my wards, not a single case of pyemia [blood poisoning], erysipelas, or hospital gangrene had occurred in them; and this, be it remembered, not only in the presence of conditions likely to be pernicious, but at a time when the unhealthiness of other parts of the same building was attracting the serious and anxious attention of the managers. Supposing it justifiable to institute an experiment on such a subject, it would be hardly possible to devise one more conclusive.

Having discovered this monstrous evil, the managers at once did all in their power to correct it. . . . But besides having along one of its sides the place of sepulture above alluded to, one end of the building is coterminous with the old cathedral churchyard, . . . in which the system of "pit burial" of paupers has hitherto prevailed. I saw one of the pits some time since. . . . The pit, which was standing open for the reception of the next corpse, emitted a horrid stench on the removal of some loose boards from its mouth. Its walls were formed on three sides of coffins piled one upon another in four tiers, with the lateral interstices between them filled with human bones, the coffins reaching up to within a few inches of the surface of the ground. This was in a place immediately adjoining the patients' airing ground, and a few yards only from the windows of the surgical wards! And the pit which I inspected seems to have been only one of many similar receptacles, for the *Lancet* of September 25 contains a statement, copied from one of the Glasgow newspapers, that "the Dean of Guild is said to have computed that five thousand bodies were lying in pits, holding eighty each, in a state of decomposition, around the infirmary."

When to all this is added the fact that the large fever hospital was separated from the surgical hospital by only eight feet, that Lister's hospital of nearly 600 beds was cramped in area and almost always full to overflowing, and that he was operating, it might almost be said, in a charnal house, yet that those wards were continuously and conspicuously healthy and enjoyed for "three years immunity from the ordinary evils of surgical hospitals under circumstances which but for the antiseptic system were specially calculated to produce them,"[29] we stand convinced by such a huge unintentional experiment on man himself.

Were not results such as these sufficient to justify the experiments on animals as related by Lister himself and here quoted, by which such blessed relief has been brought to mankind?

What was seen in Glasgow has occurred all over the world. The surgical revolution of the last thirty years is the most momentous in the entire history of surgery. In every science—chemistry, engineering, botany, physics, electricity—the era of precise experiments has been the era when enormous and constant progress has been made. Medicine is no exception. We have closely studied disease by various observational methods, and clinical observation for two thousand years had slowly advanced our knowledge up to a certain point. Then experimental research, which employed methods of precision, varying conditions at will, noting the different results, and multiplying the experiments at will instead of waiting, it might even be years, until Nature's second experiment occurred, began its work; and in the past thirty years experimental research has produced a more fruitful harvest of good to animals and to mankind than the clinical observation during thirty preceding centuries.

But we are far from having attained perfection. In medicine and in surgery many problems of disease and death are still awaiting solution and can only be solved by the experimental method. A number of organs in the body are as yet inaccessible and others have functions of which we know little or nothing. Many operations ought to be bettered in method and in results. The causes of many diseases, such as cancer, scarlet fever, measles, whooping-cough, etc., are as yet unknown. To dispel all this ignorance and discover a cure for all these and other diseases is the earnest wish of wise and humane experimenters the world over. Shall the community aid these humane life-saving efforts, or shall they by restrictive legislation call a halt and let death slay our fellow creatures and especially our dear children? The answer is clear. It will never be other than an emphatic NO to the latter cruel course.

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# THE OBLIGATIONS OF THE UNIVERSITY TO MEDICAL EDUCATION *

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In an admirable paper before the Sixty-fifth Convocation of the University of Chicago, in December, 1907, Dr. William Henry Welch,[1] professor of pathology in Johns Hopkins University, pointed out with clearness that the historical and right home of the medical school is the university, and that it should be an integral part of it, coordinate with other departments. In the discussion of this matter he called attention to the fact that no other type of medical school has existed on the continent of Europe other than that which was under the fostering care and which shared the ideals of the university. It was under similar ideals that the medical school in this country began, and Dr. Welch traced with admirable clearness the story of the transfer of medical education from the university to the proprietary medical school.

He called attention to the fact that the proprietary school in higher education is a unique institution in the history of education, one for which the United States of America is alone responsible. Dr. Welch traced then in the most interesting way the gradual recovery of medical education in this country during the last fifty years and showed that our medical education is to-day on the up-grade and that we are striving to remove it from the proprietary status and to bring it back once more into a close association with the university, where it may receive both the inspiration and the assistance which it must receive if it is to exist on a true basis.

Since the delivery of Dr. Welch's address two years ago, the Carnegie Foundation for the Advancement of Teaching, in conjunction with various medical bodies which are interested in this matter, has made a careful study of the present status of medical education in the United States and Canada. In the course of that examination every medical school in these two countries has been visited and studied. This includes the schools of every sect of medical practitioners. The material which this study has afforded is now being put into form for publication, and it is hoped that within two or three months it may be given to the public. To-day I shall endeavor to give some general results of that study and to give them in the light of the summary which I have just made from Dr. Welch, that is to say, in full recognition of the fact that the home of the medical school is in the university and that the gains which are to be had by the incorporation of the medical school as a part of the university are mutual, the university on the one hand offering a strong faculty and the medical school on the other hand conferring prestige and honor and scientific enthusiasm on the university. Such union must always be reciprocal if it is to be a true union; and there is no reason for the existence of the medical school in the university unless the university itself both confers and receives intellectual and educational help.

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[28] Lister, ii, 45.
[29] Lister, ii, 126; Lancet, 1870, i, 4, 40.

* Read at the Joint Conference of the Council on Medical Education and Committee on Medical Legislation of the American Medical Association, Chicago, Feb. 28-March 2, 1910.

[1] THE JOURNAL, Jan. 4, 1908, p. 1.

A brief statement of the situation which one actually finds in the United States and Canada to-day shows that there are in existence about one hundred and fifty medical schools. We have, in a word, more schools for the training of physicians and surgeons in the United States than are to be found on the whole continent of Europe. Of these, eighty-two are connected with actual colleges or universities. In making this count I leave out of consideration as university medical schools those under the control of such institutions as the University of Buffalo, the University of Maryland, and the like, in which the university is really fictitious. During the last ten years these one hundred and fifty medical schools have graduated on the average about five thousand physicians annually. How great an overproduction of physicians this is may be appreciated from a consideration of the following facts: From the experience in the older countries it seems clear that in large towns one physician for every 2,000 persons would, under present hygienic conditions, be sufficient. In more thinly settled regions one physician for every 1,000 inhabitants would suffice. In general, we may say that one physician for every 1,500 persons would be a fair ratio, and this is approximately that of the older countries of Europe. The actual proportion in the United States at this moment is one physician for every 568 persons, which gives us twice as many physicians per thousand of population as England, four times as many as France, five times as many as Germany.

Consider it again from another point of view. The twelve southern states gained, in 1908, 358,837 persons. On the basis of one physician for every 1,500 inhabitants the section needed, in 1908, 238 more physicians. During the course of the same year there were 465 vacancies due to death. In view of the current overcrowding, these vacancies did not really need to be filled; but if we fill two vacancies with one new physician, 233 more graduates would have been needed; in all, 471 new men. As a matter of fact, 1,144 physicians were graduated in southern schools and 78 more southerners in Baltimore and Philadelphia. The total would certainly come to 1,300 additional physicians, three times what was needed on a most liberal estimate. In the rest of the country the total gain in population was 975,000, to meet which 650 physicians would have been required. There were also 1,605 vacancies by death, to meet which would have required 800 more on the hypothesis just made. About 1,500 physicians would then amply have sufficed to fill the vacancies. As a matter of fact, 3,500 were produced. It seems clear that by the operation of the great number of medical schools and the laxity of our laws we have for twenty years past graduated into the profession about three times as many men as are actually needed.

Before considering the duty of the university in the face of these conditions I wish to refer to one or two of the grounds on which this overproduction has been defended and which, from the material which has been gathered recently, are clearly shown to be untenable. In the inquiries which have been made concerning the reasons for the existence of various low-grade medical schools I have been met everywhere by the statement that it was the function of such a school to furnish doctors for rural regions. It was admitted that the training of these doctors was poor, but the constant assertion is made that the inhabitant of a small village or the resident on an isolated farm must accept this poor medical attendance or none at all. The investigations which we have made show conclusively that there is no truth whatsoever in this claim. It is perfectly clear from the statistics which have been brought together that a low basis of education does not force a distribution beyond a certain point. It may not be generally appreciated that the reverse of this is also true, namely, that a high basis of education does not prevent a wide distribution; that is to say, men graduated from good schools will go into all fields. The fact is that in the distribution of physicians many elements will count—the number available for distribution, home ties, individual tastes, professional opportunity, and financial consideration. The experience of foreign nations and our own shows that more expensively trained doctors will go into the country just as the poorly trained do, and it shows, on the other hand, that the ill-trained and poorly equipped men will in large measure congregate and get in each other's way. In proof of this statement it may be said that in Canada, whose laws for the admission to practice are far more advanced than ours, the well-trained graduates of McGill and of Toronto go in large numbers into the territories of the Northwest. In our own country the most expensive physicians whom we have yet graduated are Johns Hopkins men, and no one would propose to-day that the Johns Hopkins standards of admission and of facilities should be universally enforced. Nevertheless, these elaborately trained men have an astonishing disposition to scatter. They are to be found in thirty-two states and territories, and about a dozen have gone as missionaries to the Orient. One finds a Johns Hopkins man at Clayton, Ala., a town of 1,000; at Gorham, Colo., a town of 364; at Wells River, Vt., with 666; at Fairfax, Va., with 200; at Mazomanie, Wis., with 900. Western Reserve University is almost equally high in its entrance requirements, and one finds Western Reserve graduates in small towns of 700, 500 and 400 inhabitants. The argument that a cheap medical school must be maintained for the benefit of rural regions is absolutely without foundation.

A second argument which has been advanced wherever the low-grade medical school takes root is the time-worn argument on behalf of the poor boy. For example, in the city of Philadelphia, where medical facilities are offered on easy terms and under the most moderate conditions of entrance requirement, Temple University considered it necessary, for the sake of the poor boy, to maintain a night school of medicine. This argument, like the other, is based not on consideration for the poor boy, still less on consideration for the public, but on the desire to run a medical school. The truth is that the medical education which the poor boy thus gets costs him just as much as he would pay for something better. A four-year medical education in the Chicago, Baltimore, or Philadelphia schools on the ordinary basis costs in tuition fees and board $1,370. The same student can go to Ann Arbor for six years and save a few dollars; or if he wants a larger city, to the University of Minnesota at Minneapolis, for a little more. Now the absurdity is here: The low-grade medical school will tell you that their graduates can afford to go to small towns because they have not had an expensive education; well, then, so can the graduates of Ann Arbor and Minneapolis, for their education, though of higher grade, has been just as cheap. In a community where a fairly strong medical school is conducted it is possible to start a new school only by lowering standards, and it is this process which brings in the argument of the poor boy. The truth is that the poor boy has no right to enter the profession unless he is ready to make the sacrifices necessary for the right preparation. It is also true that in any large American community the poor boy who will qualify himself rightly will find the way both to a fitting education and to an efficient medical training. The argument for the poor boy is in effect an argument for the poor medical school, and it has no reasonable foundation.

Taking the situation of medical education as it now stands, knowing, as we now know, how great an overproduction of physicians we have been making, the question to which I wish to bring attention is this: What is the duty of a university with respect to medical education under such circumstances? Granting, as one does freely, that the historic, natural home of the medical school is in a university, what is the duty of an institution toward the teaching of medicine in view of the present situation of medical education and of medical practice in America?

To answer this question fairly, one needs to consider with some detail what the concrete services are which a university can render to its medical school. In seeking to answer that question, one will keep in mind the fact that, while medicine has always been a learned profession, it is to-day true that there is a vast difference between the scientifically trained physician and the able practitioner of earlier days. Within twenty-five years the development of certain fundamental sciences has been so great that the practice of medicine has come to be almost the application of these sciences—or at least this much may be said: the practice must start and rest as it did not in the preceding days on these fundamental sciences—pathology, anatomy, physiology, physiologic chemistry, bacteriology, and the like. This means that to-day we seek to train in our medical schools, as always, the practitioner of medicine, but the practitioner of medicine to-day is a scientifically trained man as he never was before. It does not mean that the analysis of the chemical laboratory or of the biologic laboratory will ever replace the skill of the clinician. It will always be true, so far as we can see, that in the treatment of diseases clinical skill and experience will be the largest factor in the physician's equipment, but it does mean that clinical skill to-day is supplemented with aids which the generation before did not know, and that the practitioner who is trained in a school which is unable to give these fundamental facilities is practicing the profession of a generation ago.

In view of the fact that the clinician is still the guiding spirit in medical education, it will always remain true that a medical school must be made up of school, hospital, and dispensary, operated as a single working plant.

Taking into account the present status, therefore, of medical education and taking into account also the standards of training which modern practice demands, it seems to me that the concrete services which the university can render to its medical department may be grouped under three heads:

1. The definition and maintenance of entrance standards.
2. The inspiration of the medical school with an appreciation of productive ideals both in education and in science.
3. The financial support of the medical department exactly on the same basis as other departments are supported.

To put the matter in a single sentence, a university which understands the present situation in medicine, which appreciates the ideals of modern medicine and which appreciates as well its own duties and responsibilities, will make itself responsible for the standard of admission to its medical school, for the ideals which govern it, and for the financial support which is to maintain it.

What is a reasonable basis, what is a reasonable standard to exact as the basis of a medical education? It is generally conceded that a scientific training in physics, chemistry, and biology constitutes an almost indispensable preliminary qualification for the study of medicine. As our present educational system stands, it is practically impossible for the student to obtain this equipment short of two years of college study, which would mean his entrance into the medical school at approximately twenty years of age.

When one comes to consider the enforcement of such a standard, however, it is clear that one must take into account the status of educational facilities in the various sections of the country. No standard can be enforced for which the schools and colleges of the region cannot reasonably well fit students. Our present educational facilities in the eastern and middle states and in the western states are already so considerable, they are so rapidly increasing, and they respond so quickly to pressure of the right kind that there is no question that the requisite number of physicians could be obtained from these sections even with the enforcement of such a standard as that indicated. The only practical difficulty that stands in the way is that the enforcement of such a standard would involve the death of most of the medical schools now existing in these regions.

In the South matters are very different. Both the legislative conditions and the educational facilities in that region are such that the standard just proposed, which is clearly a fair one for the profession itself, could not possibly at this moment be suddenly applied. This, however, is no excuse whatsoever for the almost utter absence of standards which is characteristic of that section. Only three complete institutions in the twelve Southern states have anything that can be definitely called a standard of admission for their medical schools. These are Tulane, the University of Texas, and the University of Virginia. Inasmuch as standards in medical education are necessarily tied up with the general educational system, I venture to suggest that the feasible standard in the Southern states at this moment for entrance into the medical schools is the same as that for entrance to the academic department, that is to say, high school preparation. This is the level which the general school situation of the different states either reaches at this moment or will reach in the near future. From this point progress may be gradual, but it will be inevitable. I venture to point out also that the enforcement of even this standard in the South will bring about the extinction of most existing superfluous schools.

One more thing I venture to add concerning the matter of standards of admission to the medical school, a statement clearly applicable, however, to the American university throughout all its courses, and that is that no increase of standards is helpful which does not mean actual enforcement. The conscientious and just enforcement of the four-year high-school standard throughout the whole country would alone go far toward clearing the situation; but in any case a university which undertakes to maintain a medical school ought clearly to face the duty of maintaining in its medical school standards fully abreast of the educational status of its region. If an institution is not willing to do this, then it ought not to meddle with medical education at all. The college or the university which maintains a decent standard of admission for its college and a far lower one for admission to its medical school is frankly disregarding its own duty to medical education and is seeking, as a rule, to support a medical school out of fees in order to have a certain institutional completeness. The day has gone by in the United States when an institution calling itself a university can do this without being recognized as shirking the responsibilities of a true university.

There are in the United States a few institutions of high grade which require college graduation for admission to their medical schools. We may rejoice to have this standard set up in a few of our best schools. I do not believe, however, that it will be generally adopted, and largely for the reason that, however necessary it is to give the medical practitioner the advantage of a liberal education, it is also important for him to get into the profession before he is too old.

With regard to the second specific service of the university to the medical school, namely, as to its influence on the pedagogic methods and the scientific ideals, I venture at this point merely to call attention to the very general neglect of this function of the university in most American institutions. The American medical school, even when it has been incorporated into the university itself, has remained in many cases an *imperium in imperio.* There has been, as a rule, little commerce between the professors of medicine and the professors of other faculties of the university. This has been due in part to the fact that the professor of the medical school has been in the past a practicing physician coming into the school for only brief lecture hours and having little touch with teaching or with the members of other faculties. In the best schools to-day, where not only the professors of physiology, pathology, chemistry, anatomy, and biology are men giving their whole time to the work, but where also the professors of medicine, of surgery, of pediatrics, are coming to be placed on an explicit teaching basis, the opportunity for the development of a true university spirit in the medical school is beginning to appear. This ought to result in the spread of the scientific spirit through the medical school; and while it will always remain true that the chief function of the medical school is to train the medical practitioner, it will also be true that the spread of university ideals will mean that more men will take up the investigation of medical problems from the scientific standpoint and that our medical schools, so organized, will lend themselves in increasing measure to the development of the scientific side of medicine and the investigation of its problems.

I venture here to allude to one feature of our American medical school organization which, from the standpoint of one long associated with an institution of learning has struck my attention forcibly, and that is the project for a divided medical school. It seems clear to me that such a school has distinct disadvantages and that the very division gives up in large measure the opportunity of the university to create in the medical school university ideals. It is difficult to understand, for example, how a medical school in which the clinical school is two hundred miles away from the scientific laboratories can receive any great inspiration from the men who work in these laboratories. Still more difficult must it be for the clinician, whose spirit ought to dominate the whole institution, to keep the laboratory methods and the laboratory men in touch with clinical aspirations and clinical needs. It may be that the divided medical school will succeed, but it seems that it must succeed against much greater obstacles than the school which is organically one. I cannot help wondering, for example, how it would affect the pedagogic and professional ideals of an engineering school if the first two years of it were given in one place and the last two years in a place two hundred miles away. My impression is that there would be two separate schools with very little more reaction, the one on the other, than exists between any other two schools so situated.

With respect to the third service which the university ought to render to its medical department, namely, that of an adequate financial support, I wish to speak with some degree of definiteness. This obligation is one which few colleges or universities in our country have frankly faced. In more than one report of university presidents during the past year I have read the boast that the medical school has not cost the university a cent! Colleges and universities have taken over medical schools in distant places with no expectation whatsoever of furnishing any support, and generally throughout the relations which have existed between colleges and universities on the one side and medical schools on the other there has been a most remarkable absence of any sense of financial obligation on the part of the university. I am convinced that this action has been due in the main to a lack of knowledge on the part of college and university trustees and officers. They have come to look on medical education as self-supporting; they desire a medical school in order that their institution may seem complete. The overproduction of physicians is a matter with which they are not acquainted, and the college and university have gone ahead to take over a medical school with absolutely no thought of its support—a thing which they would never do with a school of applied science. Just why it should be believed that a medical school could be sustained by moderate fees, while an engineering school or a college of arts needs a large and strong endowment, is a matter which I have found it difficult to understand. Furthermore, when an engineering school undertakes to sustain itself in the main from fees, it exacts a fee somewhere comparable with the cost of the education. Thus the Institute of Technology at Boston, which is sustained in the main from its fees, charges a tuition fee of $250 a year and laboratory fees in addition, which amount in some cases to $50 more. Such a fee for a medical department would be thought impossible.

What does it cost to run an adequate, all-round medical school? By an all-round medical school I mean one in which all departments are fairly strong. It will be found that some schools of fairly high reputation have maintained themselves by making a single department strong and leaving all the rest weak.

The investigations of the Carnegie Foundation prove that it costs easily $10,000 a year to conduct any one scientific department of the first two years of medical education in a satisfactory fashion for classes of fair size. This means the teaching of a comparatively small number of students and makes relatively slight provision for any scientific activity on the part of the teachers. A number of institutions that are economically conducted spend $15,000 or more a year on a single subject like pathology or physiology, including a fair provision for investigation, and these are not institutions which one would think of as most liberally endowed. A medical school, therefore, which is not in a position to spend $50,000 or $60,000 a year on the work of its first two years has omitted some part of its legitimate duty. It will be difficult for any complete medical school to do its fair duty by a moderate body of students with an income of less than $100,000 a year. Furthermore, this cost will increase rather than diminish, for the reason that with the improvement in the training of the first two years correspondingly improved clinical teaching will be required. It has been one of the anomalies of this whole development to note that many medical schools have acted on the idea that standards of admission could be raised without further provision for an improvement in the teaching facilities and in the teaching itself. It requires only a year's experience, however, for such a school to appreciate the fact that young men who have had two years of college training will not be satisfied with the kind of teaching nor with the facilities which will be accepted by boys fresh from the high school. The college trained man becomes restless under the physician who drops in to lecture and spends half the time in telling stories from his medical practice, and he is not at all willing to sit under a teacher whose knowledge of his subject is evidently gathered from the text-book before him. The raising of standards of admission means an important increase in expense on account of the quality of the instruction. An institution which undertakes the teaching of medicine on a basis much lower than that which I have indicated is not likely to serve either the cause of education or the cause of medical practice, and an institution which finds itself facing the question of the creation of a medical school or of the adoption of one should fairly face also the question whether it can get the means necessary for its support. It goes without saying that no university is justified in entering into any arrangement for a medical school which rests on a contractual relation. Unless the university can control, inspire, and support the medical school, it has no right to it.

Few institutions in the United States or Canada have lived up to their obligations to their medical departments in all three of the essential respects to which I have referred. Some have not even appreciated any one of them. As I have before remarked, eighty-two of the one hundred and fifty medical schools of the country are connected with actual colleges and universities. Of these, perhaps one-half fulfil all three of these obligations in a reasonable degree, in the sense that the universities fix and enforce definite standards for entrance, secure the same sort of teaching and scientific activity in the medical department as in others, and, finally, make themselves responsible for funds that go far beyond tuition fees received by the medical department. Of these institutions it may be fairly said that they are alive to and meet the responsibilities which they have undertaken in the matter of medical education.

There is in the next place a group of medical schools legally and organically parts of a college or university, but neglected by the institutions of which they are a part in one or more of the three services to which I have referred. It is difficult to say what these departments gain by their university connection. They receive no support, they get no oversight, they do not breathe the university air, nor receive any inspiration from university ideals. For example, the medical departments of Vanderbilt, Northwestern, Tufts, Bowdoin, administer in their own way the entrance requirements which the university sets up, and in none of these cases are the entrance requirements strictly enforced. In the matter of support, the university is often a harsh creditor to its medical department, sometimes not even lending it a dollar and at other times exacting, as in the case of Vanderbilt and Tufts, principal and interest for every advance made out of the general funds. As these institutions, organic university departments though they be, live on their fees or less than their total fee income, it is clear that the ideals of the university do not materially affect them. They are for the most part routine teaching schools, in no true sense university schools. Some of these organic medical departments belong to universities which can hardly hope by anything short of a miracle to do anything for medical education. For example, Drake University, with total productive funds of $290,000, has an organic medical department. The University of Alabama, with a total state appropriation for buildings and maintenance of $71,000 a year, has such a department. So have the University of Mississippi with similar appropriations of $110,000, the University of North Carolina with an annual appropriation of $70,000, the University of Tennessee with an annual maintenance appropriation of $65,000. It is perfectly clear that the problem of medical education is begun rather than solved when a university incorporates into its organization a medical school.

Twenty-seven of the remaining colleges and universities of the United States and Canada have nominal or affiliated medical departments which they not only do not support, but do not control. The state universities of Arkansas, Georgia, Illinois, and Oregon are in this position. Among endowed institutions that lend their names to proprietary medical schools for which they can hope to do nothing and which they do not control so long as they are in this situation are the University of Denver, Washburn College, Cotner University, Ohio Wesleyan University, Epworth University, Baylor University, and Dalhousie University. The budgets of some of these institutions are absurdly small in comparison with the cost of a decent medical school. Among them are some which are capable of leading respectable lives as colleges, but are little less than impossible as universities—for example, Union University, New York, which is the name given to the superficial combination of Union College with weak schools of law and medicine in Albany.

In a word, an inspection of the eighty-two medical colleges in the United States and Canada which are associated with colleges and universities shows that the relation is in many cases a superficial one. The college or the university has not in these instances approached the problem of medical education with serious purpose or with any fair sense of its responsibilities. It has been willing to give its name to a medical school, no matter how far away it was from university ideals and scientific traditions. In truth, the colleges are in no position to throw stones at proprietary medical schools.

If medical education in the United States is within the next decade to be raised to a fair standard, it is clear that the majority of the one hundred and fifty medical schools now existing ought to die. The country has no need whatsoever for even one-third of that number. Less than fifty decently equipped schools would more than supply all the needs of the country for a century to come.

The question whether we shall be able to bring public opinion to some fair understanding of this question and to secure such legislation as will provide a right scrutiny for candidates for the profession rests in considerable measure on two factors, which are moral rather than educational—educational patriotism on the part of the colleges and medical patriotism on the part of the physician.

By educational patriotism I mean this: A college has a duty greater than the mere ambition for a large student body or for institutional completeness, namely, the duty of loyalty to certain standards of common honesty, of intellectual sincerity, and of workmanlike skill, from which it cannot afford to depart. The combination of these qualities means a loyalty to the ideals of education itself, a patriotism larger than the interests of the college and taking hold on the very ideals of civilization. A university with such educational patriotism will not take on a medical school unless it can discharge its full duty by medical education; or if, in the days of ignorance which was once winked at, it became entangled in such an alliance, it will frankly and courageously go to work to get rid of a situation which is no longer tenable, for the day has come when all colleges everywhere are called on to repent. The flirtations between universities and medical schools ought now to cease and those instituions which have become involved in this sort of relation ought either to marry or get a divorce. The college which develops educational patriotism will be ready to do its duty toward the general system of education and toward the interests of professional education as well, and the question whether the inefficient medical school is to disappear or not will in large measure depend on the growth of a true university patriotism which looks on educational sincerity and thoroughness as something greater than institutional completeness.

By professional patriotism among medical men I mean that sort of regard for the honor of the profession and that sense of responsibility for its efficiency which will enable a member of that profession to rise superior to the consideration of personal advantage or of social cliques. As Bacon truly wrote: "Every man owes a duty to his profession," and there is no professional man whose obligation is more clear than that of the modern physician and surgeon. He is the outcome of the culminating forces of civilization, and he owes his very existence to the progress of these forces. For a hundred years past medical education has been a perquisite of the American medical profession, a thing which has been used both as a direct means of revenue and as a source for a wide circle of patients. When a particular group of physicians in a given city have been left out of existing medical schools they have promptly got together and made a medical school of their own. The day for the proprietary medical school has gone by. How long they can still survive will depend in large measure on the spread among American physicians and surgeons of a medical patriotism which will enable them to accept the new order of things and to come to the aid of the reputable universities in the support of medical schools where ideals of high professional honor and efficiency may be placed before the eyes of those who come to study in them.

I commend to the thoughtful consideration of medical men everywhere—those with and those without school connection—the wise, self-denying action of the physicians of Seattle, who, recently stirred by the rumor of a projected medical school on local lines, went on record as a body against any attempt to organize a medical school until the state university of Washington could undertake the task with credit to itself, to the medical profession, and to the people of the state.

# THE SERUM AND PRECIPITATE REACTIONS FOR SYPHILIS AND THEIR CLINICAL VALUE

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Several years ago Wassermann, Neisser and Bruck[1] published an article giving a method for the diagnosis of syphilis by examination of the blood. The experiments on which this method had been based were made on monkeys. Shortly thereafter appeared a brief clinical report by Detre and an extensive one by Neisser, Bruck and Schucht, whose work had been chiefly directed toward demonstrating syphilitic antigen in extracts of blood corpuscles. These were soon followed by reports from Wassermann and Plaut, Schutze, Morgenroth and Stertz, Marie and Levaditi, Citron, Fleischmann and Butler, and others.

In the communication of Fleischmann and Butler, which was the first to appear in the English literature, the principles and technic of the serum reaction were set forth in detail, and the conclusions contained in this article in regard to diagnosis and therapy of syphilis based on the serum reaction have been confirmed by practically all subsequent communications on the subject.

For the principles and methods of performing the reaction the reader is referred to the above article and subsequent communications from Butler.[2]

The technic for the serum reaction as originally given has undergone no essential changes, except that alcoholic syphilitic organ extracts have in great part replaced salt solution extracts.

### SERUM TESTS

A number of workers have attempted to modify the technic of the test. The most important of these modifications, considered in the order of their publication, are given below:

1. Bauer's: Bauer takes advantage of the natural amboceptor in the human serum for sheep's corpuscles and dispenses with the antisheep amboceptor, which is prepared by immunizing a rabbit with sheep's corpuscles. This modification was soon found wanting as the content of human serum in antisheep amboceptor is variable.

2. Tschernogubow's: Tschernogubow was the first to suggest the use of an antihuman amboceptor, which is obtained by immunizing an animal with human blood corpuscles. He proposed to make two drops of blood of a suspected patient suffice for the necessary serum, blood corpuscles and complement for the reaction. To one of the two tubes employed for each blood test the necessary quantity of antigen was added. Controls on antigen and amboceptor were also used. The tubes at this stage were incubated for one-half hour, when the anti-

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[1] Deutsch. med. Wchnschr., 1906, xix, 745.
[2] The Journal A. M. A., Sept. 4, 1908, and New York Med. Jour., Jan. 30, 1909.

human amboceptor, properly diluted, was added. He did not inactivate the serum to be tested.

3. HECHT'S: Hecht followed the Bauer system but proposed to dispense with the addition of guinea-pig serum for its complement by taking advantage of the complement present in human serum.

4. NOGUCHI'S: Noguchi also used Tschernogubow's antihuman amboceptor. He usually depends on a separate suspension of human blood corpuscles, although occasionally adding the corpuscles with the serum of the individual to be examined. He departs in one particular from the Tschernogubow system and clings to the Wassermann technic by adding guinea-pig serum for its complement instead of depending on the patient's own serum. He takes advantage of the fact that serum and organ extract retain their properties for a long time in the dried state and therefore dries his antigen and amboceptor on filter paper. He standardizes the filter papers and uses them in the reaction instead of the material in the liquid form. Noguchi's system is virtually the system of Tschernogubow. His simplification of the latter is to employ the antigen and amboceptor in the dried state.

Some of the modifications are said by their authors to be more sensitive than the Wassermann system. I know from experience that none of these modifications is absolutely reliable. It is to be hoped that the established reliability of the serum reaction for syphilis done according to the Wassermann technic will not be compromised by the haphazard performance of the reaction by one of these modifications in the hands of inexperienced workers.

### PRECIPITATE TESTS

The precipitate tests that have been offered for the diagnosis of syphilis and which have emanated directly or indirectly from the serum reactions are as follows:

1. The distilled water or Klausner reaction. This consists in bringing together in a test tube 0.2 c.c. of the serum of a suspected patient and 0.6 c.c. of distilled water. If the serum is from a syphilitic, a precipitate forms and collects at the bottom of the tube in from 1 to 15 hours; if from a non-syphilitic, no precipitate forms. Klausner subsequently reported that he obtained the reaction with a number of typhoid, pneumonia and tuberculous patients, thus showing that it was absolutely non-specific.

2. The precipitate reaction of Fornet and Schereschewsky. They found that on adding to the test tube containing the serum of a parasyphilitic, the serum of a patient with secondary syphilis, a ring precipitate occurred at the point of contact of the two serums within two hours. This reaction is obtained with normal serum and is, therefore, non-specific.

3. Porges and Meier noted that on adding a suspension of lecithin in salt solution to a syphilitic serum contained in a test tube a heavy deposit collected at the surface of the fluid in from 15 to 20 hours at room temperature. They also noted the same result on using a solution of sodium glycocholate.

Elias Neubauer, Porges and Saloman later reported their results with sodium glycochocolate in syphilitic and non-syphilitic cases controlled by the Wassermann reaction, and claimed to have obtained a greater number of positive reactions in syphilitic cases with the glycocholate than with the serum reaction.

I have investigated with Mefford[3] the precipitate reactions with lecithin, sodium glycocholate and also sodium taurocholate, controlled by the Wassermann reaction in 75 cases of syphilis, parasyphilis, tuberculosis, carcinoma, etc. Ninety-three per cent. of the cases with active syphilis gave a positive result with the Wassermann reaction. In the same cases the sodium glycocholate reaction was positive in 79 per cent., the taurocholate in 61 per cent. and the lecithin in 91 per cent. In the examination of the control cases the Wassermann reaction was uniformly negative, the sodium glycocholate was positive in 1, and the sodium taurocholate in 2 typhoid cases, while the lecithin was positive in 17 control cases.

We concluded that the serum reaction surpassed in the percentage of positive results, and consequently in reliability, the precipitate reactions with lecithin, sodium glycocholate and taurocholate for syphilis and parasyphilis. The sodium glycocholate and taurocholate, especially the former, show a large percentage of positive results in manifest syphilis and a very small percentage in control cases. The lecithin test is positive in fully 50 per cent. of non-syphilitics suffering from other diseases, and is, therefore, of no value in the diagnosis of syphilis.

The precipitate reactions have not been fully investigated. From the limited inquiries that have been made it appears that none of them, except perhaps the reactions with sodium glycocholate and sodium taurocholate, could be considered of any clinical value. The only reaction for the diagnosis of syphilis that has decisive value is the complement-binding test of Wassermann, Neisser and Bruck, made according to their system of performing it. After performing a test according to one of the modifications of the technic advanced by the authors mentioned, it is absolutely necessary to control the result by the original Wassermann reaction, if reliable and dependable results are desired.

The proper performance and interpretation of the serum reaction for syphilis demands of the operator a considerable acquaintance with laboratory technic in immunity work and experience with the reaction itself, for otherwise the results are not dependable. Discrepancies in results obtained with the Wassermann technic and modifications of it not infrequently arise from over-enthusiasm and shortcomings in one's own work.

The clinical value of the serum diagnosis of syphilis has broadened far beyond the scope originally believed to be its limit. It is not only of decisive value when positive in the diagnosis of syphilis, and almost equally so when negative, but it forms an excellent control for treatment, and, as I originally suggested, a means of controlling, in a great measure, the future of the syphilitic patient.

### CONSIDERATIONS REGARDING THE SERUM REACTION

The serum reaction has been chiefly considered in regard to:

1. The diagnosis of syphilis and parasyphilis.
2. Treatment of syphilis.
3. Contagiousness.
4. Marriage of syphilitics.
5. The protection of the syphilitic individual.
6. Congenital syphilis.

### DIAGNOSIS

In the secondary stage fully 98 per cent. of the subjects give a positive reaction; in the tertiary stage from 90 to 95 per cent. are positive. In latent syphilis previous treatment and the number of years elapsing since the infection occurred play a rôle. From 60 to 70 per cent. of individuals who have not had their infection more than two or three years, in whom the disease is apparently latent and who are not being treated, will give the reaction. Those who have had the infection for a number of years will give a reaction in from 40 to 50 per cent. of cases. The better they have been treated in early years the less frequently they give the reaction in after years. In syphilis of the viscera and in parasyphilis the reaction is obtainable in from 75 to 80 per cent.

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[3] New York Med. Jour., Oct. 31, 1908.

of cases. A close analysis of the latter cases would undoubtedly raise the percentage of positive reactions, as too frequently the clinical diagnosis, which is often accepted when the serum reaction is negative, is incorrect.

The results obtained by various investigators during the primary stage vary. This in all probability is due to the different periods with regard to their infection in which they were examined. Some report finding the reaction in two-thirds of the cases in the chancre stage, others as high as 90 per cent., and my own results run as high as 100 per cent.

Bruck, Stern and Lesser report finding the reaction in a few cases before the appearance of the initial lesion. Lesser obtained the reaction for syphilis in a case of gonorrhea one week following exposure, whereas the chancre did not appear for two weeks, which, in turn, was followed in six weeks by secondaries. The results obtained in the primary stage are of great importance when we consider the possibility of prophylaxis against general infection by extirpating or destroying the initial lesion. It would appear from the observations of many that the reaction does not appear as soon as the initial sclerosis, but a few days or a few weeks later. On the other hand, the reaction has been found positive before the lesion has appeared.

## TREATMENT

While I am disinclined to believe that the extirpation of the initial lesion, a teaching centuries old, will obviate the occurrence of a systemic infection, it would seem consistent with our present knowledge of the question that, if a local genital or extragenital lesion contained the *Spirochæta pallida* (which is regarded as the cause of syphilis), and the blood serum was negative to the syphilitic reaction and there was no evident adenopathy, the chancre should be removed. I would not expect this to obviate the general infection, because we know from clinical experience and from reports of cases so treated that it does not do so, but if the primary infection is a local one and the constitutional infection is not detectable at the time of blood examination, this would appear a tenable procedure.

In order that the serum reaction for syphilis may prove of value as an index to specific treatment, it is necessary to know whether or not its occurrence coincides with the activity of the virus, whether with the subsidence of the latter, viewed from a disappearance of symptoms, the reaction becomes weaker, and finally negative, and whether a positive reaction during apparent latent syphilis is, in the absence of visible or palpable specific lesions, to be regarded as a forerunner of them, or indicative of visceral luetic changes. The obtaining of a positive reaction in secondary and tertiary cases to the extent of from 90 to 100 per cent. is conclusive evidence of its association with virus activity.

In nearly all patients placed under vigorous antisyphilitic treatment a weakening and final disappearance of the reaction will follow. The reaction rarely disappears before the symptoms, and usually not for some time thereafter. Some tertiary cases that seem resistant to treatment continue to show the reaction and form an exception to the above rule. But this is, in all probability, due to the fact that many of these individuals are more or less immune to specific treatment and the process continues active. The frequency of the reaction in the early periods of latency in syphilis, where it is not treated, is, from a clinical standpoint, comparable to the frequency of recurrences in these cases. Its occurrence in later periods of latency is likewise comparable to the frequency of visceral lesions found in old syphilitic cases that come to post-mortem from other causes and are there recognized for the first time, and to the development of many visceral and parasyphilitic lesions recognized during life.

The following facts, first, that the reaction is found in practically all secondary cases and in 90 to 95 per cent. of tertiary cases; second, that the reaction weakens and finally disappears; as do the symptoms under specific treatment; third, that a negative reaction and absence of symptoms may sooner or later be followed by a reappearance of both, seem to me incontestable evidence that the reaction means, when found, active syphilis, and is therefore a positive indication for treatment.

If an individual who has been apparently free from symptoms and in good health for years gives a positive serum reaction, it signifies that he has somewhere in his organism an active syphilitic process. This may be in a location that does not cause symptoms and is not ascertainable by the physician. It may signify the development of a serious visceral or parasyphilitic affection, for we know that in practically 100 per cent. of cases of general paresis and in a very large proportion of tabes the serum reaction is positive.

As the treatment for syphilis is usually continued for from one to three years, the serum reaction could be of value only during this time in deciding whether or not the treatment is being pushed to the necessary extent, but in no case should it be interrupted unless the patient gives a negative reaction.

As it is a matter of experience that during the periods of latency the serum reaction is found positive in a considerable percentage of cases, which concurs with clinical experience that recurrences are not infrequent during this time, patients should be controlled at comparatively short periods with the serum test as well as by clinical observations. This should be done because, while the manifestations, if they appear externally, might be considered a sufficient guide for resumption of treatment, no one would care to await a recurrence in the form of a specific meningitis when we have a means of ascertaining activity of syphilis and of anticipating such a catastrophe.

On the other hand, when treatment is given a patient each year or oftener, such frequent examinations might not be necessary, but no period of treatment can be considered complete in the light of our present knowledge unless it is controlled by the serum reaction; so that not only is it an index to the beginning of treatment, but also to its interruption. It should be borne in mind that the skin and mucosa manifestations of syphilis are the least important in the life history of a syphilitic patient, and that patients are not safe because such evidences have not appeared for years. Such lesions seldom prove dangerous to life; at the same time we know that, next to tuberculosis, syphilis, directly and indirectly, is the most frequent cause of death in man (Gerhardt). Its fatal action is through the cerebrospinal and cardiovascular systems, glandular organs, etc.

Patients should never be assured that they can be or have been cured of syphilis, for once syphilitic always syphilitic. The continuous treatment of the first three or four years following infection should be followed by the chronic, intermittent treatment. No period of treatment should be interrupted unless the serum reaction is negative. No patient should be allowed to go longer than three months following the chronic, intermittent treatments in the earlier years, nor longer than six months in later years without a serum test being made. By this method many of the serious and fatal consequences of syphilis will be obviated.

### CONTAGIOUSNESS AND MATRIMONY

No opportunity for observations on the question of contagiousness appears to have come to those who have reported on the serum reaction. It is evident that no opinion on this point, so far as it concerns the serum reaction, could be expressed. It is equally evident that any solution of the question of matrimony for a syphilitic based on this reaction could be arrived at only by a study of the question of contagiousness, which is impractical. Any regulation of matrimony on this test alone would seem to be unfounded. However, after the period of time which clinically has been regarded as necessary to elapse before a syphilitic is considered safe to marry, his blood should be negative to the serum test, and the same injunctions for controlling his case as outlined above would be advisable.

### PROTECTING THE INDIVIDUAL

The serum reaction is found positive in practically all cases of general paresis, and in a large percentage of tabes cases. While the percentage of positive reactions in tabes cases varies more or less, as reported by various investigators, this is perfectly conceivable when we remember the chronicity of tabes and also the frequency with which tabetics have been subjected to specific treatment, as a result of which abeyance of the virus activity may occur, but at the same time the pathologic changes of tabes continue to progress. We also know from clinical experience that chronic infections may have periods of quiescence irrespective of treatment.

Many visceral lesions of syphilis are first recognized post-mortem, and, as a matter of fact, fully half the syphilitics that come to post-mortem from other causes show some evidence of syphilis that was not recognized during life. Fully 50 per cent. of latent cases of syphilis give positive reactions. There can be little doubt that this is more than a coincidence, and that there is a direct association of the latter with the former post-morten facts. This, as well as the previous mentioned relation of the reaction to syphilitic manifestations, its failure with their disappearance and the return of both, all indicate that a positive reaction indicates activity of the virus. Recognizing this, it seems perfectly logical that we should expect to obviate many of these latter developments of syphilis by controlling the patient's condition with the serum reaction and medicating accordingly.

### REACTION IN HEREDITARY AND CONGENITAL SYPHILIS

In hereditary syphilis the test is found, I may say, constantly, the reaction is strong and appears slow to disappear under treatment, possibly because the latter is not continued long enough, as is too frequently the case in congenital syphilis. Many workers who have reported on this phase of the question claim a concurrence of the reaction with the Colle and Profeta laws, while others maintain a directly opposite view, contending that neither law is sustained in the light of this test.

I have examined the blood of women who have borne syphilitic children, and who themselves were clinically apparently free from the disease, and the reaction was negative with their serums. I have also examined a syphilitic woman who had borne a healthy child who had not given the reaction up to the sixth week. On the other hand, the blood of a six-months-old infant born of a tertiary syphilitic mother gave a positive reaction, although this infant had never, so far as the history and examination could be depended on, presented any evidence of syphilis.

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# STATUS AND DUTY OF THE MEDICAL OFFICER *

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The history of the military surgeon is the history of surgery, for he has always contributed freely of the knowledge gathered in the great school of the battlefield to his less fortunate brothers in civil life, the evolution of his handicraft keeping pace with the growth of medico-military lore. In the early days he was much less favored in academic accomplishments than now: in fact, there was a marked difference between the social standing of the surgeon and that of the physician of that time, for, while the latter was scholarly and refined, and usually succeeded in maintaining his caste, the surgeon was of lowly origin and followed a despised calling. In the dark ages surgeons were little more than body servants to the generals and officers commanding—often serving in the double capacity of surgeons and barbers. Needless to say, the skill and the numbers of such men were insufficient for the task of treating the sick properly; indeed, the common soldier of the early period was given but scant consideration in any event, for it is said that Xenophon had but eight surgeons with his ten thousand troops.

Throughout the middle ages, military surgeons were still inconspicuous for any good purpose they served; they had no regular place in the ranks nor did their names appear on the pay rolls; they took such compensation as they received in gifts from grateful patrons. Out of the stormy centuries of the middle ages, when the profession of arms was occupying the first place in human endeavor, grew a greater appreciation of the need of organized effort to minister to the sick and wounded while bearing arms. Naturally the French and English were the most active in this attempt, and we find Ambroise Paré in the sixteenth century, and later Percy and Larrey, under Napoleon, exercising a marked influence on the practice of the day, for they were men of strong and resourceful personality.

The eighteenth century was well advanced, however, before any of the customs which obtain to-day were instituted, for, in Great Britain, it was not until 1751 that surgeons were uniformed in the dress of the troops with which they enlisted. The physical examination of recruits was begun in 1745. Coming down to the last century, the German sanitary corps was made a part of the German army as late as 1873. In 1860 the first British army medical school was opened at Chatham, since which time the modern army surgeon may be said to have developed. In 1878 the British Royal Army Medical Corps was formed.

In the United States, the early army medical records repeat the stories of the European wars—splendid achievements of individual surgeons of marked genius, but little concerted action on going into battle, and none when on a peace footing. Means of caring for the sick and wounded on the battle field and in camp long have been sadly inadequate, and improvements always have been greatly hampered by a want of proper understanding of the immutable laws of sanitary science and cooperation therein by officers of the staff and line. Until a year or so ago the young cadet at West Point was taught more of the care and health of the horse than he was of

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that of the men whom he was destined to command; in other words, he was so intent on studying how to destroy the enemy that he gave no thought to saving himself from destruction by deadly internal foes. Naturally the sick soldier always has been a great impediment to the movements of the army corps, and it was never even suspected until a few years ago that most of the camp sicknesses were preventable.

It also may be said of the military operations which have been conducted by the United States more recently that a grievous failure to grasp the true relation of the medical department to the army as a whole has no doubt cost the lives of many thousands of our bravest and best citizens; for it is estimated that, in most of the campaigns of the past, more men have been killed or incapacitated by disease than by the bullets of the enemy.

What, then, is the status and duty of this organization of specially trained men who fight under the banner of the Red Cross? For, whether they enlist with the organized militia, the army, the navy, or the Army Reserve Medical Corps, their function is the same; first, the preservation of the health of the command by the prevention of disease, and, second, the prompt restoration to duty of all wounded men whose disabilities admit of a cure. Since, as already stated, more men are cut down by disease than by bullets, the first of these duties is the greater; and this fact is emphasized by the statistics gathered at the concentration camps of the United States forces during the few months that they were ordered South in 1898, where men were allowed to sicken and die who never heard the sound of battle, save perhaps in their delirium. By comparing these recent events in a modern army, composed of the flower of American youth and having every facility for care at hand, with the experiences of the Japanese army while operating against the Russians for nearly two years in a wild and foreign land, destitute of bases of supplies for the barest necessities, we find a very creditable showing for the Japanese, remarkable for its low sick-rate. The reason is that to-day no other country holds its military surgeons in such esteem and respect. This nation, just emerging from a medieval civilization, has been quick to profit by the mistakes that the western world has only gone on repeating. The Japanese called into service a scientific body of medical men and followed implicitly the suggestions of these expert sanitarians; camp sites, food, water, shoes, clothing, the personal habits of the men, their preparation for battle—every detail of the organic life of these troops was passed on by their medical department, and that untrammeled by official influence or political despotism. Its ruling was paramount—the last word on sanitation.

The scientific awakening of the last two decades and the application of the principles of sanitation to commercial and industrial life are in evidence on every hand. Large employers and manufacturers now consider it good business policy to conserve the health and energy of their operators as a factor in a larger output from their labors. So, too, this nation when it took over the reconstruction of an oppressed people in Cuba, at once found it necessary to engage in sanitary, as well as political government. Our national problems in these piping days of peace have been met more effectually than they could have been in the earlier days when our interests were less world-wide, and knowledge less complete. The addition of the Philippines, Porto Rico, the Canal Zone in Panama, and other tropical possessions has thrown a greater responsibility than ever on our military surgeons, the sanitary engineers of this country. These great responsibilities have made necessary the manning of garrisons and ships of the United States with men unaccustomed to life in the tropics, and in the successful accomplishment of this end the medical departments of all arms of the service have been ever in the vanguard, so that now these territories have been rendered habitable for troops and increasingly healthful for the natives.

General Leonard Wood, who cleaned that pest-hole, Havana, of yellow fever in less than one year, was first a well-trained physician. Drs. Reed, Carroll, Lazear and others, who, by their experiments on the nature and mode of infection of this disease, made it possible to accomplish such a miracle, were also U. S. Army officers. Col. William C. Gorgas, chief sanitary officer of the Isthmian Canal Zone, another U. S. Army surgeon, profiting by his earlier experience in Cuba, has solved the riddle of the Panama Canal, converting a death-trap and slough of despond into a veritable health resort; and thus the dream of adventurers, navigators and engineers at last is coming true. The death-rate of 176.97 per thousand, under de Lesseps, in 1885, now has fallen to 3.84 per thousand among its male white population, under the direction and control of the United States, since the venomous mosquito has been banished.

It is also interesting to note the vast amount of human endeavor that has been contributed to the public weal by the military medical officer in foreign lands, for Science truly knows no country, and to the military surgeon,

"In all lands and thro' all human story
The path of duty is the path of glory."

As an evidence of this fact we may recall that the first observation of the parasitic organism of malaria in the blood of malarial patients was made by a surgeon of the French army, Laveran, who worked it out in the solitude of a military hospital in far-away Algeria in 1880; although the U. S. Army Reports of 1859 show that in that year an American medical officer, John K. Barnes, had called attention to the probability that this disease was of parasitic origin. The knowledge that the mosquito is the medium of infection in malaria is of still more recent date, and this we owe to an English army surgeon, Major Ronald Ross, whose discovery has saved thousands in India alone, since he announced his theory in 1897. Another of this brave band of grim fighters of the invisible was Bruce, who, while serving the British Empire as patriot and scientist, rid the Island of Malta of Malta fever, a pestilence which had scourged it since before the days when it sheltered that gallant company of Hospitallers, the Knights of Malta.

In an address on "The Nation and the Tropics," given at the London School of Tropical Medicine in October last, Dr. William Osler so fitly has eulogized one of the leaders of these forces, "one that sought but Duty's iron crown," so fittingly that I cannot refrain from quoting the passage entire. He says:

> No one has expressed more deeply the sentiment of lonely isolation in the tropics than Ronald Ross in his poem, "In Exile:"
>
> "Long, long the barren years;
> Long, long, O God, hast thou
> Appointed for our tears
> This term of exile."
>
> Few have been able to sing with him the pæan of victory when he discovered the mode of dissemination of malaria through the mosquito—
>
> "Seeking His secret deeds
> With tears and toiling breath
> I find thy cunning seeds
> O million-murdering death."

And the pathway of victory is strewn with the bodies of men who have cheerfully laid down their lives in the search for the secrets of these deadly diseases—true martyrs to science.

What is true of the prevention of epidemic diseases which have proved decimating to troops stationed in the tropics should be equally true of typhoid fever and other camp diseases peculiar to more temperate latitudes. In the experiments carried on in the English and German armies, and on the U. S. troops now serving in Porto Rico, it has been shown that the immunity acquired by serum vaccination of men exposed to typhoid fever has decreased the sick-rate from this disease from 12 to 3 per thousand. Lord Kitchener has recently said that the improvement in the condition of the British army in India during the last ten years has been equivalent to adding more than another regiment to its strength. "In pace paratus" should ever be the watchword.

The military and political destiny of the great nations of the world is intimately bound up with the progress of medical science; for the appreciation by their people of the natural and physical laws which govern the most economical maintenance of armed forces in the event of war will keep step ever with the march of the latest scientific achievements that have any bearing on maintaining the fitness and efficiency of the individual soldier. On this will follow a fuller control and authority in all sanitary measures by the medical officer, the logical military sanitarian.

How, then, may this standard best be attained? In the national guard and naval reserve organizations we have our limitations in time of peace, by reason of the lack of opportunity for practical work in the short tour of duty in camp and afloat each year; yet in time of war we would constitute the major part of the land and naval forces, and it would be up to us to make good. We, therefore, must look to the regular forces as the working models in this work and be eternally prepared by lending our every effort to the extension of the value of tours of instruction for men, of the time of such instruction, and in the establishing of local schools for study by officers. It is a matter of regret that by reason of their smaller number the volunteer medical officers cannot avail themselves of state, or central professional medical schools for the interchange of ideas.

The needs of the situation could be met by the endowment of chairs of military surgery and sanitation in the leading medical colleges throughout the country, open and free alike to all military officers as well as to undergraduates. A natural channel affording a medium for presenting and discussing all matters germane to the subject of medico-military interests might readily be formed, too, by assigning this branch to some correlated section in the state and national medical societies, where the medical officers among the membership, and those of the army and navy at large, could get together at the annual meeting to their mutual profit and pleasure.

As a result of this activity would follow a growing interest by medical men, both of the organized and unorganized militia—for all are alike eligible for service—and a working knowledge of military medical affairs would soon engage the attention of all medical societies to an extent quite unknown now, and to the lasting good of our military organizations.

Looking toward this end, it might be wise to expand the Section on Preventive Medicine and Public Health of the American Medical Association so as to include at once its public and military phases under the heading of Section on Preventive Medicine, Public Health and Military Sanitation, or some other suitable descriptive title. The British Medical Association already has a Section of Navy, Army and Ambulance.

Perhaps the greatest need in the state militia organizations is that they be provided with improved facilities for maintaining regimental and field hospitals in conformity to the regular types to facilitate the training of ambulance companies; but this equipment is now not easily obtainable, because of the indifferent and penurious support of our legislators and their fatuous confidence in the ability of the American soldier to fight when he is called on, however unprepared. The medical officers should also seek by every opportunity to master the manual on the handling and training of men, besides all those details which administration implies. Unfortunately the civil duties of a surgeon count for little in military experience, other than in the routine treatment of sick-call; but, given an occasion, the trained volunteer surgeon should, and the regular certainly would, be competent to take over all the sanitary departments of troops in the field, assuming full charge in every particular.

Through the rare executive ability of the late Col. Nicholas Senn as Surgeon-General of the State of Illinois work was begun along these lines; for he was an authority on military medical science, having studied at first hand the methods of all the leading armies of the world; and as a result our medical department is now, perhaps, more advanced than that of any other state in the Union. It was through his personal effort that the Association of Military Surgeons of the United States and the Association of Military Surgeons of the State of Illinois were instituted; these have proved of the greatest value to the whole body, bringing into touch the brightest minds in the profession for the study of the serious problems of the organized forces.

The Army Medical School at Washington is thrown open now to volunteer officers of the land forces, admitting them equally with the regular army officers to all of its privileges, and to make it easier for them the preliminary qualifications have been waived in a large measure. A similar arrangement has been recommended by the Navy Department in connection with the Naval Medical School, especially for medical officers of the Naval Reserve; this recommendation is now awaiting the necessary legislative action. Perhaps in no other way could so much real benefit be conferred on the personnel of the state militia as through the helpful associations that these special courses offer. It is a regrettable fact that as yet but few men have availed themselves of this opportunity; possibly by reason of the loss incurred through neglect of business for several months, and the expense incident to the course, for there is now no appropriation providing for quarters and pay in the case of militia officers attending.

In the navy a new mark was set when the executive authority on the hospital ships was transferred from the line to the medical department, an arrangement which now is giving entire satisfaction. Another era will dawn when some of the traditions of the army also have been set aside and a wider advisory sphere of usefulness and responsibility granted the medical department, whereby it may become an integral unit fully manned, with complete control of all subordinates and auxiliaries, working independently and smoothly along with the fighting forces.

On the foundation already laid let us go on building according to the latest scientific attainments, until military life shall be made at least as sanitary and wholesome as the homes that our young men leave when they enter this noble calling.

In this paper I have not sought to present the many specific duties of the medical officer as defined in the regulations, but rather to suggest the larger scope of military hygiene and sanitation, in which the members of the medical department and the officers and enlisted men of the line must labor side by side—for we are, indeed, our brothers' keepers. And, growing out of this harmony and cooperation, coupled with an awakened intelligent public sentiment, will surely blossom the perfection and preservation of an improved physique, morale and effectiveness throughout all branches of the armed forces of this nation.

Eighth and State Streets.

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# THE ARMY MEDICAL CORPS AS A CAREER

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Dr. Osler, in an address[1] before the graduating class of the Army Medical School in 1894, pictured rather clearly the general conception of the life of an army surgeon as held by the medical profession at large. In somewhat varied guises, his attitude is reflected in the advice that is apt to be given when a student of medicine, or a recent graduate, is considering the army as a career.

Also, as will appear, Dr. Osler's words indicate a lack of definite knowledge on the part of general practitioners as to the duties and opportunities of a medical officer. In beginning his address he says:

> For me the Army Medical Department, so far as particulars are concerned, means a library with unsurpassed facilities, the worth of which is doubled by the liberality of its management; a museum in which I have spent some delightful hours; an index-catalogue, which is at my elbow like a dictionary; and the medical history of the late war. . . .

Later, in attempting to cheer the surgeon who is about to enter on a career in which, as Dr. Osler intimates, there will be few cases, little opportunity for contact with medical centers and isolation from professional colleagues, he remarks on the pecuniary advantages and admonishes the beginner that "faithfulness in the day of small things will insensibly widen your powers, correct your faculties and, in moments of despondency, comfort may be derived from a knowledge that some of the best work of the profession has come from men whose clinical field was limited but well tilled." Again, he remarks that "after all, the isolation is neither so enduring nor so corroding as might have befallen your lot in the routine of country practice."

That a physician of such broad knowledge and such keen perceptions should have held these views is not surprising, for few physicians in civil practice have opportunities of observing the medical service at army posts. They argue that, since soldiers must be physically sound on enlistment, there can be comparatively little disease except that of venereal origin. As a result the advantages of the regular and sufficient pay must be balanced against a very narrow professional experience.

This article is not intended to create an impression that the average soldier is an invalid. Nor is it desired to intimate that the army surgeon is constantly holding clinics of peculiarly interesting cases. But by emphasizing the fact that an army post contains not only soldiers but also women and children, and by briefly outlining the manner in which the physicians are selected and trained for the corps, I hope that I may show that the isolation from professional colleagues is not serious, and that the entrance into the medical corps does not signify a future "professional degeneration"—a prophesy I have heard often expressed.

## EXAMINATION AND PREPARATION

On entering the medical corps at the present time a physician must pass, with an average of 80 per cent., a preliminary examination usually covering a period of six days. This consists of a physical and professional examination. If successful, the candidate is commissioned as a first lieutenant of the medical reserve corps until his graduation from an eight months' course at the Army Medical School in Washington. During this probation period he receives $2,000 a year, an allowance of $36 a month for quarters, and an ample allowance for fuel and light. At the school excellent courses requiring thorough preparation and diligent attention are given in clinical microscopy and bacteriology, military hygiene, military surgery, military and tropical medicine, sanitary chemistry, operative surgery, ophthalmology and optometry, *x*-ray work, hospital corps drill, and duties of medical officers, medical department administration and customs of the service. The scope of these courses may be realized when it is mentioned that a recent graduate in medicine who had studied under Professor Ziegler of Freiburg and Professor Welch of this country found no opportunity for reminiscences during the hours devoted to pathology and bacteriology. On graduation the officer is commissioned in the medical corps as a first lieutenant. His pay for the next three years, until his captaincy, remains the same. On changing station, mileage at the rate of 7 cents a mile is allowed, and 5,100 pounds of household effects are crated and delivered to his new post. A leave of thirty days is obtainable each year.

The professional opportunities of the service are not fully appreciated by the profession at large, so it may be permissible to comment on the range of diseases which may be met in this country. In contrast to the rather general impression, venereal cases play quite a subordinate part in the sum total of disease at a post. There is, to be sure, venereal disease, but a routine treatment is usually adopted, and after the diagnosis is assured there is little attention paid to this form of sickness. Records are kept for reference and syphilitic patients are compelled to continue treatment for a definite period after leaving the hospital. Under existing army regulations this is easily possible, whereas in most civil clinics the patients are lost track of after a month or so. Accordingly, even with treatments covering long periods, little time has to be devoted by the surgeon to venereal disease. This is fortunate in that a surgeon has ordinarily many other cases requiring study and thought. When one considers that on an average post there are from 50 to 100 women, counting the wives and relatives and servants of the officers and non-commissioned staff, 25 or more children and usually from 300 to 800 men, it may be seen that a surgeon has a rather varied practice in general medicine, surgery, children's diseases, gynecology, obstetrics and other specialties. Instead of a narrow practice confined to a few cases, it is extremely general.

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[1] Osler, William: The Army Surgeon, in Æquanimitas and Other Addresses, p. 103.

### RANGE OF PRACTICE

Reviewing the cases of three months at a certain eight-company post, one notes the following cases:

*Diseases of the Mouth, Tonsils, Pharynx and Esophagus.*—Mercurial stomatitis, ulcers of the tongue and mouth, alveolar abscesses, tonsillitis, diphtheria and pharyngitis.

*Diseases of the Stomach, Intestines and Peritoneum.*—Gastritis, acute and chronic, gastralgia, constipation, diarrhea, gastroenteritis, enteritis, colitis, peritonitis, appendicitis and malnutrition and digestive disturbances caused by the presence of nematodes and cestodes.

*Diseases of the Genitourinary Tract.*—Uremia, chronic parenchymatous nephritis, tuberculosis of the kidney, rupture of the bladder, cystitis, gonorrhea, pelvic inflammation, vaginitis, urethritis, endometritis, prolapsus uteri and syphilitic infections in practically all forms.

*Diseases of the Circulatory and Respiratory Systems.*—Angina pectoris, endocarditis, mitral insufficiency, aortic stenosis, bronchitis, asthma, lobar and lobular pneumonia, pleurisy, pleural effusion and filaria nocturna.

*Other Diseases.*—Rheumatism, tuberculous adenitis, scabies, sciatica, lumbago, alcoholism and neuralgia.

*Conditions Requiring Operative Measures.*—Ruptured bladder, appendicitis, placenta prævia, retained placenta, tuberculosis of kidney, osteoplastic cranial operation for bullet wound of cranium, fractures and minor injuries.

A careful comparison with previous periods shows that this range of cases during the past three months is not exceptional at this particular post, and yet, comparatively speaking, this station referred to is by no means a large one.

### EQUIPMENT OF HOSPITALS AND PROFESSIONAL OPPORTUNITIES

All hospitals are thoroughly equipped for every kind of surgical work, and the medical department supplies all needs. In most posts there are also *x*-ray machines and full photographic equipment. The laboratories contain every instrument for clinical study. Original investigation is encouraged, and to those following the progress of tropical diseases it is needless to enumerate the important researches that have been completed by army surgeons.

At each hospital the leading American and several foreign medical journals are received regularly. From time to time additions are made to the hospital libraries, so that an army surgeon finds a rather complete library awaiting him at each post. Should any special work be deemed necessary by the surgeon, it is forwarded by the medical department. This would surely indicate that a physician in the service who allows himself to neglect professional studies has himself and not his environment to blame, and such a man would probably remain in the service only until his next examination for promotion. Additional stimulus to study is also found in the fact that frequently surgeons who manifest an especial interest in any particular branch of medicine or surgery are sent to medical centers where their studies can be continued.

As for the isolation referred to earlier in this paper, it is possible that at times a surgeon may be the only physician at a post, but this is rather exceptional at present, and the tendency is to concentrate troops, and have larger hospitals and more medical officers.

When in time the medical profession learns of the true position of the army surgeon, of his excellent opportunities for professional development and of his incentive to serious study, then the advice to the medical student will be to enter this career, which offers such exceptional chances for successful study and research.

# PELLAGRA

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Not the least interesting feature of the medical history of recent times, which has been so fertile in sensational scientific events, has been the sudden coming to the front of the problem of pellagra. Except in the experience of a few practitioners who occasionally encountered undisputed cases of pellagra, this disease had passed almost unnoticed for a number of years; but it has of late suddenly assumed in medical and public attention a rank hardly equaled by apparently more important public problems.

It is not desired to detract in any way from the importance attached to pellagra as a direct and serious danger to public health, a danger which is but too well attested by experience in the past and in other countries; but it may very well be that, on account of the recent discovery of a considerable number of cases in this country, and especially through sensational disclosures, mostly through the lay press, the situation has been made to assume an aspect more serious than is really justified.

The problem of pellagra is surrounded with such difficulties and obscurities that much study should be given to it before attempting to formulate definite conclusions. Scientific circumspection is the more strictly to be enjoined in that, in addition to the novelty and the unfamiliar aspect of the disease, by far the greatest number of observations have been made in hospitals and insane asylums where patients have drifted at last in the advanced stages of the disease, or else when suffering from very complex ailments. Under such circumstances the picture of the disease would naturally be obscured or distorted and the diagnosis, even by the most experienced observer, would be difficult. It is assumed that this accounts for the harrowing pictures of the disease lately drawn and for the pessimism largely prevailing in regard to pellagra.

However conflicting on some particular points, and however much wanting the evidence may be under particular circumstances, it cannot be denied that those observers who have given the closest attention to pellagra have all looked on alimentation by damaged corn as the cause of the disease. Furthermore, those countries of the old world that have been forced to a determined fight against pellagra have all centered their means of defense on that theory, and it has rewarded them with such a fair measure of success as to encourage them to continue the fight on the same lines. The occurrence of analogous intoxications from other kinds of damaged grain, such as ergotism, furnishes a strong argument in favor of accepting zeism as a factor in the pathogenesis of pellagra.

Pellagra was first noticed in Europe in the countries situated near the natural northern limit of corn culture, where the ripening of the grain was often imperfect. The variations in the severity of the disease seemed to correspond with variations in the crops. Thus, after an unseasonable year, the disease would break out in sudden explosions in the spring and assume an epidemic character, and then with the coming of better crops its violence would abate and only sporadic cases would occur.

Much is to be learned from the extended experience of European investigators whose studies on this subject have extended over a century and a half.

It is an endemic trophic disease of toxic origin, especially with vernal manifestations, and characterized by gastrointestinal, cerebrospinal and cutaneous manifestations. In its attenuated or light forms, pellagra may be ushered in by languid, tired feelings, disinclination for any kind of work, more seldom by nausea and vomiting. A few patients may experience a particular feeling of heaviness about the head or of vertigo, a look of sadness or rather of mental depression, as evidenced by the apathy displayed, or by the neglect of duties hitherto cheerfully discharged. Most often pellagra has no precursory symptoms and the disease is at once ushered in by its cutaneous manifestations. The regions most commonly affected are the dorsal surfaces of hands or feet, upper parts of the chest and sternum, the neck, and such parts of the arms and legs as are usually uncovered. Very seldom is the face affected.

The cutaneous lesions of pellagra must be considered as *erythema solare,* the result not of heat, but of the actinic rays at the violet end of the spectrum. These lesions, beginning with the spring, sometimes sooner if the winter happens to be mild, confine themselves to the unprotected parts of the skin, lasting generally during July and August, to desquamate in the fall, leaving during the winter and until the next vernal exacerbation a glossy, erythematous skin. Gaetano Strambio, in the latter part of the eighteenth century, noted that by protecting the already affected skin against insolation it can be restored to its normal condition, but the patient does not escape from the other effects of the disease. The cutaneous lesions reappear the following spring and may thus recur for several years.

In the severe forms the gastrointestinal symptoms are more pronounced, including stomatitis, vomiting and diarrhea. The nervous system is more gravely affected, depression and melancholia being extreme and diplopia, vertigo and hallucinations being experienced. A feeling of heat, muscular contractions, involuntary movements, convulsions and epileptiform attacks are observed. There is extreme weakness, especially of the back and lower limbs.

These symptoms, marking a gradual degeneration or at least an impairment of the nervous system, may be associated or not with delirium. This delirium may manifest itself under two forms—acute and chronic. The acute form may prove fatal in a few days and is attended with a high fever and a hard and vibrating pulse. Some patients are dejected and gloomy, refusing to eat and drink or even to answer when addressed. Others are noisy and obstreperous, or even furious and turbulent, and many, according to Strambio, by moving the head to and fro seem to imitate the tolling of the bells. The chronic delirium—pellagrous mania—according to the same author, assumes different forms. One of them is a kind of dementia; another form is marked by a loss of memory and attention—amnesia—and a third, much more common, is a melancholia, most often religious, with an impulse toward self-destruction, especially by drowning—hydromania. This chronic delirium is almost always incurable, though it sometimes disappears after several years of existence. In the insane asylums of some Italian provinces pellagrous maniacs constitute a considerable proportion of the inmates. According to Marie, pellagrous insanity is on the decrease in France. In other countries the number of pellagrous insane is always considerable.

To such incurable and desperate states of organic degradation has been given, in the Italian hospitals, the name of *tabes pellagrosa,* the exact meaning of which should be more precisely defined. We are here dealing with a most important point concerning pellagra and one that has contributed in no small degree toward obscuring the diagnosis and causing the disease to be misunderstood. The denomination of tabes pellagrosa has been applied to two different states, one of which is but the last degree of pellagrous intoxication. The other represents, so to say, one mode of its termination, when the toxic infection, having accomplished its deadly work, leaves the system in a cachectic condition similar to that caused by any other dyscrasia in its ultimate state, or by any other process of denutrition.

If the statement of T. Roussel is adopted as true, that most pellagrins found in an incurable state in the hospitals and insane asylums belong to this second category, there is uncovered one of the main sources of error which has caused pellagra to be mistaken for and mixed up with all sorts of cachectic conditions, thereby giving rise to those diagnoses so lightly formulated and so unjustly multiplied, pellagra of the insane, sporadic pellagra, etc.

From the foregoing I may conclude that pellagra is not to be considered, as has been done by so many observers, and is still done, as an ill-defined pathologic condition, a kind of diathesis, a gastrointestinal affection accompanied or followed by various nervous accidents, but rather as a clearly defined affection characterized by phenomena which plainly can be divided into two successive pathologic states: first, a primitive toxic, chronic disease, with vernal manifestations, the progress and degree of which are governed and determined by the occurrence of repeated intoxications; second, a cachexia and a consecutive morbid state resulting from the intoxications and from mixed debilitating conditions through which the toxic disease has been originated and has developed itself.

Now that pellagra has been raised to the high importance of a national hygienic problem and the attention of the medical profession centered on it, there can be no doubt that the obscurities that still surround it will soon be dispelled and a flood of scientific light thrown on it.

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# A STUDY OF THE ADMISSIONS TO THE U. S. MARINE-HOSPITAL, CHICAGO

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The following statistics as to the change in the admission rate for certain diseases during the past twenty-five years among the patients in the United States Marine-Hospital at Chicago are believed to be of some interest.

Hospital statistics are not usually very interesting, and are, moreover, apt to have their values seriously impaired by the difficulty in estimating rightly the effect of the many factors which qualify their apparent import, as lack of definiteness in diagnosis, changed conditions as to staff, or varying character in the patients.

The figures for the Marine-Hospital at Chicago, however, as for the other hospitals of the service, while perhaps of no more interest than others, are singularly free from difficulties due to variability of attendant conditions, and this for the following reasons:

1. All diagnoses are made in strict accordance with an official nomenclature.

2. The patients are drawn from persons of one definite occupation and are almost all adult males between 21 and 50 years of age.

3. The method of recording the facts is uniform and fixed.

I doubt if there are two dozen civil hospitals in this country in which the class of beneficiaries, the system of record, and the nomenclature have remained so nearly uniform for twenty-five years.

The diseases selected for investigation were: (1) those among which any marked change in incidence would indicate some distinct change in sanitary, climatic or social conditions; and (2) diseases not appreciably affected by such conditions, diseases whose very uniformity of incidence would serve to make more striking change in admissions for the diseases of the first group.

In the first class I have placed enteric fever, malarial fevers, rheumatism (acute and chronic), syphilis, tuberculosis of lungs, acute bronchitis and pneumonia; in the second, cardiac diseases and kidney diseases.

About one in four patients applying for relief at our dispensary are sent to hospital; others receive treatment as out-patients, and only the actual hospital admissions have been considered. These vary in number from year to year; the average for the twenty-five years has been 560, the figures varying in round numbers from 400 to 800. The year is the "fiscal year," July 1 to June 30.

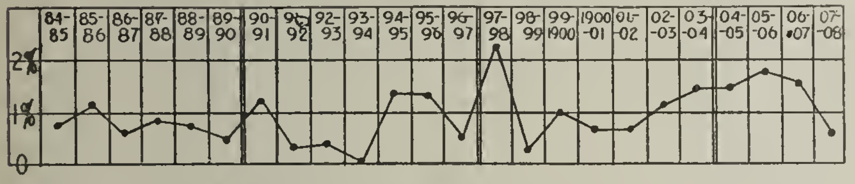

Chart 1.—Percentages of admissions for diseases of the kidney.

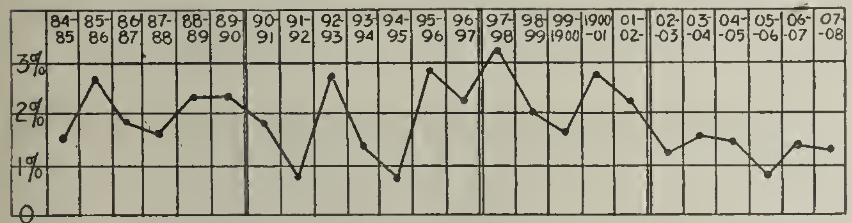

Chart 2.—Percentages of admissions for cardiac diseases.

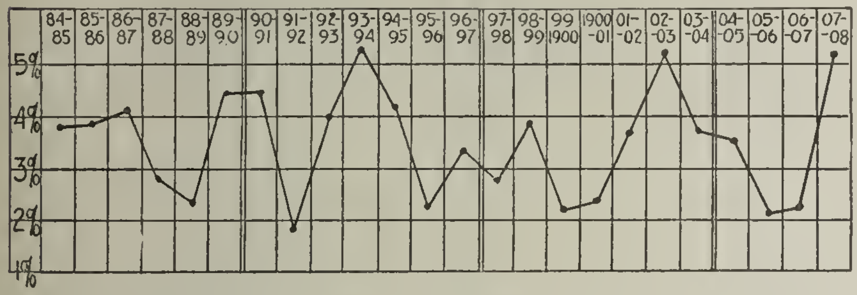

Chart 3.—Percentages of admissions for bronchitis.

One very striking fact is that among 13,500 admissions in twenty-five years there were only 9 cases of diabetes.

The charts for the diseases in the second group are first given, and a glance at them shows at once just such a lack of change in incidence as had been expected. The percentages vary a little from year to year, but the range above and below the mean are about equal.

The charts given by the diseases of the first class are found to fall naturally into two divisions: (a) those whose percentages are found to have been little, if at all, affected by changes in sanitary and other conditions, though their character would have led one to expect differently, namely, bronchitis and pneumonia; and (b) those whose percentages show very distinct changes.

I confess that I am somewhat surprised at these figures. For reasons to be explained in connection with the rheumatism table, and because the development of the use of the microscope for discovery of tubercle bacilli has eliminated many cases that might formerly have been diagnosed as bronchitis, I had expected that the table would show a progressive decline in the admissions for bronchitis, interrupted here and there by the occurrence of increases due to influenza epidemics.

The increases of the influenza years are, indeed, shown, but the expected decrease does not appear.

The same remarks apply to the pneumonia rates.

The enteric fever table shows just what was expected: a rise, a decided fall and then a steady increase, the initial rise and decline coinciding closely with the condition of the city water before and after the opening of the drainage canal, the steady rise of the last four years being a part of the well-known, but not completely explained, rise in the enteric rate among the shipping around the great lakes. The final figures leave the rate 4 per cent. against 1.4 per cent. twenty-five years ago.

The tuberculosis chart is something like the enteric chart: a sharp rise, a sharp fall, a fairly even average for a number of years and then a steady rise.

Now, there are certain facts to be considered in connection with this chart. First, the sudden fall in the number of admissions from 1889 to 1892 (from 9.4 to 4.4 per cent.) coincides exactly with the general introduction of the issue of modern microscopes to the service hospitals and the general introduction of the practice of examining sputum. One would have expected that this would have resulted in a sharp rise in the admission rate; on the contrary, it dropped more than 50 per cent.

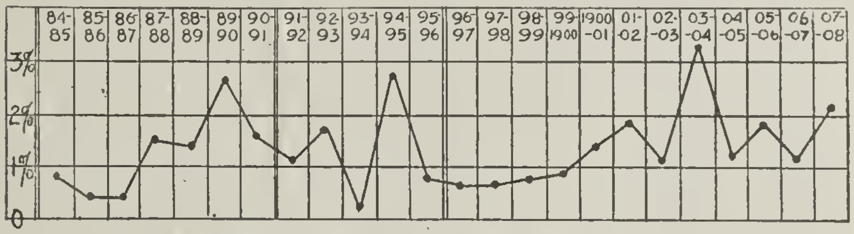

Chart 4.—Percentages of admissions for pneumonia.

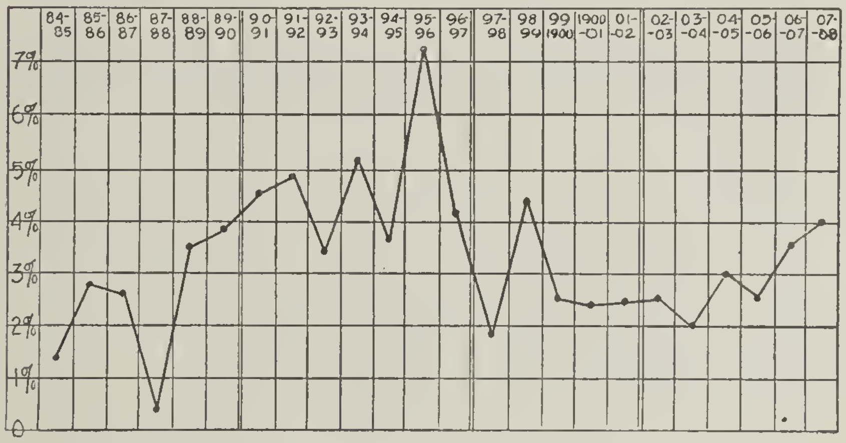

Chart 5.—Percentages of admissions for enteric fever.

In 1897-1898 the service opened at Fort Stanton a sanatorium for its tuberculous cases, and from 1901 probably 33 per cent. of the cases have been sent there, the percentages for the last three years being 40, 35 and 56.5.

Formerly patients were admitted, improved and were discharged, and were readmitted, possibly more than once, either here or at some other service hospital, each time of admission counting necessarily in the tables as a new case. I am sure that at least 15 per cent. of the admissions for tuberculosis prior to 1900 were readmissions. It follows thus that for the decade from 1890 to 1900 the net admissions were just about 4 per cent. and were strikingly uniform in number. Now, from 1900 on, the readmissions of patients coming in the same year as original admissions ceased to be an important factor. Yet just at this time apparently begins the steady increase of from about 1.5 to 2 per cent. a year.

Turning to the out-patient figures, we find that their numbers have decreased to the vanishing point; last year there were three, and year before none. Now, of course, this is due to the policy of treating as nearly as possible all cases of tuberculosis in hospital, a policy I have strongly enforced for the past four years, and I have, therefore, examined the out-patient figures for a number of years back to see if they gave any explanation of the gradual rise in the admission rate.

They do not explain it; on the contrary, they emphasize it, for the total out-relief and hospital relief in 1898, the year before the segregation plan got to working, was exactly the same as last year, when the system had been ten years in operation. Moreover, the figures which I have prepared for the whole service during the past twenty years show a decline in the amount of tuberculosis treated.

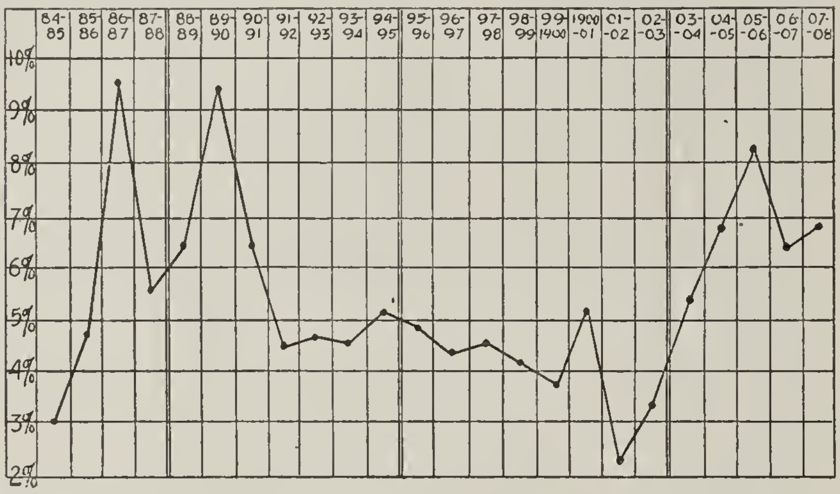

Chart 6.—Percentages of admissions for pulmonary tuberculosis.

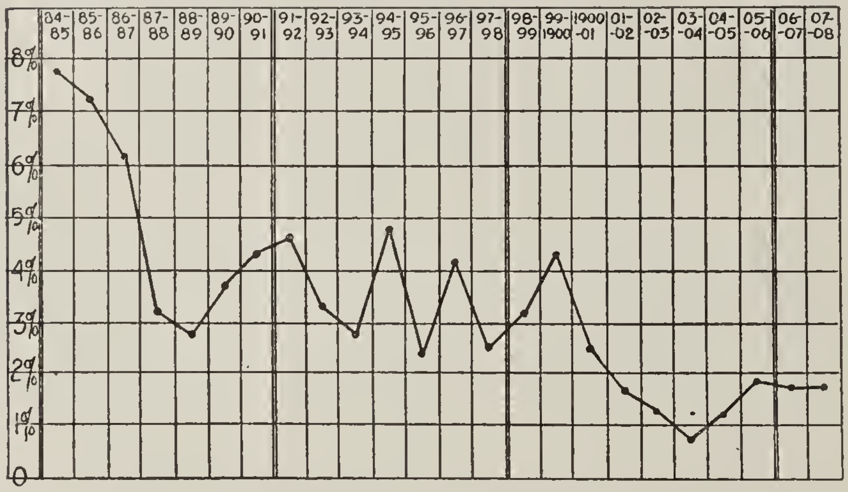

Chart 7.—Percentages of admissions for malaria.

The Chicago figures, therefore, seem to indicate clearly an increasing prevalence of pulmonary tuberculosis among the merchant seamen frequenting the port, in the face of a declining rate for merchant seamen generally.

We come now to the three most striking results of the investigation, viz.: the charts for malaria, rheumatism and syphilis.

The malaria chart illustrates strikingly the necessity of understanding all of the qualifying circumstances if one hopes to make intelligent deductions from medical statistics; it also illustrates how often such qualifying circumstances are entirely outside of the normal professional horizon—are, in fact, dependent on economic or industrial causes. At first glance it shows a very striking and steady decline in malarial admissions, from nearly 8 per cent. of the total to below 2 per cent., in round number a decline of admissions for malaria of 75 per cent., giving the impression of a great improvement in the prevalence of malaria about the lakes.

There has certainly been a great improvement in this respect as far as concerns Chicago and vicinity, for twenty to twenty-five years ago there were suburban sections and sections along both north and south branches of the Chicago river which were distinctly malarious; but the two main factors in this improvement are industrial. They are the decline in steamboating on the lower Mississippi and the rise of the great lumber, iron, copper and transportation corporations engaged in business about the lakes.

Formerly when navigation closed on the lakes there was an extensive migration synchronous with that of the ducks and geese. When serving at St. Louis, Cairo and Memphis I came to know a good many of the regular migrants who came and went year after year, but the migration was then already becoming a thing of the past.

It was these men who, coming north infected, formerly furnished a large quota of the malaria which was responsible for from 6 to 8 per cent. of our admissions. We still get a few such cases every year, but not many.

There was formerly a large fleet of schooners and small steamers on the lakes engaged in carrying lumber, etc. They entered the smaller harbors, and often loaded almost alongside the shore. Moreover, they discharged along the south and north branches and were apt to lie some time at the bank. At the present time the large steamers load mechanically with great rapidity at great terminals, often miles from the close vicinity of the forests and mines, and discharge as quickly.

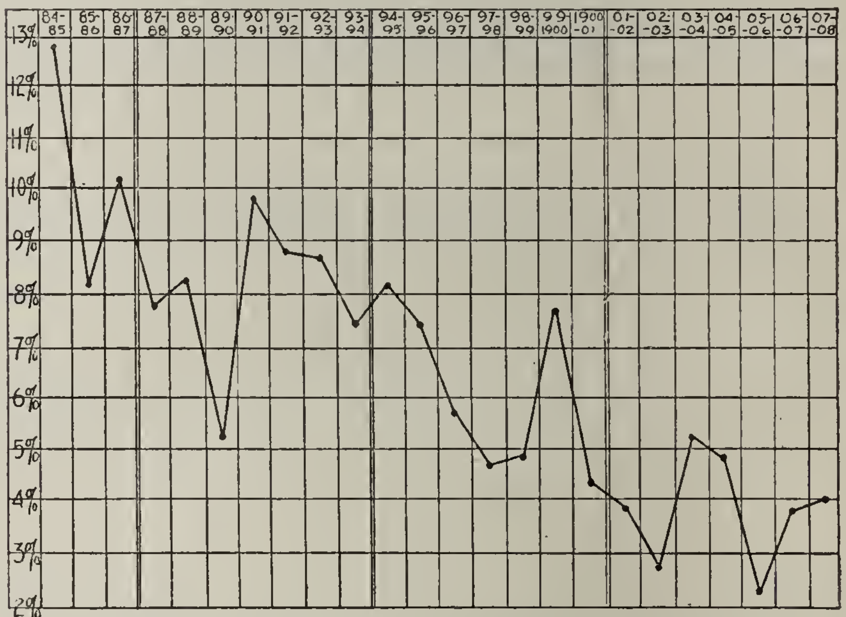

Chart 8.—Percentages of admissions for syphilis.

The chart mirrors these changing conditions very clearly. The decline in the river shipping was rapid after 1885 and coincides with the sharp drop in the curve. Then for about ten years this apex vibrates up and down with fairly even excursions above and below 3.5 per cent; and, finally, there comes the sharp decline of the past decade, coinciding closely with the rise of the great companies and the disappearance of the schooners.

Here at last in the syphilis chart is one which can be considered entirely on the basis of the sanitary or medical facts in the case; and I cannot see how it can fail to interest greatly those concerned with the "venereal peril." Here are the figures of admissions for twenty-five years among 13,500 young adult males of as nearly as possible the same class and suroundings, and they show a decline from 13 per cent. to 4 per cent. of the admissions, and a steady regular decline as well.

A word as to diagnosis. The service regulations require that the cause, not the manifestation, of a dis-case be stated. That is, for example, a tabes due to syphilis is entered "syphilis, secondary," and under "subsequent complications" it is entered "tabes," in brackets. This is the uniform and prescribed system; so the question of terminology cuts no figure in the result shown by the chart.

The decline is certainly not due to increase in the morality or sobriety of our beneficiaries, nor in their character; indeed, the latter has declined, the English, Irish and American sailors having to some extent given place to a very low order of foreigners. These last possibly drink less whisky and certainly fight less than their predecessors, but I think that they are less often married.

What, then, is the cause? Three solutions suggest themselves:

1. A decline in the prevalence of syphilis.
2. An improvement in diagnosis and treatment, resulting in fewer of the severe eruptions and crippling, late lesions.
3. An attenuation of the virus by reason of a more general syphilization of the class.

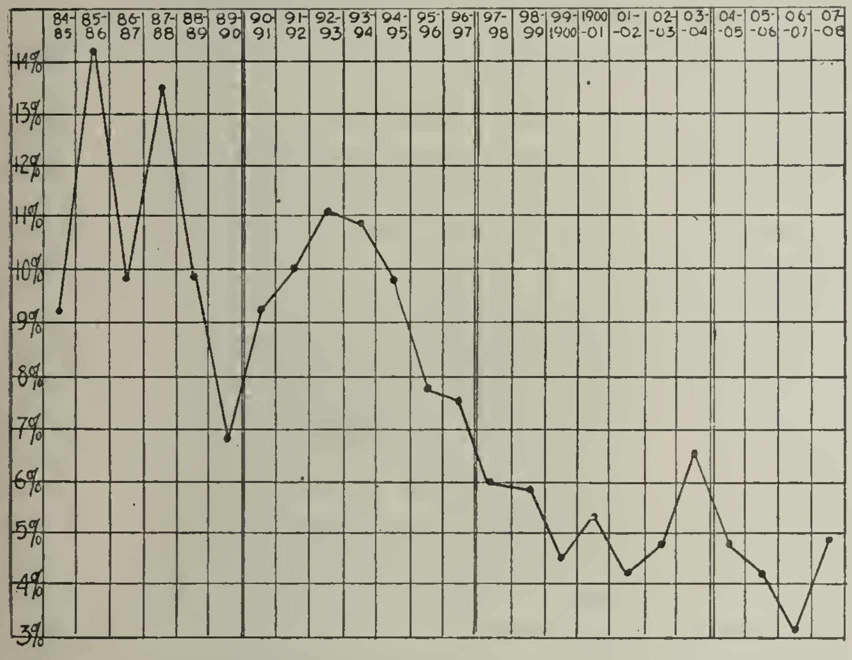

Chart 9.—Percentage of admissions for rheumatism.

I do not believe that the first is true. The statistics of the country generally are said to tell a very different story.

The second explanation is unquestionably sound. We, like the profession at large, twenty to twenty-five years ago did not so accurately draw a distinction between chancre and chancroid, and so more patients remained without constitutional treatment until their secondary stage was well developed; moreover, the very number of such cases made us less considerate of the individual patient, and they were discharged earlier and were hence more apt to relapse in later years.

The third reason is the one which, I think, is mainly responsible for the decline. It is a personal opinion merely, I know, but I have held it for some time; and, indeed, I began this inquiry because I thought that the syphilis I was seeing seemed much diminished in severity and I debated whether the cases were really fewer as well as lighter. This is not the place to argue the matter, but I state it as my opinion that there has been a decline in the severity of syphilis due to the wider prevalence of this disease—in other words, to an attenuation of the virus.

In Chart 9, again, is a chart that is worth attention. The steady and almost uniform decline is most remarkable and the cause is as plain as the results are striking. The decline in rheumatism is the direct result of the enormous improvement in the conditions under which the men work and sleep. Gone are the sailing vessels and small steamers with their drenched decks, hours of exposure on watch and the turning-in in cold, damp, unheated forecastles. The absence of work aloft and on deck on the steamers and their higher free-boards have radically changed the conditions on watch, and the living quarters are comparatively warm and dry.

Looking back at the bronchitis and pneumonia charts, it will be noticed that these diseases have somewhat increased, and it was stated in that connection that this was a surprise at first. On reflection, however, it appears that the reason for these increases is the same as that for the decline of rheumatism.

The sailor has been replaced by the fireman. He escapes the diseases associated with cold and exposure; he does not escape those due to sudden exposure when overheated.

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# THE PROPHYLAXIS AND TREATMENT OF GASTROENTERIC TOXEMIAS OF BOTTLE-FED INFANTS IN SUMMER

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One-third of all infants born into the world die before the third year, and the majority of these deaths can be attributed to gastroenteric toxemias of summer. About 85 per cent. of these deaths occur among bottle-fed infants.

In preventive medicine we encounter social as well as medical problems. The saving of the lives of infants from preventable disease is as much a social as it is a medical problem—so long as tenement builders are permitted to construct dwellings for human habitation without regard to provision for adequate systems of light or ventilation, and are allowed to fill them from basement to garret with men, women and children huddled together like sheep or cattle. So long as cities and municipalities permit the sale of unwholesome milk just so long will infant mortality be a stigma and a disgrace on our state and national life.

The saving of the lives of these infants is a greater problem than that of race suicide, and an infinitely more practical one, and as such demands the attention, not alone of medical men, but of public men, high in authority, who ought to be engaged, a portion of their time at least, in enacting laws safeguarding the lives of infants.

In the cities of Ohio, with but few exceptions, health officers are more concerned with the problem of unwholesome milk than with congested tenements, with their accompanying filth, squalor, foul air and poverty, since these latter conditions do not prevail to any extent.

Certified milk is fast coming to the rescue, and is the means, no doubt, of saving many lives, but its imperfect system of production and delivery and the higher cost often place it beyond the reach of the poor families who need it most. Moreover, it has other disadvantages; the babes who are fed on it are constipated and do not thrive; nor do they show the same rate of gain as do infants fed on less wholesome but fresher milk. These disadvantages are slight, however, when we consider the greater freedom from nutritional troubles which certified milk assures. In Akron a splendid plant is in operation for the production of certified milk, and the health board bacteriologist informs me that the bacterial count is as low as 7,000, while ordinary milk being sold in the city shows a count of 2,000,000. There has been some trouble with the delivery system. Some of the milk is 24 hours old when it reaches the consumer, and when kept for use another 24 hours, or 48 hours in all, it is entirely too old for infants during the hot months, unless we can be absolutely sure of its proper handling before and after delivery. I am informed that the bottles are to be stamped in the future, so that the consumer may know the age of the milk when received. This I consider a most vital matter.

Certified milk holds an important place in the reduction of infant mortality, but it cannot compare with reasonably clean milk fresh from the cow as a food for infants at any season of the year. Many cows are kept in the city of Akron and its immediate vicinity, and I have been advising families either to own a cow or to get milk from some neighbor's cow for the baby's use, instructing the mother in detail as to its proper care and preparation. I have yet to see a single case of infection from milk so obtained and cared for. It will be objected that there are only a comparatively few people who can obtain milk in this way, and this is true; but, on the other hand, there are many who could obtain such milk who are not now doing so chiefly because they are told that certified milk is the best obtainable for the baby, which is only true when fresh milk is not to be had. If certified milk for any reason is also out of the question, and ordinary milk must be relied on, then let it by all means be pasteurized during the excessively hot weather. Most of the objections to pasteurized milk are of but little consequence, since it need be done only for a period of three months; moreover, mothers can be taught to pasteurize milk by some simple home method.

At some future day we shall be able to procure wholesome milk at a moderate cost. The various milk commissions and health protective societies and organizations of like nature are carrying forward the work of education to such an extent that people are beginning to demand clean, wholesome milk, and the dairyman is coming to understand that unless he produces it he will be driven out of business by the stress of competition.

When the milk question is once solved, then the greatest of all factors in infant mortality shall have been conquered.

Mothers should be taught the great value of keeping the baby out of doors night and day during the hot months. This I consider next to clean milk in importance. The more fresh air the infant gets the better will be its digestion. I have repeatedly seen infants who were unable to digest properly any modified food mixture when kept indoors, go on to perfect digestion and assimilation on precisely the same modification when the tonic effect of fresh air was added by keeping the baby continually in the open air. Babies do not get fresh air enough, ill or well. "The catch cold fear" of most mothers is so firmly grounded that it will require generations to overcome it, but the fresh air camps, day nurseries and other fresh-air organizations are accomplishing much in the way of education, though much teaching yet remains to be done.

Heat is another factor in the production of gastroenteric disease—a temperature range of from 74 to 90 F. degrees being especially dangerous. I discovered that most of my cases of infection resulted from the 10 p. m. feeding, due, in my opinion, to two factors—the milk is older at this time and the nursery excessively hot. I found that during the hottest nights of last July the temperature of the average upstairs sleeping room was 10 degrees higher than the air on the downstair porches; for example, when the temperature was 81 F. in the nursery at 10 p. m. it was found to be but 71 on the downstair porches. To put a baby to bed in a room at 81 F. invites an attack of indigestion by heat depression and by raising the child's temperature to such an extent that the growth of pathogenic bacteria ever present in its alimentary canal are thereby favored, and when to this is added warm milk, 24 hours old or older, the conditions are most favorable for an attack. On the other hand, if the child is placed out of doors on a properly protected and screened porch to spend the night, with the temperature at 71 F., and gradually dropping, the factor of heat is eliminated, and the infant's digestion is assured by the stimulating and tonic effect of the fresh air, and therefore the danger of night infection is reduced to the minimum.

Over-feeding is best avoided by giving the baby an abundance of fresh boiled water to drink. The destruction of flies is important. Good serviceable screens are a good investment. Light clothing and frequent cool bathing are essential. Unceasing diligence in all hygienic matters is paramount in the prophylaxis of gastroenteric toxemia.

In the treatment of this infection a number of general principles are to be observed.

First, the withholding of all food for at least three days is imperative; after that time barley water may be given.

Second, the child should rest in bed out of doors. No child should be permitted to creep or to sit up even if apparently able to do so.

Third, the toxins should be eliminated by stomach washing, colonic irrigation and catharsis. As a rule these attacks assume such an alarming character at the onset that the physician is called in early, and there is no procedure so valuable as stomach washing, using boiled water at a temperature from 100 to 110 F., to which may be added a small quantity of lime water. Two drams of castor oil should be given through the tube before its withdrawal—a thorough colonic irrigation should follow, and after the stomach is settled cooled boiled water may be given freely by the mouth. This is all that is required in the majority of cases, and the child will be apparently well in three or four days. In cases seen a little later, stomach washing is not indicated unless that organ is irritable, but colonic irrigation should be done every four hours the first day of treatment—after that twice daily is usually sufficient. This should be followed by nutritive enemata at intervals of four hours. The rectal feeding should be continued until it is safe to begin feeding by mouth. If the rectum protrudes and becomes irritable, the application of a 5 per cent. ointment of cocain will be found efficacious. Calomel should follow the oil, but the less medication used the better. These infants are over-drugged, and thus the irritation is increased and prolonged, especially by calomel. Abt,[1] of Chicago, has recently shown by a "series of experiments the irritating effects of the common cathartics on the intestinal mucosa of infants. The benzidin test was used for blood. Calomel, magnesium sulphate and castor oil were the cathartics given. Both blood and mucus were shown in the stools after a few days. Calomel produced the greatest amount of irritation." When we consider how delicately the intestinal mucosa of an infant is constructed, it is well to be cautious in the administration of cathartics.

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[1] Archives Pediat., November, 1909; abstr. in The Journal A. M. A., July, 1909.

Fifth, of measures to control temperature and restlessness, a tub bath is the best. The child can be in the tub from ten to twenty minutes out of every two hours if necessary. An ice cap to the head is useful.

Sixth, the following measures may be used to allay the inflammation: In addition to rest in bed and after thorough cleansing of the alimentary canal, bismuth subnitrate may be given, from 1 to 2 drams daily, for a child one year old. Salol, 1 or 2 grains every three hours, is of some benefit as an intestinal antiseptic. Opium is indicated if there is much pain and continued frequent stools. It has been used too freely in the past and should not be given at all if cerebral symptoms and high temperature are present. Opium is useful in convalescence, when the taking of food is followed by a movement of bowels. In cases of a cholera infantum type with threatened collapse, it may be given hypodermatically in the form of morphin sulphate, 1/100 of a grain, with 1/1200 grain of atropin. This dose is suitable for a child of one year. For the prostration so often present, brandy should be administered by adding it to the boiled water, which the infant takes to allay thirst—½ oz. in 24 hours. Hypodermoclysis may be necessary in the graver cases. During convalescence tonics are indicated, and beef juice should be given freely. Organic iron in a liquid form to which is added Fowler's solution is a convenient method of administration. Lastly, removal to the country or seashore in those cases in which relapses are prone to occur will accomplish more than anything else in restoring the infant to health.

The use of antitoxin has not yet reached a practical basis in the treatment of gastroenteric disease of infants. I have, therefore, omitted its consideration in the preparation of this paper.

# INJURY BY ELECTRICITY*

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In view of the widespread and increasing industrial use of electricity it is not surprising that electric trauma is on the increase and that cases thereof are being cited in medical publications. Despite this, authoritative information as to the physical effects of electricity is very scanty,[1] especially in American literature. In Germany (notably through the investigation of Jellinek[2]) and in France and Great Britain, there has been much preliminary experimentation and subsequent case reporting by physicians; but in this country investigation has been limited almost solely to electric engineers, and case reports have been few in number. This is my excuse for bringing the subject before the section as this paper aims to narrate what has been learned from personal observation and a very considerable search of the available literature.

### TECHNICAL TERMS

For an intelligent understanding of the matter, it is necessary to know some of the usual technical terms, and they can be stated thus:

> The *volt* is the unit of pressure. The *ampere* is the unit of strength. The *ohm* is the unit of resistance. The *coulomb* is the unit of quantity.

But for all practical medical purposes it is enough to remember that volt is the unit to express pressure, intensity or electromotive force; and that the ampere denotes strength or current quality. The volt is the impelling force which moves the electricity through any conductor. The ohm is the unit of resistance and expresses that quality of the conductor which resists the passage of electricity through it.

Electricity flowing through any conductor is impelled by the voltage of the circuit and is opposed by the resistance of the conductor. The size of the current which flows is directly proportional to the voltage and inversely proportional to the resistance. This "size" is measured in amperes, the ampere being the unit of current, and its numerical value is found by dividing the volts by the ohms; ($A=V/O$; "Ohm's Law"). Ordinary conductors carry currents of three varieties: direct (or continuous); alternating; and interrupted.

The contact may be of four kinds, viz., *positive,* where the body is firmly and constantly pressed against the conductor; *partial,* where the contact is slight and steady; *brushing,* where the contact is slight and for a short interval, and *arcing,* where the current reaches the body via a vapor through which the current passes. The *intensity* may be (1) *low* (100 to 300 volts); (2) *medium* (400 to 600 volts); *high* (1000 volts and over); this classification being that adopted by Prevost and Batelli, of Geneva, as the outcome of many experiments.

The *duration of contact* may be (1) *short,* from one to five seconds; (2) *medium,* from five to eight seconds; and (3) *long,* from eight seconds upward.

*Mode of receipt* is generally by charged (1) wires or rails; (2) metal apparatus or tools; (3) flashes or arcs which are productive of burns only.

The average electric pressure in electric lighting is from 100 to 225 volts (direct), usually about 110 volts; in overhead and underground trolley systems from 500 to 600 volts (direct); suburban lighting circuits 1,000 to 2,000 volts (alternating); series arc lighting circuits 2,000 to 4,000 (direct or alternating); in overhead, long haul railway systems (as the N. Y., N. H. & H. R. R. Co.) 11,000 volts (alternating). In the third rail systems, like the local subway, the voltage is about 550 (direct). The highest voltage transmitted by wire in this country is that generated from Grand Rapids, Mich., 100,000 volts. Another system in Denver transmits 88,000 volts, and one in Los Angeles 75,000, and that from Niagara Falls 60,000.

A voltage of from 200 to 500 is usually not dangerous, but the alternating current is considered to be more dangerous than the direct. In the electrocution of criminals from 1,300 to 2,000 volts are used, the average being 1,700 of the alternating type.

### FACTORS INFLUENCING PHYSICAL EFFECTS

The physical effects are mainly determined by the following:

1. Amount and duration of current.
2. Site, type and area of contact.
3. The individual.

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* Read before the Surgical Section of the New York Academy of Medicine, March, 1909.

[1] In addition to the subsequent numbered references the following may be consulted:
Batelli, F.: Rev. méd. de la Suisse romande, 1902.
Cleaves, M. A.: Ref. Handbook Med. Sc., iii, 742.
Crile and Macleod: Am. Jour. of Med. Sc., 1905, p. 417.
Cunningham, R. H.: New York Med. Jour., Oct. 21-28, 1899.
Jones, H. L.: Brit. Med. Jour., 1895, i, 468.
Lloyd, J. H.: Med News, Nov. 24, 1894.
Mills and Weisenburg: Univ. Pennsylvania Med. Bull., March and April, 1903.
Spitzka, E. A.: New York Med. Rec., Jan. 4, 1902; Proc. Am. Phil. Soc., 1908; Jour. Med. Soc. New Jersey, 1909.

[2] Jellinek, S.: Numerous articles in German medical journals.

Amount and duration of current is the main essential, and the greater the degree and the longer the duration, the greater the effect. High voltage, long duration and positive contact generally predicates coma, severe systemic shock, burns and oftentimes death. Medium intensity, with medium duration and partial contact, generally means burns of the second or lesser degree, less profound coma and shock with more or less paresthesia, especially numbness and tingling. Low intensity, with short duration and brushing contact generally means burns of the first degree or none, slight, if any, coma, and moderate paresthesia mainly of the tingling type. Low intensity, with brief duration and partial contact, generally means absence of burns or systemic symptoms, paresthesia of the formication type being generally alone complained of.

Amperage is so variable that it has not been mentioned because of its uncertainty, but the higher it is, the greater the effect in general.

Site, type and area of contact is less important, pursuant to the physical law that electricity takes the shortest route between two electrodes, and this has led to investigation to determine the resistance of various bodily elements to the transmission of electrical energy. It has been found that the tissues transmit proportionate to the amount of their fluid constituents; the more saline this is, the better the conductivity. Blood is the best conductor, mainly because of the saline serum. Muscle comes next, nerve tissue follows, and bone is a poor conductor. Similarly, experiments have shown that the bodily tissues exert varying resistance to the passage of electricity, as denoted by the unit of resistance, the ohm. The average human resistance is 1,000 ohms. Dry skin is very resistant, and one observer (Jolly) says that this is 150 times greater than that of the underlying tissues. A dry, hard, thick skin offers more resistance than one that is moist, soft or thin; an acid or alkaline perspiration reduces the resistance, while an oily skin raises the resisting power. If a strong alkali be applied to the skin so that the oily secretions are removed, the resistance is much lowered, so that the subject experiencing little effect from 100 volts might be disturbed by 10 volts. Larrat[3] says that if muscle is given a standard resistance of 1, then nerve and cartilage can be denoted by 2.5; bone as 15 to 20; and the skin and epidermis as between 100 and 500. Electric energy meets greater resistance passing transversely to the axis of a tissue than when transmitted longitudinally, this being 6:1 in muscle, 3:1 in nerve fibers. Turner's experiments indicate that transmission from hand to hand meets with a resistance of 1,375 ohms; through one hand 900 ohms; from cheek to cheek 600 ohms; from one supramalleolar region to another 700 ohms; and through the calf of leg 350 ohms.

As compared with any metal, the body is a poor conductor, it being calculated that muscle is 115 million times a poorer conductor than copper. It has also been estimated that one inch of the sciatic nerve has eight times the resistance of the Atlantic cable.[4]

The greater the area of contact, the greater the effect, especially if the current traverses vital parts, notably if the heart is in circuit.

The individual variation means the personal equation, and it is strikingly similar to that of drug idiosyncrasy, notably as to sex, age, physique, occupation and temperament. Males are less affected than females; the aged offer less resistance than the young on account of the constituents of the blood vessels; those of rugged and muscular physique have a greater conductivity than those of the opposite type; the phlegmatic are subjectively less prone than the neurotic; those accustomed to electric energy are often less influenced than the novice. Illness, sleep and alcholism render persons less sensitive.[5]

Variations as to time of day, type of clothing, amount of food in the stomach and general well being, all seem to exert some influence; but the given effect cannot always be determined by these factors, and I have known electric workers to have practically no effects from contact under circumstances that left no doubt as to high voltage traversing the system.

### PHYSICAL EFFECTS

In a general way these are three in number:

1. Death.
2. Burns.
3. Nervous symptoms.

*Death.*—Death from electricity is usually sudden, and is best represented by the execution of criminals, lightning stroke and unexpected contact with highly charged materials, the body completing and short-circuiting two conductors. Under such circumstances there may or may not be decided external evidence of what has occurred, any such taking the form of burns of varying degree, areas of lividity or ecchymosis, or simple crimsoning to mark the place of entrance or exit of the current. It is, however, very unusual for a lethal dose of electricity to fail to leave some visible evidence at the points of contact. Postmortem, such cases are surprisingly free from gross microscopic changes, and the most careful search of all the tissues has as yet failed to give any adequately uniform cause of death. The findings in general are not unlike those following drowning or suffocation. The body of Czolgos, assassin of President McKinley, was subjected to the most minute scrutiny, especially by Spitka's examination of the brain and cord, but nothing more than the customary fluidity and venous stasis of the blood with flaccidity of the heart muscle was found. In a still more recent autopsy of an electrocuted murderer the same negative findings were recorded. Observers appear to have two main theories to account for death under such circumstances; one being that the heart muscle is paralyzed by a tetanic spasm analagous to that observable in skeletal muscle under high voltage; and the other theory, that there is a definite cellular destruction, especially of the vital centers. In connection with this last, it has occurred to me that the disintegration that seemingly takes place may generate toxic materials, thus adding a chemical to a mechanical irritation that almost immediately kills. Death from low tension current is by heart fibrillation; heart and respiration alike fail from lethal medium tensions; and respiratory failure is the cause of death in high tension accidents.[6]

*Burns.*—Burns by electricity differ from those due to extremes of temperature only in origin, and they may be of the usual first, second and third degrees. An electric burn is an index of resistance of the tissue affected, and always indicates that the full strength of current has not been received. The character of the burn is sometimes determined by the type of metal acting as a conductor, and burns by arcs and flashes from copper conductors sometimes produce less severe burns than those emanating from iron or steel. By contrast with burns due to flame, or contact with steam, hot solids or liquids, deep electric burns are apparently less painful, produce less systemic shock, and heal more quickly. This was vividly impressed on me in a recent Harlem hospital service, where in adjacent beds lay patients who sustained irregularly distributed burns of all degrees in an incendiary fire, and also those who had received "third rail" burns; the former had more systemic symptoms, the burns were more intractable to treatment, and the complaints of pain were greater than in the latter class of cases. This is probably due to the fact that electric destruction of tissue is sudden and absolute, as if done by electric cautery. The contrast is even greater by comparison with burns from hot liquids, such as boiling water, oil or tar, and this irrespective of the surface areas involved. The resultant scarring and contraction appear about equal, even though electric burns are often more diffusely distributed over widely separated areas than burns of other kinds. If the clothing is ignited, there is added the element of heat burns to those which may be the direct result of electric contact. Examples of "third rail" burns are shown in the annexed illustrations (Figs. 1 and 2).

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[3] Electrothérapie: Quoted by Dawson Turner, Manual of Practical Medical Electricity, p. 188.

[4] Beard and Rockwell, p. 168.

[5] Aspinwall, F. B.: Lancet, 1902, p. 660.

[6] Minot, L.: Des accidents causés par l'emploi industriel de l'électricité, etc., Paris, 1908, p. 21, quoting Prévost and Batelli.

Burns resulting from partial or arcing contact often heal slowly and show a tendency to slough or to become gangrenous, especially if the trophic supply be involved. Cases of this type sometimes give external signs disproportionate to the underlying damage, and the severer symptoms may be a few days in appearing, and then show as isolated or confluent areas of a more or less gangrenous type. From the time of receipt of burns of this kind to the outbreak of severer manifestations, the interval period is always filled by symptoms indicative of more or less deep seated damage, in addition to the superficial evidences.

## REPORT OF CASES.

As chief surgeon of the Metropolitan and Interborough Railways I have had many opportunities to examine cases of electric injuries, and one of the worst of these was the following:

CASE 1.—*History.*—S., a laborer, was working in a manhole repairing the "channel rail" of one of the surface roads, the current of 550 volts being turned on. In some manner he fell against this charged rail so that his back contacted at about the lower scapular level, his feet being grounded on concrete.

*Examination.*—He remained in that position several minutes and when released was found to have a third degree burn that practically escharred his back from mid-scapular to the lower lumbar region, and it is said that the burn reached far enough to expose the underlying viscera. He suffered profoundly from shock and was unconscious, and his recovery was protracted. Even at this date (6 years later) there is an unhealed area about 3 by 4 inches in the central portion of the scar, but all except this space cicatrized without skin grafting in a remarkable way considering the original extent and severity of the wound.

*Subsequent History.*—Some years later he was seen and exhibited by me, and at that time he had a butterfly-shaped scar 13½ by 11 inches in the involved area, in the lower portion of which was a supposed lumbar hernia. The scar had contracted enough at first to almost draw the wings of his scapulæ together and spinal flexion was impossible; but by continued self-bending and manipulation of his back, he so far recovered as to be able to resume manual labor. Later he was operated on by me and the supposed lumbar hernia proved to be retracted bundles of muscle fiber. The above mentioned unhealed areas were covered by autogenous Thiersch grafts, but healing was not yet complete in January, 1910. He at no time developed a traumatic neurosis (Fig. 3).

CASE 2.—*History.*—Another severe case was that of D. H., aged 23, ironworker, born in Finland. He was working on an iron trestle repairing overhead wires of a suburban electric and steam railroad, and, while assuming an upright position, his left occipital and clavicular regions contacted with a wire bearing 11,000 volts, and he became temporarily unconscious. Through the courtesy of Dr. F. B. Littlewood he was seen with this physician ten days later at the New Rochelle Hospital, and at that time he was able to be out of bed for a portion of each day.

*Examination.*—He then presented numerous sloughing and granulating burns of the left upper extremity and chest, and an extensive third degree burn of the left occiput and of the soles of the feet. He had little if any systemic shock or sepsis. There was no nervous involvement organically or functionally. Mentally he was as apt as could be expected, considering the fact that about one-sixth of his body was more or less badly burned.

The duration of contact in this case could not be ascertained, but it must have been short and imperfect, as it is to be noted that the contact was on the head and the left upper extremity, and that he was grounded by his feet standing on a metal support so that the main part of his body was temporarily a part of the circuit. He wore no hat, and his shoulders were bared except for a thin shirt, and he had no tools in his hands. Theoretically this man should have been unable to withstand electric shock of that volume, but the burns evidenced the fact that only a portion of the voltage was received. I am told by Dr. Littlewood that he made an excellent recovery, and that his progress and subsequent symptoms were those typical of severe burns.

CASE 3.—*History.*—I am also indebted to Dr. Littlewood for notes of the case of J. M., who was working on the same railroad and who came in contact with a transformer so that his left shoulder apparently received 11,000 volts.

*Examination.*—He immediately became unconscious, and when seen at the New Rochelle Hospital by Dr. Littlewood, had severe burns of the entire left half of the body, and the sole of each foot showed two large blebs about the circumference of a dollar. His temperature ranged from 98 to 99.4, pulse 99 to 120, respirations 20 to 40. The next night he began to vomit, and developed an uncontrollable singultus. The vomitus became biliary, and assumed the type seen in gastroduodenitis following severe burns of this or other origin.

He died early on the fourth day apparently from systemic shock. In this case the manner and duration of contact was problematical, but it is stated that the contact was for an appreciable time and that he was probably grounded on metal judging from the blebs of the feet. It is to be noted that the respiratory rhythm was more disturbed than that of the heart, and that his temperature was at no time more than one-half degree below normal. Death in this instance was probably due to respiratory failure accompanied by paralysis of the diaphragm. No autopsy was permitted. The cause of the gastroduodenal symptoms in any class of severe burns has never been satisfactorily explained, and it is generally a bad feature.

## NERVOUS SYMPTOMS

In the absence of direct destructive or inflammatory damage to nerve fiber and the subsequent development of a more or less localized neuritis, the nervous effects are almost invariably those of the hystero-neurasthenic type, it being rare in my experience to find either neurosis separately as a consequence of electric or any other form of trauma. I have never known an organic disease of the central nervous system to develop from the passage of electricity through the body, nor does the available literature narrate more than one instance of this nature. If a direct injury has been done to nerve fiber, the symptoms will be those corresponding to the distribution of the affected nerves, and hence no description is needed.

Where direct injury to nerve tissue is absent or minor in extent, the subsequent development of neurasthenic and hysterical symptoms is generally psychic in origin or dependent on auto- or hetero-suggestion, and the signs then presented are usually disproportionate to the actual physical damage sustained. Such cases rarely present objective evidences of electric contact and occur usually in those predisposed because of a neurotic or actually hysterical temperament. The flash or spark or arc from charged metallic contacted points occasionally induces this set of nervous symptoms, either with or without bodily contact. Cases of this and allied sorts are often designated by the term "electric shock," and less frequently as "electric neurosis;" but the symptoms do not differ in any essential respect from the ordinary shock or neurosis attributed to any other trauma.

Examination of such a patient develops a wealth of subjective symptoms and a poverty of objective symptoms, and the average case will correspond to the following:

CASE 4.—*History.*—Mrs. F. was alighting, during a rain, from a suburban electric car operated by the overhead trolley system. While she had one foot on the car platform and the other on the metal step, her hand being on the dash handle, she claims to have received a "shock," the force of which threw her face downward to the ground. She was stunned but not unconscious, did not vomit, and when assisted to the adjacent sidewalk was able to discuss the occurrence with some show of agitation and not a little anger. She walked unaided to her home near by and saw her doctor some few hours later. He gave her lotions for the bruises of the knee, elbow and hands. There were no burns or obvious electric effects, but she did complain of tingling and needle sensations in the hand that touched the dash-handle and in the foot that contacted with the metal step.

*Examination.*—When I saw her some fourteen days after the accident she was abed, somewhat pallid, and had a characteristically tense and drawn expression, and was markedly irritable in manner and speech, all of the foregoing being said to be foreign to her normal state. There was an obvious rapid tremor of the closed eyelids, about the angles of the mouth, and of the outstretched fingers and protruded tongue. External evidences of injury were lacking aside from a fading area of bluish discoloration over a palm-sized area just above the right knee, probably from her fall. No evidences of electric contact, or of so called "electric shock" were apparent. No paralyses and no areas of diminished sensation; conjunctival and pharyngeal reflexes absent; marked demographia; knee-jerks lively, all others normal. Romberg sign marked; no Babinski, or allied manifestations. Gait was normal and pulse rapid. There were areas of shifting tenderness along the spine, these being very inconstant and readily brought out by suggestion. Two spots were found in the upper dorsal region consistently tender, but she leaned back in a chair on these same areas and made no complaint. There was no contraction of visual fields, and no color distortion. Here is a typical case of the milder form of recoverable hystero-neurasthenia, and she had many symptoms that might as well be stigmatic as symptomatic. She recovered perfectly in a short time.

Contrasted with the former mixed type of functional nervous disturbance, the following case of almost typical hysterical motor paralysis with milder neurasthenic symptoms is narrated:

CASE 5.—*History.*—G., an electrician, was admitted to the Harlem Hospital in Dr. H. A. Haubold's service with a history of having been injured two weeks ago in an out-of-town power house, the patient stating that while holding a dead wire in his left hand, someone turned on the current of 110 volts and his hands and fingers were burned; immediately fingers of the left hand contracted; it felt as if an electric current passed through him every time his fingers were touched; he claims to have lost all sensation over entire left upper extremity; and says that he cannot move his fingers; he has had other electric burns, but was never affected in this manner before; the current entered the palm of the left hand, but the place of exit is unknown.

*Examination.*—On examination the left hand presented the pseudo-Dupuytren's contraction appearance indicated in the annexed photograph (Fig. 4), palmar flexion at the metacarpophalangeal joints of the inner four fingers being marked, that of the ring and little finger being most prominent. There was no apparent atrophy, nor was there any burn or other sign of trauma. He would not permit the slightest manipulation of the extremity except when his attention was diverted, and then the fingers could be partly extended. He claimed loss of thermal and tactile sensation over variable areas from the elbow down; but these shifted, especially on suggestion, and followed indefinite nerve distribution. Active motion of the wrist was limited; that of the elbow and shoulder normal. He would not permit passive motion, nor would he consent to electric tests. The examination as to his general state showed him to be in excellent condition except that he was of neurotic type and presented many hysterical stigmata and neurasthenic manifestations.

During the fortnight intervening between the accident and his entry to the hospital, he was under the care of a physician, who had given him some internal medication with local application of iodin, and who is said to have made a diagnosis of "paralysis from electric shock." At no time were splints or retentive forms of apparatus employed. He would not consent to the proposed anesthetization, nor would he allow a dorsal splint to be applied, and accordingly he was dismissed from the hospital with a diagnosis of "hysterical paralysis of hand." There was unquestionably an element of voluntary exaggeration in this instance as so often happens in that class of case in which litigation is pending. When seen a month later he had regained function enough to do his usual work but still had many subjective complaints.

Occasionally there are recorded cases in which blindness and deafness and other special sense defects have been attributed to electric contact or flashes, but all instances of this sort are of the hysterical variety, and fall into the class of so-called "fright neuroses." An example of this sort came to my notice recently in which "blindness" was said to have been induced in a susceptible woman by the flash and spark display when an overhead trolley wire was struck by a metal beam. She was seated in her room some two hundred feet away from the scene of this brilliant display of light and sparks but within sight and sound of the occurrence, and she claimed that she experienced the sensation of a ball of fire dancing before her eyes, and she immediately became sightless. Examination showed no organic defect of vision; the case was one of hysterical amaurosis induced by fright in a susceptible person. Vision returned within a short time.

### OTHER EFFECTS

Crile[7] says that high tension currents produce no chemical change of importance in the various tissues and organs aside from the burning at the place of contact, and that the blood is unaltered. To prove this, a current of 2,300 volts (alternating) was passed through the head of an animal, and during the ensuing month of observation there was no discoverable loss of function. The same observer also says that when atropin is administered before the current is applied, the inhibitory effect is almost wholly obviated, except when the current passes through the heart muscle and then death ensues.

### TREATMENT

Treatment presents no special problems, inasmuch as it is for the relief of shock, burns or neuroses. In cases of profound injury, and even where death has apparently occurred, prolonged artificial respiration should be maintained, as in drowning cases, with compression of the chest-wall in the precordial region; even digital compression of the heart itself has been proposed, but never successfully practiced. Crile recommends rhythmic pressure over the heart area, the tongue being drawn out, as he says that this combines circulatory and respiratory artificial stimulation.

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[7] Crile, G. W.: Article on Surgical Physiology, Keen's Surg., i, 79 *et seq.*; Crile and Dolley: Jour. Exper. Med., 1906, viii.

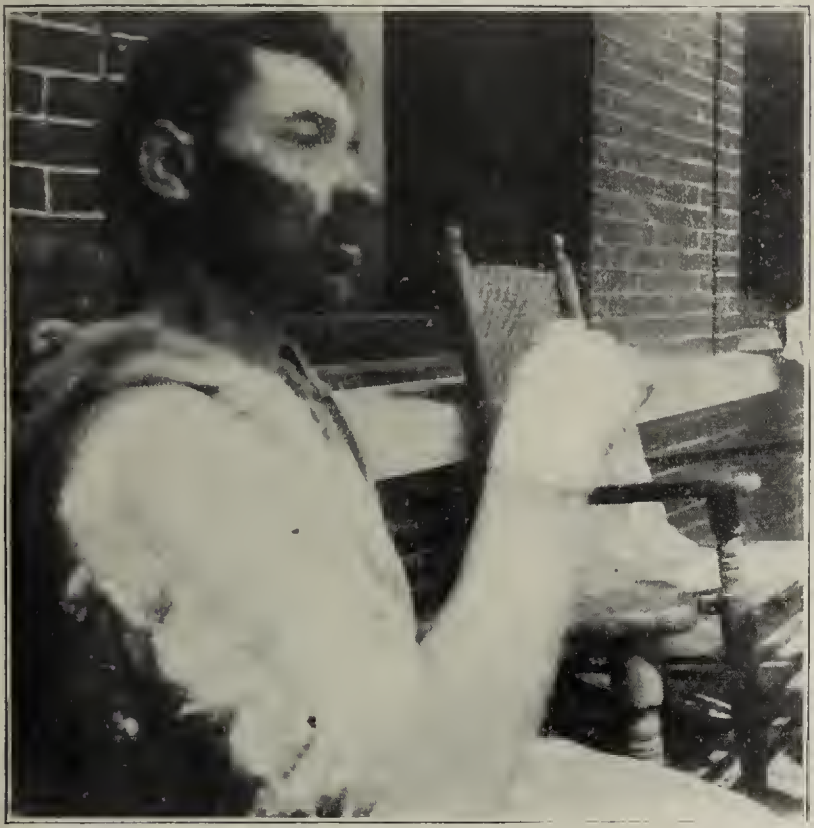
Fig. 1.—Example of third-rail burn.

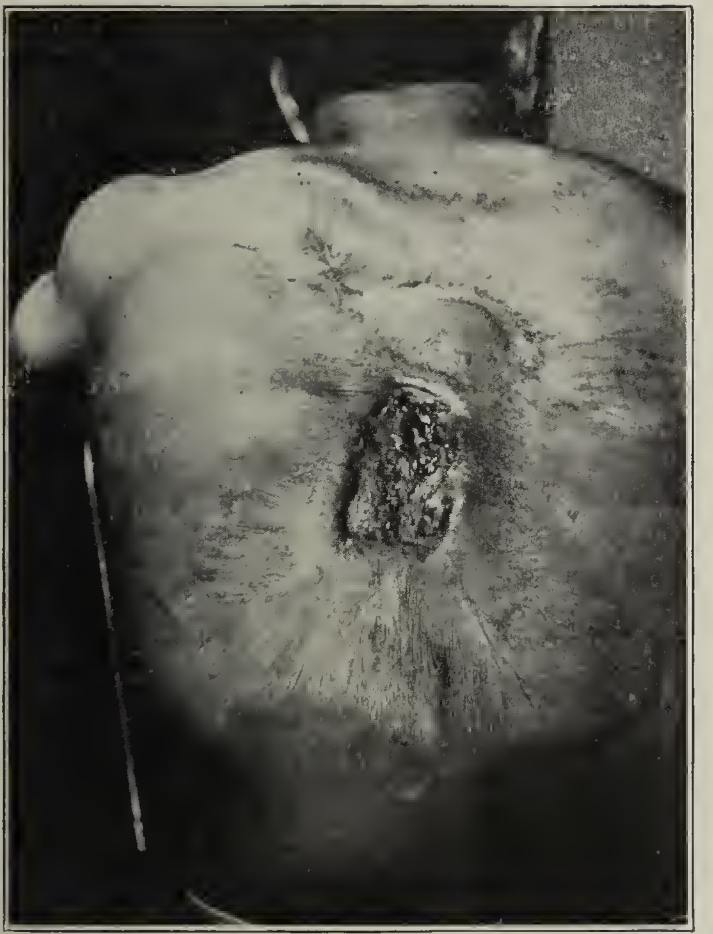
Fig. 3.—Third degree electric burn extending from mid-scapular to lower lumbar region.

With the foregoing manual methods, the use of various stimulants of the atropin, strychnin and adrenalin sort is also advisable.

Burns are treated in accordance with the custom of the individual physician, and it has been observed that the so-called open method of treatment is especially efficacious in this type of burn.

Neuroses are best treated by isolation, plus the mental or therapeutic means best liked by the individual practitioner.

### PROGNOSIS

Prognosis depends on the extent of initial inhibition symptoms; in patients that survive forty-eight hours, the prognosis is that of the absorption of septic and toxic products from the burned areas, with the development of cardiac, respiratory or kidney complications, and with, occasionally, the presence of fatal gastro-intestinal disturbances.

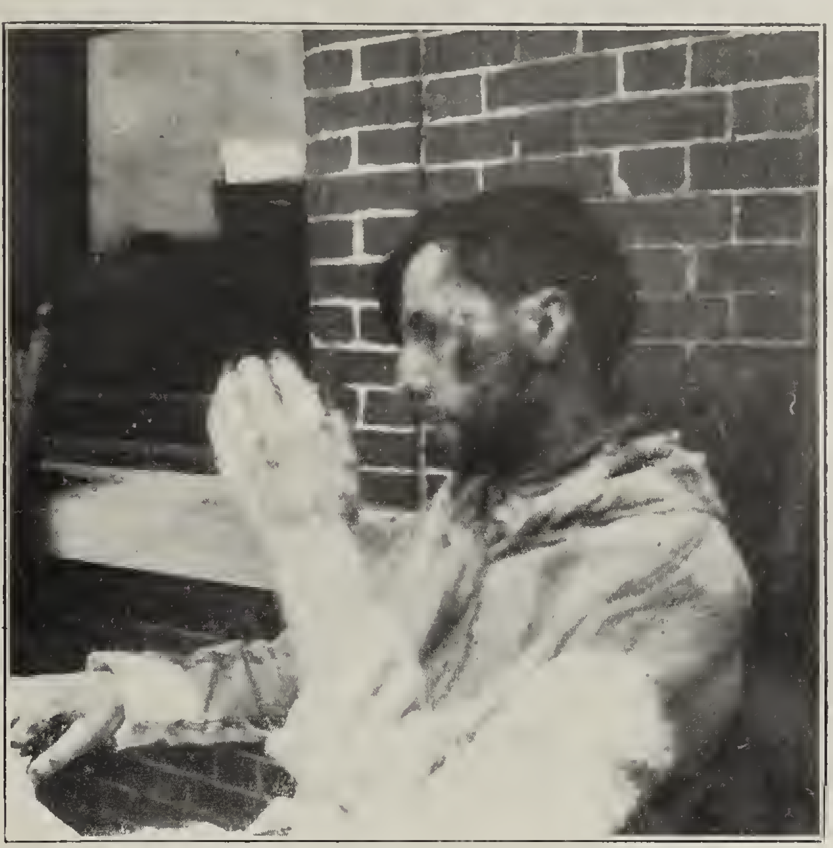
Fig. 2.—Example of third-rail burn.

The ultimate scarring and contraction from the burns requires no comment. Neuroses do not ordinarily develop until after the patient has recovered from the main objective symptoms, and these nervous manifestations then frequently stand in relationship to a pending claim, and recovery does not usually ensue until adjustment is effected.

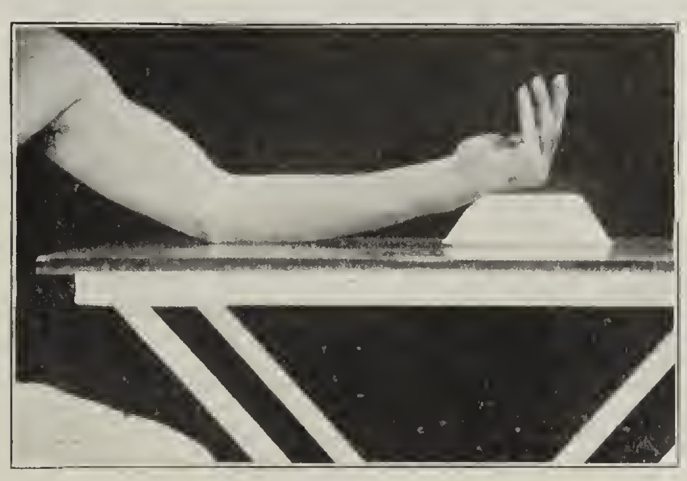
Fig. 4.—Pseudo-Dupuytren's contraction as the result of electric burn, showing marked palmar flexion at the metacarpo-phalangeal joints of the inner four fingers.

### CONCLUSIONS

It can be stated that there is no special form of physical effect inherent to electricity inasmuch as every symptom can be paralleled by other forms of trauma. Likewise there is nothing pathognomonic in electric shock and the symptoms of it are those common to other forms of systemic shock, with or without burns or neuroses. The duration of symptoms is no more prolonged after electric than other forms of trauma; nor does there appear to be any sound basis for the claim that one electric shock renders the recipient more prone to similar experiences, but on the contrary an acquired immunity seems to be created by repeated applications. Electricity is well understood scientifically and is governed by well-known physical laws, and there is no good reason for the view often expressed that its effects on the human economy are unusual or peculiar.

101 Manhattan Avenue.

# THE SURGERY OF THE HYPOPHYSIS FROM THE STANDPOINT OF THE RHINOLOGIST

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Heretofore rhinologists have been interested in the hypophysis only in a general way. Like others, they have been watching intently the results of the researches which are gradually unraveling the mystery enveloping the physiology of this gland, but up to the present time they have given but scant attention to the surgery of this structure. The explanation of the apparent lack of interest in the surgery of this region is to be sought in the fact that cases requiring operations on the pituitary body are never seen by rhinologists, and hence the nasal surgeon has never considered the hypophysis, although practically an extracranial structure, as being within the field of nasal surgery. Once the rhinologist's attention is directed to this region, however, he sees that he is in a position to help solve the problems of the surgery of this organ. The removal of the anterior wall of the sphenoid sinus through the nostril involves a technic with which the rhinologist has for years been entirely familiar. The anterior wall being removed, he has but to lengthen and to modify his instruments and he is in a position to attack the superior wall[1] separating the sinus from the sella turcica containing the pituitary body (Fig. 1).

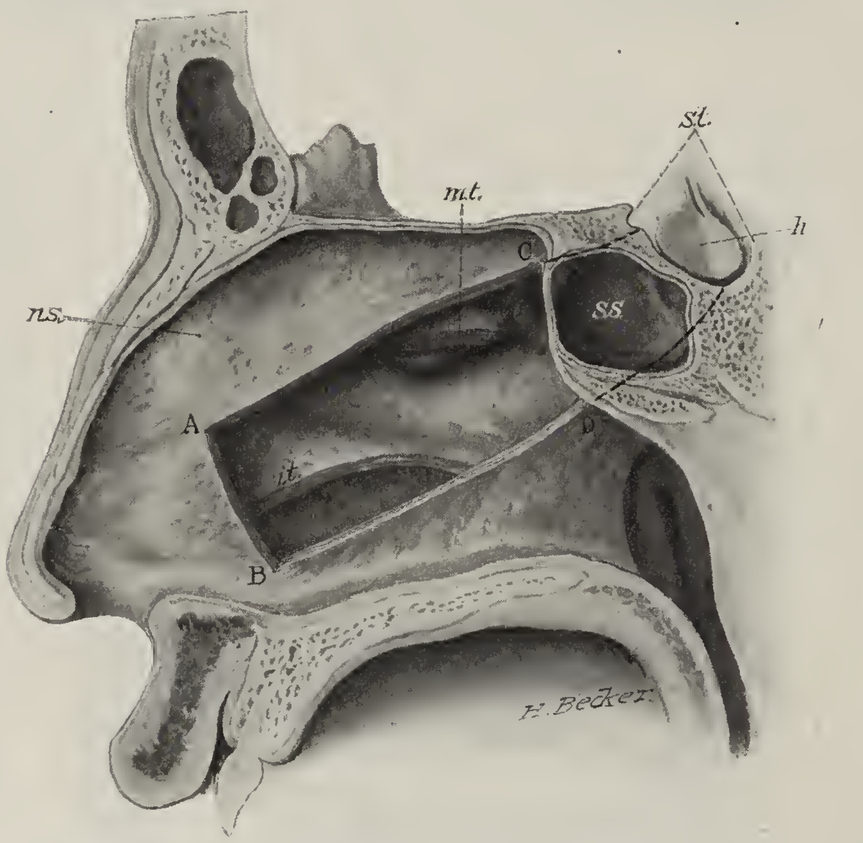

Fig. 1.—ABCD represents the window formed by resecting a quadrilateral piece from the nasal septum, N. S.; through this window the insertion of the removed middle turbinate is seen at M. T.; I. T., the remaining part of the inferior turbinate. AC and BD, continued by dotted lines, show the direction of approach through the sphenoid sinus, S. S., to the sella turcia S. T. containing the hypophysis, H. For the sake of clearness the anterior wall CD of the sphenoid sinus is shown, although in the operation it is removed before the nasal septum is attacked.

My interest was first awakened in this subject in February, 1909, through a case shown by Cushing before the Johns Hopkins Hospital Medical Society. In this case Cushing had successfully operated on the hypophysis by the supranasal method, that is through the superior part of the nose following a course parallel to the cribriform plate.

The methods of approach to the hypophysis, which had up to that time been suggested, were many, some more or less similar, and several were of a very mutilating character. Without attempting to describe in detail the difference between the various procedures, it may be noted that the methods may be classified according to Schloffer[2] as (1) *intracranial* and (2) *extracranial.*

1. Of the intracranial methods, aside from minor modifications, two entirely different procedures have been suggested:

A. The approach through the temporal region of the skull, lifting the temporosphenoidal lobe and thus reaching the hypophysis. This method, first suggested by Caton and Paul,[3] has been followed by Horsley[4] and McArthur.

B. The approach through the frontal bone, avoiding the frontal sinuses, lifting the frontal lobe and following the anterior fossa (Kiliani,[5] Krause[6]).

2. The extracranial methods are those by which the sella turcica is approached through the sphenoid sinuses, as, for example, by removal of the palate, and the interior of the nose (König[7]); or, as suggested by Kocher,[8] the superior maxilla is chiseled through above the alveolar process, and after incision of the soft parts a *Wangennasenlappen* is turned down and out; or after the nasal walls of the maxillary sinuses have been removed, through the fossa canina, Löwe[9] suggests making a skin incision along the nose which permits of a radical opening up of all the nasal sinuses by an anterior approach. Schloffer[10] in one case has turned the nose to one side, and, following a course parallel to the cribriform plate, after removing the turbinates and the nasal wall of the orbit, has succeeded in removing a tumor from the sella turcica. This method of Schloffer has been followed by Eiselsberg[11] in five cases and a similar operation has been done once in this country by Cushing.

It will be noticed that all of these operations are more or less extensive and necessitate great destruction of tissue.

Schüller[12] and Erdheim have pointed out the great value of the $x$-ray in aiding us to judge of the size of an hypophyseal tumor, and Schloffer's pathologic studies lead him to the conclusion that, so long as the cranial entrance to the sella turcica is enlarged to a diameter not greater than 2 cm., the tumor is operable by the transphenoidal route. Moreover, owing to the proximity of the carotids and the cavernous sinuses, the window which is resected from the sella turcica must necessarily be of small size, and hence all solid tumors operable by this route will be small. Large tumors of the pituitary region will probably all be inoperable.

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[1] In speaking of the part of the wall of the sphenoid sinus which separates the sinus from the sella turcica, as the superior wall, we follow the description of Zuckerkandl (Anatomie der Nasenhöhle, Edition 2, Vienna, 1893, i, 335).

[2] Schloffer: Beitr. z. klin. Chir., 1906, i, 767.

[3] Caton and Paul: Brit. Med. Jour., 1893, p. 1421.

[4] Horsley: Brit. Med. Jour., 1906, ii, 44.

[5] Kiliani: Ann. Surg., 1904, No. 40, p. 35.

[6] Krause: Die deutsche Klinik am Eingange des 20 Jahrhunderts, 1905, viii, 1004.

[7] König: Berl. klin. Wchnschr., 1900, No. 46, p. 1040.

[8] Kocher: Operationslehre, 1902, Edition 4, p. 133.

[9] Löwe: Zur Chirurgie der Nase, Berlin, 1905.

[10] Schloffer: Wien. klin. Wchnschr., 1907, No. 21, p. 621.

[11] Eiselsberg: Wien. klin. Wchnschr., 1909, No. 8, p. 287.

[12] Schüller: Die Schädelbasis im Röntgenbilde, Fortschr. a. d. Geb. d. Röntgenstr., Ergänzungsband 11.

Considering, then, the fact that perhaps all operable tumors of this region will be small, it occurred to me that a conservative surgical method following a transnasal route diagonally through the nose roughly parallel to Zuckerkandl's line from the nostril to the sphenoid sinus ought to accomplish the same result as the more radical procedures. The following facts support this conclusion:

1. Adrenalin, owing to its constricting effect on the cavernous tissue of the nose, renders the nasal passages so patent that, in most cases, the anterior walls of the sphenoid sinuses can be clearly seen over a considerable area by inspection through the nostril. This being the case it would seem rational to follow this open route from the nostril through the sphenoid cavity, and by thus utilizing the space offered by the natural passages through the nose one is enabled to open the sella turcica with the *least possible destruction of tissue.*

2. Without entering into the question of the physiology of the hypophysis, it will suffice to say that the researches of Howell[13] and of Schäffer[14] have shown that this organ has a definite physiologic function, and, while the experiments of Friedman and Maass[15] have apparently shown that in cats the pituitary body can, without injury to the animal, be removed, on the other hand, Paulesco[16] and also Cushing[17] have demonstrated that in dogs part at least of the anterior lobe is necessary to the life of the animal. The results of animal experiments cannot always be applied unchanged to human beings, and, besides, the complete extirpation of the hypophysis has apparently in man been accomplished in several cases without a fatal result. With the evidence at hand, however, the question of partial removal comes up at once. A glance at Figure 1 will show that this infranasal route, anatomically considered, would seem to be advantageous particularly for partial removal, for in this case the hypophysis is approached from below, making it easier to remove the posterior lobe than if the supranasal route parallel to the cribriform plate be followed.

3. The nasal surgeon, as mentioned above, had already developed the technic of this operation to the point of opening up the sphenoid sinuses, and it would seem but an easy and natural step to cross the sphenoid cavity and attack the sella turcica.

4. While in conditions demanding operation on the hypophysis the question of the cosmetic result is of minor importance, still, other things being equal, the procedure causing the least disfigurement should be the method of choice. In some of Eiselsberg's cases healing was accompanied by marked deformity. This infranasal method should be followed by no deformity at all.

With these facts clearly in mind I began on fresh cadavers to develop a technical method for this operation, which up to that time had not been suggested. In one of my early experiments, after resection of the middle turbinate, part of the inferior turbinate and the anterior wall of the sphenoid sinus of one nasal cavity alone, it was possible to remove the pituitary gland through the nostril without cutting the ala and with the nasal septum intact. This case represents, of course, unusually favorable conditions, and in my other experiments it was always necessary to remove part of the nasal septum, including the septum sphenoidale. Later as routine I began removing both middle turbinates, for this shortens the operation considerably. I followed in each case the general course here described, that is, in the direction of Zuckerkandl's line through the sphenoid sinus to the sella turcica. As each new difficulty arose I have tried to devise instruments to overcome it. Meanwhile Kanavel[18] of Chicago published an article describing a method of approach similar to that which I had been following. He is more radical, however, and advocates elevating the nose. I have developed the technic further than Kanavel has done, and am describing the procedure as I have developed it.

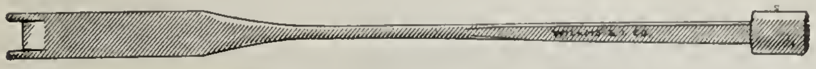

Fig. 2.—Chisel with knobs at either corner of the cutting edge used in removing the quadrilateral piece from the nasal septum. These knobs straddle the septum and prevent the chisel from slipping into the nasal cavity.

In the first place I suggest with Moskowicz[19] that the operation be done in two stages. I believe, however, the turbinates of both nasal cavities, the anterior wall of the sphenoid sinuses, part of the nasal septum, including the septum sphenoidale, can in most cases be removed at a preliminary operation with *local anesthesia* (cocain, adrenalin) without slitting the ala nasi at all. It will probably be a question entirely of the patient's tolerance for cocain and adrenalin; and it is suggested that in the cocainization particular attention be given to the regions of the foramina through which the nerves enter the nose, that is, the ethmoid and the sphenopalatine foramina. By observing this precaution one should be able to produce the necessary anesthesia with the minimum amount of cocain. This preliminary operation will technically always be best carried out, I am inclined to think, if done by the nasal surgeon.

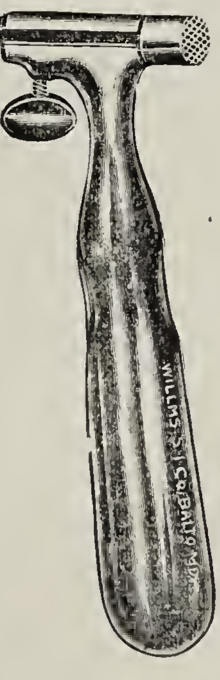

Fig. 3. — Long chisel used in opening up sella turcica.

After the path to the sella turcica has thus been cleared, at a secondary operation the sella itself can be attacked and the hypophysis reached. Perhaps experience will teach that the second stage of the operation can also be done under local anesthesia with cocain. Indeed, it may be shown in practice that it is possible, in some cases at least, to do the complete operation, that is both stages, as here suggested, with local anesthesia at a single sitting. For the second stage I recommend slitting the ala, although I have not found it necessary in any of my experiments on cadavers. Whether this second stage of the operation should come within the field of the nasal or the brain surgeon remains for the future to decide.

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[13] Howell: Jour. Expér. Med., 1898, iii, 245.

[14] Schäffer and Vincent: Jour. Physiol., 1899, xxv, 87; Schäffer and Herring: Philos. Tr. Roy. Soc., London, 1906, 199, B 1.

[15] Friedmann and Maass: Berl. klin. Wchnschr., 1900, No. 52; Friedmann: Berl. klin. Wchnschr., 1902, No. 19, p. 436.

[16] Paulesco: Compt. rend. d. acad. Sc., 1907, cxliv, 521.

[17] Cushing, H.: Some Principles of Cerebral Surgery, The Journal A. M. A., Jan. 16, 1909, lii, 184.

[18] Kanavel, A. B.: The Removal of Tumors of the Pituitary Body by an Infranasal Route, The Journal A. M. A., Nov. 20, 1909, liii, 1704.

[19] Moskowicz: Wien. klin. Wchnschr., 1907, p. 792.

The technic in detail is the following:

1. The middle and as much as is necessary of the inferior turbinate of one nasal cavity are removed to permit a clear view of the anterior wall of the sphenoid sinus. The anterior wall of the sinus is then removed. The instruments used are familiar to all nasal surgeons and need no special description.

2. This procedure is repeated in the opposite nasal cavity, reserving the septum to be attacked later. The partial resection of the nasal septum is postponed until after the removal of the turbinates of both nasal cavities, on account of the hemorrhage often met during operations on the vomer.

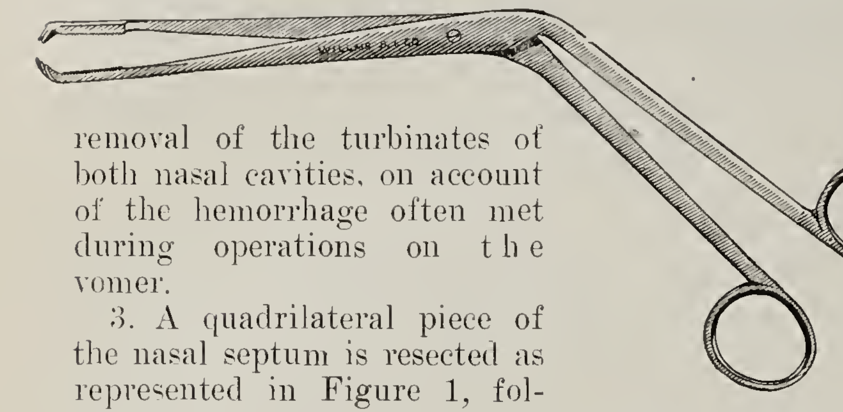

Fig. 4.—A long forceps with teeth set at an angle, used in removing pieces of bone from the sella turcica.

3. A quadrilateral piece of the nasal septum is resected as represented in Figure 1, following roughly Zuckerkandl's line in the direction of the rostrum sphenoidale. After this the septum sphenoidale is removed.

In attacking the nasal septum it is advantageous to begin by making an incision with a knife along the line A B (Fig. 1), then with a chisel (Fig. 2) cut, following the line A C to the sphenoid. Continuing with the chisel make a similar cut along the line B D, parallel to A C. This quadrilateral section of the septum is now removed in one piece, using for this purpose the Jansen forceps designed for the submucous resection of the nasal septum. The chisel (Fig. 2) used on the nasal septum is provided with knobs at either corner of the cutting edge which prevent it from slipping into the nasal cavity as it glides along the septum. (In cases of marked deviation of the septum this structure is then, of course, attacked as the second step of the operation.)

4. The septum sphenoidale is now removed partly with a long chisel (Fig. 3) and partly with a Grünwald nasal forceps. In practice it may be found to be helpful to note accurately the position of the sphenoidal septum with reference to the median line, and then to leave a slight ridge of septal bone to act as a guide to the midline at the secondary operation.

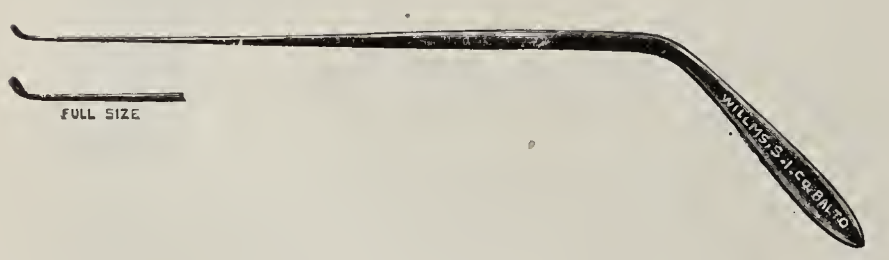

Fig. 5.—An extra long sound made of tempered steel which is often used to advantage.

5. The sella turcica is now opened up with the chisel (Fig. 3), the splinters of the bone being removed with the toothed forceps (Fig. 4). A long sound (Fig. 5) is often used to advantage.

In carrying out this fifth step, that is, the second stage of the operation as here proposed, the importance of keeping in the mid-line so as to avoid the optic nerves and the carotids cannot be too strongly emphasized.

It should be noted that Crowe's work showing the inhibitory effect of hexamethylenamin on infections of the meninges will make the rhinologist bolder in opening up the cranium from the nose.

To develop the technic for this operation, I have experimented on eleven cadavers. Owing, however, to the uncertainty of autopsy material and to the delays incident on devising and modifying instruments, the work (begun early in June, 1909) has extended over a period of six months.

For illumination of the field of operation I have used an ordinary gas-jet and a head-mirror such as belongs to the routine equipment of the nasal surgeon. A dilating speculum with an electric lamp attached at the distal end might be of assistance to surgeons who are not familiar with intranasal technic.

In suggesting that such an extensive intranasal operation be attempted under local anesthesia, one cannot but feel grateful to two men whose work has made possible, in the large majority of cases at least, both painless and bloodless nasal surgery. I refer to Koller, who first made use of cocain as an anesthetic, and to J. J. Abel, whose researches stimulated the work which culminated in the making of the adrenalin preparations as now used in practice.

Finally, I am much indebted to Dr. Whipple, of the pathological department of the Johns Hopkins Hospital, who kindly furnished the material for these experiments, and I desire also to express my appreciation of the assistance of Dr. Parsons and Dr. Brülle.

### SUMMARY

In a word, this method is conservative and consists in approaching the sella turcica from below, following a course diagonally through the nose from the nostril to the sphenoid sinus, removing as much as is necessary of the turbinates, the entire anterior walls of the sphenoid sinuses, a quadrilateral piece from the nasal septum, including the septum sphenoidale, and finally attacking the sella. This procedure takes advantage of the natural space afforded by the nasal passages, and thus permits the sella turcica to be opened up with the *least possible destruction of tissue.* Further, I believe that the greater part of this operation can be done under *local anesthesia.*

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## A NEW APPARATUS FOR PROCTOCLYSIS

ANGUS McLEAN, M.D.
DETROIT

This apparatus consists of a galvanized iron or tin box (size 7 by 8 by 9 inches), the walls, floor and cover of which are made of two layers, between which is placed a sheet of asbestos to minimize heat radiation. For the front, two layers of glass instead of metal are used.

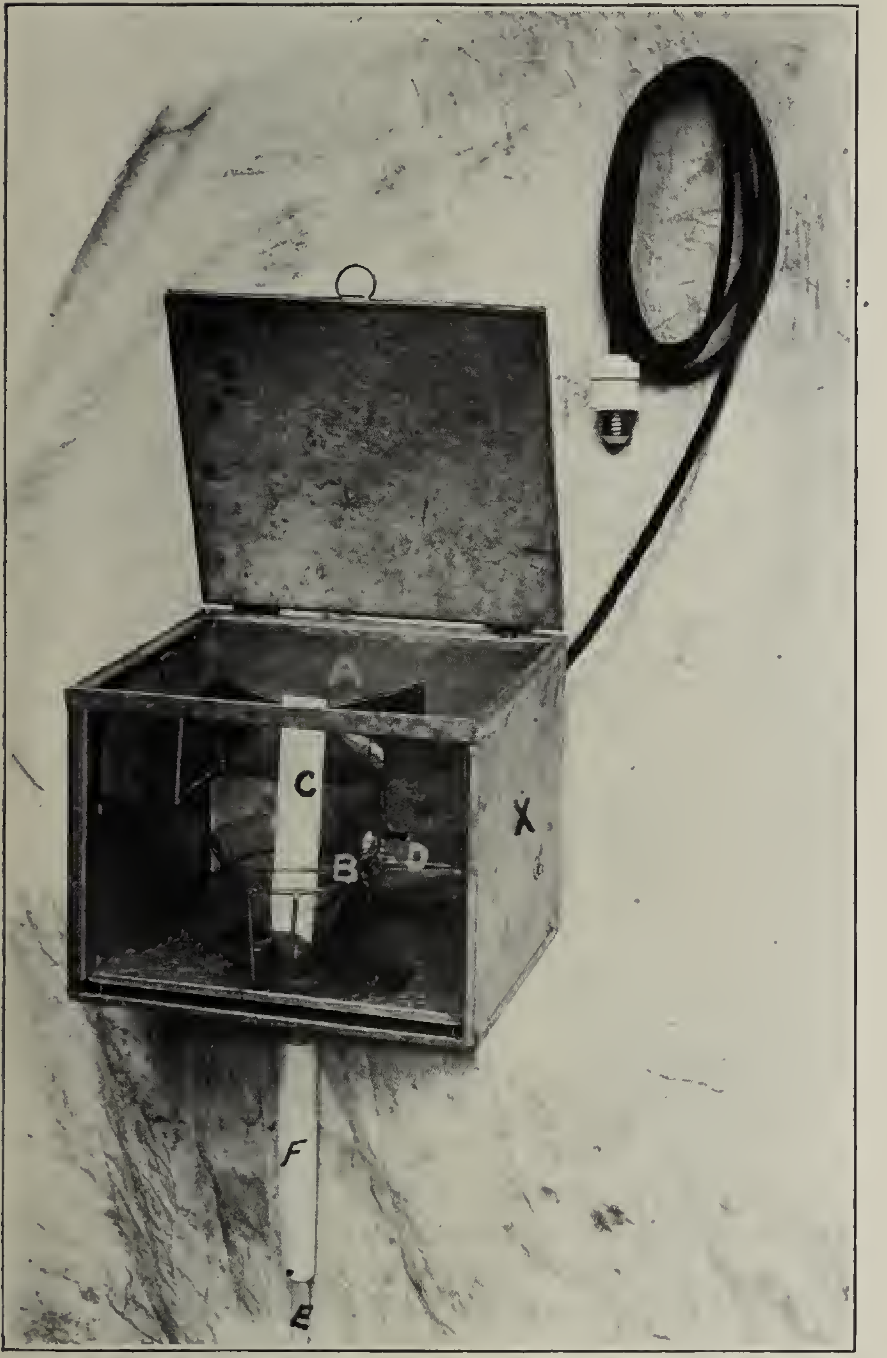
In this box are placed a two-quart dish (A), a funnel (B), a strip of gauze (C) and an incandescent bulb (D).

A. The two-quart dish is for the saline solution. The peculiar shape seen in the illustration is used to economize space. It is made as broad and as shallow as possible to insure a uniform drop.

B. The funnel receives the saline solution drop by drop and is connected with a tube (E) which leads to the patient's rectum. The tube leading to the rectum is enclosed in one (F) of larger caliber. This is attached to the floor of the box, but does not communicate with its interior. The purpose of tube F is to prevent radiation of heat from the inner tube, thereby conserving the heat in the saline fluid during transit from the container to the rectum.

C. The gauze hangs over a spout on the dish, and by capillary attraction causes the saline solution to flow drop by drop into the funnel and thence into the rectum. It is so arranged that the distal end hangs about 2 inches below the lowest level of the dish. A strip is used 1 inch wide and of varying thickness, depending on the number of drops per minute required (four-ply giving 50 drops a minute).

D. An incandescent bulb (or, if electricity is not at hand, an alcohol lamp) is placed under the dish and as near as possible to the double glass front in order to prevent condensation of vapor. A sixteen-candle-power bulb is sufficient. This will keep the temperature of the saline solution at 140 to 145 F. indefinitely. This temperature I have found necessary to cause the solution to enter the rectum at a temperature of 100 to 101 F., for, in spite of the double tube and the drop falling through air heated to 140 F. the loss of heat from the dish to rectum, through a tube 4 to 5 feet long, is about 40 degrees. Were the smaller tube not enclosed by a tube of larger caliber the water would enter the rectum at about 96 F., and the slightest draught coming in contact with the single tube would bring the temperature of the fluid entering the rectum still lower (to 85 and 80 F.).



A new apparatus for proctoclysis; A, dish for saline solution; B, funnel which receives the solution drop by drop; C, gauze hanging from spout of dish A, and conducting solution into funnel B; D, electric bulb; E, tube leading to rectum; F, larger tube enclosing tube E.

From this description it is evident that no part of the tube is constricted and that consequently there is always a free communication between the rectum and funnel. The drop is formed outside of this communication. Should feces, pressure of the thighs on the tube or anything else cause an obstruction to the flow into the rectum, the solution will at once be seen filling the funnel. Gas forming in the rectum, having absolutely nothing to obstruct its passage outward, will readily bubble up through the tube. The box itself is so arranged that the funnel will be from 8 to 12 inches above the level of the patient's rectum. In case the rate of absorption is slower than the rate at which the solution is dropping, the tube will naturally become filled with water. Even then, gas that may accumulate in the rectum, being much lighter than water, will easily bubble up through the tube. The amount of pressure necessary to bring about this result is that equal to 30 mm. of mercury, and pressure to that extent any patient can conveniently bear. Again, if the rate of absorption is slower than the rate at which the fluid is dropping into the funnel, say, 60 drops per minute, the fluid is running too fast for the individual. The rate of flow can then be diminished by simply using a strip of gauze with a lesser number of thicknesses. This will prevent the tube filling with water and consequently a pressure equal to 30 mm. of mercury, necessary to force gas through a column of water in the tube, will never exist. Gas will simply find its way through the patent, empty tube as soon as it is formed or, if it has been formed higher up in the colon, as soon as it reaches the rectum.

For the rectal end of the tube, the rectal tips advocated by Murphy are used.

This apparatus, therefore, furnishes a perfect drop which can easily be regulated to suit the needs of the patient. It allows for rapid expulsion of flatus. It is simple and very inexpensive (any tinsmith can make an outfit), and, if necessary, it can quickly be improvised in any household where a basin, a funnel, a tube and a piece of gauze are at hand.

57 West Fort Street.

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# A CASE OF HEMORRHAGIC PEMPHIGUS

CHARLES F. CLOWE, M.D.
SCHENECTADY, N. Y.

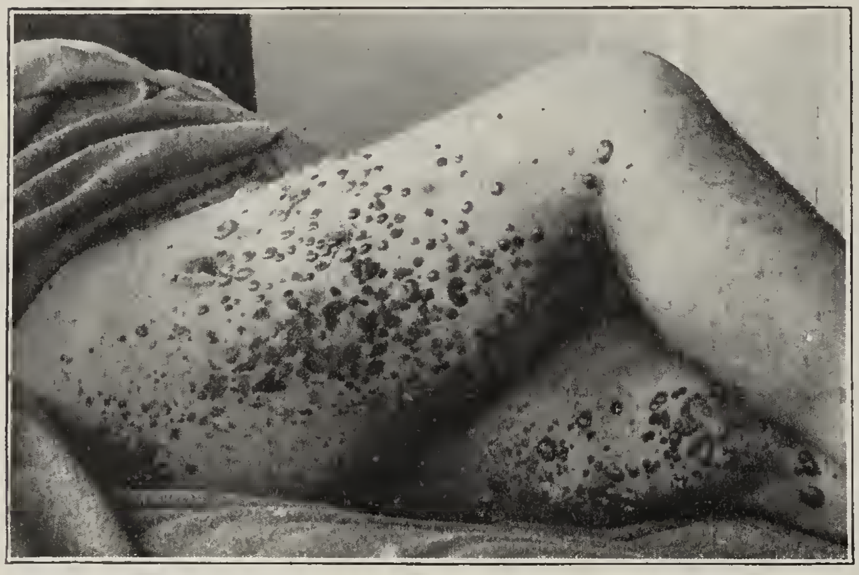
A case of pemphigus is rare enough to attract attention at any time, but a case of this degree of severity is so unusual as to merit reporting.

*Patient.*—J. McC., aged 29, driver of an ice wagon, a blonde, weighing 325 pounds, was admitted to my ward in the Ellis Hospital, Oct. 14, 1909, with the following history.

*History.*—His father died of tuberculosis at the age of 61. His mother, two sisters and a brother are alive and well. The patient had the usual diseases of childhood, pneumonia at 14, and gonorrhea at 22, of which latter he was "cured" in about six weeks. For the past two or three years he has had indefinite pains attributed to rheumatism. There is no evidence of syphilis. He is an excessive user of tobacco and at times drank heavily of both beer and whisky. For the past two years he has drank steadily, chiefly of beer. He suffers more or less from indigestion. His bowels move normally.

*Present Illness.*—Early in August, 1909, the patient noticed some blisters on the skin of the thighs and pubic region which itched somewhat. These dried and new ones came for the next three or four weeks, during which time he kept at work and felt fairly well, although he visited a physician and applied local treatment. During the month of September the eruption steadily increased and his strength and appetite failed, until about October 1, when he was obliged to give up work.

*Examination.*—He is an extremely large man. His body is almost covered with a bullous eruption, the blebs varying in size from a pea to the area of a half dollar. The eruption is most profuse on the thighs, in the axillæ, over the abdomen and neck. No part is free except the palms of the hands and soles of the feet. The blisters are seated on a slightly reddened base and filled with a clear serum. Many of them are tinged with blood. The character of the eruption is well shown in the accompanying illustration. His tongue is coated, there is complete anorexia, bowels are regular. He is delirious during the night and at times during the day, is hard to manage and vile in his language. His pulse was always relatively high and of poor quality. Tobacco and alcohol were both stopped on admission. A blood count showed whites 7,200, reds 4,320,000. On examination the serum in the blisters was found sterile.



Hemorrhagic pemphigus.

*Treatment and Course.*—The blebs were punctured, the fluid expressed and a dressing of very soft oxid of zinc ointment applied. He was given 5 m. of Fowler's solution and ½ ounce of linseed oil three times daily. The patient steadily improved and in about two weeks the eruption had entirely disappeared with no loss of tissue, and only a bright red stain remained. During this time, however, he developed a marked paresis of the extensors of the arms and legs accompanied by no pain, but a general muscular soreness. This gradually has cleared up under the use of strychnin and electricity until at this writing (Dec. 15, 1909), he is in very good condition.

613 Union Street.

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## A NEW APPARATUS FOR THE ESTIMATION OF BLOOD-PRESSURE

DELNO E. KERCHER, M.D.
PHILADELPHIA

The apparatus for the estimation of blood-pressure which I desire to present has the following features to recommend it:

Extreme simplicity; the avoidance of all ground joints, cocks, valves and complicated mechanisms.

Absence of metal parts to amalgamate the mercury.

Ease of manipulation; only one hand being required to work the apparatus, the other being free to feel the pulse or manipulate the stethoscope in auscultation.

Cheapness; there being no expensive parts or construction, this apparatus can be sold for one-half the price of the cheapest instrument at present on the market.

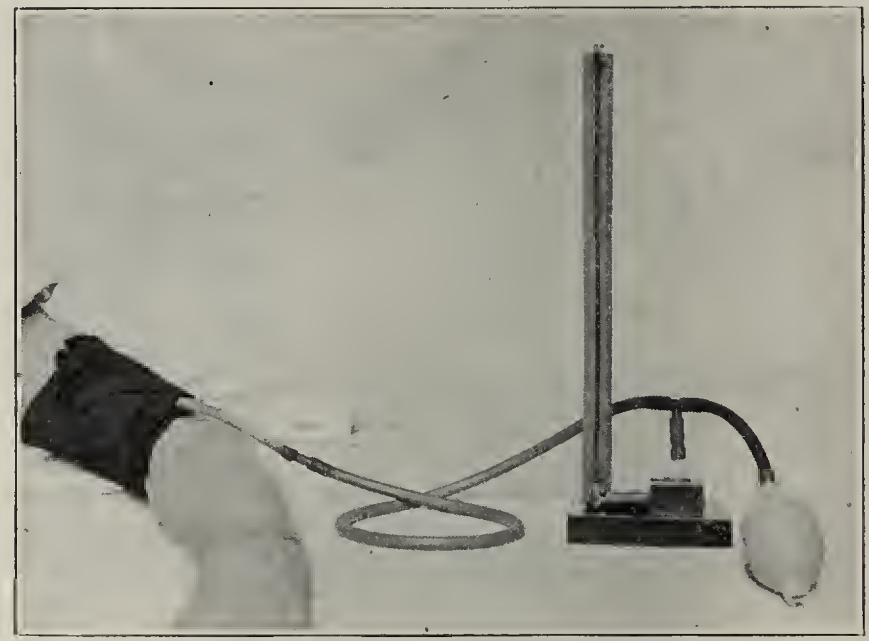
Portability; it may be taken apart readily, carried in any convenient bag and quickly put together again for use. The entire apparatus weighs fourteen ounces.

This apparatus consists of:

1. Wooden base with supports for small glass mercury cistern and for upright 300 mm. scale graduated in millimeters. Lying in a groove in this scale is the glass tube containing the mercury column which measures the pressure.

2. A strong cloth cuff 4 by 36 inches, containing the rubber pneumatic tube.

3. Three feet of strong rubber tubing bearing at one end a slip connection for attachment to the pneumatic cuff, at the other a rubber bulb with double valve for applying the air pressure to the apparatus, and in the tubing about six inches from the bulb a T connection to attach the cuff and bulb to the mercury cistern.



Apparatus for estimation of blood-pressure.

4. One ounce of pure mercury.

1534 Pine Street.

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## COMBINED MOUTH GAG AND TONGUE FIXER AND SUCTION APPARATUS FOR TONSIL OPERATION

EDWARD C. SEWALL, M.D.
SAN FRANCISCO

An efficient mouth gag and tongue depressor which I have been using for over six years is shown in the accompanying illustration (Fig. 1). It is modeled on the style of the old Hartman mouth gag, but involves an entirely new principle, in that it has a spatula so curved that it fits over the dorsum of the tongue, reaching the base of the epiglottis. By the employment of force from behind forward the base of the tongue is pulled away from the pharyngeal wall and fixed there. This allows free breathing space for the patient, and also puts the pillars of the fauces on the stretch so that their separation from the tonsil is much facilitated.

Figure 2 represents an apparatus devised by myself and Dr. F. A. Hamlin which adds very materially to the safety and ease of doing a tonsil operation. It consists of a large bottle in which a partial vacuum is produced by means of a water suction pump. A column of mercury registers the "negative pressure." A tube is attached which is sterilizable and can be passed easily through the mouth or nose into the throat. The pump used is of large size and fits on an ordinary faucet. The bottle exhausts quickly and, being of large size, retains its efficiency for a considerable period. This apparatus can be set up in any operating room at nominal cost.

A little experience in the use of the gag and tongue fixer is important, and a few words are pertinent as to the method employed in the Cooper College Clinic, where the apparatus has been developed.

The gag and tongue fixer is used usually with a general anesthetic, no gag being necessary where local anesthesia is employed. The patient invariably is given ether with the Allison inhaler, usually preceded by nitrous oxid. The recumbent position with overhanging head is employed. When the patient is anesthetized, a tube is passed through the nose and the ether given by the Bottsford-Junker apparatus. This usually produces some irritation, accumulation of mucus and coughing. It is here that the gag is of use. Such accumulation of mucus in the throat of anesthetized patients, especially where ether is used, is a source of danger. On introducing the gag and tongue fixer the breathing is immediately free except for the presence of the mucus, and this is then easily removed by slipping the tube of the suction apparatus into the throat. Such a method is recommended whenever in giving an anesthetic for any purpose there is liability of aspirating mucus. It is more efficient and in all ways preferable to the unsatisfactory method of wiping out the throat.

In the introduction of the gag, on account of the curve of the tongue fixer, it is sometimes necessary to bend the head backward in order to get it over the tongue. The blade is adjustable and should reach to the epiglottis. The mouth is then opened by pressing the thumb piece and held by the ratchet. The part of the ring resting on the teeth is so bent that it is suitable for infant or adult mouths. One point of great importance in the use of the gag is that the handle be raised by the anesthetist so that the gag fulfill its object, i. e., the bringing forward of the base of the tongue.

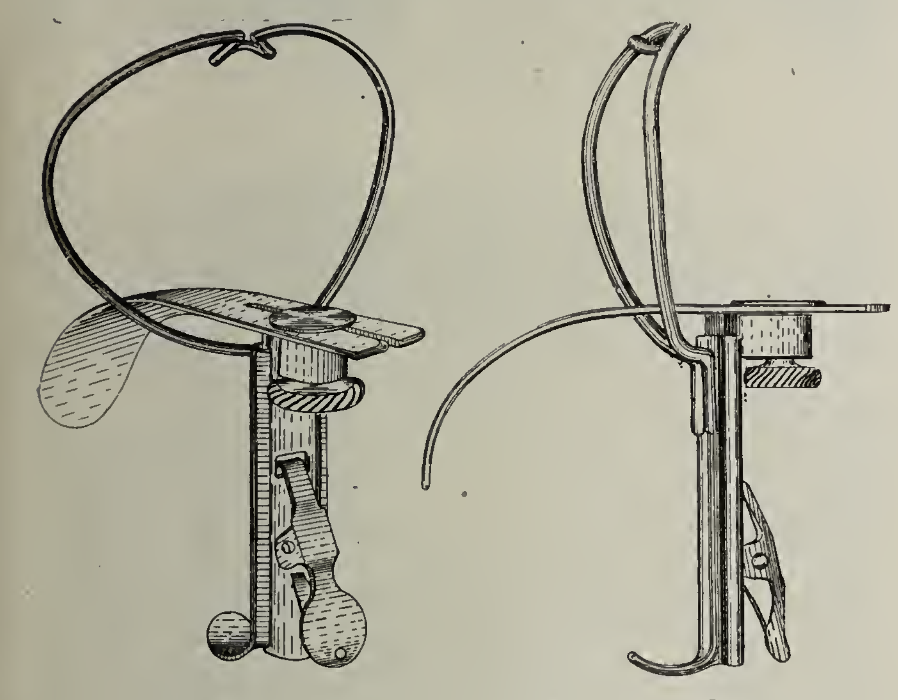
Fig. 1.—Combined mouth gag and tongue fixer.

The mouth is now open, the tongue fixed away from the field of operation, the breathing is undisturbed and there is no possibility of aspiration of mucus or blood. The overhanging head allows all the latter to flow toward the nasopharynx, where it is quickly aspirated by the suction apparatus. The pillars are drawn taut and the fold of the anterior pillar running to the base of the tongue engages the separating knife readily. The tonsils are removed in their entirety.

I wish to recommend the gag and tongue fixer especially in relation to the hemorrhage that may occur in tonsil operations. It must be admitted that, though the tonsil with its capsule is removed, leaving the superior constrictor bare, this does not do away with all danger of hemorrhage. Where hemorrhage occurs after the patient has recovered from the anesthetic, the usual means of stopping it are first employed. If these fail, the gag and aspirator make it possible to again fix the parts and clean the field. Where readministration of an anesthetic is for some reason undesirable, the patient may be held by force and the gag introduced. He has no control over his tongue or throat, no matter how he may gag or struggle, and any vomitus which may appear is aspirated.

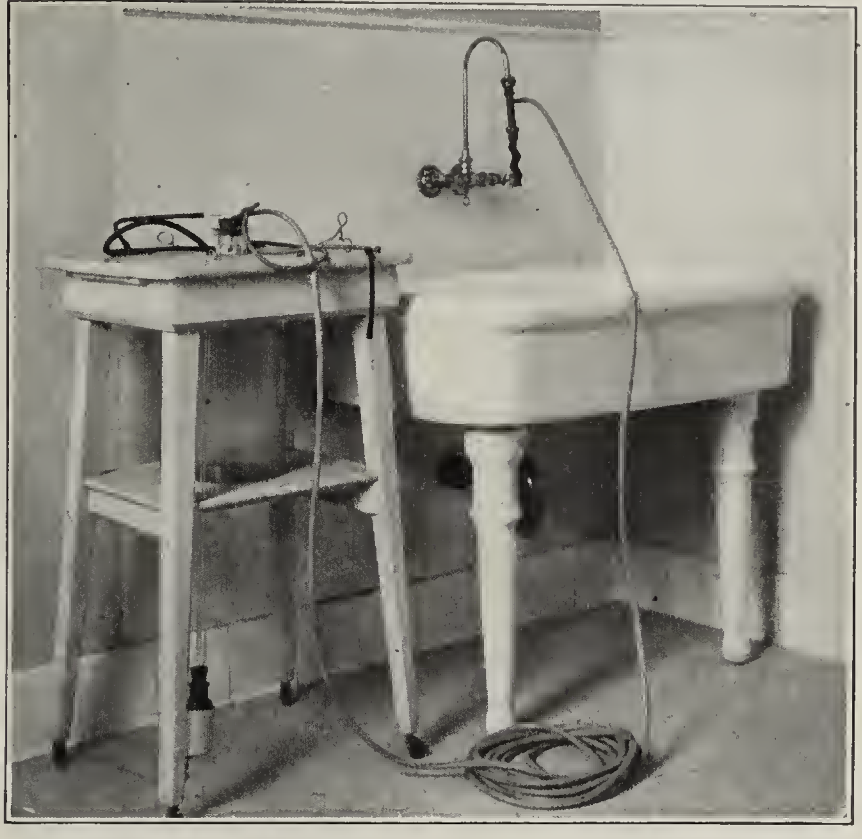
Fig. 2.—Suction apparatus used in tonsil operations.

The amount of blood lost in this operation by children especially is important. For that reason the bottle has been graduated in ounces and thus the exact amount of blood lost can be measured. If any simple antiseptic solution is used in cleansing the tube the amount of this is deducted from the total amount of fluid in the bottle.

This gag and tongue fixer is manufactured by H. Weniger, 244 Ash Avenue, San Francisco.

135 Stockton Street.

# EPIDERMIDOLYSIS BULLOSA CONGENITA

## (EPIDERMOLYSIS BULLOSA HEREDITARIA OF KÖBNER)

J. PHILLIP KANOKY, M.D.
AND
RICHARD L. SUTTON, M.D.
KANSAS CITY, MO.

Since Tilbury Fox,[1] in 1879, described two cases of "congenital ulceration of the skin, with pemphigus eruption and the arrest of development generally," and Goldscheider,[2] in 1882, reported his peculiar example of "acantholysis," about 100 cases of the novel affection from which their patients suffered have been placed on record. In addition to these, we desire to report the clinical history and the laboratory findings in a case of

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[1] Fox, Tilbury: Lancet, London, 1879, i, 766.
[2] Goldscheider: Monatsh. f. prakt. Dermat., No. 6, 1882.

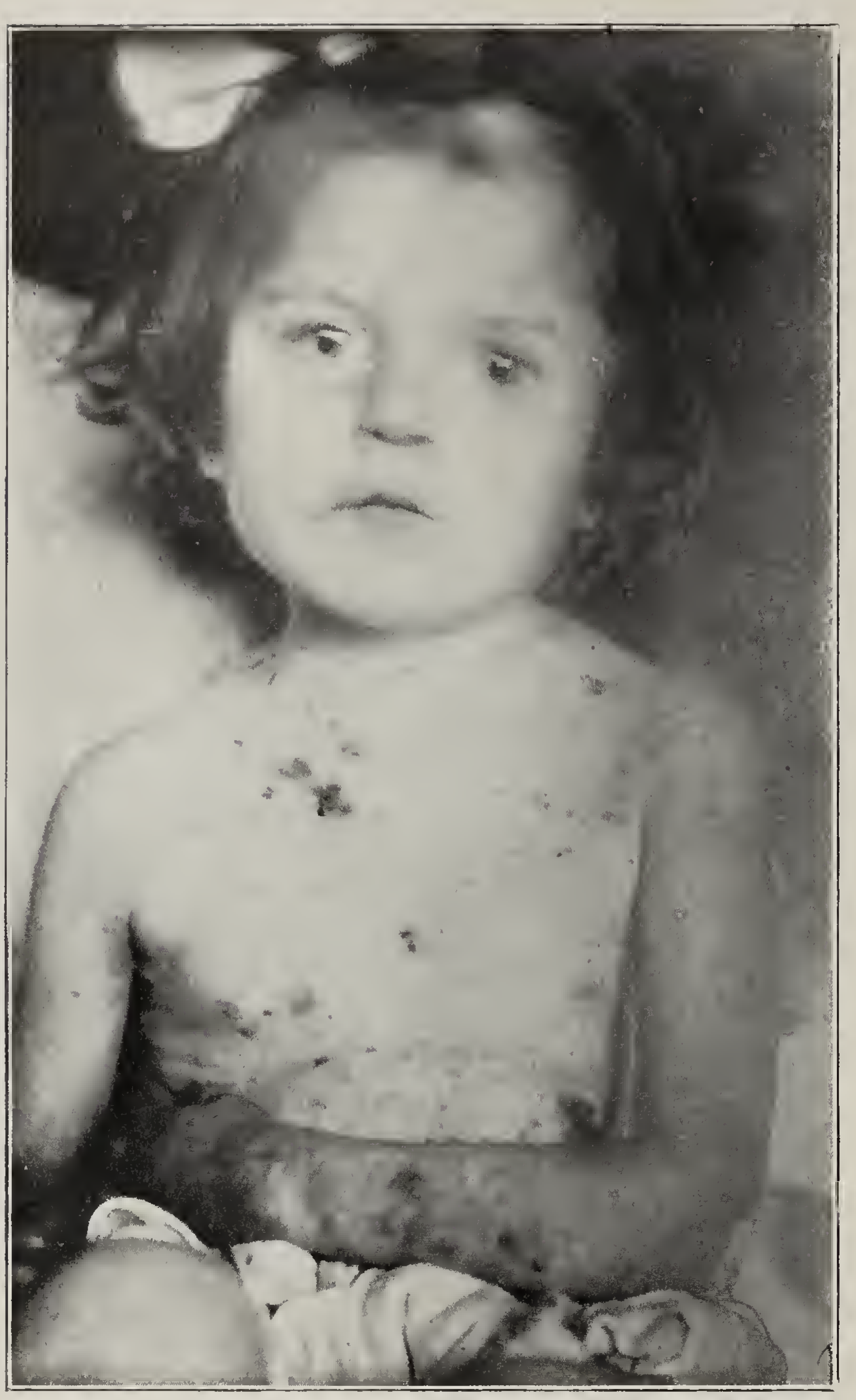

Fig. 1.—Showing ruptured and disappearing bullæ on trunk and arms.

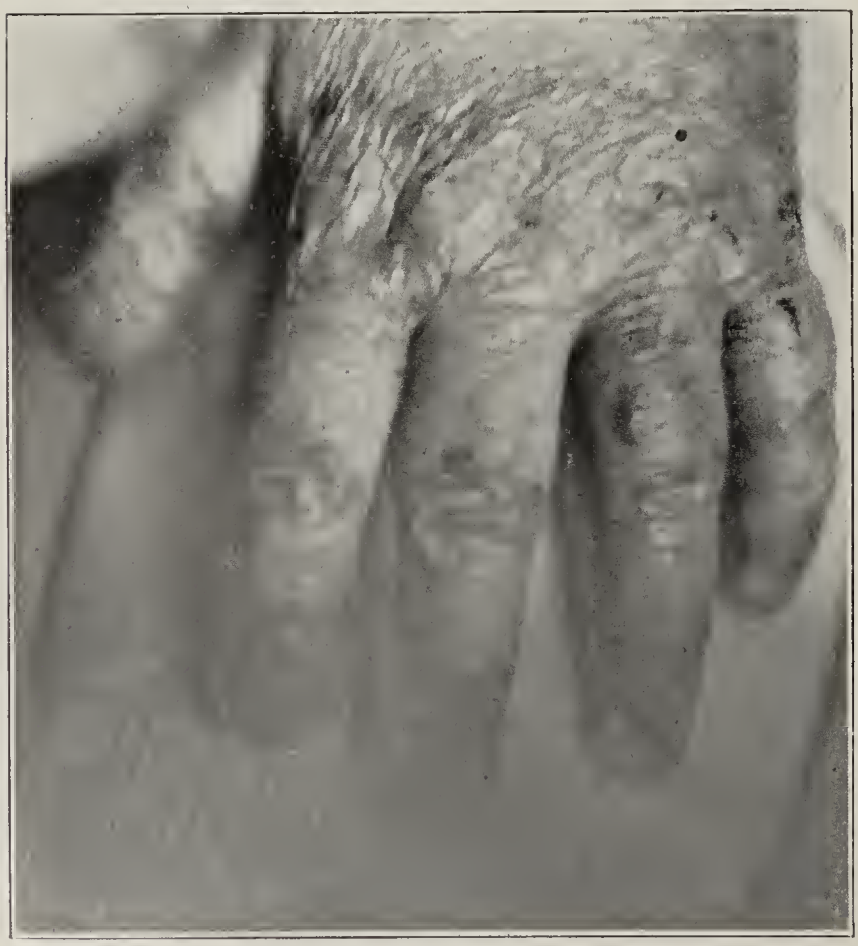

Fig. 2.—Milium-like bodies, and atrophy of skin on back of hand.

epidermidolysis bullosa which has been under our care during the past five months.

*Patient.*—M. W., female, aged 3 years.

*Family History.*—The father is a farmer by occupation, and a strong, healthy man of 26. The mother is 22, has always enjoyed good health, and has never had a miscarriage. There is one other child, a boy, aged 5. His health is excellent. The cutaneous history of the family is negative. No other member has ever been affected with a similar disorder so far as the grandparents remember.

*Personal History.*—The patient has never experienced any illness other than the one for which relief is now sought. She was a nine-months baby, and the delivery was uncomplicated. At birth the skin and nails were apparently like those of any other child. The mother's health during the period of gestation was good.

*Present Illness.*—When the patient was two days old a large bulla appeared on the outer side of the left leg. No cause for it could be assigned. A few days later, she struck the back of her left hand on the side of the crib, and the slight injury resulted

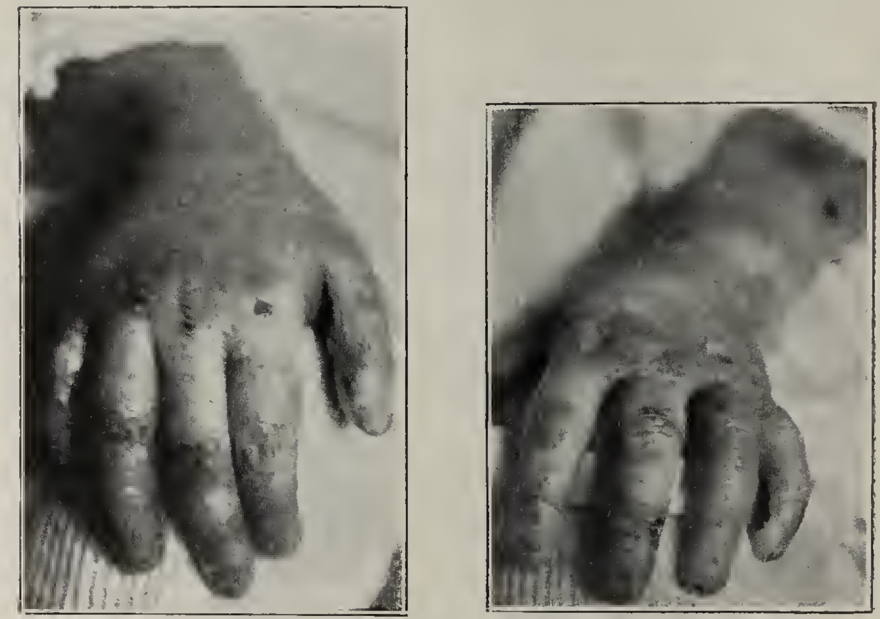

Fig. 3.—Showing atrophy of nails.

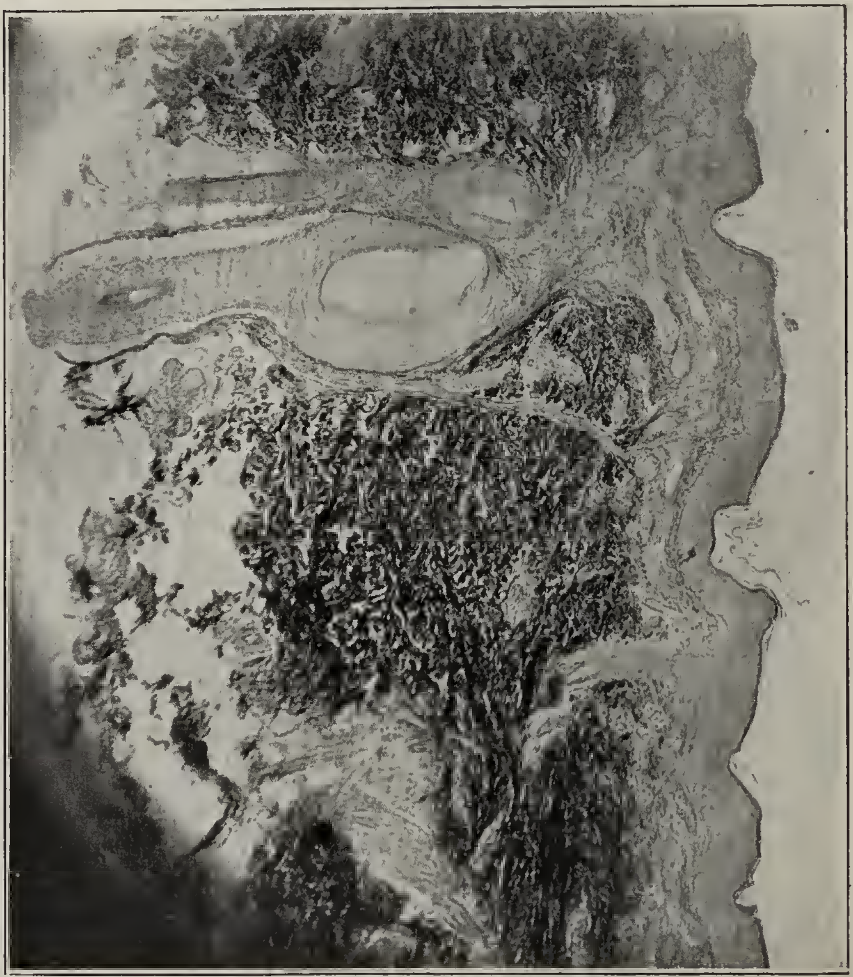

Fig. 4.—Section showing absence of elastic tissue in papillary and subpapillary regions and hair follicle.

in the development of a large hemorrhagic bleb one hour later. Since then the skin has never been entirely free from lesions. No part appears to be exempt. Vesicles have developed on the buccal mucous membrane frequently since the third month. As a result of repeated exfoliation, the finger nails have practically disappeared, and the toe nails have become atrophied and deformed. In consequence of injuries to the scalp, and the ensuing development of bullæ, several bald spots have appeared. The patient becomes cold easily, and often complains of chilliness when her brother is not suffering in the least. There has never been excessive sweating. The lesions are almost painless. They itch very little, and heal promptly. They form rather slowly—in from one-half hour to two hours after the receipt of the injury. Commonly they contain only serous fluid, but occasionally, following considerable injury, they are filled with blood.

*Examination.*—The patient is a well nourished child, a blonde, and rather large for her age. The hair is long and silky. There are three spots of cicatricial alopecia on the scalp. The teeth are normal. The buccal mucous membrane is paler and smoother than usual, and the tongue is partly bound down. The pharynx appears to be unaffected.

On the body and limbs are numerous lesions in various stages of development or subsidence. On the back of each hand is a considerable number (20 or more) epidermic cysts (minute, pale, flat or cup-topped elevations). In these localities the skin is thin, parchment-like and atrophic. Both palms are marked by the remains of recent bullæ. Friction with a rough towel produces blebs. The seats of former lesions are not wholly immune, but it is more difficult to produce bullæ here than on surfaces which have never been injured.

In four blood counts, made at intervals of one month, the highest number of whites found was 12,400, and the lowest, 6,800. An average of the four gave 39 per cent. polymorphonuclears, 41.2 per cent. small mononuclears, 11.2 per cent. large mononuclears and transitionals, and 8.6 per cent. eosinophils. The serum in the blebs contains very few eosinophils. Exposures to the $x$-rays, for from three to eight minutes, at a distance of 12 cm., a soft tube being used, invariably result in the production of bullæ (as in Berger's[3] case). The lesions heal within the usual period, and we have not found the areas thus treated any less liable to subsequent injury than those which have not been exposed to the rays.

*Histopathology.*—A piece of the uninjured integument, measuring 1 by 2.5 cm. was excised from the right upper arm under chloroform anesthesia. This material was cut in two, and one portion fixed in alcohol, the other in 10 per cent. aqueous solution of formalin. Later the formalin specimen was divided, and one-half mounted in celloidin, the other in paraffin. For comparison, sections of normal skin, taken, post-mortem, from the upper arm of a three-year-old child, were used, together with some material secured (also post-mortem) from the chest of a fifteen-year-old boy. The sections intended for study of the general structure were stained with hematoxylin-eosin. For elastic fibers Weigert's elastic tissue stain and Unna's orcein mixture were employed. In the hematoxylin-eosin sections the only changes observable in the horny layer are those which might occur as a result of acute edema. The cells are plumper and more rounded than normal, and those in the uppermost layers are less flattened than the ones in the fourth and fifth layers of the control. The outer (upper) portion of the section stains fairly well, but as the granular stratum is approached the coloring becomes faint and pale. The nuclei throughout stain very poorly. In the prickle-cell layer the interepithelial channels are widened and some of the fibrils are broken. There is some granular degeneration of the cells that constitute the lower part of the rete, and the nuclei stain irregularly. The interpapillary processes are swollen and edematous. The papillæ also are swollen, and the blood and lymph vessels are somewhat dilated, but there is no cellular infiltration. In the subpapillary region there are some lymphocytes and considerable numbers of connective tissue cells in the neighborhood of the vessels. The edema is less in the deeper regions, and there is little or no perivascular infiltration, but the vessels here also are dilated. Some of the coil glands are slightly affected. Their component cells stain irregularly, and the lower portions of the ducts are at some points blocked with cells, but there is no dilatation.

It is extremely probable, as Politzer[4] has suggested, that practically all of these changes occur as a result of injuries sustained by the skin during the performance of the biopsy. This also would account for the slight difference in the microscopic findings of various observers. But the fact that there must be a predisposition to injury on the part of the skin must also be taken into consideration. Until recently no plausible reason for this lack of resistance had been found. That it was due to some structural fault had been suggested by Payne,[11] Elliot,[5] Gilchrist,[6] Welch,[7] and others, but the exact nature of this peculiarity escaped the notice of a large number of careful investigators. It is when the stains for elastic tissue are used that this typical and, so far as we know, specific anatomic difference between the sections of normal skin and those of epidermidolysis bullosa is shown.

Stanislawski,[8] working in Podvisotski's laboratory at Odessa, was the first to note the absence of elastic tissue in the lesions of the affection, but, in spite of the fact that the excellent drawings with which his article is illustrated fail to show the presence of elastic fibers in the upper corium, he specifically states that this tissue was normal in the uninjured localities. Engman and Mook[9] pointed out that the elastic fibers were almost or entirely absent in the papillary and subpapillary regions of the derma in not only the bullæ, but in the apparently normal skin as well.

In the sections from our case scarcely a trace of this tissue is to be found in the upper corium. Below the subpapillary region the network is fairly heavy and regular, but as it passes upward it quickly shades off into a thin, friable-looking mesh which disappears practically altogether when the upper derma is reached. The fibers are entirely absent in the hair follicles as well, a fact which has not been noted by previous observers.

The controls show the thick, wavy fibrils running up into the papillæ, and passing into the mucous layer above, to finally terminate between the cells of the basal layer of the epidermis. We consider it extremely probable, as Pusey[10] suggests, that these prolongations of elastic tissue constitute an important factor in binding together the two major layers of the skin, and we believe that the almost complete absence of these fibers in this region in epidermidolysis bullosa undoubtedly explains the predisposition to injury manifested by the integument in cases of this affection.

Inasmuch as this condition is a congenital one in practically every instance, and hereditary in only about 50 per cent. of the cases, it appears to us that the term "epidermolysis bullosa congenita" is to be preferred to "epidermolysis bullosa hereditaria." Dr. Achilles Rose has kindly informed us, however, that the expression "epidermolysis" is incorrect, and that "epidermidolysis" is the proper word to employ. Although it may appear injudicious to suggest a new name for a disorder which has already suffered from over-christening, it is never too late to give an affection its proper designation, and

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3. Berger: Archiv f. Dermat. u. Syph., lxxx, 23.

4. Politzer: Jour. of Cut. Dis., 1899, p. 539.
5. Elliot: Jour. of Cut. Dis., 1895. p. 10.
6. Gilchrist: Jour. of Cut. Dis., 1899, p. 539.
7. Welch: Quoted by Gilchrist, Jour. Cut. Dis., 1899, p. 539.
8. Stanislawski: Russk. Jur. of kozhn. i. ven boliezn, v, 1903.
9. Engman and Mook: Jour. Cut. Dis., 1906, p. 55.
10. Pusey: Prin. and Prac. Derm., 1907, p. 23.
11. Payne, Lancet, 1893, ii, 425.

so, in this instance, the title "epidermidolysis bullosa congenita" is used.

We desire to express our indebtedness to Dr. Harry Czarlinsky, deputy coroner of Jackson County, for a liberal supply of post-mortem material, and especially to Dr. O. L. Castle for his kindness in preparing for us a large number of microscopic specimens.

610 Commerce Building.

# EXPERIMENTAL EPIDEMIC POLIOMYELITIS IN MONKEYS

## SIXTH NOTE: CHARACTERISTIC ALTERATIONS OF THE CEREBROSPINAL FLUID AND ITS EARLY INFECTIVITY; INFECTION FROM HUMAN MESENTERIC LYMPH NODE *

SIMON FLEXNER, M.D., and PAUL A. LEWIS, M.D.
NEW YORK

In our last communication,[1] we pointed out that by making use of the filterable nature of the virus of epidemic poliomyelitis we had succeeded in detecting it in the nasal and pharyngeal mucosa of the monkey, from which we concluded that one path of elimination of the virus was by way of the nasal mucosa through its lymphatic connections with the pia arachnoid of the brain. On the basis of this observation, we assumed that infection in the monkey might be accomplished by the reverse route, namely, from the nasal and pharyngeal mucosa, and that this route probably represents one of those traversed by the virus in the course of spontaneous infection in man. We have made some experiments covering this point and have ascertained that when an emulsion of the spinal cord from a recently paralyzed monkey is brought into intimate contact with the scarified mucous membrane of the nose and pharynx infection results. In the protocol that follows, note should be taken of the location of the paralysis in the muscles of the upper half of the body.

Experiment 1.—March 15, 1910: *Macacus rhesus*, ether anesthesia; scarified nasal and pharyngeal mucosa; dropped a milky suspension of spinal cord into nose and rubbed it in gently with cotton pledget. March 18, reapplied same suspension. No immediate effect. March 21, 8 a. m., paralysis of muscles of neck and arms; legs strong but animal cannot stand; died during night of the same day.

In a recent publication,[2] we described the series of changes in the meninges which we believe precede the development of the vascular impediments that ultimately cause paralysis. We have followed the alterations which take place from day to day, following intracerebral inoculation of the filtrate, and have found them to be of rapid development and characteristic nature.

When a considerable dose of filtrate is injected, the cerebrospinal fluid secured twenty-four hours later by lumbar puncture is of normal quantity but contains a considerable number of small cells, hardly exceeding a lymphocyte in size but showing a polyform nucleus, a few lymphocytes, and some red corpuscles. At the expiration of forty-eight hours, the white cells have increased in numbers, but the cells with polyform nuclei still predominate. At the expiration of seventy-two hours, a large number of mononuclear cells have appeared and the fluid presents a striking opalescent appearance. On the day of paralysis, the fluid tends to be only slightly cloudy and contains a mixture of large and smaller (lymphoid) mononuclear cells, and a few cells with polymorphous nuclei.

The fluid withdrawn on the third day, which is several days in advance of the appearance of paralysis, contains the virus, and when injected intracerebrally it is capable of setting up paralysis in another monkey.

Experiment 2.—March 10, 1910: Inoculated *Macacus rhesus* intracerebrally, under ether anesthesia, with 1.5 c.c. of fluid obtained by lumbar puncture on third day after injection of filtrate. March 16, paralysis of left arm. March 17, paralysis of arms, legs and neck. March 21, died. Lesions characteristic.

These experiments show that the cellular changes in the meninges and cerebrospinal fluid begin immediately after the intracerebral injection of the filtrate and are thus present several days before the onset of the paralysis. Should this observation be confirmed for human beings, a valuable method of diagnosis of atypical and abortive or non-paralytic cases would be secured. An abrupt change in the nature of the cerebrospinal fluid, from being opalescent, rich in cells and spontaneously coagulable just before or at the time of paralysis, to a more limpid fluid, poorer in cells immediately after, often occurs. The spinal cord removed on the third day after an intracerebral injection shows beginning meningeal infiltration and normal vascular and nervous structures.

Through the kindness of Dr. W. T. Longcope of Philadelphia, we secured portions of the spinal cord and a mesenteric lymph node, preserved in glycerin, from a child of five years who had died on the fifth day of illness. The child was under the care of Drs. Marcy and Hodge. The symptoms were suggestive of infantile paralysis—onset sudden. Sections prepared from the spinal cord, kindly sent by Dr. Longcope, showed characteristic and extensive lesions of epidemic poliomyelitis.

Suspensions of the glycerinated spinal cord and mesenteric lymph node were each injected intracerebrally on March 8, into a monkey (*Macacus rhesus*). The animal inoculated with the spinal cord was well until March 19, when weakness and paralysis of the legs appeared. It was killed with ether. Characteristic microscopic lesions existed in the spinal cord. The monkey having received the suspension of the lymph node remained well until March 18, when paralysis of the legs and left arm appeared. Lumbar puncture yielded a faintly cloudy fluid containing an excess of mononuclear cells. The animal was killed with ether. Characteristic lesions were present throughout the spinal cord.

This experiment proves the virus of poliomyelitis is contained not only in the central nervous system but in mesenteric lymph glands, and suggests that it may be present in other organs in human subjects of the disease.

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* From the Laboratories of the Rockefeller Institute for Medical Research, New York.

[1] The Journal A. M. A., Feb. 12, 1910, p. 535.

[2] Jour. Exper. Med., March, 1910, p. 227.

# FORMALDEHYD POISONING

FRANK A. ELY, M.D.
DES MOINES, IA.

In view of the paucity of literature[1] on formaldehyd poisoning, the following case seems worthy of record:

The patient, a boy of 3 years, gained possession of a bottle containing a few drops of a 40 per cent. solution of formaldehyd which he tipped to his lips as though in the act of drinking. He was immediately seized with a paroxysm of coughing and choking, but the attack soon ceased. The child's mouth was rinsed out thoroughly with water and he was soon at play as if nothing had happened.

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[1] References to the literature are given in The Journal, Jan. 29, 1910, liv; 370, and Jan. 15, 1910, liv, 221.

On the next day I was called and found the child suffering from a hoarse, laryngeal cough with accelerated and labored breathing. The pulse and temperature were normal and in every respect the child seemed to be in perfect health.

I made laryngeal application of adrenalin with temporary benefit. Inhalations of steam were advised and frequent teaspoonful doses of olive-oil were ordered to allay any pharyngeal or esophageal irritation.

Fifteen hours later I was called in great haste and found the child deeply cyanosed and showing every sign of laryngeal obstruction. I immediately transferred the patient to a hospital and called a specialist in consultation, hoping that intubation or tracheotomy might be performed and thus relieve the respiratory difficulty. Upon the arrival of the consultant, it was decided to defer operative procedures for the reason that we could not be at all sure that the obstruction did not extend low down in the trachea, in which case the introduction of a tube might produce an immediate fatal termination. Repeated applications of adrenalin were made and the breathing became somewhat easier, but during the night, eight hours after admission to the hospital, the child died.

Post-mortem examination, made six hours after death, showed a marked thickening of the mucous and submucous coats of the epiglottis, larynx and trachea, with a superficial necrosis which extended to the bifurcation of the trachea. The esophagus showed no pathologic changes, nor was there evidence of destruction of the mucosa of the mouth and pharynx.

The extensive thickening of the tracheal mucous membrane proved the wisdom of non-operative treatment because the morbid changes extended so low down that even a low tracheotomy would have failed to relieve the condition.

The points of greatest interest in this case are as follows:

1. The absence of systemic disturbance other than that produced by respiratory obstruction.
2. The absence of destructive changes in the buccal, pharyngeal and esophageal mucous membranes.
3. The extensive infiltration and necrosis of the tracheal mucosa extending below the point where a tracheotomy operation would be of value.

605 Citizens National Bank Building.

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# IODIN AS AN ASTRINGENT, ANTISEPTIC, DISINFECTANT AND GERMICIDE IN MOUTH DISEASES

EUGENE S. TALBOT, M.D., D.D.S.
CHICAGO

For an astringent, antiseptic, disinfectant and germicide in the mouth, there is nothing so convenient and quick acting as tincture iodin. I have used this drug as an astringent, antiseptic and disinfectant since 1878, but did not know of its germicidal properties until six years later, although I was obtaining the desired results of germ destruction.

Patients present themselves with fetor of the breath, pus about the teeth, inflamed gums, diseased alveolar processes, acid mucus and saliva, the latter being also ropy and stringy, plaques on the teeth and decay with all the forms of bacteria from the most harmless to the more dangerous pathogenic microorganisms such as the pneumococcus, diphtheria bacillus, tubercle bacillus and the germs of children's diseases. Miller has demonstrated more than fifty varieties of microorganisms in the mouth. Pus germs are often present in and about the necks of the teeth and easily infect wounds and inflamed tissue. These germs are also taken into the stomach at every swallow and some pass through into the intestines. While most of the better class of patients possess fairly cleanly mouths, yet from 12 to 20 per cent. of all patinets have pus germs in the oral cavity.

Tooth decay is due to lactic-acid ferment and nearly every person has it to a greater or less extent. Clinic and dispensary patients, and especially the poorer classes who never use brushes, washes or powders in the mouth, possess regular cesspools of filth. Before the fingers, even, are placed in such mouths, the mucous membrane, gums and teeth should be thoroughly painted—completely covered—with tincture of iodin. Enough iodin should be applied to run in between the gums and the teeth, and then it should be allowed to dry; afterward the mouth should be rinsed with water.

Attention was first called to this method of procedure by my researches on interstitial gingivitis. The pathology of this disease showed the inflammation to be deep-seated throughout the alveolar process. In order to reach this inflammation, iodin alone would penetrate the bone.

All people after the temporary teeth erupt have interstitial gingivitis more or less throughout life. The mouth of every patient of mine, therefore, who has any operation on the mouth or teeth, since I began this method, is treated to an iodin bath before or after the operation. This may occur every day, every other day or whenever the patient has an appointment.

The officinal tincture of iodin contains 7 per cent. of iodin dissolved in alcohol to which is added 5 per cent. of potassium iodid. This preparation, if used often will cause the mucous membrane to become tender and sore; it will also, in some patients, destroy the mucous surface. To overcome this difficulty, many years ago, I formulated the following, which I have called iodoglycerole:

| | |
|---|---|
| Zinc iodid | 15 parts |
| Water | 10 parts |
| Iodin | 25 parts |
| Glycerin | 50 parts |

The proportions were suggested by Prof. C. S. N. Hallberg of the University of Illinois School of Pharmacy, in order to obtain a clear preparation without deposits. As compared with the ordinary tincture of iodin, its astringent properties are greatly increased, the glycerin causes rapid absorption and the irritating effects are reduced to a minimum. The penetrating effect is remarkable. The glycerin thickens the preparation and prevents it from mixing with the saliva and running over the mouth as the ordinary tincture will do. Long, round, wood applicators can be obtained at the drug and instrument houses and on one end cotton is wound; this is saturated with the preparation and the gum margins above and below painted. The jaws are closed, the lips and cheeks distended and the application made as before, the teeth are also covered; the lips and cheeks are held away from the jaws until the iodin has dried.

No one drug will destroy lactic-acid bacilli and their ferment and thus stop tooth decay like iodin. Frequent applications will destroy all germs in the mouth and reduce mouth and general disease to a minimum.

Before operations on the mouth and fauces, the gums, teeth and mucous membrane should be given an application of iodin; especially in the removal of tonsils. After this treatment, and after the iodin has become absorbed, the tonsil or part to be operated on should receive similar treatment. This application should be made from 10 to 15 minutes before operation.

To prevent contagions and infections among public school children, their teeth, gums, and mucous membrane should be painted with iodoglycerole as often as once a month, during the school term. This method will greatly reduce tooth decay.

103 State Street.

# New and Nonofficial Remedies

Since the publication of the book "New and Nonofficial Remedies, 1910," the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association. Their acceptance has been based largely on evidence supplied by the manufacturer or his agent and in part on investigation made by or under the direction of the Council. Criticisms and corrections to aid in the revision of the matter before publication in the book are asked for.

The Council desires physicians to understand that the acceptance of an article does not necessarily mean a recommendation, but that so far as known it complies with the rules adopted by the Council.

W. A. PUCKNER, Secretary.

## FILICIC ACID AND RELATED SUBSTANCES

Aspidium and pharmaceutical preparations thereof have long been used as teniafuges. The most recent work indicates that aspidium probably contains the following constituents, in approximately the amount indicated: Filicic acid, 3.5 per cent.; flavaspidic acid, 2.5 per cent.; albaspidin, 0.05 per cent.; aspidinol, 0.10 per cent.; flavaspidin, 0.10 per cent.; amorphous acid, 5.0 per cent. and filicic nigrine, 6.0 per cent. These substances are, for the greater part, derivatives of phloroglucinol, and some of them are ketones possessing acid characters.

The various formulas assigned to the filicic acids and the different results reported regarding their physiological activity, have given rise to much confusion, leaving the chemistry in an unsettled condition. One of the first formulas assigned to filicic acid is that of Luck—$C_{26}H_{30}O_9$, which differs considerably from the formula—$C_{14}H_{18}O_5$—given this substance by Grabowski and $C_{14}H_{16}O_5$, as suggested by Daccoma. Later two forms, a crystalline and an amorphous filicic acid, were recognized by Poulson, who suggested the formula, $C_{36}H_{40}O_{12}$ for the crystalline filicic acid and $C_{36}H_{42}O_{13}$ for the amorphous acid, which latter he considered as the active therapeutic principle of aspidium. Poulson believed the crystalline acid to be the anhydride of the amorphous acid. More recently, Gallas has stated the formula for both the crystalline and the amorphous filicic acid to be $C_{18}H_{22}O_6$. Gallas and later Kraft concluded that one form of the acid was the lactone of the other form. Filicinic acid, which has the formula ($C_8H_{16}O_3$) is sometimes confused with filicic acid. Besides a difference in the theories regarding the constitution of the various filicic acids, there has been considerable controversy over the anthelmintic properties of these substances.

Our knowledge of the subject is very imperfect, but the majority of authors still accept filicic acid as one of the active constituents of aspidium.

**FILICIC ACID, AMORPHOUS.—Acidum Filicicum Amorphum.**—Amorphous filicic acid is an organic acid $C_{35}H_{42}O_{13}$, obtained from several species of aspidium.

Amorphous filicic acid is a white, or yellowish powder, without odor or taste, melting at 125° C. (257° F.), soluble in cold alcohol.

*Actions and Uses.*—Amorphous filicic acid has been recommended as an anthelmintic, and is generally considered one of the active principles of several species of aspidium.

*Dosage.*—0.5-1.0 Gm. (8 to 15 grains) given with calomel or calomel and jalap.

Note:—The crystalline filicic acid, preferably designated as filicinic acid, which is considered as an anhydride of the amorphous, is devoid of anthelmintic action, and must not be used in place of the amorphous.

**FILMARON.**—Filmaron, $C_{47}H_{54}O_{16}$, is an active anthelmintic constituent obtained from the ethereal extract of aspidium (the rhizome of Dryopteris Filix Mas).

Filmaron is obtained from the male fern extract by isolating it in the form of a metallic salt, from which the free filmaron is liberated and suitably purified.

Filmaron occurs as a straw-colored amorphous powder, insoluble in water, difficultly soluble in ethyl and methyl alcohols, and rather difficultly soluble in petroleum ether. It is readily soluble in all proportions in ether, acetic ether, amyl alcohol, chloroform, benzene, carbon disulphide, and acetone, and also, though with partial decomposition, in solutions of the alkalies and alkali carbonates. The alcoholic solution exhibits a slightly acid reaction. Filmaron melts at about 60° C. (140° F.). It exhibits a strong tendency to cake together to form a resinous mass which is difficult to reduce to powder and dispense, hence it is not marketed in substance, but as a 10 per cent. castor oil solution, which is known as "Filmaron oil."

0.5 Gm. filmaron and 5 Gm. pumice stone, and 1 Gm. magnesia are finely triturated with 250 Cc. water, the mixture shaken for half an hour, and then filtered. On passing a rapid current of carbon dioxide through the filtrate, a voluminous, flocculent precipitate forms; the filtrate should afford but very slight precipitate on the addition of hydrochloric acid.

On dissolving 0.1 Gm. filmaron in 0.2 Gm. acetic ether or 0.2 Gm. carbon disulphide by rotation in a test tube, and setting the stoppered tube aside for three days, no separation should have taken place at the end of this time (absence of other male fern constituents; filicic acid and flavaspidinic acid).

0.1 Gm. filmaron should completely dissolve in 0.5 Gm. warm petroleum ether, and leave no more than a slight trace of undissolved substance. To detect the filmaron in the castor oil solution (filmaron oil), dilute the filmaron oil with ether, shake out with sodium hydroxide solution, acidulate the alkaline liquid, and then take up the liberated filmaron with ether. On evaporating the ether the filmaron is obtained as a residue.

*Actions and Uses.*—Filmaron is said to exhibit the specific action of male fern extract and to be useful as an anthelmintic for expelling intestinal parasites.

It is claimed to be devoid of the injurious side actions sometimes exhibited by the oleoresin of male fern and to be harmless when given in the dose necessary for the expulsion of tape worm.

*Dosage.*—See Filmaron Oil.

Manufactured by C. F. Boehringer & Soehne, Waldhof near Mannheim (Merck & Co., New York). U. S. trademark No. 40,558.

*Filmaron Oil.*—Filmaron oil is a 10 per cent. solution of Filmaron in castor oil.

*Dosage:* 10 Cc. (2½ fluidram).

(*To be continued*)

# Therapeutics

## CHOREA

Although the treatment of this disease is frequently discussed, its management is still too little understood, and the mistake of giving large doses of arsenic in the belief that, because the symptoms often abate during its administration, arsenic did it (it being forgotten that acute chorea is a self-limited disease) is still prevalent. Poisonous doses of arsenic can never be beneficial in chorea.

Dr. John Allan, of Edinburgh, Scotland, in the *American Journal of the Medical Sciences,* February, 1910, offers some valuable recommendations for the management of chorea. He well states that the most important factor in its successful treatment is more or less absolute rest and removal from all sources of frets and teasing which may occur when a child so afflicted, even mildly, is sent to school or allowed to associate with other children. Even if the disease is mild, the child should be put absolutely to bed, or at least should be put to bed several times during the day. From three to five weeks of bed rest and then two or three weeks of intermittent bed rest is the greatest promoter of quick recovery and is the best prevention of cardiac complications. Hard playing or hard exercise, or even much walking, should be prohibited for some weeks after a child has recovered sufficiently to be about. During the period of rest in bed massage should be administered daily, as soon as there is no fever, and, of course, there may be no fever at all. The massage should be more or less general, depending on its effect on the child.

More or less isolation of a choreic child is essential. Only those persons should come near the patient whose judgment is such as not to fret the child by their presence. When it is possible a sensible nurse is the best caretaker of the patient, as nervous, neurotic or fretted mothers are not the best nurses for these children.

The advantage of any particular specific diet is doubtful. The diet should depend on the acuteness of the symptoms or the amount of fever. If there is fever, the diet should be light but nutritious, perhaps mostly milk. If there is no fever, a sufficient, easily digestible, mixed diet, with perhaps meat in small amount only, is the best. Of course, tea, coffee, alcohol or any other excitants are prohibited.

It is essential that the bowels should be kept active in the manner found the pleasantest and the simplest, preferably with cascara or with phenolphthalein.

Warm baths every day or every other day, if the patient's movements are not too severe, are quieting and restful, and, with the massage, keep the skin in good condition.

In spite of the long-continued use of arsenic in chorea, it may be stated that there is no specific treatment for this disease. Those who advise the use of arsenic state that it must be rapidly pushed to the point of saturation of the tissues, i. e., to the point of tolerance. Some state that, if it does no good in the first two weeks, it will do no good at all. Others object to its use on account of the fact that in order to do good it must literally poison the patient; in other words, that the nervous system is more or less paralyzed by it if it inhibits the muscle movements in chorea. If given in small doses it probably is of little, if any, value, as when the disease becomes better it becomes better because it is time for the chorea to improve (it tending to recovery), but it does not recover on account of the small doses of arsenic. Arsenic pushed to rapid effect will frequently cause albuminuria and even nephritis, and casts and blood cells will be found in the urine. If the urine of every patient were studied daily during the administration of large doses of arsenic, less arsenic would be given. While small doses of arsenic in many anemic conditions (and in chorea the patients are often anemic) will stimulate the production of red blood corpuscles, large doses of arsenic will often cause destruction of red blood corpuscles.

Whether or not chorea is allied to rheumatism, Allan believes that acetyl-salicylic acid (aspirin) is a drug of great value in its treatment. He finds the best method of administering it to children is as follows:

| ℞. | gm. or c.c. | | |
|---|---|---|---|
| Acidi acetyl-salicyli | 8 | | ʒiiss |
| Acaciæ | q. s. | or | q. s. |
| Syrupi aurantii | 25 | | fl.℥i |
| Aquæ chloroformi, ad | 100 | | ad, fl.℥iv |

M. et Sig.: A dessertspoonful, in water, every 4 hours. [This must be well shaken.]

This dose, he finds, is suitable for a child 6 years of age, but it should be increased as the child's age increases until at about puberty he gives from 90 to 120 grains a day. He says that acetyl-salicylic acid should never be given in tablets, and should not be prescribed with alkalies. He finds less symptoms of salicylism than occur from the salicylate of sodium and he does not find it depresses the heart. He quotes the German authorities as believing that acetyl-salicylic acid has an hypnotic as well as analgesic effect.

At times strong hypnotic drugs are required, and Allan prefers sulphonethylmethanum (trional), but some patients require stronger quieting drugs, as chloral and chloralamid.

If the heart is weak and a cardiac tonic is required, he prefers strophanthus in the form of the tincture.

As soon as convalescence is established, iron is certainly required. It may or may not be combined with small doses of arsenic. Of course, the acetyl-salicylic acid should be stopped as soon as the choreic movements have ceased.

It is needless to emphasize the necessity for removal or correction, as soon as possible, of any reflex irritation that may have caused or aggravated the chorea, be this intestinal worms, carious teeth, phimosis, clitoris adhesions, eyestrain, otitis media, or adenoids.

A patient who has recovered from an acute chorea should be given an outdoor, quiet life for several months. School work should be absolutely prohibited. If the chorea has occurred about puberty in young girls, all excitement and the strain of school life should generally be forbidden until menstruation is thoroughly and regularly established. Disturbances of menstruation are frequently the cause of chorea.

## UNNECESSARY BLINDNESS

The caption of this article is copied from the *Journal of the Minnesota State Medical Association and the Northwestern Lancet* (February, 1910). The very association of these two words presents a truth that cannot be too frequently emphasized, and still, with all the discussion on the subject, it is not daily recognized that ophthalmia neonatorum, with its dire consequences, can and should be prevented. A symposium on ophthalmia neonatorum is presented in the above-mentioned journal, and ends with the following conclusions:

"1. The conjunctiva of the newly born is peculiarly liable to infection.

"2. Many germs may cause the infection, but the gonococcus is responsible for at least 65 per cent. of the cases and for nearly all of the severe infections.

"3. Ophthalmia neonatorum may almost surely be prevented.

"4. The 2-per-cent. silver nitrate is the surest prophylactic.

"5. The 1-per-cent. silver nitrate is nearly as valuable.

"6. Bichlorid of mercury, 1-2,000, is a good substitute and should be used if one has not the silver.

"7. If a prophylactic be used in the eyes of every newborn baby, the present rate of ophthalmia neonatorum will be greatly reduced.

"8. The treatment of the disease should always be turned over to the ophthalmologist."

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**Practical Applications of Salt in Epilepsy.**—A. Ulrich has found that the symptoms of bromin poisoning rapidly subside when salt is given internally; the motor symptoms especially yield at once to the action of the salt. Even the *fetor ex ore* subsides under its influence. In his article on the subject in the *Neurologisches Centralblatt*, 1910, xvi, 74, he states that bromin acne is also rapidly cured by local application of a 10 per cent. salt solution. There seems to be no doubt, he says, that salt is the antidote to bromin. He also reports that he was able to bring on an epileptic seizure in 12 cases of genuine or Jacksonian epilepsy by giving 20 or 30 gm. of salt a day for a few days for diagnostic and therapeutic purposes. In one of the 3 cases reported in detail, the patient had had no severe seizure for several months and was in a condition of excitement bordering on mania. Administration of 30 gm. of salt on two successive mornings brought on a seizure after which the patient's mind was apparently normal. In another case the salt was given to disclose a possible epilepsy in a medicolegal case, and the findings were positive.

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[*For other information see second page following reading matter*]

SATURDAY, APRIL 2, 1910

## THE RAT AND ITS RELATION TO THE PUBLIC HEALTH

Rats probably exceed any other variety of mammal in the number of individuals, and their fecundity and secretive habits add greatly to the difficulties of the rat problem. Under normal conditions a female rat will bear three to five litters of ten each year. At this rate, one pair of rats would in five years increase to over nine hundred billion, provided all survived. The number of rats in any given place is limited only by the amount of available food and the facilities to nest.

The economic losses from rat depredation in the United States alone are estimated to vary from thirty-five to fifty million dollars a year. They consist mostly in damage to grain, merchandise, poultry, eggs and other foodstuffs. Rats also set fire to buildings, destroy furniture, gnaw lead pipes, weaken embankments, undermine foundations, piers, etc. So far as anyone has been able to make out, rats serve man no useful purpose. They are a wary, alert and dangerous foe, and it will require intelligent, energetic and unrelenting efforts to suppress them. In certain places and at certain times the suppression of the rat has become almost a necessity for the preservation of the human race. The extermination of the rat is almost a hopeless task, and seems to be a biologic impossibility.

It has been found that the rat is one of our most serious and dangerous enemies. It has followed man into all parts of the globe, and where the rat goes, plague and other diseases may go. This rodent in addition to carrying plague is also the reservoir of trichinosis and ten other parasites of man. Furthermore, rats have leprosy, although no direct association between rat leprosy and human leprosy has yet been made out. Rats also have cancer. These tumors occur "spontaneously" among wild rats, and may be readily transferred from rat to rat. Rat cancer is now being studied in many laboratories and in many parts of the world, and it is probable that he who can cure rat cancer will have little trouble in controlling this scourge in man.

Special opportunities for observation and study of the diseases of rats, their relation to the public health and the problems connected with their destruction, have been afforded officers of the Public Health and Marine-Hospital Service, who have had practical dealings with this question since plague in the present pandemic reached our western shore about ten years ago. These experiences have just been collected in an admirable volume[1] published by the Public Health and Marine-Hospital Service, with the collaboration of experts in the Department of Agriculture. This work is particularly timely, and should interest sanitarians and health officers everywhere, especially as it is the first and only publication in which the important known facts on the subject are brought together in an authoritative and satisfactory way.

In this bulletin Lantz gives a description of the genus *Mus* in America and a classification of rats. He also refers to their habits in breeding, feeding, migration, invasion and fecundity, and discusses their natural enemies. The facts presented emphasize the great difficulty in ridding cities of these pests.

McCoy, who has had large experience with the problem in California, discusses plague infection in rats, and describes methods for their examination. He presents results of his investigations to show that the wild rat in San Francisco is not especially susceptible to plague infection, and that a certain percentage of these animals appear to enjoy a natural immunity to plague.

Brinckerhoff discusses the question of rat leprosy, and states that it has no known bearing on human leprosy. It is believed, however, that a further study of this disease in the rat may throw much additional light on the problem presented in man, for the two diseases are strictly analogous. Banks presents information in condensed form, having practical bearing on the ectoparasites of the rat. Rucker explains methods of trapping rats, of cutting off their food-supply, of destroying existing nests and of preventing the making of new ones.

Stiles discusses the internal parasites of rats and mice in relation to the diseases in man, and emphasizes the fact that trichinosis will probably never be eradicated from man until it is eradicated from rats, or until rats and mice are killed off. A national campaign directed against trichinosis, therefore, must take the rat into consideration.

The problem of fleas associated with rodents and their relation to plague is fully considered by Fox and Blue. A point of special importance, which cannot be emphasized too strongly, is the plague infection in ground-squirrels in California, and the danger lest these animals become responsible for the establishment of a permanent focus on the Pacific Coast of the United States, just as the marmots have established a permanent focus in India.

Rat-proofing as an antiplague measure is considered by Creel. Rodents must be "built out of existence." Houses in the Philippines are rat proof by reason of having thin walls and being elevated above the ground, affording no refuge for rats, and as compared with the appalling epidemics of plague in India and China but few people die of the disease.

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[1] The Rat and Its Relation to the Public Health, by various authors. Prepared under the direction of Surgeon-General Walter Wyman, U. S. Public Health and Marine-Hospital Service, 1909. This bulletin contains eighteen different articles.

Rat-proofing is one of the most practical of the antiplague measures, and while it is expensive, it will finally have to be adopted by all cities desiring to improve permanently their sanitary condition in so far as plague is concerned.

The bulletin contains an article by Rosenau on the inefficiency of bacterial viruses in relation to rat destruction. As a result of his investigations in the Hygienic Laboratory and the reports of investigations and practice elsewhere, he concludes that these bacterial viruses have signally failed to accomplish the results for which they were intended. An important point brought out is that these cultures are not entirely harmless to man, as has been previously stated. It appears also, that they are comparatively expensive, and have little, if any, advantage over chemical poisons.

Heiser describes the methods of procedure adopted in Manila for eradicating plague by destroying infected rats, and presents graphic charts showing a practical method of dealing with this infection in city districts. Hobdy describes the migration and voyage-making tendency of the rodent, its destructiveness aboard ship, and its facility in adapting itself to unusual conditions and surroundings. As many as seventeen hundred rats have been collected from one vessel after fumigation. Kerr emphasizes the important fact that the rat has become a factor in international sanitation, and briefly outlines the provisions contained in international sanitary agreements for their extermination. An intimate knowledge of the rat has become essential to sanitarians, and those familiar with the subject realize that the difficulties are proportional to the gravity and magnitude of the problem.

This troublesome pest the rat has received much attention recently in other parts of the world. In Denmark, for instance, a legalized warfare against rodents has been started, principally on account of the part they take in transmitting trichinosis. In England there exists the incorporated Society for the Destruction of Vermin, and in other places destruction is being agitated both from economic and public health standpoints. In Japan four million rats were destroyed during the recent plague campaign in Kobe and Osaka. Similar work has been forwarded in Australia under the direction of Dr. J. Ashburton Thompson, in San Francisco under Dr. Blue, and in other places where plague has received proper attention from the health authorities.

The rat has grown from a nuisance to a danger, and the control of this rodent has become a serious public health problem. It must be considered in the drafting of city ordinances, and energetically hunted down in municipal house-cleaning. The city beautiful must not merely contain marble palaces, fine parks and imposing boulevards; it must provide for the destruction and suppression of all vermin, especially the rat.

## CHANGES AT THE UNIVERSITY OF PENNSYLVANIA

It has long been recognized that, while progress in the medical sciences in this country in the last generation has been, relatively speaking, greater than in any other country, the clinical branches have, on the whole, lagged far behind in the academic sense, and clinical departments in most schools have not advanced very far beyond what they were a generation ago. The improvement in the scientific branches has been due chiefly to the recognition of the fact that the imperative demands of active practice absorb too much time to permit a man to teach one of these branches properly, and that in all our best schools such men are now devoting their whole time to teaching and investigation—the two essential requirements of their positions. To contribute to medical knowledge is of essential importance, for, aside from the value of new knowledge, no one can remain a good teacher unless he keeps himself familiar with progress through the essential stimulus that comes through contributing to that progress.

In recent years it has appeared to many that the great need of medical teaching has been that the most important clinical chairs should be held only by those whose interests lie more largely in teaching and investigation than in active practice, and who will train others in these same lines of work, for the teaching of clinical branches and the lines of investigation that are necessarily followed in them are now so complex that it is impossible to combine active general practice with such positions, just as it was earlier recognized to be impossible to combine practice with the teaching of the medical sciences. It is worthy of consideration, however, whether clinicians who devote themselves to teaching and investigation, thereby acquiring special skill in certain ways, should not place themselves as consultants at the service of the public so long as such practice is sufficiently limited as not to interfere with their academic work and influence. Their teaching also could profitably be supplemented and reinforced by the teaching of high-class men actively engaged in general practice.

In accordance with this sentiment one of the most important features of the program recently announced by the University of Pennsylvania is the reorganization of the clinical chairs so that the occupants will give the larger part of their time to university work. A beginning has been made with the chair of medicine. Dr. James Tyson, after his long years of service, with the deep affection of every one, has resigned, his resignation to take effect at the end of this academic year. He will be succeeded by Dr. David L. Edsall, who will have as his colleagues Dr. John H. Musser and Dr. Alfred Stengel, who now hold chairs of clinical medicine. Equally radical changes in other clinical chairs are a part of the program for the future.

The program also includes radical changes in the departments of pathology, pharmacology, and the establishment of new departments of research medicine, physiologic chemistry and comparative pathology, and the reorganization on new lines of the Henry Phipps Institute for the study, prevention and treatment of tuberculosis.

The Henry Phipps Institute is to be organized into three distinct lines of work—social, laboratory and clinical—and all these departments will be used to a more or less considerable extent in teaching medical students, and thus in spreading more widely knowledge concerning tuberculosis and the methods of attacking it. Generous financial provision has been made for the departments of research medicine and physiologic chemistry and for the Phipps Institute, the endowment for these three consisting of gifts aggregating $800,000.

The department of pathology will be in the hands of Dr. Howard T. Ricketts of the University of Chicago; the head of the department of pharmacology is not yet announced; the department of research medicine will be in the hands of Dr. Richard M. Pearce, now professor of pathology of the University and Bellevue Hospital Medical College, while Dr. Alonzo Englebert Taylor of the University of California will head the department of physiologic chemistry, and Dr. Allen J. Smith the new department of comparative pathology.

These extensive changes in the oldest medical school in the United States are sure to have a profound influence. They constitute another illustration of the present rapid development of medical education in this country.

## SENATOR OWEN ADVOCATES A DEPARTMENT OF HEALTH

The declaration of President Taft at the University of Pennsylvania last year that "certainly the economy of the union of all health agencies of the National Government in one bureau or department is wise" bids fair to find expression in law. This is shown by the bill introduced by Senator Owen, providing for a Department of Public Health. In advocating the bill,[1] Senator Owen pleaded the law of precedent in accordance with which other departments have been created by assembling and coordinating pre-existing bureaus, and urged Congress to redeem the pledges on this subject made in the platforms of both the great political parties. He also pointed out the necessity of having a department with ample power, as the only means of conferring on the health agencies of the country such prestige and influence as would afford adequate protection to the people.

Senator Owen made some statements which tend to impeach the Department of the Treasury as a competent administrator of the health interests of the country. He stated that when he applied to the Surgeon-General of the Public Health and Marine-Hospital Service for certain information, he, a senator of the United States, could not get the information for two weeks or until the Secretary of the Treasury had returned to Washington. When the Surgeon-General finally made a statement to Senator Owen it was by express permission of the Assistant Secretary of the Treasury. This is an illustration of the humiliating status of our national health service under the existing system. It is true that until recently the Public Health and Marine-Hospital Service has been more distinctly autonomous than would seem to be indicated by the two foregoing incidents, but it was only by tolerance and not because the Secretary of the Treasury did not have the power at any time to subordinate that service by executive order. Nor can we reproach the Secretary of the Treasury. Central responsibility must carry with it central authority, and in national health administration that authority, under the President, resides in the Secretary of the Treasury. So it is not against the Secretary of the Treasury nor against the Surgeon-General of the Public Health and Marine-Hospital Service that Senator Owen directs his shafts, but rather against the laws that permit a system that belittles that which ought to be dignified and weakens that which ought to be strengthened.

The action of the Department of the Treasury during, we believe, the secretaryship of Hon. Leslie M. Shaw, with respect to the bubonic plague at San Francisco, is urged by Senator Owen as an additional reason why that department should not remain in executive control of our health interests. The charge in this instance involves the suppression of the report of the board of experts from Feb. 26, 1901, to April 19, 1901. Senator Owen said: "The commercial interests of San Francisco had triumphed over the bureau and compelled the Surgeon-General, the head of the bureau, by order of his superior officer, the Secretary of the Treasury, to agree to suppress the report contrary to the obvious moral and sanitary duty of the United States. From that time bubonic plague has widened the area of its terribly dangerous infection from Los Angeles to Seattle, passing from rat to rat and squirrel to squirrel and from these animals to an occasional human being through the agency of the common flea."

With respect to this charge the Surgeon-General of the Public Health and Marine-Hospital Service, "by permission of the Assistant Secretary of the Treasury," dictated this statement: "There was a time when the commission of three experts was sent out there and verified the existence of the plague and it was known that this full report was on the way when it was evident a great sensation was expected and the full report of the commission was not published immediately, although the essential facts were published. It was evident that a wide sensation beyond what was evident and what was proper could have been made out of the report of this committee and it was so handled that, while the central facts were not delayed, still the sensational report which would inflict injury on the State of California for an indefinite number of years was prevented."

Apparently the Treasury Department was more concerned about the receipts of the custom house at San

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[1] Department of Medical Economics, p. 1159.

Francisco than about stamping out the plague. Evidently "revenue" and "health" are such incompatible propositions that, in fairness to either, they cannot be administered jointly by the same agency.

Senator Owen has made clear that any attempt at progressive legislation must be in the direction of a department and not of a bureau, since the latter is the very thing from which we are endeavoring to escape. On this point, Senator Owen insists, as President Taft pointed out, that "it is generally agreed that these bureaus should all be brought together as one working body. To bring established bureaus under a new 'bureau of public health' would be to lower the dignity of the present bureaus by making them the subordinate bureaus of a new bureau which would be offensive to every bureau so subordinated. To bring these bureaus under a department would not lower the dignity of a bureau thus coordinated with other bureaus under the department and would, I believe, generally meet the approval of the government officers employed in the bureaus so coordinated, giving them a new dignity by being a distinct branch of a department of public health, through which they could enlarge their efficiency and find better expression and publicity of work done for the public health." These considerations prompted Senator Owen to introduce this bill providing for a department and not for a bureau.

It is impossible to review every phase of Senator Owen's speech, the full text of which will be sent by him to any one on application. This movement and especially this enthusiastic propaganda on the part of a United States Senator is gratifying and encouraging to all those who have long sought to interest our national legislators in public health matters. If as a result a Department of Health is created, the visions of years will be realized. Even if this end, so much to be desired, cannot be secured, the campaign ought at least to insure a strong bureau of public health located in a department in which its work shall be untrammeled and not subordinated to other interests. Such a result will be a marked advance in the campaign for the protection of public health, and, even if it is not all that can be desired, will be well worth the effort.

## THE FOURTH-OF-JULY SACRIFICE—MUST WE HAVE IT THIS YEAR?

Seven years ago THE JOURNAL, realizing the enormous sacrifice of human life in connection with our annual celebration of the Fourth of July, and believing that the public should be made acquainted with the actual figures, undertook to gather and publish accurate statistics regarding the matter. Every possible care has been taken each year in collecting these statistics, large numbers of individual cases being followed up, and sufficient time being allowed to elapse before final publication so as to include termination of the cases of lockjaw following Fourth-of-July wounds. For the first year or two the figures presented were apparently not appreciated but gradually they have been, and during the last two or three years they have been made the basis of a propaganda for a more sensible method of celebrating our national holiday. While the results of the propaganda have not been all that could be wished, it is most encouraging when cities like Baltimore, Cleveland and Washington have taken such a vigorous stand that last year they eliminated the fatalities and practically all of the casualties.

The outlook this year is promising. Never before has the subject been so widely and earnestly discussed in all classes of publications. The statistics have been utilized by the monthly magazines, and by various kinds of periodicals, including the newspapers. One magazine[1] this month devotes four pages to graphic illustrations of the horrors of the day as they have been observed in the past, and uses the statistics compiled by THE JOURNAL—although without credit—to show the gruesome results. Another magazine[2] calls attention to the "coming sacrifice" and says that "for scores of healthy happy boys and girls the days of life are nearly ended." It pictures startlingly the results of a vote by Congress, if that were possible, to sacrifice one unknown boy each year as a national Fourth-of-July offering—the extra editions of newspapers announcing this extraordinary action, the editorial denunciation of the law-makers, the public agitation and excitement, the petitions to Congress and the President, and the civil war that would surely follow an attempt to execute the decree. Such an attempted sacrifice, of course, is an impossible one, as the magazine says, but, if it could be seriously suggested for a moment, the pictured results would be true in every detail. All this would occur over the contemplated sacrifice of one unknown boy; and yet we supinely allow, year after year, the slaughter of hundreds, and the mutilation of thousands, causing desolation and anguish in many homes.

The public is becoming aroused on the subject. In every part of the country individuals, civic societies, and other organizations are taking up and vigorously agitating the matter, and one organization has taken steps for the formation of a national committee for the promotion of a "safe and sane Fourth." In cities, in which quickest and best results can be obtained, the authorities are taking action, and to those already having effective legislation many will be added this year. The medical profession, which comes in immediate contact with the results of the present custom of celebrating the holiday and realizes their frightful extent, should take the lead in agitating such measures as will speedily put an end to this needless sacrifice of life and limb.

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[1] The Ladies' Home Journal, April, 1910.
[2] Popular Mechanics, March, 1910.

## DEFENSE OF ANIMAL EXPERIMENTATION

Recently the *Ladies' Home Journal* has published two articles on animal experimentation, one by the Rev. Floyd W. Tomkins and the other by Dr. W. W. Keen.[1] Dr. Tomkins' article, while much more moderate in tone than the average "antivivisection" article, advocates restriction of scientific experimental work and regulation of it by men admittedly of unscientific training, in order to avoid the possibility of preventable cruelty. Like all the opponents of animal experimentation, Dr. Tomkins speaks entirely from hearsay and without personal or accurate knowledge of the facts involved. Dr. Keen, who, as the editor of the *Ladies' Home Journal* well says, is "as well, if not better, qualified to present the advantages of vivisection as any American writer," has spent a long, useful and honorable life in the active practice of surgery and of warfare against disease. When, therefore, he states facts which have come to him through his own experience as a surgeon, they are entitled to far more weight in the minds of all rational persons than the theorizing and hearsay arguments of those who would lock the doors of our laboratories and compel our scientific men to abandon their life-saving work.

Dr. Keen's first illustration is an exceedingly graphic one. In 1905 his assistant, a young man of brilliance and promise, was stricken with cerebrospinal meningitis and died in less than thirty-six hours, no relief being possible. In 1909 Charles E. Hughes, Jr., the son of the governor of New York, was seized a few weeks before graduation with the same dreadful disease. His death also would have been inevitable had not Drs. Flexner and Jobling, of the Rockefeller Institute, discovered in 1907, by researches on animals alone, a serum by which this disease could be cured. Three injections of the serum were given young Mr. Hughes, with the result that within a few weeks he was completely restored to health. In discovering this serum, Dr. Flexner experimented on twenty-five monkeys and one hundred guinea-pigs. Dr. Keen shows that this one discovery has reduced the mortality of cerebrospinal meningitis from 75 to 25 per cent., and then says: "Let me now put a plain, straightforward, common-sense question: Which was the more cruel: Dr. Flexner and his assistants who operated on twenty-five monkeys and one hundred guinea-pigs with the pure and holy purpose of finding an antidote to a deadly disease and with the result of saving hundreds, and, in the future, thousands on thousands of human lives; or the women who were 'fanned into fury' in their opposition to all experiments on living animals at the Rockefeller Institute, 'no matter how great the anticipated benefit.'?"

Dr. Keen gives other graphic illustrations of the results of animal experimentation, all proving that much of the present success in treating disease depends on investigations that have been made on animals. He also states that 97 per cent. of the animal experiments performed in England last year were merely hypodermic punctures, involving no pain whatever.

The article is calm and judicial, easily intelligible to the layman yet interesting and graphic throughout. It is not believable that any state legislature will pass an antivivisection law in the face of such testimony.

## NEW CANCER RESEARCH LABORATORY

To overcome the ravages of cancer has become a fixed purpose with the medical profession, and the struggle has aroused the active interest of the general public. Endowments and other gifts for the study of cancer have reached a large sum. We recently[1] called attention to some of the large benefactions for this purpose. In this connection, an announcement made in the news columns of this issue is of especial interest. The St. Louis Skin and Cancer Hospital, one of the few institutions in the United States already doing good work along this line, is to establish and equip a research laboratory for the study of cancer. A new building is being erected, and from a liberal endowment, a large portion of which is already subscribed, a sum is annually to be appropriated exclusively for cancer research. Dr. Leo Loeb, formerly professor of experimental pathology in the University of Pennsylvania, is to be the director of the new laboratory, and under his guidance progress along scientific lines will undoubtedly be made. Although for a number of years the study of cancer seemed to make no progress, and the many theories as to its origin were one by one exploded or failed of confirmation, within the last few years definite progress seems to have been made, and this has given a new impetus to the study. The report, made at the last International Medical Congress, of the investigations carried on by the British Imperial Cancer Research Fund; reports from other sources in this country that cancerous tumors can be perpetuated in successive generations of animals even for years; the production of experimental tumors, some of them with all the characteristics of cancer, by means of the *x*-ray and by other means; the establishment of an apparent immunity by inoculation in animals—all these things indicate progress toward the final solution of this difficult problem. The multiplying of endowments and laboratories for the study of cancer is most gratifying and will hasten the time when conclusions of value can be drawn. St. Louis is to be congratulated on this new laboratory and the increased facilities for studying this vital problem; and much credit is due the founder of the hospital, the board of directors and the people of that city for their recognition of an important public duty.

**Antagonistic Serotherapy.**—Mariani suggests treating patients with myxedema with serum from patients with exophthalmic goiter, and *vice versa*. In the *Cronaca della Clinica Medica di Genova*, 1910, xvi, 65, he refers to the experiments of Colzi who united the carotid artery and jugular vein of a normal dog with those of another dog with thyreopriva tetany so that in a few minutes the blood of the two dogs was thoroughly mixed and the tetany subsided.

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[1] See also page 1104.

[1] Cancer Research, The Journal A. M. A., Feb. 26, 1910, liv, 710.

# Medical News

## DISTRICT OF COLUMBIA

**Personal.**—Dr. John E. Walsh, sanitary inspector and bacteriologist of the health department of Washington, has resigned.——Dr. Tom A. Williams, Washington, has been elected foreign corresponding member of the Paris Neurologic Society.

**Society Election.**—The Medical Society of the District of Columbia, at its annual meeting, elected the following officers: Dr. Louis Mackall, president; Drs. D. Olin Leech and Philip S. Roy, vice-presidents; Dr. Dwight G. Smith, corresponding secretary; Dr. Henry C. Macatee, recording secretary; Dr Charles W. Franzoni, treasurer; Dr. Edwin L. Morgan, librarian, and Drs. D. Olin Leech, Henry B. Deale, Francis R. Hagner, John F. Moran and Raymond T. Holden, censors.

## GEORGIA

**Sanatorium Site Selected.**—The City and County Subcommittee on the Tuberculosis Sanatorium site for Atlanta has decided on a piece of property, thirty-seven acres in extent, half a mile from the new city limits, high and well-drained, for which $7,000 is asked. The committee has already $20,000 in hand and can secure $10,000 more when it is desired.

**State Medical Society Meeting.**—The Medical Association of Georgia will hold its annual meeting in Athens, April 20-22. At the meeting of the council of the association, held in Cordele, March 10, Dr. Claude A. Smith, Atlanta, secretary-treasurer of the association, resigned on account of pressure of business, and Dr. Jarrett W. Palmer, Ailey, was elected to fill the unexpired term.

**Personal.**—At a called meeting of the Medical Examining Board of Georgia, held in Atlanta, March 9, Dr. Isham H. Goss, Athens, resigned as president of the board, and Dr. Francis M. Ridley, Lagrange, was elected for the unexpired term. Dr. Goss was elected to fill the unexpired term of Dr. Edwin R. Anthony, Griffin.——Drs. Bernard Wolff and Miller B. Hutchins have opened a sanitarium for the treatment of cancer in Atlanta.

## ILLINOIS

**Hospital News.**—Dr. Paul E. N. Greeley has commenced the erection of a private hospital in Waterman.——An addition costing $25,000 will be made to St. Vincent's Hospital, Taylorville.

**Building for Tuberculous Nurses.**—The Illinois State Association of Graduate Nurses is endeavoring to raise $10,000 for the erection of a building to be used for the care of nurses attacked by tuberculosis.

**County Sanatorium.**—The board of supervisors of LaSalle county has recommended the remodeling of the present Isolation Hospital so that the building may be used as a county sanatorium for tuberculosis. A large porch is to be constructed around the building and proper provision made for open-air treatment.

**County Retains Hospital.**—At a meeting on March 23, of the Hospital Commission, consisting of representatives of Cook county and Chicago, it was decided that the county hospital is to be retained in charge of the county board. No more contagious diseases are to be treated in the institution and the city will build a hospital for contagious diseases.

**Personal.**—Dr. Glen W. Putnam, Grand Crossing, has succeeded Dr. I. W. Howard as surgeon of the Burlington Relief Association at Aurora.——Dr. Samuel M. Wylie, Paxton, has returned from Palm Beach, Fla., greatly improved in health.——Dr. Eugen Cohn, assistant superintendent of the Anna State Hospital, has been appointed assistant superintendent of the Peoria State Hospital.

**Gives Site to Hospital.**—Mrs. Helen Morris, wife of Edward Morris, Chicago, has deeded the site of the Chicago Home for Convalescent Women and Children, valued at $10,000, to that institution. The gift makes possible the addition of a children's ward. The building at present on the site will be remodeled and a new four-story structure will be erected, doubling the capacity of the home.

## INDIANA

**Society Meeting.**—The third annual meeting of the Fifth District Medical Society was held in Terre Haute, March 3. Dr. Orion E. Maddox, Rockville, was elected president; Dr. Daniel B. Miller, Terre Haute, vice-president; Dr. J. Randolph Gillus, Terre Haute, secretary, and Dr. Myron A. Boor, Terre Haute, treasurer.

**Irregular Practitioners Found Guilty.**—Colonel E. Wittey, Terre Haute, an advertising specialist, is said to have been fined $25 recently for practicing medicine without a license.——C. O. Buis, a so-called "suggestive therapeutist," of Princeton, is said to have been found guilty of practicing medicine without a license, March 10, and fined $25 and costs.

**Personal.**—Dr. Thomas H. McCorkle, Black Hawk, formerly of Terre Haute, is reported to be critically ill in St. Anthony's Hospital in that city.——Dr. Henry A. Denison, Indianapolis, is reported to have been committed to the Central Hospital for the Insane.——Dr. James D. Hillis, health officer of Lafayette, is a patient in St. Elizabeth's Hospital on account of an injury to the eye, caused by a long hatpin.

**Ask for Larger Hospital.**—The Indianapolis Medical Society is to bring pressure to bear on the city council to secure better accommodation at the City Hospital. The resolution adopted called on the authorities to take up the question of hospital care without delay, and to give to the community and city a hospital commensurate with its needs, and with the modern conceptions of the proper care of the dependent sick.

**New Hospital Opens.**—The Indiana Steel Company formally opened its hospital at Gary, March 23. The hospital is admirably located, well built and thoroughly equipped, has accommodation for about 125 patients, and has cost the company about $2,000,000. A special train from Chicago carried a number of Chicago physicians and other invited guests to be present at the dedication. The hospital will take care of the injured from all the industrial plants of Gary. Dr. Ira Miltimore is in charge of the institution.

## LOUISIANA

**Leprosy Found.**—It is reported from Estherwood that a case of leprosy has been found at Mermentau Cove in Acadia parish. There are said to be nine other cases in the cove.

**Extra Protection Secured.**—The efforts of the health officers of the state and New Orleans to secure for the city during the summer months extra protection has been successful. The supplemental local inspection by the United States Public Health and Marine-Hospital Service will be reestablished.

**Milk Commission Planned.**—A milk commission to work in conjunction with the New Orleans and Louisiana boards of health, in the interest of a pure milk supply is proposed by the state pure food commissioner, Dr. Hamilton P. Jones. The duties of the proposed commission will be to ascertain what dairies have attained the specific standard, to give such dairies certificates.

**Elections.**—At the annual meeting of Webster Parish Medical Society, held in Minden, March 15, the following officers were elected: President, Dr. John E. Rooks, Doyline; vice-president, Dr. Risdon W. Smith, Dubberly; secretary, Dr. Shelly F. Martin, Minden; and treasurer, Dr. Rutledge C. Tompkins, Minden.——Dr. Edward L. McGehee, New Orleans, organizer of the Louisiana Antituberculosis League, organized a branch society at Lafayette, March 11. Dr. Lambert O. Clark was elected president of the league and Dr. George A. Martin, vice-president.

**Personal.**—Dr. Isidore Cohn has been elected by the board of managers of the Touro Infirmary, New Orleans, outdoor physician to the poor, vice Dr. Jules Lazard, deceased.——Dr. Domingo Bornio, New Orleans, has been elected grand dictator of the Louisiana Grand Lodge of the Knights of Honor.——At a meeting of the Italian Mutual Benefit Societies and other organizations at Hotel Monte Leone, March 18, Dr. Joseph A. Danna, chief surgeon of the Charity Hospital, the guest of honor, was presented an oil painting of himself, and also with a handsome engrossed scroll containing expressions of regard and esteem.

**Popular Medical Lectures.**—An extensive course of lectures under the auspices of Tulane University, Medical Department, New Orleans, began March 16, and will continue until April 22. The list of subjects is as follows: March 16, Dr. Charles W. Duval on "Cancer;" March 23, Dr. G. Farrar Patten on "Recollections of Student Life in Germany;" March 30, Dr. George Dock on "Typhoid Fever;" April 6, Dr. Charles Chassaignac on "Sexual Continence and Prophylaxis;" April 12, Dr. Paul Michinard on "The Management of Labor;" April 13, Dr. Jacob A. Storck on "Hygiene of the Gastrointestinal Tract;" April 19, Dr. C. Jeff Miller on "The Anatomical Basis Underlying Injuries and Repair of the Pelvic Floor;" April 26, Irving Hardesty, Ph.D., on "The Anatomy of the Ear in Relation to Theories of Hearing;" and April 27, Dr. J. T. Hasley on "Physiologic Action of Some Much-Used Drugs, with Demonstrations."

## MARYLAND

**Protest Against Optometry Bill.**—The Medical and Chirurgical Faculty of Maryland has made a protest against the optometry bill at present before the legislature, on the ground that it will license unskilled men to treat diseases of the eye.

**Personal.**—Dr. Thomas C. Bussey, Texas, was stricken with cerebral hemorrhage, March 19.——Dr. Ira Remsen, president of Johns Hopkins University, has been appointed a delegate from that institution to the centennial celebration of Berlin University, to be held next October.——Dr. Granville H. Richards, assistant superintendent of the University Hospital, Baltimore, has settled for practice at Fort Deposit.

**Medical Association Meeting.**—At the annual meeting of Howard County Medical Association, held in Ellicott City, March 19, the following officers were elected: President, Dr. Charles C. Tumbleson, Glenelg; vice-president, Dr. John M. B. Rogers, Ellicott City; secretary, Dr. Frank O. Miller, Ellicott City; delegate to the Medical and Chirurgical Faculty of Maryland, Dr. Arthur Williams, Elk Ridge, and censors, Drs. John M. B. Rogers, Bernard J. Byrne, and William B. Gambrill, all of Ellicott City.

**Report of Sanatorium.**—The biennial report of Eudowood Sanatorium shows that 89 per cent. of the cases were cured, arrested, or improved, and that no deaths had occurred. There were 337 patients treated, of whom 159 were discharged. The total expenditures for the biennium were $37,539, and the profits from the farm were $624. During the last two years there has been a deficit of $13,500, and the legislature is asked to appropriate $15,000, and a per capita allowance for maintenance on the same basis as is allowed for the state sanatorium.

**State Appropriations.**—Dr. Hugh H. Young, president, and Dr. Arthur P. Herring, secretary of the Lunacy Commission, point out that by the bond issue of $600,000 for the state care of the poor insane, the state will save $285,000 in 1911 and 1912, and also that the bond issue will add only one cent to the state tax and will be paid off in fifteen years. The general appropriation bill as agreed by the committees of the two houses of the legislature, leaves out the appropriation of $10,000 asked for by the Medical and Chirurgical Faculty of Maryland, and the appropriation of $4,000 a year asked for by each of the four medical colleges of Baltimore. Johns Hopkins University is given $25,000 a year.

### Baltimore

**Must Report Births.**—An ordinance is being prepared by the health department of Baltimore providing a penalty for failure of physicians to report births. It is asserted that the registration of births in Baltimore is more incomplete than in any other civilized city in the world.

**Money for Baltimore Hebrew Hospital.**—Mr. Frank Cahn, New York City, has given $1,000 toward the maintenance of the Children's Summer Camp of the Hebrew Hospital, which was started last year.——By the will of Samuel Frank the Hebrew Hospital is bequeathed $500.

**Tribute to Dr. Welch.**—On the evening of April 2, several hundred distinguished representatives of medicine, science, literature and art, industry and statesmanship are to assemble at a dinner at the Belvidere, given in honor of Dr. William Henry Welch. This tribute is in recognition of the commanding position in the field of pathology occupied by Dr. Welch, of his work in original research for the diminution of human suffering and saving of human life, and of his election to the presidency of the American Medical Association.

## MASSACHUSETTS

**Fund for Children's Hospital.**—The building fund for the Children's Hospital, Huntington avenue, Boston, now amounts to $245,050, of which Francis W. Hunnewell, Wellesley, has contributed $150,000. During 1909 1,303 patients were cared for in the wards of the institution, 25,895 outpatients were treated, and 1,951 visits were made by the outdoor department. The new buildings will accommodate 150 patients, doubling the present capacity of the institution.

**Bequests.**—Vincent Memorial Hospital and Emergency Hospital, Worcester, each receives $2,000 from the estate of Mrs. Sarah E. Foster.——By the will of Mary S. Spaulding, Groton, a bequest of $5,000 each is made to the New England Hospital for Women and Children, the Massachusetts General Hospital, Perkins Institution for the Blind, and the Boston Home for Incurables.——By the will of the late Freeborn F. Raymond, the Newton Cottage Hospital is bequeathed $5,000 to endow the Mary P. Raymond free bed.

**Personal.**—The summer home at Hamilton of Dr. Orran G. Cilley, Boston, was entirely destroyed by fire, March 26.——Dr. John A. Leitch, Andover, has been appointed town physician.——The Worcester Home of Consumptives Association, at its annual meeting, March 8, elected Dr. Carl Crisand, president, and voted to endorse the bill giving cities and towns the right to erect public sanatoria for the care of incurable cases of tuberculosis, and provide for the establishment of the sanatoria by a mill tax.——Dr. William J. Collins has resigned as chairman of the board of health of Northampton.——Dr. William N. Noyes has been elected city physician of Salem.——Dr. Joseph F. O'Shea has succeeded Dr. Frank E. Stone as city physician of Lynn.——Dr. Charles W. Page, superintendent, and Dr. Charles Ricksher, assistant superintendent, of the State Insane Hospital, Danvers, have resigned.——Dr. Maurice V. Tyrode, faculty instructor in pharmacology in Harvard Medical School, has resigned to take effect September 1.

## MICHIGAN

**County Sanatorium to Be Established.**—The Houghton County Board of Supervisors adopted a resolution at its last meeting to submit to voters at the spring election the proposition to raise $15,000 for the erection and maintenance of a county sanatorium for tuberculosis.

**The Health of Manistee.**—Dr. Szymon Szudrawski, health officer of Manistee, in his annual report, states that during the past year 652 investigations were made, of which 163 were positive; 312 cases of infectious diseases were reported, and 269 disinfections were made, at a total cost to the city of only $224.17.

**Lodge Practice.**—At the recent meeting of the Oakland County Medical Society, held in Pontiac, an amendment to the constitution of the society was passed by a vote of 32 to 5, which stipulates that no member shall continue to do lodge practice and still continue to be a member of the society, unless he obtains for his compensation fees similar to those established by usage in the community in which he resides.

**Sentenced to Prison.**—Dr. George A. Fritch, Detroit, said to have been convicted of manslaughter in the case of Maybelle Millman, Ann Arbor, who died as the result of a criminal operation, was sentenced to imprisonment for an indeterminate term of seven and a half to fifteen years in the state penitentiary. The judge, in making the usual recommendation in indeterminate sentence law, recommended that the sentence of the prisoner be for fifteen years.

**Personal.**—Dr. Roy C. Perkins has succeeded Dr. Charles F. H. Freiberg as health officer of Bay City, and Dr. Harvey Gilbert has been placed in charge of the smallpox cases in the city.——Dr. Mina L. Fuller, physician of the State Industrial Home for Girls, Adrian, since 1891, has resigned, and Dr. Emily S. Stark, Detroit, has been chosen her successor.——Dr. Oscar C. Breitenbach has been appointed Escanaba representative of the State Board of Health on the regulation of the public water supply.——Dr. Flemming Carrow, Detroit, for eighteen years a member of the faculty of the University of Michigan, and a member of the State Board of Registration in Medicine, has decided to give up practice and has purchased a farm in the state of Washington.

## MINNESOTA

**Abortionist Sentenced to Jail.**—Mrs. Elizabeth Schmitz, a midwife of St. Paul, who pleaded guilty March 14, to the charge of criminal abortion, has been sentenced to imprisonment for one year in the county jail.

**Public Safety Commission Proposed.**—Dr. Henry M. Bracken, secretary of the State Board of Health, has suggested a commission on public safety as one of the future possibilities of the state. His idea is to have a commission composed of three men, which will be in continuous session, and who will do the work now done by the Bureau of Labor, the Health Department, and the Dairy and Food Commission.

**Personal.**—Dr. John Jackola, Duluth, has returned after a years' stay in Berlin.——Dr. William D. Kelly, St. Paul, has been appointed chief surgeon of the Chicago, Milwaukee and St. Paul Railroad for Minnesota, Iowa and Wisconsin.——Dr. Albert F. Groves, Brainerd, who has been seriously ill with rheumatism, is reported to be improving.——Drs. Arthur S. Adams, Rochester, Charles E. Fawcett, Stewartville, Frederick L. Smith, Chatfield, Rolla C. Dugan, Eyota, and George Steven, Byron, have been appointed by the county commissioners of Olmstead county, physicians for the districts in which they are located.

## MISSOURI

### St. Louis

**New Building for Hospital.**—The St. Louis Skin and Cancer Hospital, which has been in operation in an old hospital building since its inception in 1906, will in the early summer occupy its new four-story hospital building, with largely increased facilities for the study and treatment of cancer and skin diseases. The hospital is wholly charitable, no private or pay patients being admitted. The funds for the erection of this new structure were furnished by Mr. George D. Barnard of St. Louis, the founder of the hospital, for whom the institution is to be named. It will be complete and modern in every detail, and specially constructed for the study of skin and cancer diseases. The Board of Directors has lately appropriated the sum of $8,000 annually for the department of cancer research, and has secured the services of Prof. Leo Loeb of the University of Pennsylvania, as director of research. The fourth floor of the institution has been reserved for the exclusive use of the research laboratory, and is to be fitted with all the apparatus necessary to prosecute the work along scientific lines. The directors are at present raising an endowment fund of sufficient magnitude to perpetuate the usefulness of the institution; so far they have met with gratifying success and hope in a short time to have sufficient means to put the institution on an adequate financial basis. The report of 1909 has not as yet been compiled, but that of 1908 shows an abundance and variety of clinical material for the prosecution of this special work.

## NEW YORK

**Medical Examination.**—On April 23, the State Civil Service Commission, Albany, will hold an examination for medical superintendent of Letchworth Village, $4,500 with maintenance for superintendent and family. Applications should be filed before April 16.

**Vital Statistics for January.**—There were 12,866 deaths in the state during January, as compared with 11,481 in January, 1909. Influenza had an increased prevalence and fatality. Measles continued to be extremely epidemic. With an average daily mortality of 415, the death rate was 17.8 per 1,000. The birth rate for the month was 23.2 per thousand population.

**Medical Society Elections.**—At the annual meeting of Utica Medical Club, March 17, the folowing officers were elected: Dr. John Gormann, president; Dr. Arthur M. Johnston, vice-president; Dr. Frederick R. Ford, secretary-treasurer, and Drs. Morris J. Davies, William J. Schuyler, and William B. Roemer, trustees.——Preliminary steps were taken March 16, for the organization of a new medical society at Canandaigua, to be known as the Canandaigua Medical Association. Dr. Frank A. Brockmyre was temporary chairman and Dr. George W. Gregg, temporary secretary of the meeting.

### New York City

**Gift to Medical School.**—Mrs. Helen Hartley Jenkins has given $100,000 for the endowment of the Marcellus Hartley Chair of Medicine in the New York University and Bellevue Hospital Medical College.

**New Courses in Medicine at Columbia University.**—During the summer of 1910 a new course in clinical pathology, bacteriology, physiologic chemistry, nutrition, and physical and medical diagnosis, will be instituted.

**The Harvey Society.**—The eighth lecture of the Harvey Society will be delivered by Professor Magnus-Levy of the University of Berlin at the Academy of Medicine, New York, on April 9 (not on April 2 as previously announced), at 8:30 p. m. The subject of the lecture will be "Pathology and Therapy in Diseases of Metabolism."

**Cartwright Lectures.**—Professor Magnus-Levy of the University of Berlin will deliver the three Cartwright Lectures of the Alumni Association of the College of Physicians and Surgeons of Columbia University at the New York Academy of Medicine, 17 West Forty-third street, on April 11, 12, and 13, at 5 o'clock. The subject of the lectures will be "Some Phases of the Chemistry of Diabetes."

**Personal.**—Dr. A. O. Shaklee, assistant in physiology and pharmacology in the Rockefeller Institute for Medical Research, has been appointed assistant professor of pharmacology in the Philippine Medical School, Manila.——Dr. Nell G. W. Bartram has been appointed a member of the staff of Kings Park State Hospital.——Dr. and Mrs. Simon Flexner and Dr. J. Morgan Howe have sailed for Bermuda.

**Closer Relations Between College and Hospitals.**—Closer relations are being established between the College of Physicians and Surgeons and Mount Sinai Hospital and the German Hospital. Drs. Nathan E. Brill, Emanuel Libman, Arpad G. Gerster and Henry W. Berg, of the staff of Mount Sinai Hospital, and Drs. Frederic Kammerer, Norbert Stadtmuller, and Otto Hensel, of the staff of the German Hospital, have received appointments in Columbia University.

**Fellowship in Pathology.**—Mount Sinai Hospital announces the establishment of a second fellowship in pathology to be known as the Eugene Meyer, Jr., Fellowship. The income of the fellowship, like that of the first, established in 1908, is $500 per annum. It is open to all graduates in medicine, and the term of appointment is for one year with renewal at the option of the committee, composed of Drs. Abraham Jacobi, Arpad G. Gerster, Frederick S. Mandlebaum, and Emanuel Libman. The object of the fellowship is the furtherance of scientific work of the hospital and to aid students to obtain laboratory training. The work may be done either in Mount Sinai Hospital or elsewhere, under the direction of the pathologist of the hospital.

### Buffalo

**Personal.**—Dr. Charles F. Howard has been appointed chief of the medical staff of Providence Retreat, vice Dr. William C. Krauss, deceased.——Dr. John H. Pryor has been elected president of the board of trustees of the J. N. Adam Memorial Hospital.

**Alumni Election.**—At the annual meeting of the Buffalo General Hospital Alumni Association, held in Buffalo, Dr. Ernest L. Shurly, Detroit, Mich., was toastmaster. Dr. James W. Putnam was elected president; Dr. Frederick C. Busch, Buffalo, vice-president, and Dr. Thew Wright, secretary-treasurer.

**Free Dispensary Established.**—The Board of Health has decided to establish and maintain a free dispensary at the city hall, and has appointed Dr. Walter H. Vosburg, and Messrs. Frank E. Murphy and John T. Kornprobst as a commission to provide the necessary quarters, hire trained nurses, and furnish the equipment.

**Gift for Nurses' Home and Contagious Pavilion.**—Mrs. William Hamlin has bought the property adjoining the Children's Hospital on the west and has intimated that she will present the site to the management with the distinct stipulation that the money needed is raised for the new home. The new contagious pavilion for the hospital will cost about $30,000, of which $12,000 has already been subscribed.

## PENNSYLVANIA

**Personal.**—Dr. Michael Austin, Josephine, has been appointed chief surgeon for the Lackawanna Coke Company at Wehrum, to take effect April 1.——Dr. Louis Jurist, Philadelphia, who has been seriously ill with pneumonia, is convalescent.——Dr. Florence H. Richards, Philadelphia, has been apponted medical director and teacher of physiologic hygiene in the William Penn High School for Girls.

**Site for Tuberculosis Camp Acquired.**—The state commissioner of health announced March 24 that he had purchased for $18,305, 311 acres of land near Hamburg, Berks county, for the state, on which the department of health will establish its proposed Eastern State Sanatorium for Tuberculosis. The site is in the foothills of the Blue Mountains, a mile from Hamburg, is very picturesque and is admirably adapted for the use to which it is to be placed.

**Care for State's Defective Children.**—A successful movement has been inaugurated by the Pyschologic Clinic of the University of Pennsylvania to extend throughout the state its work in the treatment of backward and defective children. The officials of the clinic recently offered their services to any community wishing to make studies in retardation and to gain knowledge of a proper treatment for defectives. Already more than 100 children have been examined by Dr. Leightner Witmer and his associates, who have visited Susquehanna, Media, Williamsport and other towns. It is said that several other school boards have arranged to utilize the services of the clinic.

### Philadelphia

**New Motor Ambulance.**—On March 23, Dr. Joseph S. Neff, Director of Health and Charities, received the third motor ambulance for the use of the Municipal Hospital.

**Hospital Pavilion Completed.**—The new pavilion of the women's section of the Insane Department of the Philadelphia General Hospital has been completed and will be occupied in a few days. The new building will accommodate about 60 patients.

**Railroad to Abolish Public Drinking Cup.**—The officers of the Pennsylvania Railroad are endeavoring to perfect plans to abolish the public drinking cup from all waiting rooms in their stations and from all railroad coaches. A plan for individual drinking cups is being developed and will be tried.

**Bequests.**—The will of the late Henry C. Fox bequeathes $5,000 to the Presbyterian Hospital, $5,000 to the Howard Hospital and Infirmary for Incurables, and $5,000 to the German Hospital.——From the estate of the late Charles E. Etting, valued at $150,000, the sum of $10,000 is set aside to endow two perpetual free beds in the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases.——The will of the late Emma M. Shive bequeathes $500 each to the Methodist Hospital and the Philadelphia Home for Incurables.——By the will of the late Anna D. Evans, a bequest of $5,000 is made to the Germantown Hospital and Dispensary for the purpose of endowing a free bed, to be known as the "Thomas Wallis Evans and Anna D. Evans Memorial Bed."

**April Housecleaning.**—Dr. Joseph S. Neff, of the Department of Health and Charities, advocates calling on all members of the community to engage in a thorough housecleaning the first week in April. The street cleaning contractors will also be called on to aid in the city-wide movement for greater cleanliness as a preventive against the spread of disease. The fact that the death rate has run up this winter to 20 per 1,000, as compared with about 18 last winter and an average rate of 16 for the entire 12 months of 1909, has led to this decision. Among the causes for the increase are believed to be the severity and changeableness of the weather and the labor troubles. As so many men were out of work, it was difficult for their families to obtain proper food. One reason for the general housecleaning the first of April is the prevention of breeding of flies. This is the time to prevent their breeding and absolute cleanliness will go far toward reducing their numbers.

## GENERAL NEWS AND COMMENT

**Bubonic Plague in Hawaii.**—Rear Admiral Cowan P. Rees, commandant of the Naval Station at Honolulu, cabled the naval department, March 19, that two deaths from plague had occurred on the Island of Honokaa and three on the Island of Hilo.

**New Medical Association.**—A medical association has been organized by the practitioners in the district between Warroad, Minn., and Fort Francis, Ont., and the following officers have been elected: President, Dr. Frank H. Stuart, Baudette, Minn.; vice-president, Dr. Alexander A. McCrimmon, Rainy River, Ont.; and secretary-treasurer, Dr. Dugald McBane, Rainy River.

**Naval Medical School Graduation.**—The closing exercises of the United States Naval Medical School, Washington, for 1910, were held March 24. Among the features of the program were an address and presentation of degrees by Secretary Meyer, and addresses by Dr. Edward Quintard, New York City, and by Surgeon General Charles F. Stokes. A class of twenty passed the final examination.

**Sixth International Congress of Esperantists.**—This congress will meet next August at Washington, D. C. Dr. Zamenhof, the founder of Esperanto, and a prominent oculist of Warsaw, Poland, will attend. The American members of the World Esperanto Medical Society will doubtless be present in force, as an effort will be made to organize an American branch of the society. Further particulars may be obtained from Dr. Kenneth W. Millican, 231 Metropolitan Building, St. Louis.

**Panama Sanitation Reports Again Published.**—In The Journal, Dec. 11, 1909, we commented on the fact that the monthly publication and distribution of the Reports of the Department of Sanitation of the Isthmian Canal Commission were eagerly looked for and carefully read by sanitarians all over the country and that their discontinuance in March, 1909, was unfortunate. We have now to announce that the reports are again being issued and that the back numbers from April to December, 1909, have been published and are available for reference, and may be obtained from the government printer. As we stated before, these reports are of importance not only in regard to canal sanitation but in regard to the management of diseases in the tropics generally.

## LONDON LETTER

*(From Our Regular Correspondent)*

London, March 19, 1910.

### Death from Fright: Curious Charge in a Case of Murder

A curious case of murder has just been tried in which the theory put forward by the prosecution was that the victim died from fright when she discovered that her son was attempting to poison her. An old woman, aged 75, was living alone in Coventry. She had a son who was a great trouble to her and to whom she lent money from time to time. Shortly before Christmas, he went about saying that his mother was very ill and would not live over Christmas, though she was in her usual health and was going about her duties. About this time he purchased some cyanid of potassium, saying that he wanted it for hardening tools. He alleged that he used it on a chisel, but the evidence showed that the chisel had not been so treated. He left the cyanid at his mother's house where there could have been no lawful use for it. He told people from whom he had borrowed money that he would have plenty after her death. On Christmas eve, the woman was found very unwell and drowsy and the prisoner admitted that he had given her laudanum "to do her good." He promised to call a physician and ostensibly went to do so but none came. On January 9 the woman was found lying dead on a sofa. In front of her was a glass which had contained cyanid of potassium. When shown the glass the prisoner remarked, "I know what is in it; it is cyanid of potassium." Asked how it came there, he replied, "How should I know?" He was arrested on the charge of poisoning and then the curious fact arose: the necropsy revealed no cause for death. The organs were healthy and no trace of the cyanid could be found in the body. The amount of cyanid in the glass was so small that in the opinion of the analyst it was not sufficient to cause death. The latter said in his evidence that the absence of all signs was not inconsistent with cyanid poisoning. Cyanid of potassium in the stomach would be converted into hydrocyanic acid, which is very volatile. He was of opinion, however, that death was most probably due to fright or some other external cause. It was suggested that the old woman died from fright when the glass containing the cyanid was presented to her by her son. In this case, he would be as guilty of murder as if she died from taking it. By order of the judge, a solution similar to that found in the glass was prepared and he and the jury smelt and tasted it. The defense was that the whole case rested on suspicion and that the woman died from syncope. The jury found the prisoner guilty of attempted murder. The judge passed the heaviest sentence possible for this crime, penal servitude for life.

### Expedition to Study the Effects of High Altitudes

An international expedition for the investigation of the effect of high altitudes on medical and biologic processes has left England for the Peak of Teneriffe. The members are Professor Pannwitz of Charlottenburg, the president of the "International Commission for the Study of Biological and Medical Effects of High Altitudes and Sunshine;" Dr. Bancroft and Dr. Douglas, representing England; Professor Zuntz and Dr. Neuberg, representing Germany; Dr. Mascat and Dr. Plasse, representing Frence; and Professor Durig and Dr. H. von Schrötter, representing Austria. The primary object of the expedition is to continue the observations started by Professor Zuntz and his collaborators on Monte Rosa. At the same time the members will endeavor to extend the knowledge recently acquired of heliotherapy.

## BERLIN LETTER

*(From Our Regular Correspondent)*

Berlin, March 10, 1910.

### Personal

Like Professor Olshausen, Professor Senator will resign his position at the end of the summer semester. Senator was 75 a short time ago.

### New German Mortality Tables

The official German mortality tables based on statistics of the decade from 1891 to 1900 have just been published. The new tables are intended to replace the German mortality tables published in 1887, which were computed on the mortality for the years 1871 to 1881. The new tables give a view of the changes in the death rate in the last thirty years. The average length of life of the male sex was calculated for 1870 as 35.8; for 1890, 40.56. For the female sex the corresponding figures are: 38.45 and 43.97. The expectation of life for the male sex has risen from 38.1 to 48.85, for the female sex from 42.5 to 54.9. This shows a quite important improvement in the life expectancy of the German people.

### Professional Courtesy in Regard to Fees

It is an ancient custom in Germany as in many other civilized countries that physicians receive no fee for their treatment of their colleagues and their families. This tradition, founded on an ideal of professional conduct, has led in the course of time to abuses which are much complained of, both by the colleagues treated and by those called on to treat them. In a signed editorial in the *Deutsche medizinische Wochenschrift* last October, Professor Schwalbe discussed these abuses thoroughly. (A summary of his article was published in The Journal, Nov. 20, page 1785.) He came to the conclusion that the conditions of practice have changed so much that a mutual remission of fees to the medical profession is no longer to be regarded as desirable from a professional standpoint. The treatment of the families of physicians forms at the present time a great part of the work of specialists, who formerly were almost unknown, and those among them who are of moderate means cannot afford to receive for their practice either nothing at all or more or less useless presents like bronzes, vases, pictures, etc. On the other hand, the distinguished physicians whose income might well permit such free treatment are so greatly in demand by German and foreign physicians and their families that their other practice suffers. On the other hand, a considerable number of physicians who require the aid of their colleagues for themselves and their families object to the present custom, for one reason because they are not willing to remain under obligations to physicians to whom they are more or less strangers, and as the consultants are averse to receiving pay on account of professional custom, they hesitate to demand their services and often in this way diseases are neglected. Professor Schwalbe proposed that each physician shall be allowed to decide whether he will demand or pay a fee for the services and that a consultant shall no longer be required on the ground of professional courtesy to refuse to receive a fee offered by a colleague. This position has been endorsed by a number of physicians in letters that have been published in the *Deutsche medizinische Wochenschrift*. What is still more important, the business committee of the Berlin medical professional union (*Standesverein*) which includes the greater part of the Berlin medical profession, a few days ago, after a thorough debate, passed the following resolution: "The acceptance of a fee for the treatment of physicians and physicians' families is not to be considered unethical conduct." Thus the present usage will be gradually abandoned to the benefit of many patients and physicians. In practice the ideal which Professor Schwalbe gave at the end of his article may be established: Physicians who are in friendly relations or closely associated in their work will not mutually recompense each other for treatment by money payment, but the specialist will be justified in requiring a fee from distant, unknown, or foreign physicians and their families. On the other hand, every physician will be permitted to pay the adviser for himself and family in a moderate way, and the consultant need not feel himself obliged on account of professional courtesy to refuse the fee. If the latter regards it unprofessional to use such a fee for himself, he may apply it to some humanitarian purpose. In the estimation of the fee it is to be expected of specialists that they will not require the fancy prices occasionally customary with many of them but at most will settle for a moderate fee.

### Infant Mortality in Bavaria

The infant mortality in the kingdom of Bavaria has fallen markedly and somewhat steadily in the last six years; in the years from 1903 to 1908 the deaths of children in the first year corresponding to a percentage of those born living, were respectively 25.0, 23.9, 24.1, 22.7, 22.0 and 21.7. In 1900 the infant mortality was 27.8 and in 1878 29.6 per cent. In 1908 two-thirds died from gastrointestinal catarrh and diarrhea or congenital lack of vitality, 36.8 per cent. from the first cause, and 26.8 per cent. from the second. The infant mortality is extraordinarily high only in certain districts where the custom of artificial feeding of new-born children prevails. The coincidence of a high infant mortality with a high birth rate, noted in Bavaria as elsewhere, is associated with the marked extension of artificial feeding for the reason that the mother who nurses her child does not again become pregnant so soon, and that when the deliveries follow each other so rapidly, the new pregnancy gives the mother no time to recover from the exhaustion of the last delivery. The prince regent of Bavaria has contributed $2,500 (7,000 marks) and the government $12,000 for the advancement of infant hygiene.

## VIENNA LETTER

(*From Our Regular Correspondent*)

Vienna, March 12, 1910.

### Increase of Smoking and Its Effects on Youths

Two reports giving an interesting insight into the effects of tobacco on the population have been recently published.

The financial report of the budget committee of parliament shows that a constant and rapid diminution of the use of cigars is balanced by an equally constant and rapid increase in the consumption of cigarettes. Pipe-smoking and snuffing are nearly 80 per cent. less than five years ago, while tobacco-chewing is practically unknown here. There were 1,212,060,000 cigars sold in this country in 1908, while 4,348,010,000 cigarettes were consumed at the same time. The population being about 28,000,000, of whom only 9,000,000 can be considered as smokers, this works out a high figure per head.

The other report was made by a medical officer engaged for ten years in recruiting work, who for his private curiosity undertook to observe the effects of smoking on the youths whom he had to examine for the army. His list comprises 4,800 youths, aged from 19 to 24. He finds that in rural districts smoking is much less common, at this age at least. Even then pipes are preferred; smoking is done mostly in the open air. In the town population the cigarette is mostly indulged in, oftener indoors than out in the open; the average age at the beginning of smoking, 17, is about equal in the two groups. Youths in schools (colleges, gymnasiums, universities) are nearly always smokers; at least they pretend to be. Only 5 per cent. of the masculine population of this age are non-smokers. Generally speaking, he could not find any marked effects due to moderate smoking among those whom he examined. Only excessive smoking, especially seen in students before examinations during hard study, brought on neurasthenic symptoms: palpitation, indigestion, sleeplessness, tinnitus aurium. He hardly ever saw such conditions in youths engaged in rural occupations, while apprentices and shop assistants showed similar conditions as those seen in students.

### Postgraduate Lectures During Vacations

For a few years postgraduate courses have been organized here with much success. Although they were at first only a private experiment their use has been recognized so universally that they have now become a regular part of the teaching at our general hospital. In order to enable all doctors who desire it to partake of the advantages of the classes, it has been arranged by the Vienna medical council that classes of six to twelve hours, lasting one or two weeks, are given by certain professors alternating every month. The fee is very moderate, $1 or $2 per class, which goes to medical charitable purposes. The subjects of the postgraduate classes of this kind are chosen with a view to inform the doctor who is out of touch with the hospitals about the achievements of modern medicine during the last fifteen years or less. Another group of lectures, called the *Ferialcurse* or vacation course, is delivered during the Easter, Christmas and summer months, lasts at least four weeks and comprises one subject, which is taught as intensively as possible. The fees are much higher, $10 to $20; the classes are held mostly by privat-docents or assistants, and the number of the students is limited. They are open to any qualified man, while the classes conducted by the medical council are open only to Austrian doctors. The number of physicians who made use of the opportunities offered them by the medical council was over 400 last year, and the usefulness is best demonstrated by the number of those who have booked for similar courses for this year.

### The Temperance Movement in Austria

The temperance movement is growing in this country steadily, though not too rapidly. The energetic managing board of the "Austrian Antialcohol League" has succeeded in turning public attention to its aims by inducing several well-known men, among them the celebrated Professor Forel from Switzerland, to deliver popular lectures on the subject of the evil influence of alcohol on the development of both the body and the mind.

Already it has been demonstrated that temperance exerts a powerful influence on the capability of the laborer, and in many factories and trades only persons are employed who belong to the abstainers or at least to temperance clubs. There is a medical club of total abstainers. Students of all faculties have formed the students' antialcohol club (a fact much more significant than anything else, for the old unwritten laws and customs of the German students made drinking one of the chief recreations of the university men). In several hospitals a non-alcoholic treatment of diseases has been strictly adhered to, and there is an antialcohol press, whose circulation has exceeded that of many of the political papers.

Among the working classes the knowledge of alcohol, of its questionable value as a food, and its unquestionable effects as disease-producer is widely disseminated by lectures, so that in many circles a true alcoholic boycott is permanently declared and observed by the men.

## Pharmacology

[CONTRIBUTION FROM THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION.]

### THE ESTIMATION OF MERCURY IN ORGANIC COMPOUNDS

**W. A. Puckner and W. S. Hilpert**

[EDITOR'S NOTE: The preparation here referred to, in an indefinite way, was finally accepted by the Council and is now included in New and Nonofficial Remedies, but with a corrected statement as to its actual composition. The matter is published to call attention to one phase of the work of the Council on Pharmacy and Chemistry. In this instance an honorable firm had for a long time been putting out a preparation which the physician was told contained a certain amount of mercury. It matters not whether the manufacturers were innocent or not, the fact was that it did not contain the amount stated, and the physician would therefore be misled on a very important matter. This report also shows another thing, and that is that honest manufacturers are realizing that it is to their interest to comply with all legitimate demands regarding statements, whether they relate to the actual composition of a product or to its therapeutic value.]

Under a proprietary name there has been on the market for some time a preparation containing a protein compound of mercury, combined with other material. The preparation was submitted to the Council on Pharmacy and Chemistry and the manufacturers gave a chemical formula for the protein compound of mercury which indicated that the mixture should contain 6.57 per cent. of mercury.

At the request of the Council, the preparation was examined in the Association laboratory. The identity of the contents of the mixture was verified by qualitative tests, but a quantitative examination showed that the preparation instead of containing 6.57 per cent. of mercury really contained only 4.27 per cent. The method of examination was that of Kjeldahl. The material was decomposed by sulphuric and nitric acids and the mercury determined as sulphid.[1]

The attention of the manufacturers was called to the result of the examination and they were also given the method used. In reply they questioned the findings and held that the method used was faulty, and proposed a method[1] which differs from the one used in the Association laboratory only in that potassium sulphate was added to the sulphuric acid in place of nitric acid. This method was then employed with the result that in two analyses the mercury compound yielded mercuric sulphid equivalent to 4.40 per cent. of mercury. This showed such a slight increase in the mercury content indicated by the first examination as to be negligible.

As a further check on the method determinations[1] were made according to the method of Schumm in which the organic matter is decomposed by the action of concentrated hydrochloric acid and potassium chlorate and the mercury estimated as sulphid, with the result that the compound yielded mercuric sulphid equivalent to 4.23 per cent. of mercury. Confirmation of the laboratory's findings by their own method having been reported to the manufacturers, they were accepted by them as correct.

The discrepancy between the claims made for a product and the facts established by analysis which were brought out by the examination detailed above furnishes a good illustration of the lack of control exercised in the manufacture of medicinal products and the loose manner in which chemical formulas are applied to substances which are of indefinite, variable composition or which are highly impure. This can be explained in this instance by a lack of cooperation between the scientific staff of the manufacturers and those in charge of the commercial department.

There is no reason for the assumption that the manufacturers knowingly misrepresented the composition of the preparation. On the contrary, they have courted investigation of their products. Thus, when they submitted to the Council the preparation referred to, they voluntarily presented specimens of the constituents so as to facilitate investigation.

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[1] The details of analysis will be published in the annual report of the laboratory.

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### The Composition of Manola

Inquiries have been received relative to the composition of Manola, a preparation manufactured by the "Manola Company," said to be a subsidiary concern of the Luytics Homeopathic Pharmacy Company, St. Louis.

Examination of Manola in the Association laboratory indicates that its composition is consistent with its origin, for its medicinal ingredients are present in truly homeopathic quantities. The laboratory report follows:

An examination of an original bottle of Manola gave the following results:

| | |
|---|---|
| Specific gravity at 25 C........ | 1.0329 |
| Alcohol ........................ | 18.00 per cent. by vol. |
| Non-volatile matter (residue on evaporation) ............... | 15.93 gm. in 100 c.c. |
| Ash ........................ | .96 gm. in 100 c.c. |
| Phosphoric pentoxid ($P_2O_5$)..... | .0668 gm. in 100 c.c. |
| Total alkaloids ............... | .0047 gm. in 100 c.c. |
| Calcium ..................... | Traces. |
| Magnesium .................. | Traces. |
| Iron ........................ | Traces. |
| Sodium ..................... | Traces. |
| Arsenic ..................... | Traces. |

Manola is a light amber colored liquid having the odor and taste of sherry wine. The above analysis indicates that it is nothing more than wine, fortified with alcohol and a slight amount of medicinal substances added. The non-volatile matter appears to be nearly all sugar, glycerin, or some similar substance and the presence of less than one gram of ash to 100 c.c. excludes the presence of more than a small amount of organic salts. From the amount of phosphorus found there appears to be about one dose of phosphoric acid to a twenty-ounce bottle. Arsenic is present in such small amounts that the ordinary hydrogen sulphid test failed to show its presence and the delicate Gutzeit's test had to be used to detect it.

Some interesting points in regard to the methods of the exploiters of Manola appeared in THE JOURNAL, Aug. 8, 1908, p. 511; Dec. 19, 1908, p. 2172, and have been reprinted in the "Propaganda for Reform."

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## Correspondence

### Views on the Present Organization by the "Father of the Association"

*To the Editor:*—I have been reading your editorials on the organization of the Association with great interest and satisfaction. I am sure if you will search old speeches made by my father, by Gross, and by others of the old guard, you will find the hope frequently expressed that ultimately the profession of the country would be so organized that every county would have its society and send delegates to a business body of the state society, and that every state society would, in like manner, be represented in the Association—in other words, the organization as it now exists. That this was my father's ideal I know from his frequently repeated expressions to that effect.

Moreover, what may please you was his feeling of gratification when the reorganization was effected that such a representative organization was possible. He also commented on the similarities of function of the council and the business committee, or business council as his committee planned it for adoption, a reform which was adopted and later tabled on a parliamentary technicality, as is stated in your editorial.

N. S. DAVIS, Chicago.

[Dr. Davis merely emphasizes what the records of the Association show and what the older, active members of the Association know—that the general plan of organization, as is now in active operation, was the ideal that for long had been suggested, and especially by Dr. Davis, the "Father of the Association." This is shown in the "argument" accompanying the report of the Organization Committee, presented to the St Paul meeting in 1901.—ED.]

### Arrest of Paroxysms in Whooping Cough

*To the Editor:*—The following simple method has arrested the paroxysms of whooping-cough in a number of patients in from 3 to 7 days, and has also succeeded in some cases of laryngismus stridulus.

Place a pleximeter on the spinous process of the seventh cervical vertebra and strike the pleximeter a series of moderate blows with a percussion hammer. The number of blows is of little moment but the blows must be as strong as the child can tolerate without flinching. Some of the mothers accompany the blows with a nursery rhyme or song to interest the child. In the absence of a pleximeter and percussion hammer, a strip of linoleum and a tack hammer will suffice. To avoid cutaneous irritation, cotton may be interposed between the linoleum, or pleximeter and the spine. Each seance during the interparoxysmal period should last five minutes thrice daily and the harmless method may be executed by the mother or nurse. I am desirous of collecting reports on this method of treatment; to test the efficiency of the treatment, it would be well to note the number and severity of the paroxysms before and after treatment in each patient.

ALBERT ABRAMS, M.D., San Francisco.

246 Powell Street.

### The Kentucky Medical Bill

*To the Editor:*—In THE JOURNAL, March 19, an item from your Kentucky correspondent is misleading in that it states that the cause of the failure of the bill was the statement made by Senator Linn in opposition to the bill that "the consolidation of the five medical colleges of Louisville resulted in a number of men losing their positions and this bill was the outcome of the ill-feeling resulting therefrom."

Senator Linn was the political leader of the senate, and was simply following the dictates of the powerful influence brought to bear on him by the so-called University of Louisville, which has fought higher medical education all the time.

This bill was the result of a petition endorsed unanimously last October by the State Medical Association urging the state to establish a medical department of the State University as a necessity for higher and better medical education. It was drawn by President Patterson and his associates of the state university at Lexington. It was a bill that should have passed, and will pass unquestionably at the next legislature.

The bill was not defeated by a vote of eighteen to fourteen, as stated by your correspondent, but it was defeated, after receiving eighteen to fourteen votes in its favor, by a constitutional amendment requiring all bills carrying an appropriation to have twenty votes, of which we lacked two owing to sickness on that day of two of our champions for the bill in the senate.

W. F. BOGGESS, Louisville, Ky.

[We have received two other protests similar to the above. The item referred to and quoted should not have appeared in THE JOURNAL, regardless of whether or not the assertion of Senator Linn was based on fact.—EDITOR.]

## Association News

### TRUSTEES' MEETING

### Report of Regular Meeting of the Board of Trustees of the Association

The Trustees of the American Medical Association met in Chicago, Feb. 4 and 5, 1910, at the rooms of the Association. Two sessions were held on February 4 and one on February 5. There were present at all sessions:

Dr. M. L. Harris, Chicago (Chairman).
Dr. Philip Marvel, Atlantic City, N. J. (Vice-Chairman).
Dr. Wisner R. Townsend, New York (Secretary).
Dr. Philip Mills Jones, San Francisco.
Dr. W. T. Councilman, Boston.
Dr. W. T. Sarles, Sparta, Wis.
Dr. C. E. Cantrell, Greenville, Texas.
Dr. C. A. Daugherty, South Bend, Ind.

FIRST SESSION, HELD FROM 10:15 A. M. TO 12:30 P. M.

A letter from Dr. W. W. Grant, Denver, was read, in which he stated that he was unable to be present and expressed his regret.

It was moved to dispense with the reading of the minutes of the last meeting, as they had been read and approved.

The Editor and General Manager read his annual report. The recommendations contained therein, for new machinery, were duly considered.

Dr. Sarles moved, Dr. Cantrell seconded, that a new covering machine to cost $3,500 be ordered. Carried.

Dr. Jones moved, Dr. Cantrell seconded, that a new rotary press to cost $18,000 be ordered. Carried.

Dr. Jones moved, Dr. Sarles seconded, that a new book sewing machine to cost $1,350 be ordered. Carried.

A request from Dr. W. B. Cannon was read, asking for an additional appropriation of $500 for the Committee on the Defense of Medical Research.

A request was also presented for an appropriation of $850 for the Council on Pharmacy and Chemistry.

Dr. Charles A. L. Reed presented a request for an additional appropriation for the use of the Committee on Medical Legislation, and made an argument in favor of the same, giving details as to what had been done so far toward the establishment of a bureau of health and what work was necessary in the future. Dr. Cantrell moved, Dr. Marvel seconded, that the request of Dr. Reed for an additional appropriation of $1,250 for the expenses of the Committee on Medical Legislation, from February 7 to June 12, be allowed, and an additional contingent fund of $2,000 be placed at the disposal of the committee, with the proviso that it can only be spent for work done by the committee itself. Carried.

SECOND SESSION, HELD FROM 2:30 P. M. TO 6 P. M.

The minutes of the morning meeting were approved.

Dr. Jones moved, Dr. Cantrell seconded, that the plan of publicity campaign advocated by Dr. F. B. Wynn, chairman of the Committee on Scientific Work, be received and placed on file. Carried.

Dr. Jones moved, Dr. Councilman seconded, that Drs. F. G. Novy, G. H. Simmons and H. W. Wiley be declared elected to the Council on Pharmacy. Carried.

Dr. Jones moved, Dr. Marvel seconded, that the Board of Trustees again call the attention of all officers of the Association and all heads of committees to the necessity of presenting to the Board of Trustees an annual budget, and request that all expenses be kept within the appropriations made. Carried.

Dr. Councilman moved, Dr. Jones seconded, that an additional $500 be appropriated to the Committee on Defense of Medical Research. Carried.

Drs. I. Abt and F. S. Churchill, on behalf of a number of pediatrists, presented a communication requesting the publication, by the Association, of a journal devoted to pediatrics. Dr. Jones moved, Dr. Sarles seconded, that a committee of eleven be appointed by the chairman to secure information for the Trustees in regard to the publication by the American Medical Association, of a journal devoted to pediatrics. Carried. The chairman appointed Drs. I. Abt of Chicago, chairman, and Drs. A. Jacobi, L. E. Holt, Thomas Southworth and G. Pisek of New York, T. M. Rotch of Boston, E. E. Graham and J. P. C. Griffith of Philadelphia, W. J. Butler, J. M. Dodson and F. S. Churchill of Chicago.

Dr. Jones moved, Dr. Sarles seconded, that bill of Dr. McCormack, $842.40, for expenses from July 23 to February 5, be paid. Carried.

Dr. Jones moved, Dr. Councilman seconded, that the $850 requested by the Council on Pharmacy and Chemistry be granted. Carried.

A letter of the lawyers in regard to the status of the American Medical Association Public Health Education Committee of Women was read and ordered spread on the minutes. Dr. Marvel moved, Dr. Daugherty seconded, that the communication received from the chairman of the committee be acknowledged by the chairman of the board. Carried.

Drs. Bracken, Evans and McCormack then appeared before the Board and presented a communication relating to the establishment of a Bureau of Legislation, Organization and Publicity. Dr. Cantrell moved, Dr. Sarles seconded, that the chairman appoint a committee of two from the Trustees, to meet with Drs. Bracken, Evans, Reed, McCormack, Clark and Price (previously appointed by the House of Delegates) to prepare a plan for the formation of this council and to suggest the necessary changes in the Constitution and By-laws to carry the plan into effect, and that this committee report to the Board of Trustees prior to the meeting in St. Louis. Carried.

THIRD SESSION, FEBRUARY 5, HELD FROM 10 A. M. TO 12:45 P. M.

Dr. Sarles moved, Dr. Cantrell seconded, that the chairman be made a member of the committee to devise plans, etc., for the Council on Legislation, Organization and Publicity. The chairman then appointed as members of the committee, from the Trustees, Drs. Harris and Cantrell. Carried.

A report from the Committee on Refraction by Dr. Connor was read and ordered placed on file.

A request was received from Dr. A. D. Bevan and others asking that the Association publish a journal devoted to surgery. Dr. Jones moved, Dr. Councilman seconded, that a committee of eleven be appointed by the chairman to secure information for the Trustees in regard to the publication, by the American Medical Association, of a journal devoted to surgery. Carried. The chaiman appointed Dr. A. D. Bevan of Chicago, chairman, and Drs. J. F. Binnie, Kansas City, Kan.; J. C. Bloodgood, Baltimore; George E. Brewer, New York; George W. Crile, Cleveland, Ohio; A. F. Jonas, Omaha; Rudolph Matas, New Orleans; W. J. Mayo, Rochester, Minn.; J. G. Mumford, Boston; Charles A. Powers, Denver; and Emmett Rixford, San Francisco.

A report from the Committee on Ophthalmia Neonatorum was then read. Dr. Jones moved, Dr. Cantrell seconded, that the report be accepted and the committee thanked for its excellent work. Carried.

Dr. Harris reported progress as a member of the Committee on Postal Relations.

Dr. Jones moved, Dr. Councilman seconded, that Dr. George H. Simmons be reelected Editor and General Manager for the ensuing year. Carried.

There being no further business, the minutes of the meeting were read and approved and the Board of Trustees adjourned *sine die* at 12:45 p. m.

M. L. Harris, Chairman.
Wisner R. Townsend, Secretary.

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## HOTELS AT ST. LOUIS

### Rates, Locations and Capacities of Hotels for the St. Louis Session

Members of the American Medical Association desiring to secure hotel accommodations should write to the chairman of the Hotels Committee, Dr. Louis H. Behrens, 609 Metropolitan Building, or direct to the hotels. Many reservations have already been made and prompt attention should be given to this matter in order to secure accommodations in advance.

When writing, please give definite instructions as to the character of rooms desired, whether with or without bath, European or American plan, number of people in the party, and particularly the names of persons who are willing to share rooms.

As the section meeting places are located along Grand avenue, which is a thoroughfare about midway between the east and west ends of the city, the hotels are listed according to their location, and the time consumed in riding to the meeting-places is mentioned.

The first list comprises those hotels located in the downtown, or east, section of the city:

**American Hotel**, Seventh and Market Sts., 275 rooms, all with bath; can take 350; rate, one person, $1.50 and up; additional, $1 per person; 15 minutes from meeting place.

**Edison Hotel**, 107 N. Eighth St., 12 rooms; can take 24; rate, one person, $1; additional, $1 per person; 15 minutes from meeting place.

**Hotel Garni**, Jefferson and Olive Sts., 50 rooms; can take 50; rate, one person, $0.75 and up; additional, $0.50 per person; 8 minutes from meeting place; near Coliseum.

**Jefferson Hotel**, Twelfth and Locust Sts., 400 rooms; can take 300; rate, one person, $1.50 and up; with bath, $2.50 and up; additional, $1 per person; with bath, $1.50 per person; 8 minutes from meeting place.

**Laclede Hotel**, Sixth and Chestnut Sts., 170 rooms; can take 150; rate, one person, $1 and $1.50; with bath, $2 to $2.50; additional, $1 per person; 15 minutes from meeting place.

**Madison Hotel**, Broadway and Chestnut St., 112 rooms; can take 100; rate, one person, $1 and up; additional, $0.75 and up; 15 minutes from meeting place.

**Marquette Hotel**, Eighteenth and Washington Ave., 400 rooms; can take 250; rate, one person, $1.50 and up; with bath, $2 and up; additional, $1 per person; 8 minutes from meeting place.

**Maryland Hotel**, Ninth and Pine Sts., 240 rooms; can take 200; rate, one person, $1 to $2; with bath, $2 to $2.50; additional, $1 per person; 10 minutes from meeting place.

**Moser Hotel**, 809 Pine St., 100 rooms; can take 75; rate, one person, $0.75 and $1; additional, $0.75 per person; 10 minutes from meeting place.

**Planters Hotel**, Fourth and Pine Sts., 440 rooms; can take 300; rate, one person, $1.50 and up; with bath, $2.50 and up; additional, $1 per person; with bath, $1.50 per person; 15 minutes from meeting place.

**Portland Hotel**, 1817 Market St., 100 rooms; can take 100; rate, one person, $1; additional, $0.75 per person; 10 minutes from meeting place.

**Rozier Hotel**, Thirteenth and Olive Sts., 120 rooms; can take 180; rate, one person, $0.75 to $1.50; additional, $0.75 per person; 8 minutes from meeting place.

**St. James Hotel**, Broadway and Walnut, 150 room; can take 200; rate, one person, $1.50; with bath, $2; additional, $1 per person; with bath, $1.50 per person; 15 minutes from meeting place.

**St. Nicholas Hotel**, Broadway and Market, 40 rooms; can take 25; rate, one person, $0.75 to $1; additional $0.50 per person; 15 minutes from meeting place.

**Southern Hotel** (General Headquarters), Broadway and Walnut, 400 rooms; can take 200; rate, European plan, one person, $1.50 and up; with bath, $2.50 and up; American plan, one person, $3.50 and up; with bath, $4 and up; additional, European plan, $1.50 and up per person; American plan, $3.50 and up per person; 15 minutes from meeting place.

**Stratford Hotel**, Seventh and Pine Sts., 100 rooms; can take 150; rate, one person, $1; with bath, $1.50; additional, $0.50 per person; 15 minutes from meeting place.

**Terminal Hotel**, Union Station, 110 rooms; can take 150; rate one person, $1.25 and up; with bath, $2.50 and up; additional, $1.25 per person; 10 minutes from meeting place.

The following hotels are located in the west end, or residence section, of the city:

**Beers Hotel**, Grand and Olive, can take 40; rate, one person, $1 and up; with bath, $2.50, and up; additional, $1 per person; at meeting place.

**Buckingham Hotel**, Kingshighway and West Pine, can take 100; rate, one person, European plan $1.50; with bath, $2.50; additional, $1 per person; rate, one person, American plan $3; with bath, $4; additional, $2.50 per person; 10 minutes from meeting place.

**Hamilton Hotel**, Hamilton and Maple Ave., 150 rooms; can take 50; European plan, rate, one person, $1; with bath, $1.50; additional, $1 per person; American plan, one person, $2; with bath, $2.50; additional, $1.50; 15 minutes from meeting place.

**Hotel Berlin**, Berlin and Taylor Ave., can take 25; American plan, rate, one person, $1.50; with bath, $2.50; additional, $1 per person; 10 minutes from meeting place.

**Usona Hotel**, Kingshighway and McPherson, 100 rooms; can take 50; American plan, rate, one person, $2.50; with bath, $3; additional, $1.50 per person; with bath, $2 per person; 10 minutes from meeting place.

**West End Hotel**, Vandeventer and W. Belle, can take 25; rate, one person, $1 and up; with bath, $1.50 and up; additional, $1 and up; 5 minutes from meeting place.

**Westmoreland Hotel**, Maryland and Newstead Ave., can take 50; all rooms with bath; rate, one person $2; additional, $1 per person; 8 minutes from meeting place.

**Windermore Hotel**, 5601 Delmar Blvd., American plan only; can take 25; rate, one person, $1.50; with bath, $2.50; additional, $1 per person; 15 minutes from meeting place.

### PRIVATE HOMES AND BOARDING HOUSES

In addition to the hotels listed there are numerous private homes and boarding-houses on and near Grand avenue, in close proximity to the section meeting-places, where good accommodations can be secured at rates ranging from 75 cents to $1.50 a day, American plan. Those who desire to obtain such accommodations should write to the chairman, Hotels Committee, at the address given above. State clearly what accommodations are desired, for how many people, and at what rate per day.

### SECTION HEADQUARTERS

Hotel headquarters for sections have been assigned as follows:

| SECTIONS | HOTELS |
|---|---|
| General Headquarters | Southern Hotel |
| Surgery | Jefferson Hotel |
| Dermatology | Jefferson Hotel |
| Laryngology and Otology | Jefferson Hotel |
| Practice of Medicine | Planters Hotel |
| Pathology | Planters Hotel |
| Pharmacology and Therapeutics | Planters Hotel |
| Ophthalmology | Marquette Hotel |
| Obstetrics and Diseases of Women | Marquette Hotel |
| Diseases of Children | Marquette Hotel |
| Nervous and Mental Diseases | Buckingham Hotel |
| Preventive Medicine | Buckingham Hotel |
| Stomatology | West End Hotel |

# Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

## UTILIZATION OF GARBAGE IN SUPPLYING POWER FOR WATERWORKS, ETC.

*To the Editor:*—Can you furnish data concerning the utilization of city refuse, such as garbage and old paper, for supplying power for waterworks and other municipal plants, or tell me where such data can be obtained? Stephen C. Mason, Jr., Menominee, Mich.

Answer.—The economical disposal of garbage and refuse in cities and towns is an engineering as well as a sanitary problem of no small importance, and has been the subject of a great deal of study and experiment. It cannot be said that a practical and economical solution has yet been evolved. In many cities, such refuse has been made a source of revenue to the extent of paying a part of the expense of disposal, but nowhere in this country has it been successfully utilized in the way of fuel for running city plants to the extent named in the inquiry. In Great Britain more success has been attained in this respect, but it is said that such waste contains more combustible material than in this country. In Boston and in New York, and perhaps in some other cities in the United States, incinerators have been established which dispose of a part of the waste. After it is picked over by contractors who pay certain sums for the usable material they can get from it, the residue is burned, sufficient heat being produced to furnish steam for running a belt conveyor and perhaps baling presses. One incinerator under the Williamsburgh bridge in New York also furnishes enough heat to make electric light for lighting the bridge. The proximity of the water in the boilers of steam plants seems to cool the fire so that combustion is not perfect even under forced draft, and if the boilers are placed far enough away from the fire box to overcome this difficulty much of the heat is lost. In many cities and towns where incinerators and plants for the utilization of the waste for power purposes have been established they have later been abandoned and other methods of disposal adopted.

The following references may be consulted:

Chapin: Municipal Sanitation in the United States, The Providence Press, Providence, R. I., 1901.

Goodrich: Disposal of Town Refuse, Wiley, New York, 1901.

Baker: Municipal Engineering and Sanitation, Macmillan Co., New York, 1902.

The Journal, July 3, 1909, p. 43, in an article in Queries and Minor Notes, gives further references.

# The Public Service

## Medical Department of the Army

Changes for the week ended March 26, 1910:

Taylor, Blair D., col., ordered to make an inspection of the Medical Department, and a sanitary inspection of Key West Barracks, Fla., Forts Dade and De Soto, Fla.

Bryan, Ray W., lieut., granted 2 months' leave of absence,

Jordan, Edward H., 1st lieut., M. R. C., orders to Fort Ward, Wash., revoked; relieved from active duty in the Medical Reserve Corps, to take effect on expiration of leave of absence granted him for 1 month and 1 day.

Ruffner, Ernest L., major, on arrival at San Francisco, to proceed to Fort Missoula, Mont., for duty.

Thomason, Harry D., capt., relieved from duty at Fort Missoula, Mont., and will repair to this city and report in person to the Chief of the Division of Militia Affairs, War Department, for duty in his office.

Wales, Philip G., major, ordered to proceed from Presidio of Monterey, to the Army General Hospital, San Francisco, for observation and treatment.

Johnson, Charles W., 1st lieut., M. R. C., relieved from duty at Fort Des Moines, Iowa, and will proceed to his home, and on arrival there will report by telegraph to The Adjutant General of the Army, for further orders.

Woodson, Robert S., major, ordered to report in person to Brigadier General William P. Hall, Adjutant General, President, Army Retiring Board, Washington, D. C., at such time as he may designate for examination by the board.

Lyster, Theodore C., major, on expiration of present leave of absence, directed to proceed to Manila, P. I., for duty on transport sailing from San Francisco, about May 5, 1910.

Raymond, H. I., lieut. col., will stand relieved from duty as Chief Surgeon, Headquarters, Department of Dakota, March 24, 1910, to enable him to comply with orders for the Philippine Islands.

Pulver, Arthur L., 1st lieut., M. R. C., ordered to proceed from Fort Porter to Fort Wadsworth, N. Y., for temporary duty.

McCallum, F. M., 1st lieut., M. R. C., honorably discharged from the service of the United States.

Tukey, William H., 1st lieut., M. R. C., orders to duty in the Philippine Islands, revoked; relieved from duty at Boise Barracks, Idaho, and will proceed to his home.

## Public Health and Marine-Hospital Service

Changes for the week ended March 23, 1910:

Stoner, G. W., surgeon, granted 16 days' leave of absence from March 24, 1910.

Mead, F. W., surgeon, directed to proceed to Georgetown, S. C., on special temporary duty.

White, J. H., relieved as chairman of board of medical officers convened to meet April 4, 1910.

Carrington, P. M., surgeon, directed to proceed to San Francisco, on special temporary duty.

McIntosh, W. P., surgeon, detailed to represent the service at the meeting of the Association of American Medical Colleges, to be held in Baltimore, March 21-22, 1910.

Wickes, H. W., P. A. surgeon, relieved as recorder and detailed as chairman of board of medical officers convened to meet April 4, 1910.

Von Ezdorf, R. H., P. A. surgeon, leave of absence granted Jan. 19, 1910, amended to read 1 month and 6 days from Jan. 15 and 20 days from March 10, 1910.

Korn, W. A., P. A. surgeon, granted 2 days' leave of absence from March 22, 1910.

Pettyjohn, Joseph, P. A. surgeon, detailed as recorder of board of medical officers convened to meet April 4, 1910.

Hotchkiss, S. C., asst.-surgeon, granted 1 day's leave of absence in February, 1910, under paragraph 191, Service Regulations.

Dynan, N. J., acting asst.-surgeon, granted 4 days' leave of absence from Feb. 28, 1910, under paragraph 210, Service Regulations.

McKay, W. W., acting asst.-surgeon, granted 30 days' extension of leave from Feb. 5, 1910, on account of sickness.

Walkley, W. S., acting asst.-surgeon, granted 3 days' leave of absence from March 29, 1910.

Board of medical officers were convened to meet on April 4, 1910, for the purpose of making physical examinations of applicants for the position of cadet in the Revenue-Cutter Service, as follows: Wilmington, N. C., Surgeon C. H. Gardner, chairman; Acting Assistant-Surgeon W. D. MacMillan, recorder. Milwaukee, Wis., Surgeon J. O. Cobb, chairman; Acting Assistant-Surgeon C. H. Stoddard, recorder.

Board of medical officers convened to meet at Boston, for the purpose of reexamination of an alien. Detail for the board: Passed Assistant Surgeon T. W. Salmon, chairman; Acting Assistant-Surgeon M. V. Safford; Acting Assistant-Surgeon H. B. C. Riemer, recorder.

# Society Proceedings

## COMING MEETINGS

Alabama, Medical Association of State of, Mobile, April 19-22.
Amer. Assn. of Genito-Urinary Surgeons, Washington, D. C., May 3-4.
Amer. Assn. of Pathologists and Bacteriologists, Washington, May 3-5.
American Climatological Association, Washington, D. C., May 3-5.
American Dermatological Association, Washington, D. C., May 3-5.
American Gynecological Society, Washington, D. C., May 3-5.
American Laryngological Association, Washington, D. C., May 3-5.
Am. Laryn., Rhin. and Otol. Society, Washington, D. C., April 28-30.
Amer. Medico-Psychological Association, Washington, D. C., May 3-5.
American Neurological Association, Washington, D. C., May 3-5.
American Ophthalmological Society, Washington, D. C., May 3-4.
American Orthopedic Association, Washington, D. C., May 3-5.
American Otological Society, Washington, D. C., May 3-5.
American Pediatric Society, Washington, D. C., May 3-5.
American Surgical Association, Washington, D. C., May 3-5.
American Therapeutic Society, Washington, D. C., May 5-7.
Arizona, Medical Association of, Phoenix, April 20-21.
Association of American Physicians, Washington, D. C., May 3-5.
California, Medical Society of State of, Sacramento, April 19-21.
Conf. State and Prov. Bds. of Health, Washington, April 28-29.
Congress of Amer. Phys. and Surg., Washington, D. C., May 3-5.
Connecticut State Medical Society, New Haven, May 25-26.
District of Columbia, Medical Association of, Washington, April 26.
Florida, Medical Association of, Jacksonville, April 6-8.
Georgia, Medical Association of, Athens, April 20-23.
Illinois State Medical Society, Danville, May 17-19.
Iowa State Medical Society, Des Moines, May 20-21.
Kansas Medical Society, Topeka, May 4-6.
Louisiana State Medical Society, New Orleans, May 3-5.
Maryland, Med. and Chirurgical Faculty of, Baltimore, April 26-28.
Mississippi State Medical Association, Oxford, April 12.
Missouri State Medical Association, Hannibal, May 3-5.
Montana State Medical Association, Hunter's Hot Springs, May 11.
Nebraska State Medical Association, Lincoln, May 10-12.
New Hampshire Medical Society, Concord, May 12-13.
North Dakota State Medical Association, Grand Forks, May 10-11.
Ohio State Medical Association, Toledo, May 11-13.
Oklahoma State Medical Association, Tulsa, May 10-12.
South Carolina Medical Association, Laurens, April 19-21.
Tennessee State Medical Association, Memphis, April 12-14.
Texas, State Medical Association of, Dallas, May 10-12.

## ASSOCIATION OF AMERICAN MEDICAL COLLEGES

*Twentieth Annual Meeting, held at Baltimore, March 21-22, 1910*

Dr. George Howard Hoxie, University of Kansas, the President, in the Chair

### Officers Elected

The following officers were elected: President, Dr. J. A. Witherspoon, Vanderbilt University; vice-presidents, Dr. Horace D. Arnold, Tufts College Medical School, and Dr. Charles R. Bardeen, University of Wisconsin; secretary-treasurer, Dr. Fred C. Zapffe, University of Illinois, reelected;

judicial council, Drs. William J. Means, Starling-Ohio Medical College, Randolph Winslow, University of Maryland, and J. R. Guthrie, University of Iowa.

### Amendments Adopted

The following amendments to the Constitution were adopted:

Article III, *Section* 1 (b): For the present Latin requirement of 2 years (4 points), there may be substituted 4 years of either high-school French or German, or its full equivalent, provided a satisfactory examination is passed in the elements of Latin grammar.

Article III, *Sec. 5:* Each annual course must be of not less than 32 weeks' duration instead of 30 weeks, as heretofore. This time includes examination periods, but does not include any vacation period. It was estimated that about 2 weeks would be consumed by examinations, leaving 30 actual teaching weeks, and on this basis the new curriculum is established.

Article III, *Sec. 13:* No college a member of this Association will be permitted to employ a paid solicitor for the purpose of inducing the attendance of students, nor shall any college offer to anyone, either directly or indirectly, any reward or inducement for securing the attendance of students.

Article III, *Sec. 1* (e): The university matriculation certificate of the Association of American Universities may be accepted as a minimum requirement for admission.

### President's Address: Medical Standards; Medical Pedagogics

Dr. George Howard Hoxie, Kansas: The membership of the association is determined by a curriculum standard; it would be unwise to raise that standard beyond the reach of any school in membership; on the other hand, the legislatures of several states have adopted this standard. Schools of medicine are designed primarily for the education of practitioners of medicine. So-called research work must take a subordinate place in the average medical school. The average quality of the profession would be raised, however, by decreasing the number of practitioners. The ultimate standard will be 8 years of primary and grade schools, 4 years of high-school, 2 years of college, 4 years in a medical school, and 1 year in a large, well-regulated hospital. A boy entering the primary school at the age of 6 will be ready to begin the practice of medicine at 25, a mature age. Inquiry among the colleges in membership elicited the fact that the two-year college entrance standard seems to be the ultimate goal.

As to the length of the course, there was some difference of opinion as to whether this should be 4 or 5 years. One way out of the difficulty would be to have 2 degrees in medicine, as is now true of engineering, bachelor of medicine and doctor of medicine. To adopt the international standard as a minimum at this time would be disastrous. Medical education in America is as yet in a chaotic state. We are in a transition period, when the forms and methods of work are being differentiated and crystallized. To make the association national in scope we must not limit our membership by setting up standards that cannot be reached by some sections of our country. In other words, we must have a minimum rather than an ideal standard. It would be wiser to base standards of membership on the quality of work done in the schools and the character of the men who dictate the policy of the schools rather than on the quantitative standards. Does the school demand as high standards as its environment will permit? Does it make the most out of the material given? Furthermore, we cannot go forward more rapidly than the people and the state governments are ready to support us. The student who has had the broad training that includes the humanities as well as the sciences may lack some of the knowledge of the details of technic possessed by those who study only the sciences, but he will have the freshness and eagerness for work and a perspective that will more than compensate, even while in the medical school, for their lack. I would urge that the preliminary college years now being added to our courses be directed toward making men rather than artisans; that the languages, philosophy and the arts be given a proportionate place in their curriculum.

It seems wiser not to take radical action at this time on standards, but to continue our present standard. I believe that the association is concerned not so much with the legal and economic aspects of medical education, as with its pedagogics. We should not give so many hours of study that the students will be physically exhausted, nor should we give so much mental labor that the students become stale. Many medical schools do not require preparation for their class exercises. We should define our standards more carefully. An hour should mean a class exercise and therefore we should make clear in our statement whether the hours enumerated are total hours of study or simply hours of classroom exercise. The curriculum can be improved by giving attention to the law of variety and monotony. Each day the student should have exercises of sufficient variety to excite his attention, but not so many as to dull his interest. I would suggest that we try to arrange our clinical curriculum along the line of the three great branches of practice: medicine, surgery and obstetrics and gynecology. The clinical laboratory should not be a separate department, but a phase of the work in all the departments mentioned. The curriculum of the clinical department must center about the hospital. No school of medicine is adequate for present-day needs unless it is possessed of a hospital of its own. Clinical teaching should be practical and not irrelevant. I would suggest that we work in harmony with other organizations now interested in medical education; that we take their suggestions and recommendations and examine them in the light of our own experience, and in the light of pedagogics.

### Report of Secretary

Dr. Fred C. Zapffe, Chicago: The present membership of the association numbers 51, and cannot be increased very materially because of apparent ineligibility. The Council on Medical Education of the American Medical Association placed in its acceptable list 68 colleges. The work the council is doing is of the very greatest importance in its particular sphere, and thorough and hearty cooperation between the council and this association is greatly to be desired. To further such cooperation, I would suggest that the next annual meeting of the association be held in conjunction with the annual conference of the council, in Chicago, or elsewhere, as may be decided later. By a constitutional provision, this association must hold its meeting on the third Monday in March, but it is probable that the council is in a position to shift its time of meeting.

(*To be continued*)

## MEDICAL SOCIETY OF THE MISSOURI VALLEY

*Twenty-second Semi-Annual Meeting, held at Omaha, March 17-18, 1910*

(*Concluded from page 1075*)

### Should Operation for Ruptured Tubal Pregnancy Be Immediate or Deferred?

Dr. John E. Summers, Omaha: In the majority, say about 95 per cent., of cases of ruptured tubal pregnancy, no operation should be done until reaction from the shock of rupture has taken place. In the remaining 5 per cent. of these cases no delay is permissible. The urgency for operation can be recognized in most patients by the differences in the initial symptoms. In borderline cases the same rules of recognition apply. A differentiation must be made between hemorrhage and shock, immediate and recurring.

#### DISCUSSION

Dr. B. B. Davis, Omaha: I have done many of these operations; many of these patients will go through the original hemorrhage and shock and will rally and be in a much better condition for operation than at the beginning of the hemorrhage. For a long time I took the position that ruptured tubal pregnancy ought to be operated on at once, but for the last two or three years I have delayed operation for at least a few hours.

Dr. O. Beverly Campbell, St. Joseph, Mo.: I believe that every case of ruptured ectopic gestation is a law unto itself, and the judgment of the surgeon should be used. In many of these cases, delay in operating is indicated. My experience has been that in most cases a blood clot will form and hemorrhage cease, and that we should wait until shock has passed off and the patient has reacted before operating.

**Dr. Donald MacRae**, Council Bluffs, Iowa: I am not in a position to differentiate between one case and another, and to say that this patient is or is not in a serious condition, and so in cases of ruptured tubal pregnancy I am going to operate as soon as I can, as I do not know which case is going to terminate fatally, and which is not.

### The Physical Basis of Mental Disease

**Dr. Frank P. Norbury**, Hospital, Ill., delivered the oration in medicine, and, among other things, said:

The interrelationship of mind and body will ever be a fruitful field for discussion, and may never be solved to the satisfaction of all, but the time is coming, and is not far distant, when the somatic will have precedence over purely mental symptoms. Our therapeutics must and will be adjusted to meet the conditions as they are, not as they are supposed to be.

### Local Anesthesia

**Dr. Leonard Freeman**, Denver, delivered the oration in surgery. He referred to the early history of chloroform and ether and the dangers attending the administration of these anesthetics. Nervous and hysterical patients are not suitable for local anesthesia. The patients, he said, must be selected with care and the surgeon must consider age, temperament, nervous control of the individual, etc. Among the operations which can be done under local anesthesia he mentioned the removal of tumors of the scrotum, castrations, epididymectomies, varicocele and hydrocele operations.

### Rapid and Complete Cure of Gonorrhea

**Dr. Thomas M. Paul**, St. Joseph, Mo.: A cure is not complete unless it results in the absolute eradication of gonococci from the genito-urinary tract, and such a cure can never be rapid in the sense in which that term is used by the laity.

### Why the Indifference of the Profession to Morphinism Should Be Changed

**Dr. S. Grover Burnett**, Kansas City, Mo., described three types: 1. Simple morphinists belong to the better class of mentalities. They inherit or acquire a tendency to nerve weakness by exhaustive taxations of nerve energy. The drug is taken to relieve physical and exhaustive nerve discomfort. 2. Morphinomaniacs are lower in intellectual stability and acquirements. The inherited weakness of nerve and mind energy is the rule, and a predisposition to add acquired exhaustive states is strong. The drug is taken to relieve exhaustive psychic pain, mind pain, mind discomforts. The action of the drug is to cause further mind deterioration in a mind already near the borderline of insanity. 3. Delusional or motiveless morphinists are sufficiently over the borderline of insanity to cause them to take the drug because of faulty mind, delusional states. The condition is apt to end in a terminal insanity.

### Treatment of Localized Appendicular Abscess

**Dr. Van Buren Knott**, Sioux City, Iowa: The removal of the appendix at a secondary operation is frequently difficult because of the density of the surrounding adhesions and in the majority of instances it will be found much easier to remove it at the first operation; and this should be done rather than subject the patient to a prolonged and often serious operation. The incision is invariably made through the right rectus muscle, splitting the fibers and the peritoneal cavity freely open. A small gauze pack is tucked into the upper angle of the wound and so adjusted as to prevent any extravasation of pus toward the liver or diaphragm. Another small pack is tucked in toward the median line from the upper angle of the wound to the lower pelvis to prevent any extravasation toward the left. The abscess cavity is then freely opened with the fingers, unless opened by the peritoneal incision, and the pus is rapidly mopped up with gauze sponges. The appendix is then exposed and removed. All adhesions separating the abscess cavity from the lower pelvis are freely separated and the pus or seropus, which is usually found in the lower peritoneal pouch, is rapidly mopped up with sponges. A large split rubber tube, from one-half inch to one inch in diameter and carrying a wick of iodoform gauze is inserted through the lower angle of the wound to the bottom of the rectovesical pouch, or cul-de-sac, the protecting gauze removed and the wound closed down to the tube with interrupted through-and-through silkworm sutures. A large-size tube is important, as I believe that the first two hours of drainage are those which count. This method is not advocated for the occasional operator, but for men of great experience.

### Increasing Mortality in the United States from Heart, Brain and Kidney Lesions

**Dr. W. F. Milroy**, Omaha, directed attention to the enormous increase of deaths from these diseases and offered suggestions as to what may be done by way of remedies.

### Treatment of Angiomata and Nevi

**Dr. John Prentiss Lord**, Omaha: The angiomata fall within the pale of surgery, while nevi, involving the skin only, fall within the sphere of dermatology. The conditions are so frequently associated that it becomes impossible to divide their treatment. Boiling water is of great value in treatment of angiomata and carbon dioxid snow in treatment of pigmented hairy nevi.

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## *Medical Economics*

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

### Senator Owen Declares in Favor of a Department of Health

Hon. Robert L. Owen, United States Senator from Oklahoma, delivered a speech in the United States Senate, Thursday, March 24, in support of Senate Bill 6049, introduced by him, providing for a Department of Public Health. Senator Owen stated that the present loss of life from preventable diseases in the United States amounts to over 600,000 lives per annum, while the economic loss amounts to over $2,000,000,000. After calling attention to the report of the Committee of One Hundred compiled by Prof. Irving Fisher, with the assistance of many well-known scientific men as his authority for these statements, Senator Owen discussed in detail the possibilities of the prolongation of life, the prevention of yellow fever, hookworm disease, bubonic plague, and other contagious diseases. He then read the letter from Dr. Charles A. L. Reed, chairman of the Committee on Legislation of the American Medical Association, which appeared in The Journal March 19, and quoted from President Taft, Mr. Roosevelt and others as to the necessity and importance of public health legislation. Senator Owen's argument for the establishment of a department instead of a bureau is of particular interest. He said:

> It is generally agreed that these bureaus should all be brought together as one working body. To bring established bureaus under a new "bureau of public health" would be to lower the dignity of the present bureaus by making them the subordinate bureaus of a new bureau, which would be offensive to every bureau so subordinated.
>
> To bring these bureaus under a department would not lower the prestige of a bureau thus coordinated with other bureaus under the department, and would, I believe, generally meet the approval of the government officers employed in the various bureaus so coordinated, giving them a new dignity by being a distinct branch of a department of public health, through which they could enlarge their efficiency and find better expression and publicity of work done for the public health.
>
> We have had bureaus for one hundred years. They are scattered in eight departments. They have been disconnected and without coordination. They have ever been jealous of each other, the one nullifying and hampering the work of another. They have been without a responsible head because of this subdivision and because the chief of the most important of these bureaus, the Surgeon-General of the Public Health and Marine-Hospital Service, cannot express an opinion or give information until he has consulted the Secretary of the Treasury.

### BUBONIC PLAGUE ON THE PACIFIC COAST

Regarding the effect of control of the quarantine service by the Secretary of the Treasury, Senator Owen instanced the history of the epidemic of bubonic plague in San Francisco:

> When the bubonic plague broke out in San Francisco in 1900—one of our importations from the Orient, known in former times as the black death or the plague—the city board of health of San Francisco quarantined the Chinese district. [It is the most deadly epidemic disease known to men. In the outbreak in Bombay 220,000 cases gave 164,000 deaths. This disease, as the black death, killed 68,596 people in London in 1665, nearly half of those who remained in the city.] The United States circuit judge, on June 15, 1900, influenced by the commercial spirit of San Francisco, declared the city quarantine illegal, gratuitously observing in his opinion:
>
> "If it were within the province of this court to decide the point, I should hold that there is not and never has been a case of plague in this city."
>
> This high authority on bubonic plague would also have decided, "if within the province of his court, that there never would be a case in San Francisco." His judgment in the one case would be as persuasive as in the other.
>
> Bubonic plague was then in the city. It is now scattered over the Pacific coast at points a thousand miles apart and is requiring enormous sums of money to stamp it out, and it has not been stamped out, but is now endemic and spreading through the infection of ground squirrels and rats, which continually infect each other and spread the germs of the disease over enlarging areas.
>
> This opinion of the United States circuit judge was followed with an immediate federal quarantine of the State of California, which was the duty of the government officers in charge under the obligation of the United States to the several States of the Union and to the nations of the world. The Marine-Hospital Service officials in San Francisco declared this quarantine.
>
> The governor of California, the senators of California, and the commercial bodies of San Francisco immediately suppressed the Marine-Hospital Service report, compelled the Surgeon-General to yield, proved a false case, and made it temporarily stand as the truth before the country. They furnished evidence and proved (?) that there was no bubonic plague in San Francisco, nothwithstanding the fact bubonic plague was there in sober truth.
>
> The Marine-Hospital Service finally persuaded the Secretary of the Interior to cause an inquiry in January, 1901, through experts of the highest class. This unanswerable authoritative report was made on Feb. 26, 1901, finding numerous cases of bubonic plague in the heart of San Francisco. The United States quarantine law (sec. 4) required its immediate publication. It was suppressed until April 19, 1901, and until it had been given publicity by the *Occidental Medical Times*, The Journal of the American Medical Association, the *Medical News*, and the *Sacramento Bee*.
>
> Again the commercial interests of San Francisco triumphed over the bureau and compelled the Surgeon-General, the head of the bureau, by an order of his superior officer, the Secretary of the Treasury, to agree to suppress this report, contrary to the obvious moral and sanitary duty of the United States. From that time bubonic plague has widened the area of its terribly dangerous infection from Los Angeles to Seattle, passing from rat to rat and squirrel to squirrel and from these animals to an occasional human being through the agency of the common flea. Various experts of the Marine-Hospital Service, who immediately after the report of 1901 discovered the infection outside of San Francisco and reported the truth, were by some strange fatality shortly after their several reports removed from such duty faithfully performed and sent to the ends of the world—to Honolulu, to Ecuador, and so forth.
>
> It is a most interesting history, the details of which might with propriety be given to the Senate as showing the destructive power commercial interests can exert over the faithful servants of a subordinate bureau.

Senator Owen then argued that a Department of Public Health is absolutely essential in order to comply with the international sanitary obligations of the United States, as a bureau which is subordinate to a department is not in a position to represent the United States in international sanitary affairs. He called attention to the International Sanitary Convention of American Republics held in Washington, Dec. 2-4, 1902, which pledged the respective health organizations of the various American republics participating to cooperate for the suppression of contagious diseases, and urged that a bureau has been tried in the balance and found wanting, and that the importance of the subject, the dignity and honor of the United States, its international relations and the health and welfare of the world demand the establishment of a Department of Health.

Senator Owen then reviewed the present cost of health agencies in the United States, showing that a sum of nearly $15,000,000 is being expended by the government and that over 12,000 persons are employed. He also showed by quotations from the various party platforms, reports of committees, and other sources, that the people are ready to support such a movement, closing his address as follows:

> This is a question of vast national importance. In eight years we have increased our expenditures over the average of preceding years by the huge sum of one thousand millions for the Army and Navy, and are spending 70 per cent. of the national income to cover the obligations of past wars and the preparations for possible future war, or about seven hundred millions per annum. But for war on preventable disease now costing us infinite treasure in life, efficiency, and commercial power and prestige we spend nothing and do not even employ the agencies we have in an efficient manner.
>
> In the name of the people and in the name of the American Medical Association, whose members are the faithful and self-sacrificing guardians of the health of our people, and in the name of the Committee of One Hundred, of the American Federation of Labor, of the National Grange, and of the various health boards of the forty-six states of the Union and of the great body of learned men desiring improved sanitation and the application of the improved agencies of preventing disease, disability, and death, I pray the Senate to establish a department of public health.
>
> The principle of the bill meets the general approval of the public-health societies and of the medical associations of the United States, and there should be no difficulty in perfecting this bill and in impressing on the country the importance of organized effort to control the ravages of tuberculosis, typhoid and malarial fevers, bubonic plague, and other preventable diseases, which inflict such enormous injury on the people of the United States, impose such vast, but needless, human misery and pain, with great financial loss and loss of prestige and power.
>
> A commercial nation will not be unmindful of the commercial value of the saving of life and efficiency possible, which is worth $3,000,000,000 per annum.
>
> A humane nation will not fail to act when it is known that we could save the lives of 600,000 of our people annually, prevent the sickness of 3,000,000 of people per annum, who now suffer from preventable disease, and greatly abate the volume of human pain, misery, and death.
>
> I trust, Mr. President, that the Senate may not fail to take action in regard to this matter at the present session.

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## POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
Bowling Green, Kentucky

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

### Eighth Month—Third Weekly Meeting

Pharmacologic and Therapeutic Actions of Drugs (Continued)

VII. Drugs Acting on Bodily Heat: A. Drugs which decrease bodily temperature, antipyretics. Thermogenesis, thermolysis, thermotaxis. 1. Drugs increasing loss of heat. 2. Decreasing production of heat. B. Drugs which cause rise of temperature.

VIII. Drugs Acting on Respiration: A. Drugs altering composition of air, by inhalation. 1. Drugs acting generally, anesthetics, amyl nitrite, etc. 2. Drugs stimulating bronchial secretion. 3. Drugs disinfecting foul secretions. 4. Relieving spasm of bronchial tubes. B. Drugs acting on respiratory centers. 1. Stimulants. 2. Depressants. C. Drugs affecting bronchial secretion. 1. Increasing. 2. Diminishing. 3. Disinfecting. D. Drugs relaxing spasm of bronchial tubes, asthma, etc. E. Expectorants. 1. Stimulating. 2. Depressing.

IX. Drugs Acting on Digestive Apparatus: A. Drugs acting on flow of saliva. 1. Sialagogues, act by (a) stimulation of secretory cells, or nerve terminals in them, (b) stimulating afferent nerves, in mouth or in stomach. 2. Antisialagogues, act by depressing (a) secretory cells and nerve terminals, or (b) afferent nerves. B. Drugs acting on stomach. 1. Increasing amount of gastric juice secreted. 2. Decreasing amount of gastric juice secreted. 3. Drugs altering composition of gastric contents. 4. Drugs which dilate vessels of stomach. 5. Drugs which contract vessels of stomach. 6. Drugs acting on nerves of stomach. 7. Drugs acting on movements of stomach. 8. Emetics. Act locally or centrally. 9. Antiemetics. Direct or indirect.

C. Drugs acting on intestines. 1. Purgatives. Laxatives, simple purgatives, cathartics, cholagogues. 2. Intestinal antiseptics. 3. Intestinal astringents. (a) Acting on vessels, (b) coagulating albuminous fluids, (c) diminishing amount of fluid secreted, (d) lessening muscular contractions.

## Marriages

Jacob Kulis, M.D., to Miss Edith A. Olsjewski, both of Chicago, recently.

Francis W. McNamara, M.D., to Mrs. Ella May Eldredge, both of Chicago, March 19.

William Leon Channell, M.D., to Miss Edna Ingram, both of Oakland, Cal., March 16.

E. Don Taylor, M.D., Watertown, Ill., to Miss Katie Swanson of Colona, Ill., at Moline, March 16.

Marano Bernardo del Carmen Caballero, M.D., Porto Rico, to Miss Cecil Beatrice Mallory, at Petersburg, Va., March 17.

## Deaths

**Fred Byron Robinson, M.D.** Rush Medical College, Chicago, 1882; a noted scientific investigator in anatomy and pathology; some-time professor of anatomy and clinical surgery in Toledo Medical College; professor of anatomy in the Post-Graduate Medical School and Hospital, Chicago; professor of surgery in the College of Physicians and Surgeons, Chicago; for thirteen years professor of gynecology and abdominal surgery in Illinois Medical College; professor of gynecology and diseases of the abdominal viscera in the Chicago College of Medicine and Surgery; a member of the Illinois State Medical Society; a man of boundless enthusiasm in the field of original research; a prolific writer; author of two volumes on intestinal surgery, four volumes on gynecologic subjects, an encyclopedic treatise on the peritoneum, and an extensive work on "The Abdominal and Pelvic Brain;" died at his home in River Forest, March 23, from disease of the kidney, aged 53.

**Oliver Morse Dewing, M.D.** College of Physicians and Surgeons, New York City, 1887; a member of the Medical Society of the State of New York, Associated Physicians of Long Island and American Medico-Psychological Association; formerly assistant physician in the New York Insane Asylum; transferred in 1889 to the Kings County Insane Asylum, of which he was made superintendent in 1892; appointed medical superintendent of that institution when it became a state hospital; and in 1897 made general superintendent of the Kings Park and Flatbush Insane Asylums; superintendent of the Long Island State Hospital, Flatbush; an acknowledged expert on treatment of the insane and asylum management; died at the State Hospital, Flatbush, March 15, from lobar pneumonia, aged 47. At a meeting of the staff of the hospital, March 22, resolutions of regret and sympathy were adopted.

**Franklin Bennett Entrikin, M.D.** Medical College of Ohio, Cincinnati, 1894; of Findlay, Ohio; a member of the American Medical Association and Association of Military Surgeons of the United States; formerly surgeon of the Second Infantry, Ohio N. G.; a member of the local pension examining board; oculist and aurist and a member of the consulting staff of the Findlay Home and Hospital; died in the Jewish Hospital, Cincinnati, March 16, from acute nephritis, after an operation for umbilical hernia, aged 38.

**Orlando Scott Wood, M.D.** Starling Medical College, Columbus, Ohio, 1891; College of Physicians and Surgeons, Baltimore, 1900; of Haydenville, Ohio; for six years a member of the staff of the Athens State Hospital, and for one term a trustee of the institution; surgeon of volunteers during the Spanish-American War, with service in Cuba; died in Mount Carmel Hospital, Columbus, March 14, from septicemia, due to an operation wound, aged 46.

**Joseph W. Eddy, M.D.** Detroit Medical College, 1874; a member of the American Medical Association and Syracuse Academy of Medicine; staff surgeon to the Oswego City Hospital; local surgeon of the New York Central System, and since 1886 chief surgeon to the Rome, Watertown and Ogdensburg division of that system; died at his home in Oswego, March 12, from acute bradycardia following cystitis and nephritis, aged 58.

**Charles Peyton Gordon, M.D.** New York University, New York City, 1860; surgeon in the Confederate service throughout the Civil War; a member of the Association of Surgeons of the Southern Railway Company and International Association of Railway Surgeons; for more than twenty years local surgeon of the Southern Railway at Dalton, Ga.; died at his home, March 16, from heart disease, aged 73.

**William S. Wood, M.D.** McGill University, Montreal, 1896; a member of the American Medical Association and Minnesota Valley Medical Association; a specialist on diseases of the eye, ear, nose and throat of Blooming Prairie, Minn.; died at the home of his father in Faribault, Minn., March 16, from pulmonary tuberculosis, following an infection of the throat, aged 36.

**Arthur Delavan Stowitts, M.D.** Albany (N. Y.) Medical College, 1886; a member of the American Medical Association; of Sidney, Neb.; local surgeon for the Union Pacific and Burlington systems; a member of the local board of United States Pension Examiners; died in the Methodist Hospital, Omaha, March 13, after an operation for mastoid disease, aged 48.

**Henry Rhode, M.D.** University of Goettingen, Germany, 1850; said to have been the oldest practitioner of Brown county, Wis.; at one time a surgeon in the Prussian army; physician of Brown county for several years, and a member of the pension examining board of Green Bay; died at his home in that city, March 16, from pneumonia, aged 80.

**Ira Hudson Fry, M.D.** Hahnemann Medical College, Chicago, 1881; a specialist on diseases of the eye, ear, nose and throat of Marshalltown, Iowa; while suffering from melancholia, is said to have committed suicide by hanging himself in an empty store building in Marshalltown, March 10, aged 51.

**Raymond B. Harris, M.D.** Savannah (Ga.) Medical College, 1859; assistant surgeon of the First and Fifty-seventh Ga. Infantry, C. S. A., during the Civil War; state senator in 1880 and 1881; an alderman of Savannah from 1889 to 1893; died at his home, March 15, from heart disease, aged 71.

**John A. Hutchinson, M.D.** Bennett Medical College, Chicago, 1878; a veteran of the Civil War; and at one time a member of the local pension examining board of New Haven, Conn., and later a resident of Cambridge, Mass.; died in the Soldiers' Home, Chelsea, Mass., March 13, from nephritis, aged 66.

**Cyrus V. Gorrell, M.D.** Fort Wayne (Ind.) College of Medicine, 1884; of Payne, Ohio; formerly a member of the American Medical Association; a member of the Ohio State Medical Association; died suddenly in the caboose of a freight train near Payne, March 7, from heart disease, aged 66.

**Joel G. Williams, M.D.** University of Missouri, Columbia, 1856; a member of the Illinois State Medical Society; assistant surgeon of the Second Illinois Volunteer Cavalry during the Civil War; died in a cottage at the Soldiers' Home, Quincy, March 17, from heart disease, aged 75.

**John M. Coombs, M.D.** Cincinnati College of Medicine and Surgery, 1865; a member of the Ohio State Medical Association; acting assistant surgeon in the Army during the Civil War; auditor of Defiance county, Ohio, in 1893; died at his home in Hicksville, March 13, aged 77.

**Wade Hampton Barnett, M.D.** University of Louisville, 1898; a member of the American Medical Association; a charter member and president in 1905 of the Williamson County (Tenn.) Medical Society; died at his home near Franklin, Tenn., February 28, from tuberculosis, aged 36.

**Evans E. Brubaker, M.D.** Starling Medical College, Columbus, 1878; a member of the American Medical Association; and local surgeon of the Chicago, Milwaukee and St. Paul Railway; died at his home in Northfield, Minn., January 6, from cancer of the liver, aged 56.

**James McCann, M.D.** Western Reserve University, Cleveland, 1856; of Normal, Ill.; formerly a member of the local pensioning examining boards of Joliet and El Paso, Ill.; died in the Kelso Sanitarium, Bloomington, March 18, from ptomain poisoning, aged 77.

**Willis Anderson Barclift, M.D.** University of Tennessee, Nashville, 1878; a member of the Medical Association of the State of Alabama; died at his home in Hartsells, March 14, after an operation performed at a hospital in Birmingham, aged 57.

**Clarence W. Pickerill, M.D.** Iowa Eclectic Medical College, Des Moines, 1892; of Kansas City, Mo.; formerly a member of the American Medical Association; died at the home of his parents in Lake Charles, La., February 20, from tuberculosis, aged 38.

**David Allison Armfield, M.D.** Jefferson Medical College, 1861; a member of the Medical Society of the State of North Carolina; for ten years United States pension examiner; died at his home in Jamestown, March 1, from pneumonia, aged 73.

**William Herbert Nickelson, M.D.** Hahnemann Medical College, Chicago, 1881; visiting physician to Syracuse Homeopathic Hospital; health officer of Adams, N. Y.; died in his office in that place March 14, from heart disease, aged 51.

**Townsend A. Walker, M.D.** University of Buffalo, N. Y., 1897; a member of the Medical Society of the State of New

York and Buffalo Academy of Medicine; died at his home in Corning, March 10, from cerebral hemorrhage, aged 40.

**Hugh Alexander Utley, M.D.** University of Nashville, Tenn., 1878; of Goodlettsville, Tenn., and vice-president of the National Bank of that place; died in an infirmary in Nashville, March 11, after a surgical operation, aged 56.

**Warren Thomas Thornton, M.D.** University of Kansas, Lawrence, 1908; a member of the staff of the Kansas City General Hospital; died in that institution, March 17, from septicemia, following a peritonsillar abscess, aged 26.

**George T. Blynd, M.D.** Northwestern University Medical School, Chicago, 1904; a member of the State Medical Society of Wisconsin; died at his home in Berlin, March 18, from tubercular meningitis, aged 34.

**Walter Channing Blaisdell, M.D.** Harvard Medical College, Boston, 1867; a member of the Massachusetts Medical Society; died at his home in Everett, Mass., Nov. 14, 1909, from acute enterocolitis, aged 65.

**Myron Pelaski Fogleson, M.D.** Bennett Medical College, Chicago, 1886; a member of the Michigan State Medical Society; died at his home in Harvard, January 23, from acute yellow atrophy of the liver.

**Frank B. Hamilton, M.D.** University of Nashville, 1867; a member of the Tennessee State Medical Association; a Confederate veteran; died at his home in Jackson, March 11, from rheumatism, aged 68.

**Chester Carey, M.D.** Long Island College Hospital, Brooklyn, 1881; a practitioner of Columbiaville, Mich., for thirty-five years; died at the home of his brother in Adrian, Mich., March 16, aged 62.

**George L. Cunningham, M.D.** University of Louisville, 1876; a pioneer practitioner of Conway county, Ark., and president of the bank of Morrillton; died at his home in that city, March 11, aged 76.

**Hiram Newton Whitacre, M.D.** Medical College of Ohio, Cincinnati, 1878; a member of the American Medical Association; died at his home in Carbondale, Ill., March 19, from pneumonia, aged 62.

**Roswell Delavan Smith, M.D.** New York Homeopathic Medical College, New York City, 1880; for many years a clergyman; died at his home in New York City, March 19, from asthma, aged 76.

**John O. Dixon, M.D.** Missouri Medical College, St. Louis, 1886; a member of the American Medical Association; died suddenly at his home in Marion, Ky., March 16, from heart disease, aged 49.

**H. R. Trollinger** (license, years of practice, Ohio, 1896); for fifty years a practitioner of Homeworth, Ohio; died at his home in that place, March 8, from cerebral hemorrhage, aged about 85.

**Thomas Stuart Farrar, M.D.** Trinity Medical College, Toronto, 1885; of Cedar Rapids, Iowa, was stricken with cerebral hemorrhage, on the street, March 18, and died, aged 49.

**Fred W. Beil, M.D.** Western Pennsylvania Medical College, Pittsburg, 1899; formerly of Sharon, Pa.; died at his home in Pittsburg, March 12, from tuberculosis, aged 35.

**Valentine H. Hobson, M.D.** Hospital College of Medicine, Louisville, 1889; of Richmond, Ky.; died in Lexington, Ky., March 15, from the effects of a fall from a window.

**John G. MacNamara, M.D.** Rush Medical College, 1884; of South St. Paul, Minn.; died suddenly in St. Joseph's Hospital, St. Paul, March 11, from heart disease, aged 55.

**William Willet Moon, M.D.** University of Vermont, Burlington, 1892; died at his home in Brooklyn, March 15, from pleurisy, complicating rheumatic fever, aged 40.

**Greenbury Linton Shipp, M.D.** University of Maryland, Baltimore, 1885; of Little Hocking, Ohio; died suddenly in that place, January 3, from heart disease, aged 47.

**J. O. K. Gant, M.D.** Washington University, St. Louis, 1865; a member of the Missouri State Medical Association; died at his home in Plattsburg March 8, aged 68.

**William Benjamin Smith, M.D.** Medical College of Ohio, Cincinnati, 1873; died at his home in Downing, Mo., March 3, from cerebral hemorrhage, aged 65.

**William F. Walker, M.D.** New York University, New York City, 1852; died at his home near Aberdeen, Miss., March 19, from paralysis, aged 82.

**William Gregory Healey, M.D.** Albany (N. Y.) Medical College, 1899; died at his home in Cohoes, N. Y., March 15, aged 30.

# Medical Education and State Boards of Registration

## COMING EXAMINATIONS

Arizona: Phoenix, April 4-5. Sec., Dr. Ancil Martin.
California: San Francisco, April 5. Sec., Dr. Charles L. Tisdale, 929 Butler Building.
Colorado: Denver, April 5. Sec., Dr. S. D. VanMeter, 1723 Tremont Place.
Florida: Jacksonville, April 4-5. Sec., Dr. J. D. Fernandez.
Idaho: Boise, April 5. Sec., Dr. O. J. Allen, Bellevue.
Illinois: Chicago, April 14-16. Sec., Dr. J. A. Egan, Springfield.
Minnesota: State University, Minneapolis, April 5. Sec., Dr. W. S. Fullerton, 214 American Nat'l Bank Bldg., St. Paul.
Montana: The Capitol, Helena, April 5. Sec., Dr. W. C. Riddell.
New Mexico: Santa Fe, April 11-12. Sec., Dr. J. A. Massie.
Oklahoma: Ione Hotel, Guthrie, April 12. Sec., Dr. Frank P. Davis, Enid.
Rhode Island: State House, Providence, April 7-8. Sec., Dr. Gardner T. Swarts, Room 315, State House.
West Virginia: Wheeling, April 12-14. Sec., Dr. H. A. Barbee, Point Pleasant.

### Iowa December Report

Dr. G. H. Sumner, secretary of the Iowa State Board of Medical Examiners, reports the written examination held at Des Moines, December 7-9, 1909. The number of subjects examined in was 8; percentage required to pass, 75. The total number of candidates examined was 8, of whom 3 passed and 5 failed. Thirteen reciprocal licenses were issued. The following colleges were represented:

PASSED

| College | Year Grad. | Per Cent. |
|---|---|---|
| George Washington University | (1908) | 87.1 |
| Sioux City College of Medicine | (1909) | 81.1 |
| University of Toronto, Ontario | (1908) | 85.2 |

FAILED

| College | Year Grad. | Per Cent. |
|---|---|---|
| University of Iowa, College of Medicine | (1909) | 70.1 |
| Keokuk Medical College, College of Phys. and Surg. | (1900) | 72 |
| Sioux City College of Medicine | (1909) | 74.3 |
| Rush Medical College | (1892) | 68.1 |
| St. Louis College of Physicians and Surgeons | (1909) | 68.6 |

LICENSED THROUGH RECIPROCITY

| College | Year Grad. | Reciprocity with |
|---|---|---|
| College of Physicians and Surgeons, Chicago | (1894) Wisconsin; (1905) (1906) | Illinois |
| Northwestern University Med. School | (1908) (2, 1909) | Illinois |
| Hahnemann Medical College and Hosp., Chicago | (1907) | Illinois |
| Keokuk Medical College | (1894) | Kansas |
| University of Louisville | (1909) | Illinois |
| University of Michigan, College of Medicine | (1908) | Michigan |
| Creighton Medical College | (1903) (1905) (1909) | Nebraska |

**Salicylate Treatment of Bacillus-Carriers.**—How to free typhoid bacillus-carriers from their dangerous guests is a question which R. Hilgermann of Coblenz thinks can be solved by administering to them some drug that is readily eliminated by all the secretions, renders the bile more fluid and increases its amount, while it has a certain bactericidal action but is free from toxic action, even when taken for long periods. In a communication on the subject in the *Klinisches Jahrbuch*, 1910, xxii, 291, he announces that sodium salicylate fulfils all these conditions, and that he has successfully used it for the purpose in 3 cases. The bacillus-carriers in question were in the Andernach insane asylum and he gave the salicylate in 1 gm. (15 grain) doses three, four or five times a day for a week at time, giving five courses in one year in one case. The stools became entirely free from typhoid bacilli after the third course and none has been found during the nearly two years since. After even one course of the salicylate the number of typhoid bacilli rapidly diminished and those found displayed very little vitality. Experimental research has confirmed these clinical findings justifying the hope, he believes, that a course of sodium salicylate after recovery from typhoid would clear out remaining bacilli and prevent the individual's becoming a chronic bacillus-carrier. In his cases the carriers had sheltered the bacilli for so many years that it was far more difficult to dislodge them than would be the case with comparatively recent typhoid infection. The salicylate does not display such powerful bactericidal action in respect to paratyphoid bacilli.

# Book Notices

ARTHRITIS DEFORMANS: COMPRISING RHEUMATOID ARTHRITIS, OSTEO-ARTHRITIS, AND SPONDYLITIS DEFORMANS. By R. Llewellyn Jones, M.B., Fellow and Member of Council of British Balneological and Climatological Society. Cloth. Pp. 353, with 38 illustrations. Price, $4 net. New York: William Wood & Co., 1909.

This book is a most interesting and valuable contribution from the viewpoint of a former medical officer of the Royal Mineral Water Hospital of Bath, England, and comes very opportunely for consideration with the recent valuable work of Goldthwait, Painter and Osgood, and the still more recent paper by Nichols and Richardson in the *Journal of Medical Research* for September, 1909. The author says that his chief aim is to indicate and emphasize the essential distinctness of the two diseases, rheumatoid arthritis and osteo-arthritis. Special consideration has been given to the premonitory symptoms which characterize the period of invasion of rheumatoid arthritis, in the hope that it may assist in the early recognition of the affection so essential to its successful treatment. From the historical chapter one learns that there have been even more etiologic theories than names advanced for this disease or group of diseases; and with reason.

From the author's standpoint there are two distinct diseases, namely, rheumatoid arthritis and osteo-arthritis; whereas, we in America, viewing the condition somewhat more from the pathologic findings, include all under the term osteo-arthritis, and pathologically divide the cases into the atrophic and hypertrophic varieties, although the work of Nichols and Richardson has shown that identical pathologic findings clearly arise from a variety of causes, in fact from about all of the causes that have heretofore been regarded as etiologic factors.

We recommend the perusal of this book to all those interested in chronic non-tuberculous joint diseases; but we call attention to the fact that the author uses the terms "atrophic arthritis" and "hypertrophic arthritis" in the ordinary sense of obvious atrophy and hypertrophy of the joints, and not in the sense used by Nichol and Richardson, which is based on the microscopic findings in the joint structures. The historical references are most numerous and range from Cicero and Shakespeare down.

DISEASES OF CHILDREN. Translated by J. L. Salinger. Edited by Abraham Jacobi, M.D., LL.D., Consulting Physician Mt. Sinai, Bellevue and German Hospitals, etc. Pp. 828, with 34 illustrations. New York: D. Appleton & Co., 1910.

Perhaps no more accurate or illuminating statement could be made concerning the quality of this work by twenty-three German and Austrian authors than that of the editor. As he says, the articles are all written by masters of national or international renown, are evidently weighed with care and guided by learning, and are brief but complete and lucid. The list of authors includes such names as Czerny, Neumann, Hoffa, Henoch, Heubner, Baginsky, Escherich, C. Keller and others equally authoritative. The book is hardly in the usual text-book style, but each monograph is written in the complete and thorough manner of the Germans, and all coordinated, so that there is no overlapping in the treatment of the subjects. Among the unusually complete chapters is that on the diseases of the new-born, which includes a very interesting section on those infectious diseases which may be transmitted from the mother or father to the fetus. Other chapters are on infantile scurvy, rickets, syphilis, convulsions, infantile paralysis and scarlet fever. In a few instances the treatment is not very fully given, but is usually sufficiently complete. As is usual in foreign works, the work of American authors in pediatrics is not referred to except casually in a few instances, and the editor calls attention to this fact. This is partially compensated for, however, by careful, even critical editing by Dr. Jacobi, who adds a word or a phrase here and there to the text to modify a too dogmatic statement, or by way of criticism, or reference to work by Americans, and by full foot-notes in elaboration of management or treatment, or on some other phase, where it seems to be necessary. The book contains a number of charts and a few other illustrations. The translation under the supervision of Dr. Salinger is good and makes a very readable book. Aside from the preference of some for a text-book by a single author, the work is an eminently satisfactory one on the subject.

THE CAMPAIGN AGAINST MICROBES. By Etienne Burnett, M.D., of the Pasteur Institute; Head for the Vaccination Service of the City of Paris. Translated from the French by E. E. Austin, F.Z.S. Cloth. Pp. 248. Price, $2.25 net. New York: William Wood & Co., 1909.

This work consists of 227 pages. The subjects treated are cancer, tuberculosis, tetanus, sleeping-sickness, enteritis and variola; the original article by Jenner on vaccination is added as an appendix. The subjects are treated in a semi-popular way, and yet the method is a little too technical, at least for the general American reading public. It will appeal to medical men who wish to be instructed and entertained and to the better informed people who have had some technical training. The literature is freely drawn on.

In discussing cancer the author lays especial stress on the possible contagiousness of the disease, and quotes freely from experiences of himself and others to show that there is a relation between such etiologic factors as soil moisture, dirty vegetables and contact with affected individuals in cancer. In considering tuberculosis he gives a good deal of space to experiences tending to confirm the importance of food in relation to the spread of this disease, discussing at some length vaccination, and especially bovo-vaccination. Sleeping-sickness is of only general interest to Americans. Burnett reviews the geography and the history of the disease at considerable length and then discusses the possibility of medicinal cure. His discussion of enteritis is given over almost entirely to what we in this country term mucous colitis, and the fermentations taking place in the intestinal tract in relation to senility. He advocates the use of various methods of preventing intestinal putrefaction as a means of attaining old age. A large part of his article on variola is given over to a discussion of the history of the subject, and in this he has much to say of the personality of Jenner and the men of his time.

MALE DISEASES IN GENERAL PRACTICE. An Introduction to Andrology. By Edred M. Corner, M.A., Surgeon to Children's Hospital. Cloth. Pp. 462, with illustrations. Price, $6. London: Oxford University Press, 1910.

As its name indicates, this work considers the surgical diseases of the organs peculiar to the male. There are a few points which require special approval as they are unusually well presented, though much of the technic developed by American surgeons is not introduced at all and weakened by its absence an otherwise strong work. The chapter on Varicocele is good and a commendable tabulation of the ultimate results of the operation is given showing 70 per cent. of the patients as distinctly improved. Circumcision in old men is advised as a prophylactic for penile carcinoma; also nerve blocking anesthesia is recommended for the operation. A chapter on Hermaphroditism brings out several interesting case histories. Some very pleasing work on the cremasteric reflex is mentioned and certainly opens up a field for investigation. The minor operation of meatorrhaphy is recommended in preference to meatotomy. This places epithelium to mucous membrane and thus avoids the granulation tissues produced in meatotomy. Syphilis is considered only in its initial stage and a strong point is made of the variability of the gross appearance of the chancre depending on its location. In the chapter on sterility the operation of vasoepididymostomy is only mentioned as possible. In discussing vesiculitis, no mention is made of treatment through the vas deferens. In discussing tapping for hydrocele, Belfield's trocar is conspicuous by its absence. A nice point in the use of collodion dressings is illustrated by a neat diagram.

SPONDYLOTHERAPY: Spinal Concussion and the Application of Other Methods to the Spine in the Treatment of Disease. By Albert Abrams, M.D., Consulting Physician to the Mount Zion and French Hospitals, San Francisco. Cloth. Pp. 420, with 100 illustrations. Price, $3.50. San Francisco: The Philopolis Press, 1909.

Opposite the title page appears a list of twelve books by the same author. The *raison d'être* for the book under consideration appears to be that "the subject of spinal therapeutics has received less attention from the medical profession than it deserves. Even the laity knows that cold applied to the back of the neck arrests hemorrhage from the nose, and that heat applied to the small of the back may hasten menstruation. The profound and far-reaching physiologic truths which underly these simple phenomena have either been ignored or only given inconsiderate attention."

In looking through this book of over four hundred pages with its 97 illustrations, covering practically every pathologic condition that can possibly have any relation to the spine from muscular hypotonia and vibro-suppression through osteoarthritis, Pott's disease and spondylitis, scoliosis and spinal curvature, sacroiliac disease and sacroiliac relaxation, tumors and typhoid, syphilis, gonorrhea and rickets to pseudoesophagismus and cortical sinusoidalization and many score others, one wonders whether this is an attempt to explain osteopathy and chiropractic to the understanding of the regular practitioner, or to exploit the very ingenious percussion devices of the author, or whether it is really true that medical men really know practically nothing about the cure of disease through treatment of the spine. Let us hope that it is the latter and that a careful study of this unique volume may open new avenues of therapy heretofore undreamed of.

Diagnostic Therapeutics. A Guide for Practitioners in Diagnosis by Aid of Drugs and Methods other than Drug-Giving. By Albert Abrams, A.M., M.D., Consulting Physician to the Mount Zion Hospital and the French Hospital. Cloth. Pp. 1039, with 99 illustrations. Price, $5. New York: Rebman Company [1910].

In this work the author enters what is to a large extent a new field. The attempt is made to show the use of drugs and other remedial measures in determining the diagnosis of disease. Although desirous of limiting himself exclusively to diagnostic pharmacotherapy, it was necessary to add other therapeutic procedures in order to maintain the continuity of the subject. The result of this seems to be a lack of due proportion and emphasis. In the abundance of therapeutic suggestions which flow from the author's reading and experience, it is hard to differentiate those that are of diagnostic value. Some of the statements, we feel sure, have been made without due qualification and without a full appreciation of their real significance; for instance: "Hemorrhages in typhoid fever and phthisis are really due to a plethora, and may be averted, if recurrent, by venesection," page 416. We hope that none of Dr. Abrams' readers will put this method into practice without due discrimination between hemoptysis due to congestion and hemorrhage due to erosion of a blood-vessel.

Ueber den Einfluss der basedow'schen Krankheit und verwandter Zustande auf das Langenwachstum nebst einigen Gesetzen der Ossifikation. Aus der Poliklinik für innere Krankheiten am Serafimerlazarett in Stockholm. Von J. Holmgren, Leitendem Arzt der inneren Abteilung des Provinzialkrankenhauses zu Falun, Schweden. Paper. Pp. 244, with 2 plates. Leipzig: Druck von Metzger & Wittig, 1909.

This monograph gives the results of an investigation of 114 cases of hyperthyroidism in patients under 25 with reference to the height and growth in the length of the body. The author finds that there is an evident association of the disease with increased height, and he concludes that hyperthyroidism favors a rapid increase in the length of the body, and, considering the fact that lack of thyroid secretion, as in cases of myxedema, is accompanied by deficient growth in length, he concludes that it is one of the functions of the thyroid to control the growth of the skeleton. He calls attention also to the relation between a blond complexion and increased height on the one hand and hyperthyroidism on the other. He also brings evidence to show that infections, by action on the thyroid gland, may favor the growth in height. The volume constitutes a valuable contribution to a very interesting subject.

Surgical Anatomy. By John A. C. Macewen, B.Sc. in Anatomy and Physiology with Honors, Fellow of the Faculty of Physicians and Surgeons, Glasgow. Cloth. Pp. 478, with 61 illustrations. Price, $3 net. New York: William Wood & Co., 1910.

This is a discussion of surgical anatomy, such as the physician who operates occasionally stands in need of most. The only departure from the usual work of this kind is that the author surveys the anatomy of hernia from the abdominal instead of from the external surface, which really makes very clear a subject the student usually finds rather difficult to comprehend. Naturally there can be little to criticize in a work of this kind, which is based on established facts. The illustrations, while not numerous, are well chosen and a number of them, especially in the chapter on the head, are new and helpful. The dull-finish paper and the clear, clean type are features worthy of mention. Section 1 considers the head and neck, vertebral column, brain and spinal cord; Section 2, the thorax; Section 3, the abdomen and pelvis; Section 4, the lower extremity; and Section 5, the upper extremity.

A Quiz Book of Nursing for Teachers and Students. By Amy E. Pope, Superintendent Insular School of Nursing, San Juan, Porto Rico, and Thirza A. Pope, Supervisor of Visiting Nurses of the New York A. I. C. P. With Chapters on Visiting Nursing, by Margaret A. Bewlwy, R.N., Instructor in Visiting and District Nursing in the Presbyterian Hospital, New York. Hospital Planning, Construction and Equipment, by Bertrand E. Taylor, A.A.I.A., and Hospital Bookkeeping and Statistics, by Frederic B. Morlok, Chief Clerk in Presbyterian Hospital, New York. Cloth. Pp. 469. Price, $1.75. New York: G. P. Putnam's Sons, 1909.

This book, while nominally intended for teachers and students, will prove of most value to teachers, 364 of the 461 pages of text being devoted to questions and answers. The remainder takes up visiting nursing, including tuberculosis work, hospital planning and construction, and hospital bookkeeping and statistics. The book should be valuable to superintendents of hospitals, especially those who must combine with the duties of superintendent the work of matron and housekeeper.

A Practical Guide to the Administration of Anesthetics. By R. J. Probyn-Williams, M.D., Senior Anesthetist and Instructor in Anesthetics at the London Hospital. Cloth. Pp. 228, with 44 illustrations. Price, $1.60. Second Edition. New York: Longmans, Green & Co., 1909.

Handbooks and guides to the proper administration of anesthetics appear to be gaining in favor, if we are to judge by the many books on the subject now in the market. Williams' work easily takes position as among the best of these by reason of its excellent arrangement and clearness and conciseness of style. The author has added descriptions of the newer methods and apparatus, and entirely revised the chapter on ethyl chlorid, which he regards in its proper light as a substitute for nitrous oxid and not as a rival of ether or chloroform—and added a chapter on spinal anesthesia. He would reserve the use of spinal anesthesia for those operations below the umbilicus in which a general anesthetic is dangerous to the patient and would never use it in patients who are septic.

Mammalian Anatomy with Special Reference to the Cat. By Alvin Davison, Ph.D., Ex-Fellow of Prince University. Cloth. Pp. 241, with 114 illustrations. Second Edition. Price, $1.50 net. Philadelphia: P. Blakiston's Son & Co., 1910.

This is a brief description of the anatomy of the cat, emphasizing its close relation to that of the other higher mammals. While intended primarily for students of zoology or pre-medical students it will serve as a clear concise guide for any one who has occasion to dissect the cat or one of the ordinary domestic animals. By means of numerous, well-selected illustrations, showing both histologic structure and the gross relationship of the parts, and the clear descriptions, a great deal of information is condensed into a small attractive volume.

Medical Diagnosis. A Manual for Students and Practitioners. By Charles Lyman Greene, M.D., Professor of Medicine and Chief of the Department in the College of Medicine, University of Minnesota. Flexible leather. Pp. 725, with illustrations. Third Edition. Price, $3.50 net. Philadelphia: P. Blakiston's Son & Co., 1910.

The third edition of this book has been largely rewritten and rearranged, includes information on all the new topics, and nothing seems to have failed to receive at least some mention. As stated in our comments on its first appearance, for a brief work on a large subject it is excellent and practical in every way.

Clinical Memoranda for General Practitioners. By Alex. Theodore Brand, M.D., and John Robert Keith, M.D. Cloth. Pp. 207. Price, $1.50 net. New York: William Wood & Co., 1909.

In this brief work the authors have collected memoranda, on a variety of clinical subjects. Much of this matter is not found in the ordinary text-book, but represents the personal experience of the authors. The subjects selected are such as the physician meets daily; cases are related when it is deemed necessary to emphasize diagnostic points, and hints are given as to treatment in various conditions.

Anatomy and Physiology for Nurses. By LeRoy Lewis, M.D., Surgeon to and Lecturer on Anatomy and Physiology for Nurses at the Lewis Hospital, Bay City, Mich. Second Edition. Cloth. Price, $1.75 net. Pp. 344, with 161 illustrations. Philadelphia: W. B. Saunders Co., 1910.

This has been revised and brought up to date by the addition of some new matter, among which are a number of illustrations.

# Medicolegal

## What Is Privileged Information—Inferences and Testimony as to Necessity—Duty of Physicians Employed by Other Party

The Supreme Court of Utah says, in the personal injury case of Madsen vs. Utah Light and Railway Co. (105 Pac. R. 799), that it seems quite clear that the legislature did not intend that all information, whether by communication or otherwise, which is obtained by physicians from their patients, should be privileged by the Utah statute, which provides: "A physician or surgeon cannot, without the consent of his patient, be examined in a civil action as to any information acquired in attending the patient which was necessary to enable him to prescribe or act for the patient." The statute is not intended as an aid to conceal or smother the truth in a court of justice; but its object is to protect as privileged all that may be said by a patient to his physician while the relation of trust and confidence exists, and, further, to protect all the information a physician obtains through his senses of touch, sight, or otherwise, during such relation, provided the communication or information was reasonably necessary to enable the physician to accomplish the purpose for which the relation of physician and patient is called into existence.

The law does not raise a presumption either way with regard to whether the information acquired by a physician from his patient was necessary for him to prescribe for the patient, but leaves the question as one of fact. Where therefore it is made to appear that a physician prescribed for or treated a person, or that the physician obtained any information from such person for the purpose of doing so, the inference arises that such information was necessary, and, unless this inference is rebutted, the ultimate fact that it was necessary may be assumed to be established. When, however, this inference is negatived by the testimony of the physician disclosing to the court just what the facts were under which the information was obtained, then it may be that the inference is entirely overcome. Quite true, the testimony of the physician may not, in all cases and under all circumstances, be conclusive, and the court may still be justified in holding the information necessary, the statement of the physician to the contrary notwithstanding. If the rule were otherwise, the physician would have it in his power to either enforce the statute with respect to all information, or to ignore it with respect to all. This would be unreasonable.

The testimony of the physician from which the court may determine whether the information was or was not necessary to enable the physician to act is always important, and, the court thinks, should receive fair and full consideration; but in determining its weight and effect it should be considered in the light of all the facts and the surrounding circumstances. In some cases and under some circumstances the statement or information obtained from the patient may be self-explanatory, and thus a mere inspection of it, if written, or merely having it stated, if oral, may be sufficient to enable the court to determine whether the information is privileged or not. In other cases the physician's statement as to whether the information was necessary or not may be conclusive on the subject.

If, in order to enable a physician to prescribe for an injured patient, it becomes necessary for the physician to know how an accident occurred, and he obtains the information while the relation contemplated by the statute exists, the information is privileged, although it may be a narrative of the events leading to an accidental injury. Neither the trial court nor this court therefore should arbitrarily either admit or exclude all information which may relate to the accident or injury; but, in determining whether specific information should be excluded or admitted, the purpose of the statute should be kept in mind, and if, in the judgment of the court, the particular information in question comes within the statute, it should be excluded, and, if otherwise, it should be admitted in evidence.

The plaintiff in this case submitted himself into the hands of two physicians, and permitted them to administer an anesthetic so that they might make a more thorough examination of his person. The physicians made the examination for the purpose of obtaining information to enable them to treat his injury. That they also had another purpose in mind, namely, to learn the scope and effect of the injury for the benefit of the defendant company, in no way changed their relation to the plaintiff.

No doubt the company, through its agents, had a right to obtain from the plaintiff all the information with respect to the cause and extent of the injury he was willing to impart to them; but in obtaining such information it had to exercise some discretion in selecting its agents. If it selected two skilled physicians and surgeons, and thus led the plaintiff to believe or assume that those physicians sought information from him with a view of prescribing for his injuries, then such information was privileged under the statute, regardless of the fact that the physicians sought the information for the further purpose of disclosing it in a court of justice in case he brought an action for damages against the company. If the physicians desired to obtain the information for the latter purpose only, they should have explained the matter fully to him, and should have told him that they sought the information for the purpose of imparting it to the company, and not for the purpose of aiding him.

If, under the latter circumstances, the injured person permits an examination, or imparts information, no confidence is abused, and no statute is invaded, and hence he may not be heard to complain; but persons who are injured by accidents of any kind should be treated fairly by the skilled physicians who seek information of the character protected by the statute. The statute is plain, and its purpose is just and humane. It seems to this court that it is the duty of the courts to give the statute full scope and effect; but, in doing so, to prevent, if possible, either party from gaining an advantage contrary to the true spirit and intent of the statute.

## Death Certificate Not Evidence

The Court of Appeals of Kentucky says, in Louisville Railway Co. vs. Raymond's Administrator (123 S. W. R. 281), wherein the administrator sought to recover from the railway company for the death of the said Raymond, alleged to have been the result of an injury caused by the negligence of the company, that the company offered in evidence a copy of the death certificate made by the attending physician, showing the cause of the death as tuberculosis. But this was not permitted to be read in evidence, and the court holds properly so, it not appearing that the physician who made it was himself dead at the time of the trial. If he were dead, a different question would be presented, though what the decision on it would be is not stated. While the Kentucky statute requires the physician to give the death certificate, there is nothing in the statute making the certificate evidence in judicial proceedings, and it stands entirely on a different plane from the return of an officer made pursuant to law under his official oath. The law requires the best evidence, and the best evidence would be the testimony of the physician, if living.

## Validity of Cocain Ordinance—City Cannot Impose Forfeiture of Licenses

The Court of Appeals of Maryland holds constitutional, in Rossberg vs. State (74 Atl. R. 581), an ordinance of the city of Baltimore prohibiting the sale, furnishing, giving away, or having in possession cocain and kindred substances, or compounds thereof, except on certain conditions provided in the ordinance, but invalid so much of the penalty as provided that if the offender was a licensed pharmacist, physician, dentist, or veterinary surgeon, he should forfeit his license. The court states that it is not prepared to say that where a pharmacist, physician, dentist, or veterinary surgeon, in violation of the restrictions of the ordinance, deliberately or recklessly sells the prohibited drugs, or keeps them in his possession for the purpose of such sale, that the forfeiture of his license is so oppressive as to be unreasonable. On the contrary, it is disposed to believe that both with regard to the depravity of the offender, and to the protection of the public against the evil at which the ordinance is aimed, forfeiture of license is the only fully adequate penalty. But the trouble here was that the city charter did not give it power to declare any forfeiture, while the general rule is that an ordinance cannot create a forfeiture in the absence of express legislative authority to do it.

# Current Medical Literature

## AMERICAN

Titles marked with an asterisk (*) are abstracted below.

### New York Medical Journal

*March 19*

1 *The *X*-Ray in Diagnosis of Pulmonary Tuberculosis. C. L. Minor, Asheville, N. C.
2 Tuberculosis and Its Treatment by Administration of Mercury. B. L. Wright, U. S. Navy.
3 *Value and Proper Method of Performance of Auscultatory Percussion of the Heart. W. F. Milroy, Omaha.
4 Plastic Induration of the Corpus Cavernosum. H. J. Whitacre, Cincinnati.
5 *Practical and Potent Means of Reducing Infant Mortality from Diarrheal Disease. J. Sobel and L. Marcus, New York.
6 Congenital Cataract, Successful Operation at the Age of 23 Years. M. Talmey, New York.
7 The X-Ray and Ultra-Violet Ray in Dental Diagnosis and Treatment. S. Tousey, New York.
8 Cerebrospinal Meningitis. C. Bagley, Baltimore.
9 Case Illustrating the Arrest of Early Paresis. T. A. Williams, Washington, D. C.

1. **X-Ray Diagnosis of Tuberculosis.**—As a means of early diagnosis, the fluoroscope, Minor says, while useful, is, save in the case of bronchial gland shadows, by no means equal to an expert use of standard physical diagnostic methods. Many *x*-ray specialists differ from this view, some maintaining that it is a far earlier means of diagnosis, but Minor is satisfied that this is chiefly due to the fact that the radiologist is rarely an expert physical diagnostician. In Germany, where several distinguished diagnosticians have used the *x*-ray freely, extreme assertions for the early diagnostic value of the ray are not so common as in this country. Hence the statement that any given case was negative on physical examination and showed shadows with the *x*-ray is of no great value unless it is known who made the physical examination. Minor has not found that the *x*-ray examination can give information antedating rough inspiration, feeble breathing or slight vesiculobronchial breathing, as it must if it is to precede physical signs, and when the pathologic conditions which produce these slight changes are considered, it seems most improbable that they should cause shadows.

3. **Auscultatory Percussion of the Heart.**—The method of performing auscultatory percussion of the heart, recommended by Milroy can easily be performed with the patient in the upright position. It is more conveniently done with the patient in the dorsal position and the examiner at his right side. The objective end of the stethoscope is placed immediately to the left of the sternum and extending upward from the fourth space. The instrument is held in this position with moderate pressure by an assistant or by the right hand of the patient. A finger of the examiner's left hand serves as the pleximeter. Milroy prefers the little finger, as thus one's hand does not interfere with the stethoscope. It is placed in the fifth intercostal space at a point so far to the left as to be entirely beyond the cardiac border. The pressure of the pleximeter finger must be uniform, as it is moved from place to place during the performance of percussion. To secure this uniformity it is advisable that the pressure of this finger be so firm that the fifth and sixth ribs are both distinctly felt in each position of the finger. The percussion stroke must be of very moderate intensity and must be uniform in force. Thus inaugurated, percussion is made from left to right until the pitch of the percussion note is observed to change, the site of this change representing the situation of the left border of the heart. In determining the situation of the right border the procedure is similar. The chest piece of the instrument is placed at the left of the sternum over the heart. Percussion is made in the fourth space, at which level is found the greatest projection of the heart to the right. Commencing well beyond the cardiac limit the examiner passes from right to left, noting the border of the heart at the point where the change in the quality of sound first appears. Similar percussion will locate the right border at other points, if so desired.

5. **Lectures and Infant Mortality.**—During the summer of 1908 and 1909, the Department of Health in New York City appointed six physicians to act in the capacity of lecturers to the mothers and "little mothers;" these lectures, or rather short heart to heart talks, were given for the greater part during the afternoons in the public school recreation centers, and occasionally at night, on the roofs of other institutions. The subject matter was summer care of babies, all that prophylaxis and treatment of the children entails. With this lecture, the authors feel that they have accomplished more actual good, gained more positive results, prevented more gastrointestinal disease and terminated more cases in their incipiency during the last two summers than during all the previous summers under other systems. The future problem of reducing infant mortality from summer diarrhea lies in the procuring of clean, cool milk. If the laity could be educated to the fact that the intelligent use of milk of the aforementioned type will prevent diarrhea a great advance will have been made. This system is only in its developmental stage and great possibilities are in store for it. With each succeeding year the daily attendance will increase so that in time a large proportion will receive instruction in this way. Already the tenement house population in New York has been aroused and interested by the dissemination of knowledge obtained at these lectures. The use of grocery milk for the feeding of infants has been markedly diminished. The vicious habits of feeding with any and all kinds of gastroenteric irritants was curtailed. The obnoxious habit of adding large quantities of brandy to boiled and cereal waters and the giving of beer and wine to older children has been in a great measure remedied.

### Medical Record, New York

*March 19*

10 Method of Respiration by Intratracheal Insufflation: its Scientific Principle and Its Practical Availability in Medicine and Surgery. S. J. Meltzer, New York.
11 *Avoidance of Apparatus Complicating the Operation—A Paramount Requirement in Thoracic Surgery. W. Meyer, New York.
12 Experimental Intrathoracic Surgery by the Meltzer and Auer Method of Intratracheal Insufflation. A. Carrel, New York.
13 The Value of Continuous Intratracheal Insufflation of Air (Meltzer) in Thoracic Surgery. C. A. Elsberg, New York.
14 Curious Arrangement of Capsule of the Lens After Simple Extraction of Cataract. J. S. Fernandez, Havana, Cuba.
15 Lumbar Analgesia. M. Breuer, Buffalo, N. Y.

11. **Apparatus for Thoracic Surgery.**—Meyer criticizes in detail the various apparatus used in thoracic surgery and formulates the following conclusions:

1. Intrathoracic surgery cannot be done properly and safely without differential pressure apparatus.
2. Negative and positive differential pressure are, it seems, not identical in their effects on sick human beings. Whether they are or not, must still be established, and indications be found for their use. This is rendered feasible by the universal differential pressure chamber.
3. Continuous intratracheal insufflation as practiced by Meltzer and Auer appears to be a positive differential pressure system.
4. Its weak points are the use of the human trachea as a vital part of the apparatus; the possibility of aspiration at the beginning of the operation, with subsequent pneumonia, and of interstitial emphysema at the end of the operation, as a consequence of its employment; also the required deep anesthesia. Intubation reaching below the glottis has been found to give rise in the human trachea to immediate copious secretion of mucus.
5. Sudden complete interruption of the prevailing differential pressure, followed immediately by its equally sudden restoration, as practiced in continuous intratracheal insufflation, is liable to hurt the human heart. Very slight changes in intrabronchial pressure give rise to very great changes in blood pressure.
6. Continuous intratracheal insufflation apparatus is not adapted for use in the after-treatment, nor is it otherwise all-sufficient. Those employing it need some other type of differential pressure apparatus in addition to it, in order to be prepared for every emergency.
7. The safest method of general anesthesia is the one used in our every-day surgical work, the inhaling of the narcotic with spontaneous respiration and with mouth and throat left unencumbered. This method is the one used in the larger differential pressure chambers.
8. In surgery, when entrusting human life to the safe working of mechanical apparatus, it is wise to have substitutes on hand, in order to be prepared for accidents. In continuous intratracheal insufflation everything depends, at present, on the one cannula and the patency of the trachea.
9. So far as the patient is concerned, a differential pressure system leaving mouth, throat and trachea unencumbered, appears preferable to one requiring intubation.

### Boston Medical and Surgical Journal

*March 17*

16 The Responsibility of the General Practitioner and the Specialist in the Prevention of Deafness. F. P. Emerson, Boston.
17 *Restraint Instead of Treatment in Hospitals for the Insane. L. V. Briggs, Boston.
18 Varicocele: An Analysis of Four Hundred and Three Cases. J. D. Barney, Boston.
19 The Transplantation of Cartilage in the Correction of Deformities of the Nose. D. C. Greene, Boston.

17. **Restraint Instead of Treatment in Hospitals for the Insane.**—It is evident to any one who has intelligently studied the conditions of the insane, that there is very little treatment and decidedly too much restraint. Fifty years ago it was not expected that insane persons would have much more than board and restraint. If they did not hurt themselves or other people, the public seemed to be satisfied. The same conditions exist as to a greater part of our insane to-day. It seems that legislation is sadly needed to abolish restraint, excepting as a life-saving measure, but if this is impossible, then to regulate the amount of restraint used, the conditions under which it shall be used, and that each individual case shall have the same amount of medical care and supervision as in any other disease. More physicians should be assigned to the care of the insane in institutions; women nurses should, to a greater extent, replace male attendants. If the barbarous custom of restraint must be continued, all appliances should be kept in the office and under the lock and key of the superintendent, who should see every patient and decide whether or not restraint is necessary, and should make a record of the kind and amount and different forms of restraint used. This should apply not only to state institutions for the insane, but to general and private hospitals.

### Lancet-Clinic, Cincinnati

*March 5*

20 Symptoms of Pellagra. J. J. Watson, Columbia, S. C.
21 Inflammation of the Seminal Vesicles. J. N. Baughman, Evansville.
22 A Case of Amebiasis. L. J. Krouse, Cincinnati.

*March 12*

23 Tuberculosis of Epiphyses of the Femur and Tibia: Case Fifteen Years After Evidement. B. Holmes, Chicago.
24 Tuberculosis and Its Prevalence in Cincinnati. B. F. Lyle, Cincinnati.
25 A Comparison of Hemoglobin and Chlorophyll. W. F. Keller, Cincinnati.

*March 19*

26 Thyroid Diseases. L. Heimann, Evansville, Ind.
27 An Improved Technic in the Operative Treatment of Goiter. J. R. Wathen, Louisville.
28 The Surgical Treatment of Goiter. W. D. Haines, Cincinnati.
29 Tuberculosis and Its Prevalence in Cincinnati. B. F. Lyle, Cincinnati.
30 Congenital Hypertrophic Stenosis of the Pylorus. W. Schell, Terre Haute, Ind.

### Virginia Medical Semi-Monthly, Richmond

*February 25*

31 Treatment of Suppurative Sinuses and Fistulas. L. H. Reichelderfer, Washington, D. C.
32 *Pylorospasm. J. J. Gilbride, Philadelphia.
33 Result of Late Gonorrhea. J. J. Lloyd, Lynchburg.
34 Gastroptosis. M. O. Burke, Richmond.
35 *Home Treatment of Epilepsy as Compared with Institutional Treatment. M. Woods, Philadelphia.
36 Excision of the Coccyx for Fracture and Neurosis. E. N. Liell, Jacksonville, Fla.
37 Symptoms and Diagnosis of Typhoid. A. J. Black, Roanoke.
38 Treatment of Rheumatism. W. F. Waugh, Chicago.
39 Experience with Puerperal Eclampsia. J. H. Hiden, Pungoteague.
40 Puerperal Sapremia and Sepsis—Their Treatment. J. E. Cannaday, Charleston.

32, 35. Published in the *Pennsylvania Medical Journal*, February, 1910, and abstracted in THE JOURNAL, March 19, 1910, p. 1007.

### Northwestern Lancet, Minneapolis

*March 1*

41 The Minnesota State Association. E. L. Tuohy, Duluth, Minn.
42 *The Minnesota State Board of Medical Examiners. F. A. Knights.
43 *The Minnesota State Board of Health in Cooperation with State Forces in Minnesota Medicine. H. M. Bracken, Minneapolis.
44 *Minnesota State Board of Control in Its Medical Relationships. H. A. Tomlinson, St. Peter, Minn.
45 *Relation of the University Medical School to the Minnesota State Medical Association. C. L. Greene, St. Paul.
46 *The Medical Press. W. A. Jones, Minneapolis.
47 *The Lay Press. H. V. Jones, Minneapolis.

42 to 47. Abstracted in THE JOURNAL, Nov. 20, 1909, pp. 1848, 1849.

### Journal Missouri State Medical Association, St. Louis

*March*

48 *Education of the Insane. G. W. Robinson, Kansas City.
49 Otitic Sinus Phlebitis and Thrombosis: Report of a Case of Phlebitis and Thrombosis of Lateral Sinus and Jugular Bulb. W. E. Sauer, St. Louis.
50 Accidental Removal of the Stapes. F. C. Simon, St. Louis.
51 Phases of Labyrinthine Diseases Following Middle Ear and Mastoid Suppuration. C. F. Pfingsten, St. Louis.
52 Methods of Clinical Teaching in Otology. S. Spencer, St. Louis.
53 Glaucoma. F. B. Tiffany, Kansas City.
54 Osteoma of the Chorioid. W. H. Schutz, Kansas City.
55 Extrauterine Pregnancy in Patients with Gonorrheal Salplugitis. H. S. Crossen, St. Louis.
56 Dysmenorrhea. J. M. Dean, St. Louis.
57 The Open Method of Treating Infected Joints: Report of a Case. J. D. Seba, Bland.
58 Epidemic of Typhoid from Contamination of Missouri River Water. O. W. H. Mitchell, Columbia.

48. **Education of the Insane.**—The so-called chronic insane are subdivided by Robinson into three classes—the progressively incurable dements, such as the paretics and senile dements; the physically helpless, such as the paralyzed and those who are neither physically helpless nor afflicted with progressively incurable dementia. Patients in the two former classes constitute a small percentage of the hospital population, and about all they need is kind treatment, good nursing and careful attention to their physical needs. This they get in most, if not all state hospitals. The greater percentage of the population in state hospitals is composed of a class of persons who have entered the hospital as acute patients, who have not been restored to health, and who are left over, as it were, from year to year, until there is a large accumulation. These people are not sick, but are in good physical condition. They do not need hospital treatment, excepting occasionally as one of them has an acute attack of sickness of some character. For them the insane hospitals are nothing more than jails, the only function of which is custodial; the insane person must live alone with his delusions and a mind concentrated on the ego. It is not surprising that these patients frequently become violent and have to be restrained by mechanical means and sedative drugs. What they need and want is mental and physical occupation. They must be given occupation for all the faculties of the mind and work for the hands. Some of them show very little mental reduction and likewise very little perversion of mental faculties. Those who show the greatest amount of mental reduction should be treated as very small children who are beginning on the first principles of education. They should be given a kindergarten course just as the small child, with about the same course of study. Those who have suffered less mental reduction need not begin with the fundamentals, but they can begin a little farther on in the course which should be progressive in character and should be systematically carried out. In addition to the kindergarten department there should also be a well-equipped manual training department. These departments should be directed by well-qualified teachers. Every insane hospital should have a well-furnished general library for the patients' use. These patients should be encouraged to read wisely selected books and brought together at certain intervals by a competent teacher to tell what they have been reading. They should also under the direction of a well-qualified teacher be given a course of ordinary school study.

The most important part of the treatment, however, is the manual training department and ordinary labor. A course in a well-equipped and well-directed manual training department is, perhaps, the best method of producing all-around mental and physical development. Every faculty of the mind as well as the hands are exercised and developed. An industrial building for the industrial reeducation of these patients is very essential. In such a building the clothing of all the patients can be made, mattresses manufactured, furniture repaired, and much new furniture made, etc. Such a building will pay in money saved the institutions which is now spent for such supplies as can be made by the patients. Many of the women patients are now employed in all hospitals in the wards, laundry, kitchen, dining-rooms, etc., while many of the men are employed on the farm, in the dairy, in repair work on buildings, cleaning the campus, building fences, working in concrete, road building and, in short, doing about everything and every kind of work there is to do.

### Long Island Medical Journal, Brooklyn

*February*

59 Surgery in Diabetes. L. S. Pilcher, Brooklyn.
60 Food Poisoning. E. H. Bartley, Brooklyn.
61 Laboratory Methods in Diagnosis of Typhoid. A. Murray, Brooklyn.
62 Acute Gonorrhea in the Male. J. S. Read, Brooklyn.
63 Lipoma of the Ascending Colon. R. W. Westbrook, Brooklyn.

### American Journal of Medical Sciences, Philadelphia

*March*

64 Congenital Single Kidney: Practical Significance of the Condition with Statistics. J. M. Anders, Philadelphia.
65 The Treatment of Rheumatic Fever. F. S. Meara, New York.
66 *Decompression in Treatment of Meningitis. J. F. Hultgen, Chicago.
67 Essential Pentosuria. S. S. Cohen, Philadelphia.
68 Chemical Examination of a Sample of Urine Containing Pentose. C. H. La Wall, Philadelphia.
69 Adiposis Dolorosa with Myxedematous Manifestations. H. Stern, New York.
70 *Hemophilia with a Case of Typhoid in a Hemophilic Subject. C. W. Larned, Baltimore.
71 *Etiologic Factors of Compressed-Air Illness. L. E. McWhorter, New York.
72 *Myatonia Congenita of Oppenheim. J. V. Haberman, New York.
73 Syphilitic Paralysis of the Trigeminal Nerve. W. G. Spiller and C. D. Camp, Philadelphia.
74 Pathology of the Cranial Nerves in Tabes Dorsalis. T. A. Williams, Washington, D. C.
75 *Acute Pulmonary Edema as a Terminal Event in Certain Forms of Epilepsy. A. P. Ohlmacher, Detroit.
76 The Physiologic Utilization of Some Complete Carbohydrates. L. B. Mendel and M. D. Swartz, New York.

66. **Decompression in Meningitis.**—Hultgen reports four cases. The first case was one of serous meningitis, cured by lumbar puncture alone. The patient is now in excellent health. The second case was one of undetermined meningitis, but probably of influenzal nature (leucocytic formula, pneumonia, and otitis media). Improvement occurred after lumbar puncture and progressed to complete recovery. The patient is in good health now. The third case was one of acute meningitis, probably influenzal, with very rapid recovery after decompression. The patient is in good health now. The fourth case was one of tuberculous meningitis, with recovery. Lumbar puncture, as the only therapeutic measure used in this case, must be considered curative. The removal of intracranial hyperpressure, that is, decompression, was accomplished promptly and thoroughly by means of two consecutive lumbar punctures.

70. **Hemophilia.**—The points of interest in connection with Larned's case are: (1) the inheritance came through the father, who was himself a bleeder; (2) this is the first case, so far as Larned knows, of typhoid fever reported in a bleeder; (3) a case of typhoid may be brought to a successful termination in a patient so afflicted; (4) no hemorrhages occurred from the intestinal lesions; (5) the successful termination in this instance was probably in large measure due to the fact that at or about the age of forty the hemorrhagic tendency abated; (6) in this man's case the principal manifestation of the hemorrhagic tendency had been attacks of epistaxis, the only other serious hemorrhage having occurred at the time of an operation for ingrowing toenail.

71. **Compressed-Air Illness.**—McWhorter endeavors to prove the following:

1. In subaqueous tunnels the loss of air by leakage is sufficient to maintain perfect ventilation, and, therefore, carbon dioxid, carbon monoxid, and other gases do not accumulate in sufficient quantities to be considered possible etiologic factors in the causation of compressed-air illness.

2. The direct cause of compressed-air illness is the presence of air bubbles in the circulation; these gas bubbles consist of nitrogen, carbon dioxid, and oxygen, of which nitrogen is in excess, for the reason that this gas is the chief constituent of the atmosphere, and also does not combine with any of the body tissues.

3. New workers are most susceptible to this disease until the body accommodates itself to this entirely abnormal condition of high air pressure; and therefore, it is of the utmost importance that only young, healthy men should be allowed to do this work. New workers should, when feasible, be started in low pressures, from which in the course of four or five days, they may graduate to become, as they are called, "high-pressure men."

72. **Myomata Congenita.**—Haberman reports three cases which presented certain points in common—a rather extensive apparently flaccid paralysis, with absence of patellar and Achilles reflexes. In one there is vasomotor disturbance, in another slight atrophy, masked however, by adiposis. Viewed thus far, these cases might be taken for anteropoliomyelitis. A little closer analysis, however, will bring out certain interesting facts—namely, that two cases with certainty, and one case quite probably, date from birth, or, in other words, are congenital. Congenital cases of anteropoliomyelitis appear not to exist. Haberman believes that the one case cited in the literature has nothing to do with poliomyelitis, as two other children of the family were similarly afflicted (familial intrauterine poliomyelitis), and the paralysis was progressive—increased instead of decreasing, as is the rule in anteropoliomyelitis. Furthermore, there is no really degenerative atrophy present with reactions of degeneration. The paralysis, which is extensive, especially in two of Haberman's cases, has not gradually confined itself to an area smaller in extent than that which was at first affected, as is almost invariably the case in anteropoliomyelitis. Finally, on careful examination, one sees that some movements are present in the affected muscles, that we are not really dealing with genuine paralysis, but with an extreme condition of muscular atony. These muscles feel soft and doughy, and, except in one case, are not cold to the touch.

The clinical picture of myatonia congenita is a typical one, and may be described, Haberman asserts, as a congenital, atonic pseudoparalysis, encountered in the first two or three years of childhood, when the reflexes are very weak or abolished, electrical reaction reduced but never degenerative, real atrophy not met with, the distribution proximal with no progression, the muscles or bulbar innervation practically exempt, and no sensory, bladder, nor rectal involvement occurring. In a minimal group the children are older, contractures are present, the muscles small and thin (atrophic?).

75. **Acute Pulmonary Edema.**—The observations made by Ohlmacher in 5 cases, should, he says, tend in two directions—to emphasize the importance of acute edema of the lungs as a concurrence in epilepsy, and further to illustrate the kinship between certain types of epilepsy and status lymphaticus.

### Atlanta Journal-Record of Medicine

*February*

77 The Chattahoochce Valley Medical and Surgical Association. A. L. Harlan, Alexander City, Ala.
78 Danger in Adenoids and Diseased Tonsils. H. R. Slack, La Grange, Ga.
79 Abortion. J. S. Horsley, West Point, Ga.
80 The Automobile as a Curative Factor in Catarrhal and Bronchial Affections. S. A. Visanska, Atlanta.
81 Treatment of Pneumonia. L. W. Johnson, Tuskegce, Ala.
82 Organ Therapy. R. Westmorcland, Atlanta.

### Journal of the Medical Society of New Jersey, Orange

*February*

83 Points in Infant Feeding. D. E. English, Summit.
84 Ophthalmia Neonatorum. T. R. Paganelli, New York.
85 Spontaneous Rupture of Pyosalpinx into the General Peritoneal Cavity Producing Acute Diffuse Peritonitis. C. W. Bonney, Philadelphia.
86 Pyelitis: Especially Its Occurrence in Infants. T. N. Gray, East Orange.
87 The First Inklings of Disease. A. McAlister, Camden.
88 Heubner's Mustard Treatment of Catarrhal Pneumonia in Children. A. Stern, Elizabeth.
89 Directions to a Young Physician. D. Swift.

### Military Surgeon, Washington, D. C.

*March*

90 Substitute for the Correspondence School in the Training of National Guard Medical Officers. C. C. Foster, Cambridge, Mass.
91 How May the Value of the Medical Department to the Military Establishment be Enhanced? R. G. Ebert, U. S. Army.
92 Practical Field Sanitation. H. S. T. Harris, U. S. Army.
93 Suggestion for Simplifying the Medical Equipment of Mobile Units in Campaign. C. Willcox, U. S. Army.
94 Importance to the Army of Diseases Transmitted by Mosquitoes and Methods for Their Prevention. C. F. Craig, U. S. Army.
95 Comments on the Disappearance of "Potomac Malaria" at Fort Myer, Va. F. A. Winter, U. S. Army.
96 Dangers of Introducing Infections from Our Tropical Possessions by Returning Troops. F. M. Hartsock, U. S. Army.
97 Account of an Instructive Typhoid Epidemic. P. M. Ashburn, U. S. Army.
98 Liquor Cresolis Compositus, Extempore. J. R. Barber, U. S. Army.
99 Treatment of Acute Epididymitis and Orchitis. H. Butts, U. S. Navy.
100 Shotgun Wound of Toe. F. T. Woodbury, U. S. Army.
101 Medical Service with Cavalry in the Field. W. M. Roberts, U. S. Army.
102 Military Hygiene in Cold Countries. R. H. Pierson, U. S. Army.
103 *Reinforced Plaster Splint. R. M. Tbornburgh, U. S. Army.

103. **Reinforced Plaster Splint.**—The idea of this splint was suggested to Thornburgh by reinforced concrete building construction. After reduction of the fracture in the usual way, the leg is encased in one thickness of absorbent cotton and this is held in place by a few turns of roller bandage, applied tightly. A wet plaster roller is now wound round until at least two thicknesses surround the leg. A sufficient length of

wire mesh is placed along the inner side of the leg and bent over the sole of the foot to form a stirrup. By cutting a few wires here and there it can be perfectly moulded to the plaster dressing already in place. The outer side of the leg receives a similar strip of mesh but no stirrup. The strips of mesh should leave a gap of about an inch both in front and rear. While assistants hold the mesh in place the operator again applies the plaster roller until several layers are outside of the mesh. Plaster is applied by hand in the usual way, but only half as much is used as in the ordinary plaster splint. The dressing is allowed to set for several hours and then split with saw or cutting pliers down front, back, and along top of stirrup. Two perfectly formed moulds are thus made, which are held in place by adhesive straps or tapes embedded in the plaster. These straps may be tightened as the limb becomes emaciated or the pressure may be exactly regulated, for the splints will neither bend nor break. The patient can move about in bed, without danger of disturbing the relations of the fragments.

### Alabama Medical Journal, Birmingham

*February*

104 Early Diagnosis of Tuberculosis by the Tuberculin Test. W. Litterer, Nashville.
105 Fibroid Tumors Complicating Pregnancy. G. Torrance, Birmingham.
106 *Medical Treatment of Dysentery. J. M. Lowrey, Birmingham.
107 *Acute Traumatic Fever—Etiology and Treatment. J. F. Jenkins, Piper.
108 *Traumatic Osteoperiostitis. G. A. Hogan, Birmingham.

106. Abstracted in The Journal, Feb. 5, 1910, p. 484.

107. Abstracted in The Journal, Jan. 29, 1910, p. 394.

108. Abstracted in The Journal, Feb. 19, 1910, p. 644.

### Wisconsin Medical Journal, Milwaukee

*February*

109 The Physician and the Child. L. R. Sleyster, Appleton.
110 *Anomalies of the Mastoid from a Surgical Standpoint. H. B. Hitz, Milwaukee.
111 The Management of Typhoid, with Special Reference to Diet. W. E. Robertson, Philadelphia.
112 The Action of Certain Oxidizing Substances on the Respiratory Center. A. S. Loevenhart and W. E. Grove, Madison.
113 The Cure of Traumatic Neurosis. T. A. Williams, Washington, D. C.

110. Abstracted in The Journal, Aug. 7, 1909, p. 480.

### Journal of Biological Chemistry, Baltimore

*February*

114 The Optical Inactivity of Allantoin. L. B. Mendel and H. C. Dakin, New York.
115 Mechanism of the Oxidation of Glucose by Bromin. H. H. Bunzel, Chicago.
116 *Purin Metabolism of the Monkey. H. G. Wells, Chicago.
117 *Effect of Castration on the Metabolism. F. H. McCrudden, Boston.
118 Chemical Analysis of Bone from a Case of Human Adolescent Osteomalacia. F. H. McCrudden, Boston.
119 *Influence of Dietary Alterations on the Types of Intestinal Flora. C. A. Herter and A. I. Kendall, New York.

116. **Purin Metabolism of the Monkey.**—Wells finds that the monkey like other mammals possesses the power of destroying uric acid by an oxidase found in the liver. The urine of monekys contains very little purin nitrogen. A small amount of uric acid was found in the urine of a monkey dying from tuberculosis, but was not present in the urine of normal monkeys.

117. **Effect of Castration on Metabolism.**—McCrudden reaches a result somewhat at variance with the common idea that castration tends to produce obesity. There was no retention of material, especially of the mineral elements, but the results show a general tendency in the opposite direction; when there was a retention of material before castration, this retention was either decreased or became a loss after castration in almost every instance. Clinical investigation does not sustain the view that obesity is likely to follow the removal of the ovaries in women as a rule. The experiments of McCrudden appear to bear against the theory that osteomalacia is a disease of the ovaries which is cured by castration. This theory McCrudden proposes to discuss in a subsequent paper.

119. **Dietary Alternations and Intestinal Flora.**—The authors' experiments on kittens and monkeys show that an abrupt change in diet from a dominantly protein (meat and eggs) to a milk and sugar diet is followed by an alteration of physiologic conditions in three distinct directions (a) in the nature of the intestinal flora; (b) in the putrefactive products of the feces and urine; and (c) in the clinical conditions. The chief characteristic of the bacterial change is the gradual but rapid substitution of an acidophilic non-proteolyzing type of flora for a strongly proteolyzing type. The chief feature of the putrefactive conditions in the intestine is the reduction of the indol, skatol, phenol and bound hydrogen sulphid and a diminution in the indican and aromatic oxy-acids of the urine. Clinically, the most striking feature of the change in diet is (in monkeys) an improvement in spirits and activity which may safely be construed as showing a markedly improved sense of bodily and physical well being. While some of these changes may be due to reduction of protein it seems much more probable that the changes in the flora observed are mainly due to the influence of the carbohydrates and that the diminished intestinal putrefaction is due to the combined influence of diminution in protein and the addition of carbohydrate materials to the diet. The physiologic alternations in the flora which the authors claim to have established by their studies have been noted only in normal animals. They have as yet made no effort to study the effects of diet on animals in which the digestive tract is the seat of inflammation. They consider it likely that analogous conditions will be found to exist in man.

### Monthly Cyclopedia and Medical Bulletin, Philadelphia

*February*

120 A Study of Hyperchlorhydria. G. M. Piersol, Philadelphia.
121 Adrenal Therapy. C. E. De M. Sajous, Philadelphia.
122 The Medical Examiner's Work as Viewed by a Special Examiner. C. O. Carter, Harrisburg, Pa.
123 Rational Treatment of Hypertension and Sclerosis of the Arterial System (continued). C. Pope, Louisville.
124 Dyspeptic Diarrhea with Pneumonia and Meningeal Symptoms. W. G. Hollopeter, Philadelphia.
125 Which Preparation of the Pituitary is the Best to Use in Tetany? I. Ott and J. C. Scott, Philadelphia.
126 Psychotherapy. W. E. Magruder, Sandy Spring, Md.
127 The Insane in Pennsylvania: What the State is Doing for Them. F. Woodbury, Philadelphia.
128 Fractures of the Patella: Modern Operative Treatment (concluded). A. P. Heineck, Chicago.

### Journal of the Delaware State Medical Society, Wilmington

*March*

129 *Simultaneous Case of Intrauterine and Extrauterine Pregnancy. S. C. Rumford, Wilmington.
130 Dr. Jos H. Chandler. J. P. Pyle, Wilmington.
131 Id. H. W. Briggs, Wilmington.

129. **Intrauterine and Extrauterine Pregnancy.**—The patient last menstruated in July, 1908. April 13, 1909, she had poor labor pains, which gradually ceased after a few hours; the same thing occurred on April 17 and 24, but on none of these dates was there any dilatation of the cervix. April 26, a bloody product was passed after unusually severe pains, and proved to be a six weeks' fetus and placenta. At this time the cervix was soft and dilated and fresh blood coming from the uterine cavity. The patient was very comfortable for several days, but there was no decrease in the size of her abdomen and she still felt fetal movements. She was taken to the Delaware Hospital, Wilmington, May 3. Examination showed the abdomen distended with fluid. In the left flank a mass could at times be detected that seemed to float away from the examining hand. It was impossible to outline this mass by the vagina or to locate the fundus because of the intra-abdominal fluid, but the cervix was soft and patulous and a pale lochial discharge was present. As the patient was in poor condition and much exhausted by her trip to the hospital, a couple of days were spent in getting her in good shape for operation. On opening the abdomen by a median incision, Rumford found the cavity filled with a dark brownish and very offensive fluid, and floating about in this a male child at full term, showing very feeble signs of life. The intestines had been forced up under the lower border of the ribs, and confined there by an unusually large but thin placenta, which was adherent to the intestines, omentum, liver and the parietal peritoneum along the right side of the abdomen. The whole peritoneal cavity presented a pale, unhealthy appearance, and in separating the placental adhesions there was little tendency to bleeding. The uterus was enlarged and soft, and the tubes and ovaries normal. The child had the same pale, macerated appearance as the other structures and in delivering it the cord was broken, but from neither end was

there any bleeding. The child, after a couple of gasps, ceased breathing and its heart refused to beat in about ten minutes.

### Iowa Medical Journal, Des Moines

*February*

132 Ophthalmia Neonatorum in Iowa. Consideration of State Prophylaxis. E. R. Lewis, Dubuque.
133 Developmental and Surgical Relation of Nose and Mouth. G. V. I. Brown, Milwaukee.
134 The Nasal Polypus. A. W. Elmer, Davenport.
135 The Course of a Frontal Sinusitis. H. Bailey, Charles City.
136 Staphylococcus Septicemia. L. W. Littig, Iowa City.
137 Two Cases of Subacute Combined Cord Degeneration. F. A. Ely, Des Moines.
138 Pellagra in Iowa. J. B. Kessler, Iowa City.

### University of Pennsylvania Medical Bulletin, Philadelphia

*January*

139 *Resection of Posterior Spinal Roots for Relief of Spasticity. W. G. Spiller and C. H. Frazier, Philadelphia.
140 Mitral Stenosis with Multiple Emboli. H. B. Allyn, Philadelphia.
141 *Splenomedullary Leucemia in Childhood. H. T. Karsner, Philadelphia.
142 The Nature of Peculiar Bodies Found in the Leucocytes of Guinea-Pigs. J. W. Hunter, Philadelphia.

*February*

143 Extrasystolic Arrhythmia Simulating Heart Block. G. W. Norris, Philadelphia.
144 *Anatomy of the Epicranial Aponeurosis and Temporal Fascias. G. G. Davis, Philadelphia.
145 *Comparison of Karyokinetic Leucocytes in Different Types of Leucemia. W. Pepper, Philadelphia.
146 Additional Cases of Blastomycosis. A. J. Smith, Philadelphia.

139. **Resection of Posterior Spinal Roots for Relief of Spasticity.**—This operation was first advocated by Spiller early in 1905. He stated that it was permissible in almost every case in which spasticity is great and motor weakness is slight, provided the condition of the patient justified it, whether the lesion be spinal or cerebral, unilateral or bilateral. It is useless when motor palsy is great. Frazier performed this operation with much success in one case, which Spiller and Frazier report. The man's trouble began in December, 1903, following a drinking bout. He was examined by Spiller, Sept. 25, 1909, in view of operation. The notes of this examination are as follows: Voluntary power in lower limbs is about normal, but spasticity in these limbs is extreme. He cannot separate the thighs because of this great spasticity. The patellar tendon reflex is so exaggerated on each side that a tap on the patellar tendon throws the corresponding limb into a general clonus. Patellar clonus, so-called spinal epilepsy, persistent ankle clonus, and Babinski reflex are present on each side. Touch, pain and temperature sensations are normal in each lower limb. The cremasteric reflex is prompt on each side. The sense of position is normal in each great toe. He has control over the bladder and rectum. He is unable to walk without support (canes) because of the extreme spasticity; the toes of one foot catch behind the heel of the other foot in walking, and when he is standing still the heels do not touch the ground because of the spasticity of the calf muscles.

Spiller examined the patient again on Sept. 28, 1909, after the operation. The notes of this examination are as follows: He has touch, pain and temperature sensations in the legs below the knees and in the back of the thighs, but has no touch and temperature sensations on front of either thigh. On the front of the left thigh, he feels pin pricks, but cannot feel them on the front of the right thigh. The patellar reflex is completely lost on each side; Achilles reflex is nearly normal on the left side, but is weak on the right side. He lies with thighs far apart and legs extended. He feels touch, pain and temperature sensations in front of the abdomen. He complains of much pain low in the back, and pain is intense here on voluntary or passive movements of lower limbs. The cremaster reflex is lost on each side. He can flex slightly each lower limb at the hip, knee and ankle, and moves his toes freely. He moved his right lower limb freely, he says, a couple of hours after the operation, the left not so well. Both lower limbs and lower abdomen as far as the umbilicus feel as though dead. In October, 1909, he was able to stand if supported, but could not put much weight on the lower limbs. Pain was not so severe now as it was soon after the operation. The movements of the lower limbs were free, and he had control of the bladder and rectum. On December 17 there was great impairment if not complete loss of sensations for touch, pain, heat and cold in an area very nearly similar on the two sides and confined to the front and sides of the thighs. He can separate his thighs, flex and extend them to the normal degree. The patellar reflex is present on the left side in so far as there is distinct contraction of the quadriceps muscle, but there is no movement of the left on the thigh in this reflex. The patellar reflex on the right side is present but very weak. The Achilles reflex is nearly normal on the left side, but is very weak on the right side. Typical Babinski reflex is obtained on each side. He gets in and out of bed without difficulty. He moves his feet at the ankles with much freedom, but not to the normal degree, and places his feet firmly on the ground. There is no positive disturbance of sensation below the knees. The functions of bladder and bowels are normal. He goes up stairs with freedom, but has difficulty in descending stairs. He walks with a cane and a crutch. He has still some tendency to drag the toes, but in nothing like the degree that was present before the operation. The movements at hips and knees are nearly normal, but are still impaired at the ankles.

141. **Splenomedullary Leucemia in Childhood.**—Karsner adds one case to seven now recorded in the literature. His patient was 2 years old.

143. **Extrasystolic Arrhythmia Simulating Heart-Block.**—An interesting case of myocarditis is reported by Norris. That it was a case of myocarditis was evidenced by the physical examination by a marked limitation in the field of cardiac response, and by the pulse tracings, which showed at times a marked delay of conductivity and also a typical pulsus alternans, both of which conditions are of bad prognostic import. The patient was suffering from a very atypical form of arrhythmia, which was clinically manifested by a disappearance of every other arterial pulse wave, thus suddenly and often for a considerable interval of time halving the pulse rate. For a period of about three weeks this arrhythmia could be brought on at will by deep breathing and other simple procedures and was apparently always associated with, and at least in part the result of, increased blood pressure. It was positively not a case of auriculoventricular heart-block. The administration of digitalis invariably made the condition worse and sometimes seemed to be the direct cause of it. The effect of belladonna, on the other hand, seemed to be beneficial, and considering the diametrically opposite effect of these two drugs on the vagus, suggests that this nerve may have played an important part in the production of the arrhythmia. Certain reasons may be advanced for believing that we were not dealing with extrasystolic arrhythmia properly understood at all, but with the condition which has been designated as "true bigeminus;" the close-coupled contraction of left ventricle as well as the auscultatory examination of the heart, would, however, seem to contradict this belief. Norris believes that the form of the arrhythmia varied at different times and that sometimes it was not a "true bigeminus," at others there were undoubted extrasystoles. One other explanation, however, seems possible, *i. e.*, that the peripheral pulse intermissions simply resulted from an extreme degree of myocardial weakness, which caused the small waves of a pulsus alternans to drop out entirely. The author states that he has never seen such a case described, but can see no reason why such a state of affairs should not be perfectly possible. Three other cases are reported. Basing his conclusions on these four cases, Norris states that extrasystolic arrhythmia may simulate heart-block by the fact: (1) that the peripheral pulse may be very slow; (2) that the jugular veins may be distended and pulsate markedly in the intervals between the radial pulses; (3) that a muffled third muscular sound may be heard on auscultation over the heart which does not correspond to a peripheral pulse; (4) that there are no distinctive symptoms of true heart-block.

144. **Anatomy of Epicranial Aponeuroses and Temporal Fascias.**—Davis finds that effusions beneath the epicranial aponeurosis are limited below as follows: The occipital protuberance, superior curved line of the occiput, mastoid process, top of the ear, upper edge of the zygoma, external angular process and possibly, for a short time, at the upper edge of the orbit, but either at once or in a comparatively short time invade

first the upper and then the lower lids. The outer side of the orbit seems to be an especially favorable spot for effusions to gain entrance to the subcutaneous tissues of the lids. The accumulations occurring above the zygoma may either remain above it or possibly, especially if serous, leak through and extend a short distance below. Effusions occurring beneath the pericranium of the parietal region may, as pointed out by Richet, descend toward the temporal region, in which case they pass over the deep temporal aponeurosis.

145. **Karyokinetic Leucocytes in Leucemia.**—Pepper found that there is no more resemblance between the karyokinetic cells in acute lymphatic leucemia and in splenomyelogenous leucemia than there is between the typical "large lymphocytes" and the myelocytes of the same disease.

### Laryngoscope, St. Louis

*February*

147 New Methods of Tuning-Fork Tests and Their Practical Significance. R. Barany, Vienna.
148 Symptoms of Internal Ear Suppuration with Presentation of Two Cases: Operation: Recovery. J. McCoy, New York.
149 Mastoid Operation, Simple and Radical, Under Local Anesthesia. E. W. Day, Pittsburg.
150 Intranasal Drainage of the Frontal Sinus. E. F. Ingals, Chicago.
151 Rhinoscleroma. A. Braun, New York.
152 Rapid and Thorough Method of Opening into the Maxillary Antrum in Selected Chronic Cases. O. J. Stein, Chicago.
153 Squamous-Celled Epithelioma of the Antrum of Highmore. A. P. Voislawsky and A. Braun, New York.
154 Diseases of the Accessory Sinuses Causing Ocular Symptoms. F. E. Waxham, Denver.
155 Laryngeal Carcinoma Under Observation for Thirteen Years—Ultimate Laryngectomy. O. Smith, New York.
156 Bronchoscopic Aid in Thoracotomy. O. C. Gaub and C. Jackson, Pittsburg.
157 An Anesthetic Attachment for the Bronchoscope. C. Jackson, Pittsburg.
158 Two Unusual and Interesting Cases of Acute Edema of the Larynx. H. Foster, Kansas City.
159 Chloretone as a Local Sedative to the Respiratory Tract. W. S. Anderson, Detroit.

### Southern California Practitioner, Los Angeles

*February*

160 Application of the Wassermann Reaction in General Medicine, Based on 968 Examinations: Special Reference to the Blood of the Insane. R. C. Matson, Portland, Ore.
161 Immunity and Tuberculosis. W. W. Watkins, Phoenix, Ariz.
162 Surgical Technic. J. B. McNally, Prescott, Ariz.
163 Modified Smallpox. C. D. Ball, Santa Ana, Cal.
164 Trifacial Neuralgia. D. D. Whedon, San Diego, Cal.

### Interstate Medical Journal, St. Louis

*March*

165 *Plea for Uniform Interstate Rules in Treatment of the Venereal Diseases as a Prophylaxis of the Evil of Society. A. Ravogli, Cincinnati.
166 Symptoms of Uncinariasis. G. Dock, New Orleans.
167 Pathology of Uncinariasis. N. Evans, Nashville, Tenn.
168 Early Symptoms of Pellagra. C. C. Bass, New Orleans.
169 Tetany. E. S. Cross, Savannah, Ga.

165. **Prophylaxis of Social Evil.**—As it has been demonstrated that the treatment of the venereal diseases is the best prophylaxis against the spreading of the scourge, it is clear that some interstate rules concerning this treatment would be of great advantage to combat their diffusion. These rules, according to Ravogli, could be formulated as follows:

Every hospital (unless it be for special diseases) is compelled to accept venereal patients when disabled. In every general hospital there must be a department for the treatment of venereal diseases. In these wards there must be observed complete secrecy and discretion, in order to prevent any publicity. It must be in the power of the health officer to compel any hospital to give treatment to a disabled venereal patient. In large cities the patients must have the benefit of the clinics and dispensaries attached to the hospitals or to the medical colleges. In smaller communities dispensaries must be instituted for treatment of venereal diseases, by order of the county board of health. Medicines and treatment for poor patients must be given free of charge. Physicians in charge of these dispensaries must be specialists well-trained in the treatment of these diseases.

### Vermont Medical Monthly, Burlington

*February*

170 Prostatic Obstruction: Indications for Operation with a Description of a Method of Operating. P. Syms, New York.
171 Ileus, Mechanical and Dynamic. L. Allen, Burlington.
172 Normal Pregnancy. C. A. Pratt, Enosburg Falls.

### American Medicine, New York

*February*

173 Surgical Treatment of Epilepsy: Methods and Possibilities of Brain Surgery. W. P. Carr, Washington, D. C.
174 Tuberculosis of the Peritoneum, Uterus and Adnexa. F. J. Shoop, Brooklyn.
175 Success in Treatment of Chronic Disease. H. R. Harrower, Chicago.
176 Action of Glandular Extracts on the Secretion of Urine. I. Ott and J. C. Scott, Philadelphia.
177 *Therapeutic Value of Diaphoresis in Treatment of Ocular Diseases. A. Brav, Philadelphia.
178 The Dermatologist as Seen by the General Practitioner. A. Rostenberg, New York.
179 How to Stamp Out Leprosy. A. S. Ashmead, New York.

177. **Diaphoresis in Ocular Diseases.**—According to Brav, the beneficial influence on the ocular processes is accomplished: (a) by enhancing and readjusting metabolic end-products and the elimination of deleterious toxic substances from the organism; (b) by the reestablishment of the equilibrium in the general circulation, removing all possible venous stasis and the purification of the blood itself by the elimination of circulating toxins, following the stimulation of the sweat glands and the direct effect on the vascular system; (c) by invigoration of the peripheral and central nervous system thus increasing the nutrition of the ocular tissues affected; (d) by its action on the lymphatics, stimulating absorption and thus carrying off the inflammatory products of the diseased part of the eye; (e) by the local stimulative effect of moist heat so important to the tissues and so essential in inflammatory processes.

### Journal Arkansas Medical Society, Little Rock

*February*

180 Neuroses Due to Pelvic Disease Surgically Treated. W. C. Dunaway, Little Rock.
181 Malignant Malaria (Comatose Form). F. O. Mahoney, Huttig.
182 Race Suicide as the Medical Man Sees It. E. E. Barlow, Dermott.
183 Address for the Relief and Control of Tuberculosis at Pine Bluff. J. Jordan, Pine Bluff.
184 Pellagra: Steps Taken to Control the Disease in Illinois. G. A. Zeller, Peoria, Ill.

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## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### Lancet, London

*March 5*

1 The Esthetics of Anesthetics. F. W. Hewitt.
2 *Streptotrichoses and Tuberculosis. A. G. R. Foulerton.
3 Intracranial Tumor with Alterations in the Color Fields. B. Branwell.
4 *Treatment of Tuberculous Abscesses of Bony Origin by Conservative Methods. H. J. Calve and G. J. Gauvain.
5 *Variations of Temperature in Pulmonary Tuberculosis During the Menstrual Period. C. G. Welch.
6 *Proctopexy: A New Operation for Prolapse of the Rectum. J. P. L. Mummery.
7 Medical Treatment of the Poor. J. C. McVail.

2. **Streptotrichoses and Tuberculosis.**—In the course of an investigation of 53 cases of streptotrichoses in man, Foulerton found 6 distinct species of parasites. In one case it was easy to identify the streptothrix described by Eppinger; and from other cases he isolated 5 distinct species which he has not been able to identify positively with previously described parasites. The influence of occupation and other circumstances involving special exposure to the possibility of infection from a vegetable source is noticeable in this series. Of 27 persons belonging to the working classes, 19 followed trades in which they would be specially exposed to any infection which might have its source of origin in vegetable matter. Thus there were among them 5 men employed in stable work; of these, 1 had a primary pulmonary streptotrichosis and died with a secondary abscess in the cerebrum, another had a streptotrichial empyema secondary to a lung infection, 2 had abscess in the submaxillary region, and 1 had an abscess in the substance of the cheek. A patient with a streptotrichial appendicitis was a cellarman who was constantly handling the straw casings of wine bottles, and who happened also to live over some stables. Two of the patients were bakers, one with a subperiosteal abscess of the lower jaw, and one with a right iliac abscess which presumably was secondary to appendicitis. Two of the patients were gardeners, both with abscesses of the submaxillary region. Two other patients whose occupation would expose them to the risk of infection of this kind were a dairy maid, who suffered from a submaxillary abscess, and

a man with a streptotrichial appendicitis who had been employed for many years in a large timber yard.

Among these 19 workers, who by reason of their occupation might be supposed to be specially liable to infection of this kind, there was a group of 7, including 2 working tailors, 3 tailoresses and 2 dressmakers, who would be in the habit of passing cotton and thread between their lips. Of these the 2 tailors each had a submaxillary abscess; the 3 tailoresses suffered respectively from a pulmonary streptotrichosis, an acute parotid abscess, and a submaxillary abscess; one dressmaker died with thrombosis of the superior mesenteric, splenic and portal veins resulting from a streptotrichial appendicitis, and the other had a submaxillary abscess. The remaining 8 of the working classes followed as many different trades, in none of which could any probable cause of any special liability to exposure to infection be traced. In 2 other cases, one that of a woman medical student who died with extensive retroperitoneal suppuration following on a streptotrichial appendicitis, the second that of a young male of no special occupation who died with infection of the lungs, liver and cerebrum—there were circumstances of interest in connection with the probable source of infection. The woman had spent a long holiday in the country ending 3 months before the onset of symptoms of appendicitis, and while away had been in the frequent habit of chewing ears of growing barley and oats as she walked through the fields. The male patient died within 4 months of leaving a farm on which he had spent several weeks during convalescence after scarlet fever.

4. **Treatment of Tuberculous Abscesses.**—The combined mixture which Calve and Gauvain use for injection into cavities after aspiration is of this formula: Iodoform, 5 grams; ether, 10 grams; guaiacol and creosote, 2 grams of each; and sterilized olive oil, 100 c.c. Of the other solutions of iodoform, iodoform combined with ether is most commonly used. Out of 29 cases of spinal caries with abscesses, 27 were cured, 2 remain with sinuses which are not infected and in which the discharge is diminishing and the general condition is good. There were 33 cases of hip disease; of these, 32 patients were cured, 1 remained with a sinus. In this case, the sinus was serious, due to a secondary infection caused by improper sterilization of the instruments employed in aspiration. The number of aspirations was from 1 to 21 in each case. At the Cripples' Home at Alton, during the last months of 1909, 23 closed tuberculous abscesses connected with lesions in the spine, hip and knee have been treated by aspiration; 8 spinal abscesses were aspirated. The greatest number of aspirations required for any one case was 12, the average number required was 3. All the patients are apparently cured, and in no case has a sinus formed. Thirteen cases of abscess in connection with tuberculous disease of the hip were treated by aspiration. Of these 12 patients had been apparently cured. In one case, a small sinus persists, but is not infected. The greatest number of aspirations required for any one case was 14. The average number was 4. Two abscesses in connection with the knee-joint have been similarly treated, and both patients are apparently cured.

5. **Phthisis and Menstruation.**—The changes associated with pulmonary tuberculosis were found by Welch to be progressively more marked in proportion to the severity and extent of the disease. Thus in early cases the changes most frequently found are a depression in the temperature, somewhat more marked but otherwise similar to that occurring in the healthy woman, except that the temperature falls on the first day and not on the day preceding the flow; and, further, the progressive and preliminary rise in the intermenstrual period appears to occur but rarely, being present in only three of his cases. In patients with two lobes affected a definite rise occurs in more than half of them while in women with three or more lobes affected a simple depression occurs in only 14.2 per cent., a rise of 57 per cent. Welch was unable to trace any definite variation of pulse rate and respiration with these changes of temperature. In like manner the amenorrhea that is so well-recognized as a sequel of this disease is found to increase progressively in proportion to the extent and severity of the disease. In early cases it occurred in 11.9 per cent., in the two-lobed in 23.7 per cent., while in the severe and advanced it occurred in as many as 62.5 per cent.

6. **Proctopexy.**—The operation devised by Mummery so anchors the rectum as to render impossible any possibility of the posterior rectal wall prolapsing. A transverse incision about 2 inches long is made about half way between the tip of the coccyx and the posterior margin of the anus. This incision should divide the attachment of the external sphincter to the coccyx and should be carried down until the posterior rectal space is opened. With the gloved finger this space is freely opened up. The height to which the posterior rectal space should be separated depends on the length of the prolapse, but in any case it should be well up into the hollow of the sacrum. The end of the gauze is left protruding from the wound which must be left open. A lot of gauze must not be pushed in, but only just sufficient to prevent the rectum and the tissues on the front of the sacrum from healing together by primary union. The external wound is carefully dressed, a piece of gauze being placed in the anus to prevent the dressings from becoming soiled. Mummery has performed this operation four times with complete success. In each case about five inches of the bowel came down previous to operation. The advantages claimed for this operation are: (1) It securely and permanently fixes the whole posterior rectal wall into the hollow of the sacrum; (2) it is simple and does not involve any serious risk; (3) it does not involve the cutting of any nerves or important structures; and (4) it restores the bowel to as near the normal condition as is possible.

### British Medical Journal, London

*March 5*

8 *Optic Neuritis, Choked Disc, or Papilledema. Sir V. Horsley.
9 *Miner's Nystagmus. T. H. Butler.
10 *Muscular Dystrophy (Erb's Juvenile Form) Occurring in an Adult. H. L. McKisack.
11 *Action of Cutaneous Anesthetics. A. R. Short and W. Salisbury.
12 *Infantile Glaucoma or Buphthalmia. W. Allport.
13 A Case of Cyclophoria. A. A. Bradburne.
14 A Trial of Nastin. J. A. Thompson.
15 *Peritoneal Blood Transfusion. A. E. Boycott.

8. **Optic Neuritis or Papilledema.**—Horsley holds that the maximal intensity and age of papilledema or optic neuritis in cases of increased intracranial tension is of the highest value in clinical localization of the lesion, and is ipsolateral with the maximal pressure effects of the latter. Papilledema produced by increased intracranial tension commences at the upper border of the optic papilla, and invades last the inferior temporal quadrant. Horsley agrees with Mr. Gunn that the macular figure is caused by tension lines centered at the fovea, the greatest stress being just beneath the intima. The phagocytes of the retina, he says, consist of several kinds, as follows: (1) Wander-cells; (2) connective tissue corpuscles; (3) epithelioid corpuscles of the nerve fiber layer; (4) epithelioid corpuscles of the outer granule layer—the two latter varieties being in close relation to the supporting fibers of Müller.

9. **Miner's Nystagmus.**—Butler agrees with Reid and Nuel that the disease is caused by a disordered cerebration, a defect in the brain, not of the eye muscles. It is produced by the peculiar work of the miner, long-continued rhythmic movements of the pick in comparative darkness. The treatment is simple. The miner must leave the mine, and must not return to it. The prognosis must be guarded. Many patients recover completely, but, on the other hand, some never entirely lose their symptoms. In any case, a miner who has once suffered from the disease must never return to work underground.

10. **Muscular Dystrophy in an Adult.**—A "plater" in a shipbuilding yard, aged 28, had been accustomed to severe muscular exertion, particularly of the arms and back. He was a total abstainer, and had had no serious previous illnesses, except a suppurating inguinal gland, which he attributed to an injury; he denied having had any venereal disease. About two years before McKisack saw him he noticed some weakness of the arms, but soon afterward observed that his neck seemed smaller than before. These defects steadily progressed until his condition on Oct. 13, 1909, had become as follows:

Mental faculties and the sensory apparatus are unchanged; pupil reflexes are normal; left knee-jerk is brisk; right knee-jerk is defective; wrist-jerks are absent; fundus oculi is normal; the blood shows a positive Wassermann reaction. The muscles of arms and shoulders are atrophied and weak. There are no fibrillary twitchings. There was atrophy of the latissimus dorsi, lower part of the pectoralis major and supinator longus, with escape of deltoid, infraspinatous and hand muscles—a characteristic picture of the juvenile type of muscular dystrophy. The muscles of the legs, pelvic girdle and lower back are intact.

Landouzy and Dejerine's type may be excluded by the complete absence of face lesion. The deltoids and infraspinati may possibly be regarded as hypertrophied, but this is probably a genuine hypertrophy from overwork rather than the degenerative false enlargement, so that the group of pseudohypertrophic paralysis may also be rejected. Absence of fibrillary contractions and of characteristic electrical changes, together with the distribution of atrophy, remove this case from the group of spinal muscular atrophies. In spite, therefore, of the comparatively advanced age (26 years) at which the disease commenced, and of the absence of hereditary influence, McKisack believes that this case may be regarded as an instance of Erb's juvenile form of muscular dystrophy.

11. **Action of Cutaneous Anesthetics.**—The authors believe that they have been able to obtain definite evidence that none of the drugs at present in use for painting on, or rubbing into the skin have any power to relieve pain. The use of belladonna, opium, aconite, menthol and cocain for bruises, thrombosis, inflammation or neuralgia should therefore be discontinued and replaced by more efficacious means, such as rest, massage and counter-irritation.

12. **Infantile Glaucoma or Buphthalmia.**—The patient, a girl, when first seen, was 6 months old. Both eyes were constantly "running water." The corneæ were large, the globes slightly prominent, and the intraocular tension decidedly high. It was impossible to examine the fundi, owing to the intense photophobia. When the patient was 3 years old, Allport performed an interior sclerotomy, but the incision was extended so as to cut entirely through the upper part of the intercalary region. The knife as it emerged from the sclera above the cornea was not allowed to cut through the conjunctiva, but this membrane was undermined for a few millimeters, producing a bridge of tissue which held the flaplike portion of the cornea in position. The idea of this operation was to obtain a scar at the filtration angle, which would be sufficiently loose and porous to allow the intraocular fluid to escape through it under the conjunctiva, and so produce a permanent drain. A small cystoid cicatrix developed at the upper point of the incision, and a minute fistulous opening in the sclera at this point could be detected. The tension soon became normal, and the symptoms gradually abated.

In September, 1908, a similar operation was performed on the right eye, with an equally satisfactory result, and in December of that year, the intraocular tension of both eyes was normal, the photophobia had completely disappeared, and the child could see very much better. She could readily perceive a pin lying on the floor some yards away, and had accurate color perception. The fields of vision were not markedly contracted. The child presents now an almost normal appearance, the eyes merely resembling the slightly prominent globes of a myope; she no longer complains of any eye symptoms.

15. **Peritoneal Blood Transfusion.**—The observations made by Boycott suggest that intravenous transfusion is to be preferred to intraperitoneal transfusion, as giving a prospect of more lasting benefit to the recipient.

### Practitioner, London

*March*

16 *Quiet Polypoid Sarcoma of the Nose. F. C. Madden.
17 Estimation of the Functional Activity of One or Both Kidneys. R. H. J. Swan.
18 *Failure of the Heart. E. H. Colbeck.
19 Treatment of Tuberculosis of the Knees. C. G. Watson.
20 Theory of Vaccine Therapy, with Practical Results. J. G. Taylor.
21 Treatment of Patients Before and After Abdominal Operations. H. J. Paterson.
22 Recent Work in Surgery of the Gall-Bladder and Bile-Ducts. H. Upcott.
23 Chronic Gonorrhea in the Female. C. D. Lochrane.
24 *Breast Pang. H. W. Verdon.

16. **Polypoid Sarcoma of the Nose.**—Under this term Madden describes a tumor whose structure is that of sarcoma, but of such a low grade of malignancy as to produce comparatively little surrounding destruction, after a prolonged period of growth. Clinically, the sequence of symptoms appears to be polypous formation in both nostrils, leading soon to complete nasal obstruction; expansion of the cartilaginous portion of the nose, with marked hypertrophy of the overlying skin; and, later, marked thickening and infiltration of the columella and upper lip, with, finally, but only after a very chronic course, extension to surrounding parts.

18. **Failure of Heart.**—Colbeck maintains that in spite of the extravagant advocacy of hydrotherapy and special exercises in the treatment of cardiac failure, there is no therapeutic influence that compares in efficacy with physical and mental rest. The carrying out of this principle does not necessarily entail complete rest in bed; each case must be considered in the light of surrounding conditions with the object of ensuring a maximum of relief to the heart with a minimum of disturbance to the patient.

The duration of the period of rest is determined by the response of the heart to this method of relieving the ventricle of its overwork, and it is of the utmost importance that the resumption of exercise should be graduated with the greatest nicety and caution, since a small indiscretion in respect to the introduction of strain may undo the beneficial effects of weeks of treatment. Drugs have little or no direct influence for good in the treatment of failure of the heart due to exhaustion of the function of contractility without loss of tonus, and their indiscriminate use may be a source not only of harm, but of actual danger. So long as the cardiac tonus is maintained, the employment of digitalis and its allies is absolutely contraindicated. The justification, if any be needed, for the occasional hypodermic injection of digitalis during an emergency in the treatment of cardiac failure without loss of tonus is apparently found in the initial effect of the drug on the function of contractility. With this exception, he declares, the action of digitalis in cases of cardiac failure without loss of tonus is wholly deleterious. The harmful effects of the drug are most commonly observed in those cases of failure of the heart without loss of tonus that are not uncommonly found in association with high blood-pressure and cardiovascular sclerosis. In these circumstances, the failing function of contractility is working up to the full limit of its reserve power, and the introduction of any depressing factor, such as a full meal, a slight effort or the action of digitalis, may be sufficient to cause sudden stoppage of the heart. In failure of the heart with loss of tonus, the very remarkable restoration of the cardiac tonus that is commonly effected by digitalis enables the heart to regain control of the collection and discharge of its contents, and thereby to reestablish the balance of the circulation.

So long as the heart is dilated digitalis may be given with safety and confidence, and the administration of the drug in suitable cases of cardiac failure constitutes one of the most satisfactory examples of therapeutic intervention in the whole range of clinical medicine. Failure of the heart to respond to the action of digitalis implies either permanent dilatation of the organ, due to the stretching of a texturally altered myocardium, or to grave functional degradation (consequent on toxemic poisoning, etc.) of the cardiac wall.

24. **Breast Pang.**—Cases not infrequently come under notice in which the prominent symptom complained of is dull pain of an intolerable sort felt in the upper third of the chest, sometimes extending to one or both arms, and sometimes rising in the neck as far upward as the angles of the jaw. Usually, at first, the pain comes on when the patient is walking on rising ground. In later stages and in severe cases it begins before 50 yards of level ground can be covered. Verdon has seen a few cases in which the patient could not walk from one side of the room to the other without provoking a seizure. The attack is accompanied by a small, quick, irregular pulse, extreme pallor, and a sense of inability and distress. Sometimes a feeling of gastric distention precedes the painful sensation, and eructation of flatus relieves

them. With a few exceptions these cases are uncomplicated by the presence of constitutional disease or any discoverable local lesion. Verdon shows that there are reasons for the inference that contraction of involuntary muscles of the arterial wall occurs during these attacks, and that contraction of arterial muscle is the cause of the pain and other phenomena connected with the seizure.

### Journal of Laryngology, Rhinology and Otology, London

*March*

25 Paralysis of the Recurrent Laryngeal Nerve. J. Broeckaert.

### The Australian Medical Journal, Melbourne

*January*

26 Work done at the Women's Hospital, Melbourne. G. Cuscaden.
27 Scarlet Fever and Diphtheria. F. V. Scholes.
28 Radium and its Application. H. Lawrence.
29 Impressions of American Surgery. T. Murphy.
30 Three Cases of Calculi. O. Penfold.

### Annales de Gynécologie et d'Obstétrique, Paris

*February, XXXVII, No. 2, pp. 65-128*

31 *Serodiagnosis of Pregnancy. (De la possibilité d'une toxémie villeuse et d'un séro-diagnostic de la grossesse, dans les premiers mois de la gestation.) G. Fieux and P. Mauriac.
32 *Acute Thyroiditis in Puerperal Infection. P. Lecène and Metzger.
33 *Hemostasis in Hysterectomy. (L'hémostase dans l'hystérectomie abdominale totale, l'hystérectomie subtotale ou en deux temps.) L. Chevrier.

31. **Early Serodiagnosis of Pregnancy.**—Fieux and Mauriac report research which seems to demonstrate that the young chorionic villi have a toxic action which induces the production of an antibody that can be revealed by the deviation of the complement in the hemolytic test. The vigorous growth of the chorionic villi during the first weeks of pregnancy seems to suggest that they possess certain features of a true parasitic graft, which may grow to a malignant tumor when the attack is too lively or the defense inadequate. This idea of syncytium intoxication from deportation of villi has been suggested as the origin of eclampsia. But the accidents due to the autointoxication of pregnancy are more severe as term approaches, while the growth of the villi becomes less and less active as the pregnancy continues. These and other facts observed suggest, they believe, that the villi may be responsible for the early toxemia; this assumption is sustained by the fact that the disturbances which mark the onset of gestation occur early; they disappear suddenly and completely if the ovum is expelled, extracted or dies; they subside and generally vanish completely by the close of the third or fourth month, but they may persist and with exceptional intensity in certain pathologic conditions of the ovum, with a vesicular mole, for instance. This, the authors assert, confirms the fact that in this toxemia the ovum rather than the embryo is concerned. In their experience, it was not in true pregnancy, but in cases of vesicular mole with proliferation of the villous element that the vomiting and cachexia were most pronounced. They apply the hemolytic test with an antigen made from villous masses derived from a two-months human ovum, taken from a patient with uncontrollable vomiting. With this and similar antigens they tested 55 pregnant women and obtained positive results in every case of pregnancy of two or three months' duration. The findings were negative in all the cases of pregnancy under one month and over four as also in 10 non-pregnant women, the latter including several with amenorrhea suggesting a possible pregnancy. The research described seems to establish, they think, the existence of an actual villi toxemia with a biochemical reaction permitting a serodiagnosis of pregnancy during the second and third month.

32. **Acute Thyroiditis in Puerperal Infection.**—Lecène and Metzger report a case in which a suppurative process developed in the thyroid a few days after delivery. The patient was 41 years old, a vii-para, and there had never been any disturbance in the thyroid. Prompt recovery followed incision and drainage of the abscess. A streptococcus was found in the lesion, the puerperium having been febrile. In a number of cases summarized from the literature the thyroiditis subsided under mild medical measures; in some cases the disturbances were ascribed to sore throat. The connection between the thyroid and the genital apparatus explains, they remark, the peculiar susceptibility of the thyroid to infection during the puerperium.

33. **Hemostasis in Hysterectomy.**—Chevrier gives an illustrated description of the technic which he advises, showing how to incise the vagina, etc., in regions free from blood vessels.

### Annales de l'Institut Pasteur, Paris

*January, XXIV, No. 1, pp. 1-80*

34 *Agglutination and Seroreaction in Sporotrichosis, Actinomycosis and Thrush. (Sérodiagnostic mycosique. Applications au diagnostic de la Sporotrichose et de l'Actinomycose' Les coagglutinations et cofixations mycosiques.) F. Widal, P. Abrami, E. Joltrain, E. Brissaud and A. Weill.
35 Serotherapy in Cholera. (Le choléra à Saint-Petersbourg.) A. T. Salimbéni.
36 *Seventh Annual Campaign against Malaria in Algiers. (Etudes épidémiologiques et prophylactiques du paludisme.) E. and E. Sergent.

34. **Agglutination and Seroreaction in Mycoses.**—It seems evident from the research and experience reported that it is possible to differentiate actinomycosis by agglutination and the fixation of complement test using for the purpose spores of the sporotrichum; the actinomyces does not respond to the tests but there is a generic reaction with the spores of the allied sporotrichum. The latter can be easily cultivated and separated. The reactions also occur constantly in thrush with these spores, but there is no reaction in ringworm or aspergillosis.

36. **The Campaign Against Malaria.**—Sergent estimates the intensity of malaria in a place by what he calls the endemic index, that is, the percentage of malarial individuals who have much enlargement of the spleen. He here reviews the systematic campaign against malaria in Algiers in 1909.

### Annales des Mal. des Org. Génito-urinaires, Paris

*January 15, XXVIII, No. 2, pp. 97-192*

37 *Urethral Stricture. (Traitement des rétrécissements de l'urétre.) Batut.
38 *Calculi in the Ureter. (Des calculs de l'uretére.) E. Jeanbrau. Commenced in No. 1.

*February 1, No. 3, pp. 193-288*

39 *Chyluria. G. Marion.
40 Pathology of the Posterior Urethra. Michailoff.
41 *Circular Electrolysis. (Nouveaux procédés d'électrolyse circulaire.) L. V. Girolamo.
42 *Six Cases of Retrograde Catheterization of the Urethra. (Cathéterisme rétrograde hypogastrique.) M. Hache.

37. **Urethral Stricture.**—After reviewing the field in general, Batut reports the details of six unusual cases from his own experience as army surgeon. In one an obstinate stricture in the anterior urethra was the result of infection after circumcision; in another the stricture was due to a probably congenital membranous growth. Urethrotomy, both internal and external was required in all but one case in which linear electrolysis answered the purpose, with progressive dilatation for a recurrence ten years later.

38. **Stone in the Ureter.**—This profusely illustrated article is an abridgement of an address prepared for the last French urologic congress. Jeanbrau has compiled 239 cases of calculi in the ureter removed by operative intervention or expelled after catheterization (53 cases). Immediate and complete recovery can be counted on, he states, if the patient is capable of bearing general or spinal anesthesia and the operation is not done during anuria. A fistula need not be apprehended if the permeability of the ureter throughout its entire length is determined after extraction of the calculus. The mortality in the cases on record was 1.66 per cent. In examining, after subsidence of the attack of pain, a tender point should be sought along the ureter above or near the umbilicus, at the intersection of a vertical line passing through McBurney's point and a horizontal line passing through the umbilicus; a second tender point is at the intersection of a line uniting the crests of the ilium and a vertical line through the pubis. The point where the ureter enters the bladder is also liable to be tender. In only 2 cases was the calculus discovered by abdominal palpation, but palpation through the vagina usually gave instructive findings, especially when the patient was examined standing. In 13 cases the calculus was palpated through the rectum. In 29 cases cystoscopy permitted the true diagnosis when the symptoms seemed to locate the trouble in the kidneys or bladder. In all the cases reviewed recurrence was known in

only a single instance and this may have been merely that a stone was overlooked at first.

39. **Chyluria.**—Marion's patient was a man of 58 who had had gonorrhea in youth and occasional bronchitis. Recently the night urine has appeared milky and he has lost 23 pounds in weight. The day urine is clear but on reclining the urine is at once milky. The milky urine always comes from the right ureter. Bacteriologic tests are negative and there is nothing to suggest the possible presence of filariosis. A fistula from rupture of a lymphatic into the urinary passages is probably the most frequent cause, although secretory renal chyluria is not an impossible assumption. This case seems to favor the assumption of a communicating fistula, and treatment along this line has been instituted, a silver nitrate solution being instilled into the ureter and renal pelvis to promote the healing of the assumed fistula.

41. **Circular Electrolysis in the Urethra.**—Girolamo has found that the negative electrolysis has first a vasoconstricting and then a vasodilating action, followed by the formation of a soft eschar. The tissues of the urethra soften and become permeable for the cauterizing action on the points influenced by the electrode. The olive-shaped metal electrode should be a little larger than the largest caliber sound that can pass through the stricture; immediately after the electrolysis he introduces other electrodes, of increasing caliber, having a set of olive-shaped tips of various sizes. The urethra should be cocainized beforehand and the current should not be over 5 or 6 milliamperes during the five minutes it is used. After the dilatation he massages the region of the stenosis still under the influence of the current. This forced and rapid dilatation, he asserts, puts an end to the retention and hastens the cure. The electrolytic action is limited to the spot where it is needed, and can be done with and without the endoscope. The superposed massage utilizing the electrolytic ionization is an important factor in the rapid cure.

42. **Retrograde Catheterization of the Urethra.**—Hache reports 6 cases interesting from the multiplicity and severity of the lesions. In 2 cases there was a sliver of bone in the urethra from a fracture of the pelvis; in one the prostatic urethra had been torn out; in another 2 accidents at 20 years' interval involved the urethra; there was also a calculus in it.

### Annales de Médecine et Chirurgie Infantiles, Paris

*February 1, XIV, No. 3, pp. 73-108*

43 *Spasmodic Paraplegia in Children with Inherited Syphilis. (Forme de paraplégie spasmodique d'origine hérédo-syphilitique chez l'enfant.) A. B. Marfan.
44 Blood in the Stools in Pathology of the Intestines in Young Children. (Recherche du sang dans les selles en pathologie intestinale.) H. Triboulet.
45 Staphylococcus Scarlatinal Meningitis. E. Weil and G. Mouriquand.

43. **Spasmodic Paraplegia in Children with Inherited Syphilis.**—In the case described by Marfan, the patient was a boy nearly 9 years old who was able to walk very slowly without support, but with a dragging gait, balancing himself first on one foot and then on the other. The entire limb was stiff, the hip, knee and ankle scarcely bending at all, the toes dragging and hitting against obstacles and the knees touching. He can walk in a straight line, however, without staggering, and closing the eyes does not increase the trouble in walking. When reclining, the paraplegia is less marked, and passive movements of the joints are possible. The tendon reflexes are exaggerated, and the Babinski and other signs indicate some lesion in the pyramidal tract in the dorsolumbar spinal cord. There are no sphincter disturbances or trophic lesions but the Argyll-Robertson sign is positive and the child is mentally backward. Marfan ascribes the trouble to inherited syphilis and advises commencing specific treatment at once in such a case without waiting for certainty as to the inherited taint. In his case treatment was not commenced until fifteen months after appearance of the first symptoms, and this delay was probably responsible for the entire lack of improvement under energetic mercurial treatment for eighteen months. The diagnosis was first rendered certain in this and another case by development of parenchymatous keratitis; this soon subsided under the specific treatment. The paraplegia in question generally develops late, at the age of 4, 5, 7 or 12 years in the cases he has encountered. The affection is much like that of syphilitic spinal paralysis in adults except that the sphincters do not seem to be affected.

### Archives des Mal. de l'App. Digestif, Paris

*January, IV, No. 1, pp. 1-48*

46 *The Mathieu Indirect Method of Estimating Amount of Stomach Content. (Valeur de la méthode Mathieu-Rémond pour la détermination indirecte du volume de liquide contenu dans l'estomac.) A. Mathieu and Taillandier.
47 Coexistence of a Basement-Celled Epithelioma in the Esophagus and a Cylinder-Celled Epithelioma in the Stomach. (Les cancers multiples du tube digestif.) E. Parmentier and E. Chabrol.
48 *Parotitis during Medical Treatment of Gastric Ulcer. (Des parotidites survenant au cours de la "cure de repos stomacal absolu.") R. Gaultier.

46. **The Mathieu Method of Determining Amount of Stomach Content.**—Mathieu states that the experiences of the fifteen years since he introduced this method have confirmed its reliability. The principle is the comparison of the degree of acidity of the stomach content before and after dilution with a given amount of water. Laboulais and Goiffon have recently simplified the technic considerably. They use a titrated solution of sodium phosphate; after this is poured into the stomach and well mixed with the contents they withdraw some, and from its dilution then they estimate the amount of fluid present in the stomach.

48. **Parotitis During Treatment for Gastric Ulcer.**—Gaultier has encountered 2 cases of bilateral parotitis developing during dietetic treatment of gastric ulcer. He has found records of 21 other cases, including 4 with suppuration, fatal in 2 cases; one of his patients was in this last group. The suppression of the salivary secretion is manifestly the cause of infection of the glands, and during withdrawal of all food by the mouth measures must be maintained to keep the salivary glands functioning, or the contents of the excretory duct may be massaged out several times a day. Expression of this duct has recently been recommended in treatment of infectious angioparotitis, and it probably would prove effectual in prophylaxis. Merely keeping the mouth moistened and giving the patient scraps of ice have not proved effectual alone.

### Archives de Médecine des Enfants, Paris

*February, XIII, No. 2, pp. 81-160*

49 *Pathogenesis of Rachitis. (Le rachitisme.) V. Hutinel.
50 *Study of the Temperature in Scarlet Fever. (Thermoséméiologie de la scarlatine.) J. Barannikow.
51 The Deceptive Abdominal Onset of Certain Diseases of Children. (Cas de rougeole débutant par des symptomes abdominaux.) Oelsnitz.
52 Roseola in Cerebrospinal Meningitis. E. Merle.

49. **Rachitis.**—Hutinel regards a quantitative modification of the bone marrow as the essential feature of rickets. The qualitative changes are like those encountered in ordinary infections, he states, but the remarkable proliferation of the bone marrow seems to be specific for rachitis. The bone tissue also displays a tendency to evolutive dystrophy, which is also evident, although to a lesser degree, in all the tissues. This dystrophy may even involve the suprarenals, thymus, etc., but the anomalies in the glands may be regarded as the result of the nutritional disturbance responsible for the bone lesions, rather than as themselves the cause of the rachitis. The dystrophies that develop at puberty are akin to those in young children, both being in periods of exceptionally active nutrition. Pregnancy is another such period, and dystrophies are also liable to occur at these times, but they do not take the form of rachitis but of osteomalacia; the lesions are different according as the tissues are immature or adult. The primal disturbance responsible for the rachitis may include microbian, toxic and dystrophic factors, associated or superposed. For example in a child with a tendency to rachitis from defective feeding, other causes, such as an intercurrent infection, may conspire to aggravate this tendency.

50. **Study of Temperature in Scarlet Fever.**—Barannikow believes that it is possible to determine the prognosis early in scarlet fever by the temperature curve, and he gives the findings in 209 cases, comparing them with the composite

curves made out retrospectively from the mild, the moderate and severe cases. A deep fall in temperature between the third and thirteenth day was characteristic of every epidemic observed. It may occur suddenly or the temperature may be two or three days in declining. This fact is important in estimating the action of serotherapy. In his experience, scarlet fever developing in the course of whooping cough was always exceptionally mild. He could not discover any connection between the duration of the fever and heart complications, but such was unmistakable between inflammation of the tonsils and the heart complications as well as with the general symptoms—all being more severe the more intense the tonsillitis, but no connection of the kind could be discovered with the nephritis.

### Lyon Chirurgical, Lyons

*February, III, No. 2, pp. 129-256*

53 *Research on Anatomy of the Small Intestine and its Mesentery. (Notes d'anatomie sur l'intestin grêle et le mesentère.) A. Latarjet.
54 *Echinococcus Disease of the Lung. (Kyste hydatique double du poumon droit.) H. Albertin and F. Barjon.
55 *Eight Cases of Laryngostomy with Dilatation. C. Viannay. Commenced in No. 1.

53. **Anatomy of the Small Intestine and Mesentery.**—Latarjet gives an illustrated description of various points in regard to the anatomy of the small intestine and its mesentery, seeking to locate the special loop of the intestine under examination and its possible torsion from the findings in regard to the arteries and veins and fat deposits.

54. **Echinococcus Cyst of the Lung.**—In the case reported one cyst was in the apex and another in the base of the same lung; both were readily shelled out, with the complete recovery of the patient, a woman of 40. She had suffered from cough and labored breathing for about six months; after three months revulsion had been applied to the chest for pleurisy. She had lost nearly 25 pounds in weight but there were no night sweats and no pain until the last two weeks when there had been intermittent sharp pains in the right side and liver region. Roentgen-ray examination revealed the two tumors, and first one and then the other, ten months later, were successfully removed, two or three ribs being resected each time. There was a history of urticaria seven years before, and this first suggested the possibility of echinococcus disease; the urticaria may have been due to elimination through the skin of the poisons generated by the parasite in the blood, the elimination ceasing as the parasite located in the lung and became encysted. There was no hemoptysis at any time.

55. **Laryngostomy with Dilatation.**—All of Viannay's 8 patients are in good health to date except that one patient succumbed to an accidental pneumonia six months later. He reviews the cases in detail with the technic. He prefers to close the wound definitely at once when possible.

### Lyon Médical, Lyons

*February 6, XLII, No. 6, pp. 269-336*

56 *Diagnosis and Prognosis of Uremia by Amount of Urea in the Cerebrospinal Fluid. J. Froment.

*February 13, No. 7, pp. 337-392*

57 Treatment of Vaginal Cystocele or Preuterine Hernia. H. Violet.

56. **Urea Content of Cerebrospinal Fluid in Uremia.**—Froment tabulates the findings in regard to the proportion of urea and chlorids in the different organic fluids in 18 cases of various affections with more or less uremia. Of all the changes in the cerebrospinal fluid in case of uremic poisoning of the nervous system, an increase in the proportion of urea is the most constant and the most instructive. Even 1 per cent. is suspicious, but with more than this, uremia is beyond question, and with 4 per cent. the prognosis is inevitably fatal. The uremia is seldom fatal when the proportion is only 1 or 2 per cent., except possibly in children with acute nephritis. The urea content in the other organic fluids is less constant and not characteristic.

### Presse Médicale, Paris

*February 23, XVIII, No. 16, pp. 137-144*

58 Tuberculosis in Origin of Rachitis. (Rachitisme et Tuberculose.) A. B. Marfan.
59 Dosage of Suprarenal Preparations. (Posologie de l'adrénaline.) L. Bernard.

### Revue de Médecine, Paris

*February, XXX, No. 2, pp. 81-152*

60 *Scarlet Fever. (La scarlatine à l'hôpital Claude-Bernard in 1908. II.). A. Gouget.
61 *Hemophilia III. P. Nolf and A. Herry.
62 Farm Colonies for Epileptics, etc. (L'assistance spéciale des épileptiques et débiles adultes par le retour à la terre.) A. Marie.
63 Distribution of Sugar in Elements of Diabetic Blood. (Repartition du sucre dans le plasma et les globules du sang chez un diabétique.) R. Lépine and R. Boulud.

60. **Scarlet Fever.**—Gouget describes the erosive or ulcerative type of sore throat which he encountered in 48 of the 858 cases of scarlet fever at the isolation hospital in 1908. In the 28 cases with ulceration, 11 of the children died and the survivors all developed otitis or other serious complication. No local measures displayed any efficacy. He also reviews the other complications observed. The total mortality in the 858 cases was 30.

61. **Peptone to Arrest Hemophilic Hemorrhage.**—In 9 cases hemophilic hemorrhage was arrested by injection of 10 c.c. of a 5 per cent. solution of peptone (Witte). In some of the cases 2 injections were made as a prophylactic measure the first 10 and the second 2 days before a major operation. In one case hematuria was arrested by one injection; the patient succumbed to hematemesis a year later. The patients were between 6 and 67 years old, and a single injection answered the purpose in nearly every case. The peptone seems to be more energetic and it is more easily sterilized than serum; heating to 120 C. (248 F.) for an hour does not alter its properties. It is injected as a 5 per cent. solution in a 0.5 per cent. solution of sodium chlorid. There seems to be no danger of anaphylaxis. For local application an extract of lymphoid organs, spleen, lymph glands and thymus, seems to be as effectual as fresh serum. The extract can be made with organs from the slaughter-house by triturating them with a little sand, adding to 1 part of the gland 2 parts of a 0.09 per thousand sodium chlorid and 0.5 per thousand calcium chlorid solution, and then straining. The action and effect of the peptone seems to be identical with that of fresh serum, but judging by the experiences to date, the authors state, the action seems to be much more pronounced.

### Semaine Médicale, Paris

*March 2, XXX, No. 9, pp. 97-108*

64 *Advisability of Surgical Intervention for Cystic Degeneration of the Kidney. (Faut-il opérer le rein polykystique?) F. Lejars.
65 *Is Hegar's Sign Pathognomonic of Pregnancy? (Le signe de Hegar est il pathognomonique de la grossesse?) R. de Bovis.

64. **Indications for Operation in Cystic Degeneration of the Kidney.**—Lejars regards nephrectomy as justified in case of suppuration, pain, hematuria or intracystic hemorrhage, if the condition of the other kidney permits. Cystic degeneration is generally bilateral but it may be in an initial stage in the second kidney and thus allow long survival after the nephrectomy, as the process is of very slow development. Unless there are severe symptoms, however, he does not advise nephrectomy as the kidney may retain for many years functional capacity sufficient to ward off severe symptoms even when in advanced cystic degeneration. He removed three years ago a polycystic tumor which he supposed was the kidney but which proved to be of pararenal origin; both kidneys were also in polycystic degeneration as was discovered at autopsy not long afterward. Differentiation even during the operation may be difficult. In another case he found a knobby, blackish cystic tumor originating in the lower end of the kidney. Supposing that the trouble was general cystic degeneration of the organ, and not knowing the condition of its mate, he did not dare to remove the kidney but resected it into sound tissue and the patient recovered. The tumor proved to be an epithelioma. Palliative operations on cystic kidneys are attended with great risks, he declares, and should never be done except under compelling indications, but then may give great relief.

65. **Hegar's Sign of Pregnancy not Reliable.**—De Bovis asserts that softening of the isthmus of the uterus cannot be regarded as pathognomonic of pregnancy as it has been encountered with a myomatous uterus. The softening may vary widely in intensity, extent and location. Hemorrhages should not be accepted as evidence for or against the presence

of a myoma. In three cases in his experience the women had hemorrhages more or less continuously for one, three and five months and were then delivered of a dead or living fetus; no trace of a myoma could be discovered.

### Deutsche medizinische Wochenschrift, Berlin

*February 24, XXXVI, No. 8, pp. 345-392*

66 *"Inflammatory" and "Real Lithogenous" Jaundice. (Entzündlicher und reell-lithogener Ikterus.) B. Riedel.
67 *Collective Investigation by the Imperial Health Office on Tuberculosis from Milk. (Die Sammelforschung des Kaiserlichen Gesundheitsamtes über Milchgenuss und Tuberkulose.) H. Kossel.
68 Transformation of Biologically Important Properties of Bacteria. (Beobachtungen über die Umwandlung biologisch wichtiger Eigenschaften von Bakterien.) G. Sobernheim and E. Seligmann.
69 Psychosis from Meat Poisoning. (Fall von Psychose nach Fleischvergiftung.) M. Raether.
70 Paratyphoid Bacilli and Meat Poisoning. (Paratyphusbazillen und Fleischvergiftungen.) H. König.
71 *Influencing of Cardiac Neuroses by Cauterization of Nose. (Zur nasalen Beeinflussung der Herzneurose.) A. Koblanck.
72 To What Extent can Local Supplant General Anesthesia? (Inwieweit vermag bereits jetzt die Lokalanästhesie die Allgemeinnarkose zu ersetzen? ) F. Hesse.
73 Modified Technic for Stovain Spinal Anesthesia. (Ein neues Verfahren bei Anästhesie durch Rhachistovainisierung.) A. Poenaru.
74 Behavior of Placenta and its Manual Separation. (Verhaltung der Plazenta und ihre manuelle Lösung.) Naumann.
75 Seroreaction in Cadavers. (Leichensera und die Wassermannsche Syphilisreaktion.) R. Krefting.

66. **Inflammatory and Lithogenous Jaundice.**—Riedel emphasizes the necessity for differentiating jaundice resulting from the presence of stones in the gall-bladder or cystic duct, which he calls the inflammatory form, and that resulting from a stone in the common bile duct, the real lithogenous form. He cites a number of examples to confirm his assertion that a patient with inflammatory jaundice cannot be operated on too quickly; a stone in the neck of the gall-bladder or in the cystic duct may be pushed along into the common bile duct, so that out of the hitherto harmless local affection a general disturbance may result. On the other hand, the patient with the real lithogenous jaundice should not be operated on at once at the first attack; the stones may be passed without further trouble. Only exceptionally serious infection compels immediate surgical intervention. In his experience with 600 operative cases of jaundice, in 80 per cent. of the cases the first attack of gall-stone colic was due to hydrops or infected hydrops in the gall-bladder; in 20 per cent. bile was found in the gall-bladder. About 57 per cent. of the patients had a primary large stone in the neck of the gall-bladder or cystic duct; in 43 per cent. there were numerous small stones. In about 90 per cent. of the cases in which the stones remained quietly in the bladder or cystic duct there was no jaundice. The majority of patients thus have no jaundice at their first attack of gall-stone colic, but in 10 per cent. of such cases there is jaundice even when the stone remains in the neck of the gall-bladder or in the cystic duct. The jaundice in this case is of inflammatory origin, although generally aseptic. It is the result of propagation of an inflammation from the gall-bladder to the liver. If the stone is high up in the cystic duct, it may compress and kink the lower biliary passage, thus superposing a mechanical element on the inflammation. In conclusion he reiterates that patients with violent attacks without jaundice and without passage of stones, and those with inflammatory jaundice should be operated on during the attack. With the real lithogenous jaundice commencing independently, conservative treatment is indicated unless severe infection compels rapid intervention.

67. Abstracted in the Berlin Letter in THE JOURNAL, March 12, 1910, page 886.

71. **Influencing of Cardiac Neurosis by Correction of Anomalies in the Nose.**—Koblanck gives the description of a case written by the patient himself, a physician, aged 31, who had suffered for years with a cardiac neurosis with attacks simulating angina pectoris. Removal of some polyps in the nose and electrolytic correction of an abnormal protruding part of the septum were followed by complete subsidence of all the trouble. The young physician had become convinced by his symptoms that a large part of them were due to participation of the sympathetic system. The benefit from direct treatment of the sympathetic fibers in the nose confirms this.

### Fortschritte der Medizin, Leipsic

*February 10, XXVIII, No. 6, pp. 161-192*

76 *Menthol in Treatment of Pulmonary Tuberculosis. Stepp.

76. **Menthol in Pulmonary Tuberculosis.**—Stepp gave the menthol internally at first, but with disappointing results. Since then he has applied it in the form of inunctions, and reports good results. He uses a 30 or 40 per cent. menthol salve. Some of the salve is rubbed into the skin for ten minutes until it is entirely taken up, a different part of the body being anointed each time. He has never observed any inconveniences from the method but found benefit follow in the 14 cases in which he has applied this method of treatment perseveringly for four or five months. He gives the details of the cases. Improvement is evident, he asserts, after two or three weeks and continues to progress until the patients are practically cured, except in the more advanced cases and improvement is evident in every case. Acute tuberculosis either of lungs, glands, or bones, is not amenable to this treatment, but it is effectual in the infiltrations left after acute pneumonia in children. These relics of the pneumonia are generally tuberculous processes, and they yielded rapidly and completely to the menthol treatment in his 18 cases of this kind. He explains the action of the menthol as due to its elimination by the lungs after it has been taken up by the lymphatics; this enables it to act directly on the tuberculous tissue in the lungs. As this is absorbed, the walls of the cavity may sink in and the cavity thus become obliterated. It is even possible that a kind of autoimmunization may follow.

### Medizinische Klinik, Berlin

*February 20, VI, No. 8, pp. 293-330*

77 Hypnotics and their Action. (Ueber Schlafmittel und ihre Wirkung.) S. Fränkel.
78 Pathogenesis of Otitic General Infection. W. Uffenorde.
79 Action of Iodin. (Ueber Jodwirkung.) A. Heffter.
80 Acute Articular Rheumatism after Operative Trauma of Nasal Mucosa. (Gelenkrheumatismus nach operativem Trauma der Nasenschleimhaut.) M. Senator.
81 Improved Roentgen-Ray Technic. (Funkeninduktor und Wechselstrommaschine zum Betriebe von Röntgenröhren.) F. Dessauer.
82 Advantages of Rubber Ball Pessary in Treatment of Prolapse of the Vagina. (Ueber ring- und kugelförmige Pessare bei der Behandlung des Scheidenvorfalls.) M. Wunsch.

### Monatsschrift für Kinderheilkunde, Leipsic

*January, VIII, No. 10, pp. 585-656*

83 Yolk of Egg in Infant Feeding. (Bedeutung der Eier als Bestandteil der Säuglingsernährung.) H. Vogt.
84 Congenital Bronchiectasia. J. Peiser.
85 Artificial Feeding of New-Born Infants. (Einiges über künstliche Ernährung von Neugeborenen im Spital und im Privathaus.) H. Schelble.
86 Fetal Fat. (Zur Kenntnis des Fötalfettes.) Engel and Bode.

### Münchener medizinische Wochenschrift

*February 22, LVII, No. 8, pp. 393-440*

87 *Typhoid with Initial Hemorrhagic Exanthem. H. Curschmann.
88 *Congenital Diffuse Hydrops. (Angeborene allgemeine Wassersucht.) H. Schridde.
89 *Effect of Momburg Belt Constriction on the Ureters. (Ueber die Komprimierbarkeit beider oder nur eines Ureters mittelst elastischer Einschnürung des Abdomens.) O. Hochne.
90 *Prophylaxis of Caries of the Teeth. (Zur Prophylaxe der Zahnkaries.) W. Herrenknecht.
91 *Change in Drop-Forming Property—the Meiostagmin Reaction—with Cancer. (Die Meiostagminreaktion bei bösartigen Geschwülsten.) M. Ascoli and G. Izar.
92 *Behavior of Pupils in Young Infants. (Verhalten der Pupillen beim Neugeborenen und im ersten Lebensjahr.) H. Guddeu.
93 Hemoglobinometer. ("Der Kolbenkeilhämoglobinometer," ein neuer Apparat zur funktionellen Hämoglobinbestimmung.) J. Plesch.
94 Toxic By-Effects of Arsacetin, Especially its Irritating Action on the Kidneys. (Die toxischen Nebenwirkungen des Arsazetins, insbesondere die Nierenreizungen.) H. Borchers.

87. **Family Typhoid with Initial Hemorrhagic Exanthem.**—Curschmann reports the case of a mother and six children all coming down with typhoid at the same time and presenting on the second or third day a sudden eruption of petechial spots. The typhoid was mild and there was nothing to suggest true exanthematous typhus. The father of the family developed the disease two or three weeks after the others, with fatal ulceration in the intestines. He presented an eruption of hemorrhagic vesicles. The other patients recovered; constipation had been the rule in all but two.

88. **Congenital Hydrops.**—Schridde has encountered 3 cases in the last 5 years in which a general hydrops was associated with extreme anemia and enlargement of the heart. In 2 of

the cases the mothers had had severe nephritis. He is convinced that many cases which have been reported as pseudoleukemic anemia in an infant, have in reality been of this type. Examination of the blood in cases of congenital edema may throw further light on the condition.

89. **The Momburg Belt Constriction for Segregation of the Urine.**—Hoehne found that it is possible by applying a splint over half of the abdomen to protect this half against constriction by the rubber tubing wound around the waist according to the Momburg technic. This allows the ureter on the protected side to continue its functions undisturbed, while the ureter feeling the constriction is closed. This permitted instructive oversight of the functioning of the kidney and ureter on the protected side in rabbits, and suggests the possibility that the method may prove useful in clinical diagnosis. He found that the compression of the ureter by the Momburg belt induced injury of the kidney, with albuminuria and tube casts. These disturbances were transient in a case reported in detail in which the belt was applied for the purpose of inducing abortion. The latter was not realized, showing that the constriction does not shut off all the blood supply from the genital apparatus. The transient injury of the kidneys observed in this case suggests possible danger from this source if the constriction is kept up for a long time; half an hour should be the average.

90. **Care of the Teeth.**—Herrenknecht reviews bacteriologic research which shows that the normal bacterial flora in the mouth protects against the invasion of pathogenic germs under normal conditions. The bacteria do not injure the teeth unless their products are allowed to accumulate, in which case the acids generated by the bacteria cause the destruction of the teeth. The main point in the care of the teeth is therefore to insure the mechanical removal of these products and everything that may serve as nesting places for the bacteria. The most important measure is to rinse out the mouth with water or a weak salt solution; warm water is much more cleansing than cold. No bactericidal drugs are needed; they do direct harm as they injure the tissues; all that is necessary is the mechanical, forcible rinsing out of the mouth several times in succession after each meal. If a mouth wash is desired to aid in cleansing, and to leave a refreshing taste in the mouth, he prescribes a mixture of 0.2 part saccharin and 0.3 part peppermint oil in 100 parts alcohol. From 10 to 20 drops are to be added to a glass of warm water and the whole amount used to rinse the mouth. He rejects tooth powders as liable to injure the teeth from hard particles. Soap also has an injurious action. He advises having the teeth inspected several times a year after the age of three, and protests against pulling a molar or premolar tooth in a child's mouth; if absolutely necessary, the antagonist should be pulled too. This should be the rule up to the age of 18; the jaws will then develop symmetrically. Adults should have the teeth examined twice a year and in some cases oftener.

91. **The Meiostagmin Drop-forming Reaction in Cancer.**—Ascoli reports positive results in tests of the drop-forming property of the serum in cancer. In 29 cases of carcinoma and 2 of sarcoma there was a difference of from 4 to 8 drops after addition of the specific antigen, while in 28 control cases the number of drops showed no change. The meiostagmin reaction may thus prove a reliable sign of malignant disease if the experience of others confirms his findings.

92. **The Pupils in Young Infants.**—Gudden calls attention to the sudden and maximal dilatation of the pupils on sudden waking from sleep as a psychic reflex, possibly possessing some differential value for cortical affections, especially in infants.

### Wiener klinische Wochenschrift, Vienna

*February 24, XXIII, No. 8, pp. 274-308*

95 Pharmacology and Clinical Medicine. (Pharmakologie und Klinik.) O. Loewi.
96 Primary Multilocular Echinococcus Disease in the Brain. (Ein primärer mehrherdiger Echinococcus multilocularis alveolaris des Gehirns.) E. v. Hibler.
97 Bacteriology of Urethritis in which no Gonococci can be Found. (Zur Aetiologie der gonokokkenfreien Urethritis.) K. Lindner.
98 Adrenalin not an Antidote to Strychnin. H. Januschke.
99 Dangers of Intravenous General Anesthesia. (Ueber die intravenöse Narkose.) P. Clairmont and W. Denk.
100 Special Action of Extracts of Tuberculous Guinea-Pig Organs. (Besondere Wirkung der Extrakte tuberkulöser Organe des Meerschweinchens.) R. Kraus and R. Volk.
101 Connection between Seroreaction and Mercurial Treatment in Syphilis. E. Epstein and E. Pribram.

### Zentralblatt für Chirurgie, Leipsic

*February 26, XXXVII, No. 9, pp. 313-352*

102 *Treatment of Air and Fat Embolism. (Massnahmen bei Luft- und bei Fettembolie.) L. v. Lesser.
103 *Operative Separation of Horseshoe Kidney into two Parts. (Operativer Eingriff bei Hufeisenniere.) A. Martinow.
104 General Anesthesia from Intravenous Injection of Hedonal. (Ueber allgemeine Hedonalnarkose.) S. P. Fedorow and A. P. Jeremitsch.

102. **Treatment of Air and Fat Embolism.**—The Journal, Feb. 12, 1910, page 576, mentioned Schanz's method of injecting large amounts of salt solution in treatment of fat embolism causing convulsions in the course of orthopedic operations. Schanz explains the disturbances as the result of obstruction of the capillaries of the brain by the particles of fat. The saline infusion washes them along. Now von Lesser calls attention to his experimental experiences with air embolism; he found that the heart was unable to contract over air as the valves are meant to act on fluids and not on air. After the heart action had ceased after injection of air in the jugular vein, he was able to revive it again by direct injection of 0.5 per cent. salt solution directly into the right ventricle.

103. **Operative Separation of Horseshoe Kidney.**—In Martinow's case a nurse, aged 49, had complained since childhood of diagreeable pulsation in the abdomen and for some years had had typical pains above the umbilicus, and also constipation. The nerves had become more and more involved and the patient had been treated for hysteria for some years. Palpation revealed a tumor above the umbilicus, the entire region was very tender; at times the tumor increased in size and the pulsation in the region became more violent. The kidney region was not tender and all the other organs seemed to be normal. On the diagnosis of pancreas tumor or horseshoe kidney the abdomen was opened. The tumor lay on the aorta and united both kidneys. He severed this bridge between the kidneys, between two soft bowel clamps. This released the aorta as the two halves of the kidney separated and all disturbances ceased at once.

### Zentralblatt für Gynäkologie, Leipsic

*February 26, XXXIV, No. 9, pp. 305-336*

105 Treatment of Old Tears in Vagina and Cervix uteri. (Zur Behandlung alter Scheiden- und Cervixrisse.) J. Voigt.
106 Statics of the Human Uterus and Its Gynecologic Consequences. (Die Uterusstatik bei der menschlichen Rasse und ihre gynäkologischen Folgen.) L. M. Bossi.
107 Shaving the Vulva as Preliminary to Delivery. (Der Ruf nach dem Rasiermesser bei der Geburt.) J. Reich.

### Zentralblatt für innere Medizin, Leipsic

*February 26, XXXI, No. 9, pp. 225-248*

108 Substances in the Blood in Nephritis that Induce Mydriasis. (Vorkommen von mydriatisch wirkenden Substanzen im Blute von Nephritikern.) A. Wirz.

### Gazzetta degli Ospedali e delle Cliniche, Milan

*February 17, XXXI, No. 21, pp. 217-224*

109 Typhoid with Circulatory Complications from Infection from Oysters. (Infezione da ostriche.) M. Vivaldi.

*February 20, No. 22, pp. 225-240*

110 The So-Called Parasyphilitic Diseases. (A proposito delle affezioni cosi dette parasifilitiche.) F. Simonelli.

### Policlinico, Rome

*February 27, XVII, No. 9, pp. 259-290*

111 Successful Pneumotomy for Echinococcus Cyst in Right Lung. E. Curti.
112 *Etiology of Pellagra. L. Verney.

*February, Medical Section, No. 2, pp. 49-96*

113 Fixation of Complement in Blood Serum and in Effusions as Sign of Tuberculosis. (Studi sul siero di sangue dei tubercolosi e sugli essudati delle cavita sierose a mezzo della deviazione del complemento e del anafilassi.) C. Frugoni.
114 *Pneumococcus in the Conjunctival Secretion in Acute Lobar Pneumonia. C. A. Crispolti. Commenced in No. 1.
115 *Registration of Respiratory Movements by Influence of Various Gases at Varying Pressure Injected into the Pleura. (Influenza di diversi gas a diverse pressioni sul pneumotorace chiuso.) S. La Franca.

*February, Surgical Section, No. 2, pp. 49-96*

116 Histopathology of Undescended Testicle. M. Fasano.
117 Behavior of Elastic Fibers in Hernial Sac and Staining Technic. (Comportamento delle fibre elastiche nei sacchi erniari e su di un nuovo metodo pentacromico.) R. Traina.
118 *Efficacy and Mechanism of Action of Bier's Constriction Hyperemia. (Iperemia da stasi alla Bier.) M. Almagia and G. Persichetti.

112. **Etiology of Pellagra.**—Verney emphasizes the fact that in Italy pellagra has followed the introduction and cultivation of maize and also that rainy seasons, with defective development of the grain, are followed by increased prevalence and severity of the disease, and, further, that the use of well dried and healthy maize has reduced materially the incidence of the disease. Another important fact is that the symptoms of the disease are analogous to those observed in other chronic intoxications such as poisoning by lead, phosphorus, arsenic, mercury and alcohol. The analogy is still closer with chronic alimentary intoxication such as from ergot poisoning, chronic favism, the *phlegma salada* of the Spaniards, attributed to spoiled wheat, the cachexia observed in Paris during the last siege, and other chronic disorders due to defective food. At the last Italian neurologic congress, on the other hand, Mondino reported two typical cases of pellagra in persons who had never used maize, and Neusser in Roumania has also encountered individuals with pellagra who had never eaten maize. But Neusser discovered that his patients were in the habit of drinking brandy made from spoiled maize and Antonini confirmed this fact in his experience at Friuli. Verney and also Gosio claim that the theory of spoiled maize does not apply to all the cases of pellagra; some other etiology must be admitted for certain cases, and there is also a probability that a syndrome may be observed closely simulating pellagra which yet is not pellagra. The idea of an intoxication, moreover, Verney continues, seems to be refuted by the persistence of the disease unmodified by avoidance of corn in the diet. No other intoxication is known which does not show a change for the better when the source of the intoxication is withdrawn. The existence of chronic, acute and fulminating cases of pellagra harmonizes better with the conception of an infection rather than an intoxication, even admitting that in certain cases the syndrome may be the result of superposed malaria, typhoid or meningitis. On the whole, he concludes, there is much to sustain the assumption that pellagra is an infection, and a protozoan infection in particular. The toxic and the infectious theories are not antagonistic but reenforce each other. The digestive disturbances induced by the spoiled corn favor intestinal derangement or there may be some toxic element. The resulting syndrome is not pellagra but the condition predisposes to pellagra, as also any other conditions entailing impoverished blood and lowered resisting powers. His conclusions are, therefore, that pellagra is an infection which develops independently when once it gets a hold in a debilitated organism.

114. **The Pneumococcus in the Conjunctival Secretion in Pneumonia.**—Crispolti found pneumococci in the conjunctival secretion in 40 out of 45 cases of pneumonia. They were numerous during the first five days but then became rarer and atypical forms predominated. In the 5 cases in which the conjunctival secretion contained no pneumococci, none was found in the sputum, and the pneumonia was probably due to some other germ, probably the influenza bacillus.

115. **Registration of Respiratory Movements by Injection of a Gas.**—La Franca reports experiments on dogs with air or various gases injected into the pleura, recording on a drum the respiratory movements afterward as they were modified by the pneumothorax.

118. **Constriction Hyperemia.**—Rabbits and guinea-pigs injected with virulent germs and then having constriction applied to the limb above seemed to die more quickly than the controls; even a sublethal dose became fatal under these conditions. On the other hand, recovery was promoted by the constriction hyperemia when the infection was with germs of comparatively slight virulence. Injection of typhoid and cholera germs, with the part shut off from the arterial circulation by the constricting band, induced a local production of antibodies having a destructive action on the germs. The induced hyperemia is not always accompanied by an accumulation of leucocytes in the part; they may even be less numerous than elsewhere. It seems to be evident that a number of factors combine to produce the beneficial results observed under suitable conditions with the induced hyperemia; no single element is responsible for them.

## Hospitalstidende, Copenhagen

*February 2, LIII, No. 5, pp. 137-168*

119 Treatment of Venereal Buboes by Arning's Method. (Om Bubonbehandling.) O. Haslund.

120 Four Cases of Pulmonary Tuberculosis with Positive Bacterial Findings but Slight, Doubtful Physical Signs. (Tilfælde af Lungetuberkulose med positivt Bacilfund, men tvivlsomme stetoskopiske Forhold.) G. E. Permin.

121 Action of Digitalis and Strophanthus on the Frog Eye. (Digitalis- og Strofantusvirkningen hos Frøer.) P. Liebmann.

*February 9, No. 6, pp. 169-200*

122 Albumin and Tube Casts in Urine after Cold Bath in Health. (Om Albuminuri efter kolde Bade.) E. E. Faber.

123 Roentgen-Ray Examination of the Teeth. (Om Undersøgelse af Tænder ved Hjælp af Röntgenstraaler.) J. F. Fischer.

*February 16, No. 7, pp. 201-224*

124 Etiology and Pathogenesis of Serpiginous Corneal Ulcer. E. Jensen.

## Nordiskt Medicinskt Arkiv, Stockholm

*XLII, Surgical section, Nos. 1-2. Last indexed February 19, p. 663*

125* Colloid Cystoma of the Ovary and the Colloid Degeneration of the Peritoneum after its Rupture, the So-Called Pseudomyxoma of the Peritoneum. (Ueber die Gallertkystome der Ovarien und die bei Ruptur derselben auftretenden gallertartigen Veränderungen des Bauchfells, s. g. Pseudomyxoma peritonei.) E. Ahlström.

126 *Mode of Action of Gastroenterostomy. (Wirkungsweise der Gastroenterostomie.) A. Pers.

127 *The Course and Outcome of Renal Tuberculosis in 33 Cases, in the Majority without Surgical Intervention. (Verlauf und Ausgang der Nierentuberkulose in einer Anzahl vorgeschrittener der Mehrzahl nach nicht operierter Fälle.) G. Ekehorn.

125. **Colloid Cystoma of the Ovary.**—Ahlström's article fills 276 pages and is accompanied by 7 plates and 8 tables of details regarding 81 cases from the literature, including 49 with microscopic findings. He also reports in detail 9 cases from his own experience with microscopic examination and 19 cases without this. The ovarian colloid cystoma is shown to be on the borderline between malignant and benign growths, and should no longer be regarded as inevitably benign. Proliferating epithelial metastasis, he asserts, is the principal feature of the process after perforation of the cystoma into the peritoneum. The proliferating epithelial cells of the colloid cystoma perforating the cyst-wall and invading the peritoneal cavity display a varying intensity of metastatic growth, but they seem to find an especially favorable medium in the omentum for almost malignant proliferation. In removing a primary colloid cystoma the colloid masses in the peritoneum should be wiped away, but it is not necessary to detach them with an instrument. The omentum should be resected wherever there are colloid deposits or changes in it. The frequent development of a cystoma in the other ovary, observed in nearly a third of the 32 cases in which the patients were traced for a number of years, suggests the importance of removing both ovaries. He was unable to discover any anatomic features as index of a specially energetic proliferating power on the part of the cyst epithelial cells; possibly the outcome may depend on the resisting power of the part of the peritoneum involved; the omentum seems to display much less resistance than other regions. Even in case of metastases, long survival may follow their excision. Implantation metastasis may occur even without naked-eye rupture. In about 27 per cent. both ovaries were affected, and in nearly 10 per cent. the second ovary became affected later. In about 20 per cent. the cystoma involved a ligament. Epithelial metastasis was evident in all of Ahlström's cases and in 57.1 per cent. of those on record. It was evident further that the colloid deposits exert a destructive action on connective tissue. One of his cases is, he believes, the first on record in which metastasis occurred in lymph glands outside of the abdominal cavity (above the diaphragm and in the groin).

126. **What Does a Gastroenterostomy Accomplish?**—Pers' previous communication on this subject was summarized in THE JOURNAL, Dec. 11, 1909, p. 2045.

127. **Course and Outcome of Renal Tuberculosis.**—Ekehorn has been studying the conditions and course of advanced tuberculosis in the kidneys in 33 cases with operative or autopsy findings in a number. Eight of the patients without operative treatment are still living, and 4 have entirely recovered so far as subjective symptoms are concerned; the urine is clear in one patient but there are signs of amyloid degeneration of the kidney in two cases notwithstanding the lack

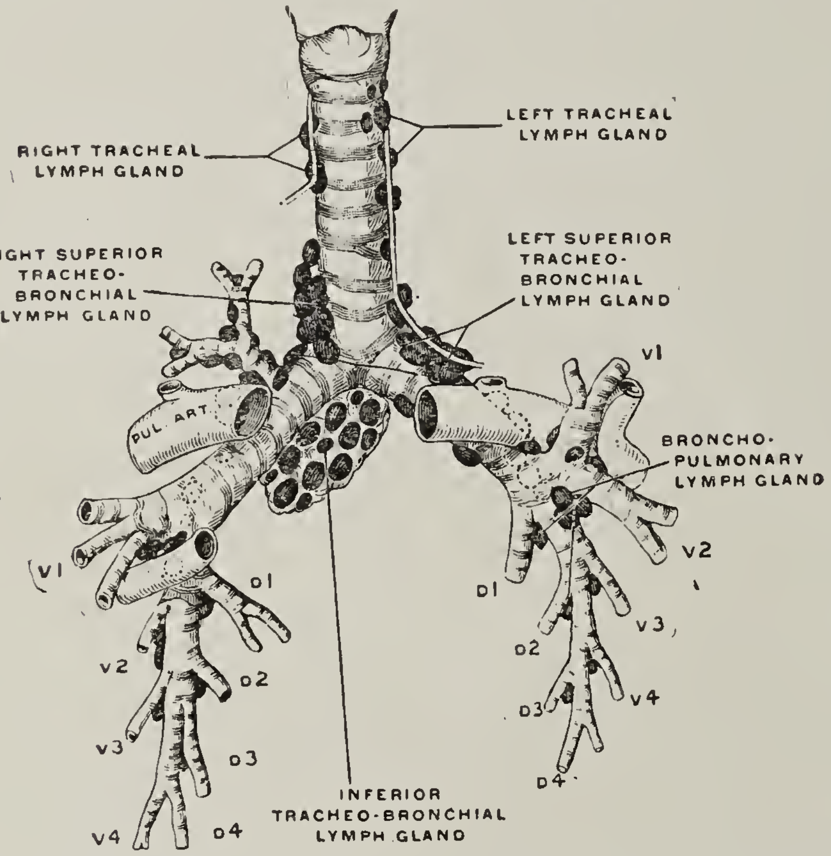
of subjective symptoms. All the patients who recovered were young, 5, 11, 19 and 19 years old respectively; the interval since averages 8 years. His material, he declares, confirms anew the importance of prompt nephrectomy as the only correct treatment. The relative improvement noticed in a number of cases after a time is deceptive. It means only that the tuberculosis in the kidney first attacked has reached the end of its active manifestations, the kidney then being largely or totally destroyed. But by this time there are usually manifestations of the disease elsewhere. Spontaneous arrest of the disease did occur in one of his cases after the kidney in question had become totally destroyed. The complete transformation of the kidney into a sterile sclerotic tissue with the flickering out of the last trace of vitality in the germs realized a kind of autonephrectomy after which the tuberculous lesions in the ureter and bladder below healed.

### Ugeskrift for Læger, Copenhagen

*February 24, LXXII, No. 8, pp. 199-234*

128 *Dulness over the Right Apex of the Lung not due to Apical Lesions. (Om falsk Dæmpning over højre Lungespids.) H. I. Bing.

128. **Dulness Over the Right Apex Not Due to Apical Lesions.**—Bing calls attention to the dulness which increases as percussion is carried outward toward the side, and he presents evidence to prove that it is due to enlarged bronchial glands on the right side while the apex of the lung may be entirely normal. This is the dulness which Krönig found in mouth-breathers and which he ascribed to the adenoids and resulting disturbances. Bing shows that adenoids generally are accompanied by enlarged glands elsewhere, and especially in the bronchial chain, and that the real cause for the dulness is the peculiar arrangement of the bronchial glands on the right side where they are more numerous, higher up and occur in groups instead of being scattered isolated as in the left side. The dulness can be readily differentiated from that with tuberculous infiltration or retraction of the apex by its location, its distinctness under Goldscheider's, barely audible, "threshold" percussion and by the characteristic areas of dulness of different degrees in the front and back of the chest. He gives a number of illustrations of the areas involved and of the arrangement of the right bronchial glands, their preponderance, and the larger size and higher location of the bronchi on this side, his clinical experience confirming in every respect the arrangement of the tracheobronchial glands as depicted by Sukiennikow.



LEFT TRACHEAL LYMPH GLAND
RIGHT TRACHEAL LYMPH GLAND
RIGHT SUPERIOR TRACHEO-BRONCHIAL LYMPH GLAND
LEFT SUPERIOR TRACHEO-BRONCHIAL LYMPH GLAND
PUL. ART.
v1
BRONCHO-PULMONARY LYMPH GLAND
v2
v1
d1
d1
v3
d2
v2
d2
v4
d3
v3
d3
d4
INFERIOR TRACHEO-BRONCHIAL LYMPH GLAND
v4
d4

The tracheobronchial and bronchopulmonary lymphatic glands seen from in front. The pointed (?) lymphatic glands and lymph vessels are not visible from in front. $d_1$ $d_2$, first and second dorsal bronchial branches; $v_1$ $v_2$, first and second ventral bronchial branches. (Sukiennikow, from Gray's Anatomy, Ed. 17.)

## Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

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Refraction and How to Refract. Including Sections on Optics, Retinoscopy, the Fitting of Spectacles and Eye-Glasses, etc. By James Thorington, M.D., Professor of Diseases of Eye in Philadelphia Polyclinic and College for Graduates in Medicine (1896-1909). Fifth Edition. Cloth. Price, $1.50 net. Pp. 324, with 251 illustrations. Philadelphia: P. Blakiston's Son & Co., 1910.

The Practice of Surgery. By Walter G. Spencer, M.S., Surgeon and Lecturer on Surgery, Westminster Hospital, and George E. Gask, F.R.C.S., Assistant Surgeon and Demonstrator of Practical Surgery, St. Bartholomew's Hospital. Cloth. Price, $5.50 net. Pp. 1,234, with 707 illustrations. Philadelphia: P. Blakiston's Son & Co., 1910.

Remedial Gymnastics for Heart Affections used at Bad-Nauheim. By Dr. Med. J. Hofmann and Dr. Med. L. Pohlman. Translated by John G. Garson, M.D., Edinburgh Physician to Sanatoria and Bad-Nauheim, Eversley, Hants. Cloth. Price, 5 shillings. Pp. 128, with 42 illustrations. London: Swan Sonnenschein & Co., 1909.

Die Bestätigung der künstlichen Züchtung des Krebserregers. Sowie weitere geschwulststatistische. Mitteilungen über Familien,- Ehegatten- und endemischen Krebs. Von Dr. Robert Behla, Regierungs-und Geheimer Medizinalrat. Paper. Price, 1.50 marks. Pp. 50. Berlin, S. W. 48: R. Schoetz, Wilhelmstr. 10, 1910.

Verhandlungen der Berliner medizinischen Gesellschaft aus dem Gesellschaftsjahre, 1909. (Separat-Abdruck aus der *Berliner klinischen Wochenschrift.*) Herausgegeben von dem Vorstande der Gesellschaft. Vol. XL. Paper. Pp. 497, with illustrations. Berlin: Druck von L. Schumacher, 1910.

Atlas zur Mikroskopischen Diagnostik der Gynäkologie. Nebst einer Anleitung und erlauterndem Text. Von Priv.-Doz. Dr. Rudolf Jolly, Oberarzt der königl. Universitäts-Frauenklinik zu Berlin. Paper. Price, 17.50 marks. Pp. 83, with 54 illustrations. Berlin: Urban & Schwarzenberg, 1910.

Ionic Surgery in the Treatment of Cancer. With a Chapter on Ionization in Surgical Tuberculosis and in Hemorrhoids. By G. Betton Massey, M.D., Attending Surgeon to American Oncologic Hospital. Cloth. Price, $3. Pp. 239, with 80 illustrations. New York: A. L. Chatterton Co., 1910.

A System of Operative Surgery. By Various Authors. Edited by F. F. Burghard, M.S., Teacher of Operative Surgery in King's College, London. In Four Volumes. Vol. III. Cloth. Price, $10. Pp. 764, with 381 illustrations. New York: Oxford University Press, 1909.

The Rat and Its Relation to Public Health. By Various Authors. Prepared by Direction of the Surgeon-General, P. H. and M.-H. S. Paper. Pp. 254, with illustrations. Washington: [Superintendent of Documents] Government Printing Office, 1910.

Diseases of the Stomach and Intestines. By Robert C. Kemp, M.D., Professor of Gastro-intestinal Diseases in the New York School of Clinical Medicine. Cloth. Price, $6 net. Pp. 766, with 280 illustrations. Philadelphia: W. B. Saunders Co., 1910.

Modern Methods of Street-Cleaning. By George A. Soper, Ph.D., Member American Society of Civil Engineers. Cloth. Price, $3. Pp. 201, with illustrations. New York: The Engineering News Publishing Company, 1909.

Thirty-sixth Annual Report of the Secretary of the State Board of Health of the State of Michigan. For the Fiscal Year ending June 30, 1908. [F. W. Shumway, Secretary, Lansing, Mich.] Cloth. Pp. 222.

Dunkelfeldbeleuchtung und Ultramikroskopie in der Biologie und in der Medizin. Von N. Gaidukov. Paper. Price, 8 marks. Pp. 84, with 18 illustrations. Jena: Gustav Fischer, 1910.

Twentieth Annual Report of the Visiting Nurse Association of Chicago. Year ending Dec. 31, 1909. Office, Room 1408 Unity Building, 79 Dearborn St. Paper. Pp. 48.

An Analysis of Some Phases of American Mortality Statistics for Nine Years, 1900-1908. By Edward B. Phelps, M.A., Editor, the *American Underwriter,* of New York City. Paper. Pp. 14.

The Pocket Clinical Guide. By James Burnet, M.D., Fellow of the Royal Society of Medicine, Edinburgh. Cloth. Price. 1 shilling 6 pence. Pp. 127. Edinburgh: John Currie, 16 Teviot Place, 1910.

Twenty-fifth Annual Report of the Adirondack Cottag Sanitarium, Saranac Lake, N. Y. November, 1909. Paper. P 24, with illustrations. [With Medical Supplement, pp. 16.]

Proceedings of the American Medico-Psychological Association. At the Sixty-fourth Annual Meeting held in Cincinnati, Ohio, May 12-15, 1908. [C. W. Pilgrim, Secretary, Poughkeepsie, N. Y.] Paper. Pp. 479, with illustrations.

Transactions of the Rhode Island Medical Society. Vol. VII Part VI. [Stephen A. Welch, Secretary, 253 Washington St., Prov dence.] Paper. Pp. 883, with illustrations.

Twenty-third Annual Report of the State Board of Healt of the State of Ohio for the Year ending Dec. 31, 1908. [C. O Probst, Secretary, 1909.] Cloth. Pp. 352.

A History of the London Hospitals. By E. W. Morris. Cloth. Price, $1.75 net. Pp. 296, with illustrations. New York: Longmans, Green and Co., [1910].

Proceedings of the New York Pathological Society. December, 1909; January, 1910. Paper. Pp. 160. New York: K M. Vogel.

The Law of the Generation of Sexes at Will. By Loui Dechmann, Seattle, Wash. Paper. Price, 10 cents. Pp. 12.

Annual Report of the Coroner of the County of Philadelphia, Pa. For the Year ending 1909. Paper. Pp. 22.

The Evolution of Religion. By William A. Hinckle, M.D. Peoria, Ill. Cloth. Price, 75 cents. Pp. 161.

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## *Original Articles*

# A LARGE CYSTIC TUMOR DEVELOPING FROM THE ILIOPSOAS BURSA

## CONTAINING LARGE FREE CARTILAGINOUS MASSES, AND COMMUNICATING WITH THE HIP-JOINT

THOMAS S. CULLEN
BALTIMORE

*History.*—In November, 1908, I was asked by Dr. A. H. A. Mayer to examine a man aged 46 who had what appeared to be a very unusual pelvic tumor. About ten years before the patient had begun to limp, and a year later consulted a physician who told him that he had a tumor of the left hip. The condition gradually had become worse. For about a year the man had noticed that every time he put his weight on his left leg "something slipped" in his hip.

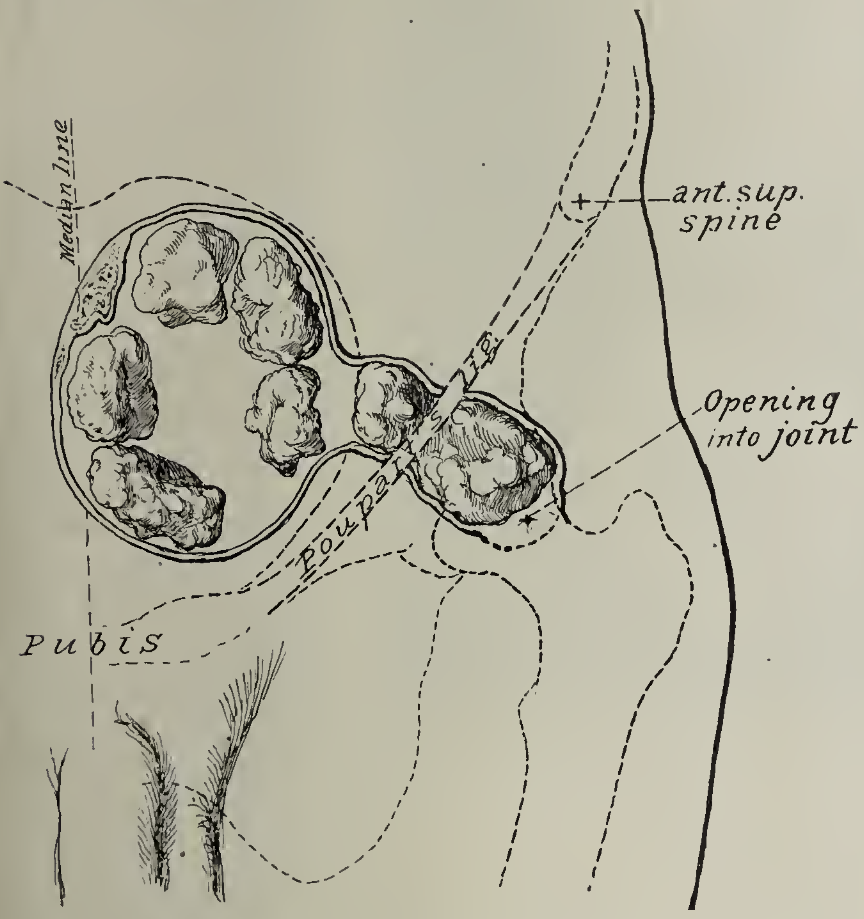

Fig. 1.—A cystic tumor developing from the left iliopsoas bursa containing large free cartilaginous masses and communicating with the hip-joint. Occupying the left half of the pelvis is a cystic tumor which on its outer side was firmly attached to the pelvic wall. The cyst walls were composed chiefly of fibrous tissue. The thickening in certain areas noted in the walls is due to deposits of bone. The cyst cavity was distended with clear yellowish, tenacious fluid and also contained five free and irregular cartilaginous masses. A narrow prolongation of the cyst passed downward and forward beneath Poupart's ligament and opened directly into the hip-joint. Filling this portion of the cyst was a large free cartilaginous mass. All the cartilaginous masses are shown in their natural size in Fig. 3.

*Examination.*—The patient was a tall, rather anemic looking man. The chest sounds were normal. The left leg was stiff and when walking he held the left hip-joint as immobile as possible. Occupying the left iliac fossa and extending beyond the median line was a firm oval mass, 8 by 10 cm. This was continuous with a smaller mass which passed below Poupart's ligament and extended to the left of the hip-joint anteriorly. The large mass seemed to fill the left half of the pelvis. In some places it appeared to consist of bone, but at other points felt cystic. It seemed to be intimately connected with the pelvic bone. The glands in both groins were palpable. The left leg was three-quarters of an inch shorter than the right. On flexion of the leg the pelvic mass receded somewhat, but on extension the tumor again became prominent. Flexion, extension, adduction and abduction were accompanied by dull crepitation in or near the hip-joint. On carefully questioning the patient it was learned that the swelling had been first noticed just below Poupart's ligament.

*Operation.*—An incision was made just above and parallel with Poupart's ligament and the extraperitoneal tumor exposed. After displacing the anterior crural nerve, which was markedly stretched over the tumor, and splitting the muscle which lay over it, it was found necessary to sever Poupart's ligament as a portion of the tumor lay beneath it. The pelvic portion of the mass was loosened up easily on its anterior and posterior aspects, but on the outer side was firmly attached to

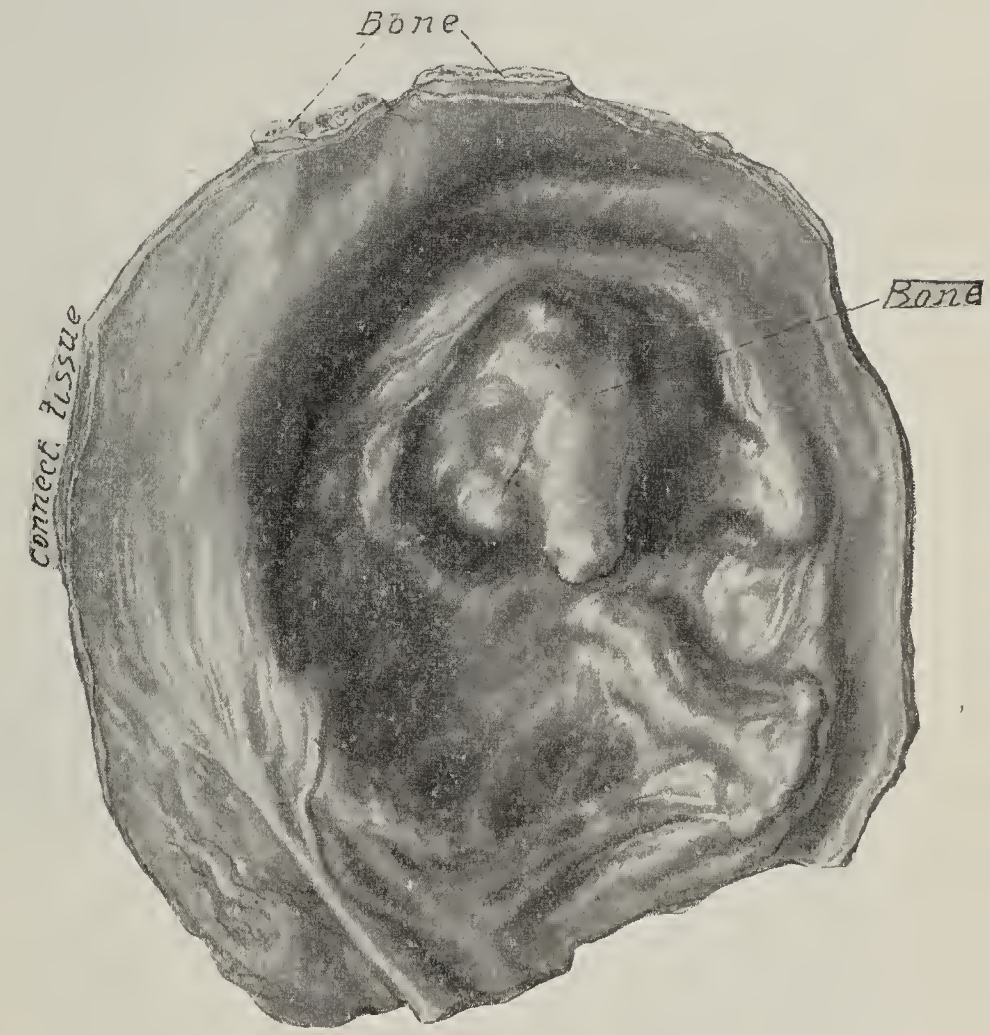

Fig. 2.—Part of the sac of a cystic tumor developing from the iliopsoas bursa. The picture represents the inner surface of the cyst. The walls vary from 1 to 2 mm. in thickness and in them are seen cross sections of plaques of bone. In other portions of the walls cartilage was noted. The inner surface presented a distinctly trabeculated appearance evidently due to the uneven stretching of the sac. Projecting into the cavity is an irregular bony mass fully 3 cm. in diameter. The sac was lined with a smooth glistening membrane; it contained clear yellow tenacious fluid and the six cartilaginous masses depicted in Fig. 3.

the ileum, and below seemed intimately related to the anterior portion of the hip-joint. After being walled off with gauze it was opened and there was an escape of clear viscid fluid, yellowish in color. Lying free in the cavity were five irregularly lobulated, hard cartilaginous masses (Figs. 1, 3). After these had been removed a sixth was found fastened down beneath Poupart's ligament. When this nodule had been taken out a finger carried downward and forward passed directly into the hip joint anterior to the head of the femur. The bones of the joint were perfectly smooth. The pelvic sac was gradually dissected free at a point considerably below Poupart's ligament. It was then cut away and the remaining portion which formed the margin of the entrance into the joint was trimmed, turned in on itself, and snugly brought together with catgut sutures, thus securely closing the hip-joint. A small drain was laid in the upper angle of the wound far removed from the joint and the incision closed.

*Result.* — For a few days the patient did remarkably well but then became delirious and talked incoherently. It was learned that on a previous occasion he had shown similar cerebral disturbances and that it had been necessary to confine him for a time in a sanitarium. Dr. Henry J. Berkley, who saw him in consultation, felt that his mental condition had nothing to do with the operation. The wound after draining for a few days closed completely and the patient left the hospital in excellent physical and mental condition five and a half weeks afterward. He was able to walk without much difficulty.

*Subsequent History.*—Dec. 6, 1909: Dr. Mayer informs me that the patient occasionally has some discomfort in his leg but no pain in hip-joint. He still uses a cane.

*Description of Specimen.*—The walls of the sac were composed of fibrous tissue and scattered throughout them were plaques of cartilage and definite bony masses (Figs. 1, 2). Some of these fragments of bone were very small; others reached 3 cm. or more in diameter. The inner surface of the sac presented a trabeculated appearance (Fig. 2) evidently due to the unequal and gradual distention of the cystic tumor. Notwithstanding the uneven appearance the inner surface was everywhere covered by a smooth membrane. The fluid contents were clear, yellowish in color and rather sticky. The six irregular, white, cartilaginous masses filling the cavity are shown in their natural size in Figure 3. They were lying perfectly free and five of them popped out as soon as the sac was opened. The sixth could not escape as it was firmly held down by Poupart's ligament and its lower end entered the hip-joint.[1]

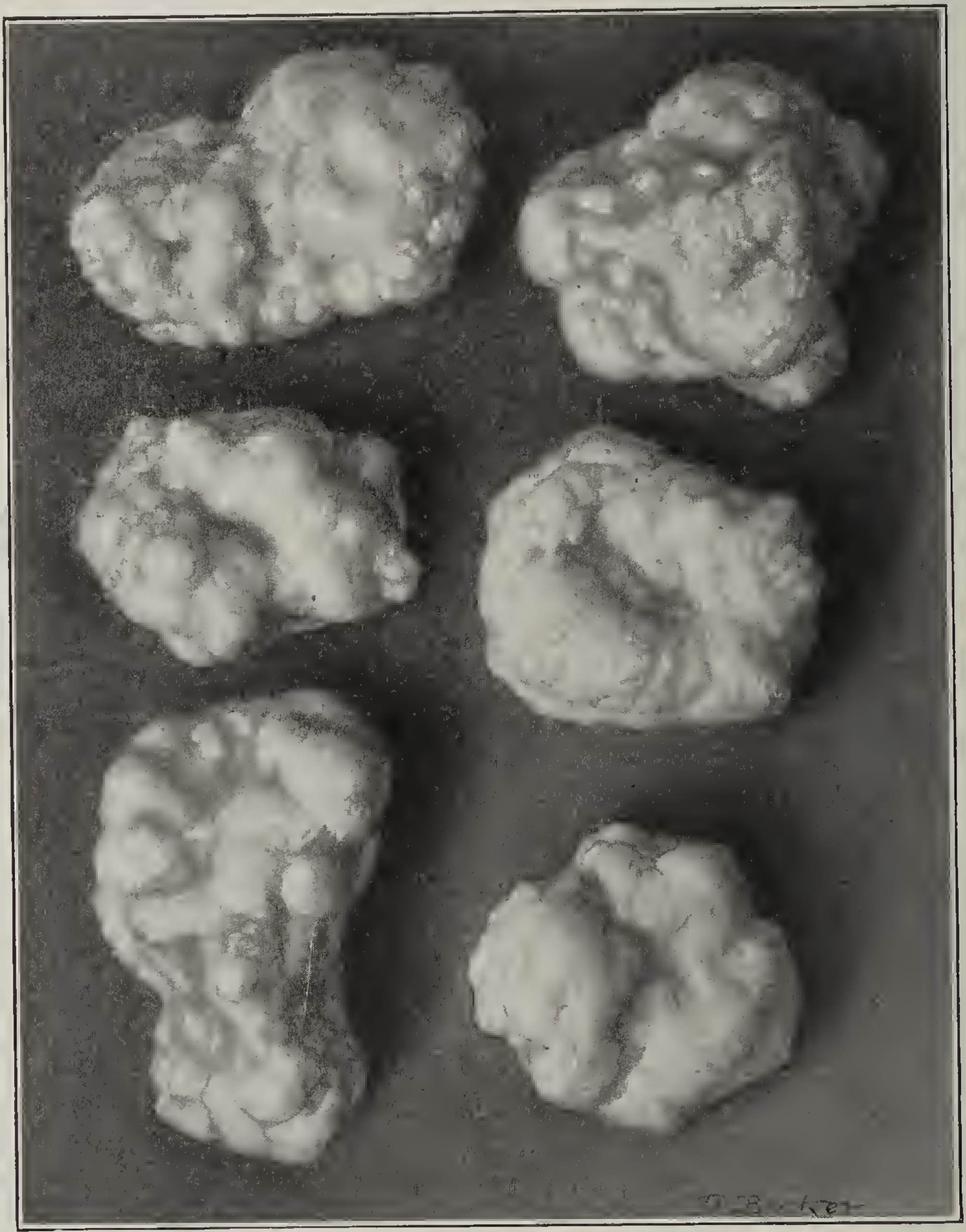

**Fig. 3.**—Cartilaginous masses lying free in a cystic tumor developing from the iliopsoas bursa (natural size). These masses were pearly white, very irregular, but perfectly smooth. They were rather lighter in weight than bone. Their general arrangement in the cyst is shown in **Fig. 1.**

### ORIGIN OF THESE CYSTIC TUMORS

One of the largest, if not the largest, bursa in the body is that situated beneath the tendon of the iliopsoas muscle. This complex muscle arises from the body of the twelfth dorsal vertebra, from the bodies of all the lumbar vertebræ, from the transverse processes of all the lumbar vertebræ and from the iliac fossa. The combined tendon is inserted in the trochanter minor. In order to reach this the iliopsoas muscle must curve around the crest of the ilium. It is beneath the muscle where it curves over the bone that the bursa is found. It lies beneath Poupart's ligament below and lateral to the iliopectineal eminence. According to some authors it may attain the size of a hen's egg.

According to Joessel[2] the iliopsoas bursa or the bursa mucosa subiliaca lies between the partly tendinous portion of the iliac muscle and the front of the iliopectineal eminence. Anteriorly, it is firmly attached to the iliopsoas muscle, posteriorly to the iliopectineal eminence, and likewise to the thin portion of the capsule of the hip-joint.[3] It is bounded on the outer side by the iliofemoral ligament, below by the pubofemoral ligament and on the inner side by the cotyloid ligament.

Joessel further finds that occasionally the fibrous capsule at the thin point of the joint is wanting and then nothing but the synovial membrane separates the joint from the bursa. Occasionally the synovial membrane is lacking at the thin point and in these cases there is a direct communication between the hip-joint and the bursa. This opening explains how purulent accumulations of the joint may extend to the iliopsoas bursa and then appear under the iliopsoas muscle and also how psoas abscesses may travel down the muscle and eventually cause involvement of the hip-joint. An extended consideration of the subject would necessitate a discussion of practically all diseases of the hip and would naturally lead us too far afield. I shall consequently limit my remarks chiefly to those cases in which cystic tumors similar to this have been noted and in which little or no evidence of inflammation has existed.

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[1] The specimens were demonstrated to the class and then drawn. During my absence in Europe they were unfortunately mislaid and have not yet been located; consequently I have thus far been unable to make a careful histologic examination to determine definitely whether the central portion of the cartilaginous masses contained bone or not.

[2] Topographisch-Chirurgische Anatomie, i, 169.

[3] This thin spot is well seen in Figure 232 of Cunningham's Anatomy, 1909, p. 296.

When consulting the literature I found a most instructive and painstaking article on "Diseases of the Bursæ of the Hip" by R. Zuelzer.[4] I have examined in the original the references given by this author and have found them in the main so well epitomized that I shall draw largely on his descriptions and conclusions.

It has been noted that the bursæ that are regularly found are usually developed during fetal life, while the less constant ones appear at a later date. Virchow and Schuchardt found that the small subcutaneous bursæ developed out of a connective-tissue network resembling cavernous tissue. Eventually a cavity was formed in which as a result of the continuous movements and rubbing the connective tissue gradually atrophied. The walls of these bursæ consist of dense connective tissue and contain a very little elastic tissue. The inner surface is lined with one layer of so-called endothelium and the contents of the bursa resemble those of the joint. They are slightly tenacious, thick and usually just enough in amount to keep the walls of the sac smooth.[5]

### CASES OF CYSTIC DEVELOPMENT OF THE ILIOPSOAS BURSA AS COLLECTED BY ZUELZER

Hoffa: The patient, a workman, was struck on the right foot and the left arm. He walked home at once a distance of about two miles, remained without treatment for fourteen days and again went to work. A year later he complained of pain in the region of the right hip. On examination the leg was found slightly flexed, abducted and rotated outward. At the hip was a painful tumor which was clearly visible and palpable; it lay under Poupart's ligament between the psoas and the pectineus muscles and was of the consistence of bone. On flexion of the leg, however, fluctuation could be detected. The trochanter was in its normal position and movements of the hip-joint were easily made. Adduction, flexion and rotation inward were, however, somewhat limited. The pain extended down to the knee. The corresponding leg was somewhat thinner than the other. This case was diagnosed by a colleague as an impacted fracture of the neck of the femur and the tumor was thought to be a callus formation pressing on the crural nerve and causing pain. There was no shortening of the leg.

Ehrle: A cooper, aged 33, for thirteen years had suffered with pain in the leg and down its inner side. Four months before coming under observation he noticed a tumor situated slightly below Poupart's ligament. This was ovoid in shape and lay under the large vessels. On extension of the leg the tumor became hard. On flexion fluid could be detected. Extension and rotation outward produced pain. By flexion it was clearly seen that the psoas muscle was lifted up. The hip-joint was free.

Herdtmann: The patient had been squeezed between two cars, the chief pressure coming on the left hip. The patient was carefully watched as he was supposed to be a malingerer. On examination, however, a painful swelling of the bursa beneath the tendon of the iliopsoas muscle was found. Flexion of the leg or rotation inward caused much pain in the joint.

Mommsen: This surgeon saw a patient who had an elevated, clearly fluctuating painless tumor which projected from the region of the iliopsoas muscle and passed out beneath Poupart's ligament. It lifted up the femoral artery. On pressure the tumor diminished in size.

Mommsen: The same author reported a case of a man 50 years old who without apparent trauma complained of difficulty in walking on account of a gradually increasing swelling in the right inguinal region. The tumor was as large as two fists and was situated deep in the right iliac fossa. It was firm in consistency and only slightly movable. It was thought to be a sarcoma of the fascia of the hip. At operation its lower pole was found firmly attached to the joint capsule. The cyst walls varied from 3 to 5 mm. in thickness and the failure to detect fluctuation was due to over-distention of the cyst.

Schäfer: The patient, a man coming to Volkmann's clinic, complained of a tumor the size of a child's head situated at the flexion of the thigh and lying under Poupart's ligament. The man had fallen and injured his hip a year and a half before. The tumor projected only slightly above the normal skin surface. It was buried deeply in the muscle of the thigh, was elongate oval and followed the long axis of the psoas muscle. The thigh was markedly flexed. When the leg was extended the tissue was of stony hardness. With extensive flexion some fluctuation could be detected. A second tumor the size of an apple was present at the edge of the gluteus maximus. This tumor also on extension was tense, but on flexion of the hip it became softer. Its contents could be made to disappear and as a result the anterior tumor became more distended. The cystic tumors communicated with one another. The movement of the hip joint was free. The pain radiated from the hip to the knee.

Fricke: This author described a case of a carter who without apparent cause had a tumor in the hip region. It lay over the right trochanter and passed inward under Poupart's ligament and extended downward over the upper third of the thigh. It really formed three tumors. The outer portion was as large as a child's head and markedly distended. The second lay on the inner side of the thigh and the third, the smallest, lay between them. All three fluctuated and the fluid could be pressed from one tumor into the other. The position of the thigh was normal but movement of the hip was impossible on account of the severe pain which was caused especially by flexion and rotation. The tumor itself was not painful on pressure but pain was reflected down to the knee.

Heineke: This author observed a case in the Greifswald clinic in which after a rheumatic inflammation of the hip-joint a prominent and distinctly fluctuating tumor developed. This followed the direction of the iliopsoas muscle from Poupart's ligament downward and raised up the femoral artery. On pressure the tumor diminished but on removal of the pressure the tumor again became prominent. Passive motion of the hip-joint was free and painless. In this case there was accumulation of fluid in the iliac bursa and this communicated with the hip-joint which also contained an excess of fluid.

Wood[6] reported a case in a thin man 28 years old, who two years previously, while convalescing from typhoid fever, had sprained his left hip. Walking was associated with severe pain. Six weeks later he noticed a swelling in this region. There was swelling both in front of and behind the hip and fluctuation was definite. A diagnosis of gluteal abscess was made. The patient, on account of well-marked contraction of the iliopsoas muscle, was unable to extend the leg. The tumor ruptured and there was a spontaneous expulsion of particles of bone as large as beans. The hip-joint was freely movable and not painful. This is one of the very few cases in which the bursa contained foreign bodies.

Couteaud: This patient was a man, aged 31, who was very strong and had done heavy work. Six years previously he had had syphilis. In the left inguinal region and on the inner side of the thigh was a prominent tumor the size of an egg. This was smooth, rounded, painless and could not be made to disappear. The skin over it was freely movable. On examination fluid could be detected in the pelvis and this fluctuation communicated with the tumor. The hip joint was normal. The tumor was punctured and clear citron yellow slightly tenacious fluid came away. In this case the chief pain was in the region of the knee.

Since Zuelzer's paper several cases have been recorded. The most interesting one is that of Delbet.[7] This surgeon gives a very short account of a case in which he diagnosed a cystic tumor of the iliopsoas bursa (a hygroma) before operation. On opening the sac he found three foreign bodies each of which was the size of a large nut.

### DIAGNOSIS

In summing up his article Zuelzer points out that these tumors may be of various sizes and that the swelling indicates primarily the anatomic position of the subiliac bursa. As the tumor increases it may extend far below Poupart's ligament, sometimes reaching to the middle of the thigh. It may consist of one tumor or be made up of several. It may spread out on either side of the iliopsoas muscle or extend in various directions, and may communicate with the joint. When more than one tumor exists it is often possible to press the fluid from one tumor into another. On releasing the pressure the fluid at once comes back. The tumor may extend forward beneath Poupart's ligament and then backward along the course of the iliopsoas muscle as in our case.

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[4] Deutsch. Ztschr. f. Chir., 1899, L, 148.

[5] Those interested in the development of bursæ should not fail to read the excellent paper on Luetic Bursopathy of Verneuil by Dr. John W. Churchman, Resident Surgeon in the Johns Hopkins Hospital (The Am. Jour. of the Med. Sc., September, 1909).

[6] This is the only case of Zuelzer's that I could not confirm, as the reference is incorrect and consequently I have not been able to obtain Wood's original article. I was unable to trace the case either in the *Index Medicus* or the Index Catalogue of the Surgeon-General's Library.

[7] Corps étranger contenu dans un hygroma de la bourse du psoas, Bull. et. mém. Soc. de chir. de Paris, 1902, xxviii, 1264.

In some cases fluctuation can be detected, but in others the tension is so marked or the cyst walls so thick that the tumor is supposed to be solid.

The skin is, as a rule, freely movable over these tumors provided inflammatory conditions are absent. Many of the tumors are painless, but when one remembers that the growth develops beneath the crural nerve and puts it on marked tension as in the case reported, it is but natural that any excessive movement of the hip-joint should be accompanied not only by local pain but also by pain referred to the knee.

Zuelzer found that the typical position of the leg in these cases is in abduction, outer rotation and slight flexion of hip. In this position there is naturally a minimum tension on crural nerve and iliopsoas muscle.

In these cases the hip-joint is, as a rule, perfectly normal, the great trochanter bears its normal relation and there is no shortening of the leg. In this way it is possible to exclude completely fracture of the neck of the femur, fluctuations and diseases of the hip. In my case there was three-quarters of an inch shortening. The joint itself was perfectly normal.

### ETIOLOGY

The majority of these cases have followed some injury, although syphilis and rheumatism are also supposed to be contributing factors. In my case the connective-tissue walls of the cyst contained bone. This should occasion no surprise as this fibrous tissue is similar to and continuous with that forming the joint. The presence of large free foreign bodies in the sac is most unusual, but when we remember that small free cartilaginous bodies are not infrequently found in the knee-joint, it should not appear strange that a sac communicating with the hip-joint might contain similar products. The foreign bodies in the case reported, however, were exceptionally large.

### TREATMENT

In times past, local applications were sometimes made; at a later date some of the tumors were aspirated, but the fluid tended to return. In cases similar to mine complete removal of the sac is the only satisfactory solution of the problem. Here it was necessary not only to get rid of the secreting surface, but also to remove the large free foreign bodies. Under no circumstances should irritants be injected into the sac as was formerly done. The surgeon cannot, as a rule, determine definitely before operation whether these bursæ communicate with the joint or not. The results from operative treatment should be most satisfactory.

Monroe's beautiful atlas containing a description of all the "Bursæ Mucosæ" of the human body, published in Edinburgh in 1788, should be read by every surgeon. It will undoubtedly stimulate increased study of this subject and materially help to clear up many imperfectly understood conditions originating in the bursæ in various parts of the body.

3 West Preston Street.

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# SECONDARY (POSTERIOR) GASTROJEJUNOSTOMY

## FOLLOWING RECURRENT ULCER AT SITE OF ANTERIOR GASTROJEJUNOSTOMY PERFORMED EIGHT YEARS PREVIOUSLY; TOGETHER WITH STATEMENT AS TO CAUSE OF GASTRIC ULCER.*

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GALESBURG, ILL.

*Patient.*—I. J. H., American, aged 43, a man, consulted me in March, 1900, for symptoms that could be referred only to an active pyloric ulcer of the stomach, combined with symptoms of obstruction. It is unnecessary to enumerate these symptoms. His history, extending over a period of four years of invalidism, was the cardinal one that has become so well known by constant repetition in the literature since that day. I urged operation and the patient passed into the care of one of my Chicago colleagues, who did, by the suture method, an anterior gastrojejunostomy without entero-anastomosis, the following June.[1] The patient had a smooth convalescence and an ideal result until January, 1908, when he began to complain of a return of the old distress which made his first operation necessary. This was his history until March, 1908, when he had a very severe and prostrating hemorrhage from the stomach. It was after this hemorrhage that I saw the patient again. He had lost practically no weight from his normal previous post-operative weight. He looked emaciated, however, and his skin had the indescribable saffron hue so often indicative of malignancy. Under the left rectus muscle, and about two inches from the costal cartilages, could be felt a movable, painful mass about the size of a goose-egg. The hemoglobin percentage at this time was 40, weight 160 pounds. The patient was put under medical treatment and improved in every way until October, 1908, when he had another severe hemorrhage. He had been advised to be operated on again, but conditions were such that he could not give consent until the necessity for a second operation became imperative. He improved on the building-up plan of treatment, the hemoglobin increased to 60 per cent., and the mass became smaller and much less painful, but never disappeared. Blood was found in the stools at three different examinations. No analysis of the stomach contents was made, because of ignorance of the depth of the floor of the ulcer and its character. The danger of perforation of an ulcer from a stomach-tube is probably remote, and yet one is not anxious to prove that this is so in the human subject. It is a very inadequate statement of the patient's condition to say that he was suffering from all of the sequelæ of gastric ulcer.

*Operation.*—I opened the abdomen Feb. 25, 1909, by excising the scar in the abdominal walls of the previous operation of June 30, 1900. There were three separate and distinct pathologic facts presented to the eye: first, an enormous thickening of the efferent and afferent loops of the attached jejunum; second, a perforated gastrojejunal ulcer at the point of the previous anastomosis; third, a complete burial of the pylorus and the adjacent liver region in a mass of dense adhesions. The most striking and insistent thing was the hypertrophy of the jejunum. Its external diameter was fully 2½ inches. The color was redder (more injected) than normal, and the intestinal wall had a juicy or edematous feel and look that was far from natural. It is excellently represented in Figure 1. Both loops were empty, but very heavy. Manipulation of both the loops reminded me of my boyhood days, when I succeeded in catching a big eel; i. e., the walls were stiff and thick and did not have the normal, collapsible feel of the small intestine. The great omentum had been pushed away so that it lay toward the left of the median line, giving an almost unobstructed view of the jejunum. The stomach was not greatly dilated and its outline was not appreciably changed because of the attachment of what had become an abnormally heavy jejunum. In other words, the stomach was not funnel-shaped. At the time of the first operation eight years before, it was reported that the jejunum was so small in diameter that an extra long loop—three feet or more—was necessary before the intestine was found large enough to serve the purpose of anastomosis. At my operation the afferent loop was not over 15 inches in length. The extreme thickness of the intestine seemed to have been obtained at the expense of the length of the tube necessary at the first operation. Retraction, hypertrophy and edema would seem necessary to explain the physiologic pathology of the process which would account for the physical appearance of the afferent, and probably the greater part of the efferent portions of the intestine. This hypertrophy of the efferent part of the intestines extended down into the abdomen and was lost to view. It was so big and thick and cumbersome to handle that to learn the full extent of it would have necessitated the manipulation which experience has wisely prohibited. The second striking thing was the ulcer. This had made its way completely through the lower left side of the first anastomosis, involving and destroying not only this portion of the line of union between the stomach and the jejunum, but some of the adjacent structures of both viscera as well. The diameter of the perforation was easily that of a silver twenty-five-cent piece (2.5 cm.). It had the characteristic look of the acute perforating ulcer of the duodenum which I have seen a few times, i. e., there was no inflammatory deposit about the margin. The intestine was merely open, with no hint as to how it became so. The edges were not exactly smooth, but they were also not thickened, as in the ordinary round ulcer. Indeed, the tissues at the rim of ulcer were macroscopically about the same as the rest of the intestine in physical appearance. The perforation was merely an absence of tissue. The hole in the stomach of the patient was covered for a space of about 2 or 2½ inches with omentum. This mass was palpable previous to the opening of the abdomen, and was the spot at which the pain was elicited when pressure was made. The presence of the omentum covering the perforation distinguished this case from the class of perforations in the duodenum referred to above. These latter were not covered with omentum, and no attempt at repair seemed to have been made by Nature. In the case under discussion, the omentum had performed its usual life-saving mission. The third insistent thing, when the abdomen was opened, was the "periduodenitis" referred to in the report of the first operator. This had evidently not grown any less in extent. The liver, gall-bladder, pylorus and duodenum were buried in a mass of adhesions (also well shown in Fig. 1) that were beyond treatment, even if it had been theoretically possible, or wise, to attempt anything in the way of treatment. The problem that presented itself was merely the one of dealing with the ulcer with its history of pain, hemorrhage and exhaustion. The artificial pylorus was not a problem in the case. It was evidently well made in the beginning; it had not appreciably contracted; it was oval in shape, at least an inch in its longest diameter, and nearly three-fourths of an inch in width. When the protective omentum was removed from the ulcer its diameter increased that of the artificial pylorus at least one-half inch. The easy management of the ulcer was interfered with by the gross pathology of the parts. The thickness of the jejunum, with its consequent stiffness and edema, did not encourage reckless attempts at surgery of any kind. To attempt to cover the ulcer by suture did not promise much, because part of the tissue involved was in the cicatrix produced by the previous operation. I finally decided, for both physiologic and anatomic reasons, that the easiest way out of the difficulty was to undo the previous anterior operation and to do a posterior as a substitute. This was done, and the openings left in the stomach and jejunum are very well shown in Figure 2. Both of these openings were closed with the Connell-Cushing sutures, the stomach turned over, and the posterior operation made. The technical difficulties were not slight, because of the great openings left after the parts were separated; this, with the abnormal thickness of the involved portion of the small intestine, together with the edema, made suturing difficult. I made use of the short loop, i. e., in this instance the proximal portion of the jejunum.

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* Read at the Omaha meeting of the Western Surgical and Gynecological Association, Dec. 20-21, 1909.

[1] A report of the operation will be found in the Med. Rec., New York, lviii, 215, Case 11.

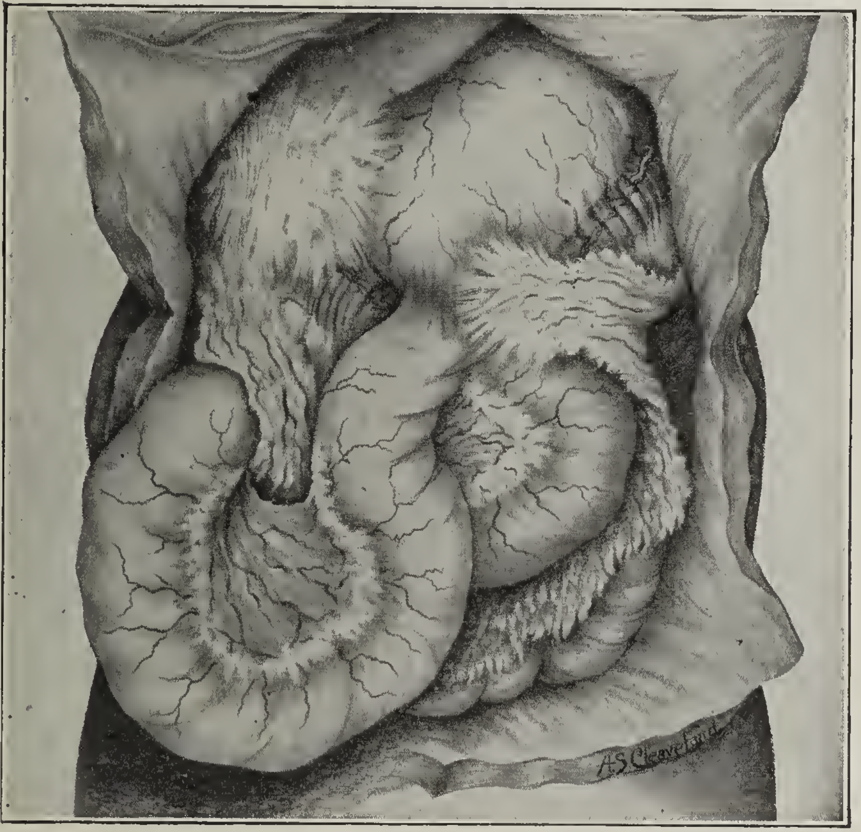

Fig. 1.—Hypertrophied jejunum and adhesions in case of recurrent ulcer at site of anterior gastrojejunostomy performed eight years before.

No sepsis followed. Indeed, convalescence and the final result have been, in every way, ideal.

I report this case because of the extreme rarity of similar ones in the surgical literature of this country. As far as I have been able to learn, it is the first reported instance in any country, in which a previous anterior operation has later been converted into a posterior, with the use of the short loop. I regret that I cannot give a complete history, chemically, of the stomach contents previous to my operation on this patient. But, as stated above, I was deterred from making use of the stomach-tube by the fear of increased hemorrhage, or perforation.

But, aside from this lack of important scientific data, on the chemical side, there are a good many problems left for us, suggested by the above recital of the history of this case. In the first place, I think that we may profitably inquire why this patient had a recurrence of his ulcer. It was certainly not due to faulty technic in the first operation. Eight years of almost perfect health answers that question. Was the ulcer due to a nutritional disturbance in the part of the scar tissue incident to the anastomosis? I do not know. But the following facts at least indicate this as a possibility. The ulcer was on the left side of the anastomosis, and it had destroyed not only the line of union, but some of the adjacent tissues of the stomach and jejunum. This left side of the anastomosis was probably the point where the greatest tension was exerted by the peristaltic tugging of the efferent part of the intestine. This tension may have interfered with the circulation necessary to maintain the nutritional integrity of the intestine properly; hence the ulcer. True, we should remember that this union had been good for eight years. But the patient was also eight years older, and this must exert some influence in scar tissue under a probable constant strain in a patient at the age of 51. From the physical appearance of the intestine, it was more than probable that it was slowly but surely getting heavier. This, again, would tend to limit the circulatory nutrition of the parts, especially in the scar tissue.

This is probably, however, only a part of the reason for the recurrence of this ulcer. In looking for an explanation of the reappearance of ulcer after so long a time, and for that matter, the explanation of the occurrence of all ulcers, either gastric or duodenal, we cannot forget the very plausible theory of hyperacidity. This theory has been given new standing by a very illuminating article by Paterson,[2] who, indeed, refers to other possible causes of ulcer, but gives hyperacidity the chief rôle. He has very little to say regarding the part that the infections play in the production of ulcer of the stomach, duodenum and jejunum other than that produced by the "toxic" action of hydrochloric acid.

In 1904, at the Milwaukee meeting of the Western Surgical and Gynecological Association, it was my privilege to discuss the relationship of the infections of the gall-bladder to the infections of the stomach and duodenum as expressed in ulcer of either or both of these structures.[3] In that paper, viewed in the light of present knowledge, my present views based on later experiences, were not well expressed; but the practical significance of the observations of that time have not been changed as to the rôle that gall-bladder infections play in the production, not only of the ulcers under consideration in this paper, but of chronic infections of the liver and pancreas as well. A large majority of the cases of gastric and allied ulcers have a history of chronic cholecystitis, and I believe that the recurrence of these ulcers, after a well-performed gastro-enterostomy, is due to the persistence of the chronic infection in the gall-bladder which has not been disturbed or corrected by the anastomosis procedure. If hyperacidity is the cause of the greater number of ulcers, as asserted by Paterson in his excellent article, why is it that only 33 per cent. in a total of 56 of his patients had a "diminution" of their hyperacidity? Paterson further maintains that, as a necessary preventive of hyperacidity following gastro-enterostomy, the anastomotic opening should be ample. Failure to make the opening large will account, according to him, for the recurrence of the excess of gastric acidity. It is assumed that in the 56 operative cases reported as performed by himself, this necessary detail in technic was not overlooked; yet only one-third of his reported cases showed, as far as followed, a lessened hyperacidity.

Is the usual picture painted by the symptom-complex of gastric ulcer and allied conditions in other structures in this region not due to another cause than gastric hyperacidity? What were the findings in the case reported here when the abdomen was opened? Adhesions, stasis and infection. Is it strange that an ulcer should appear in close proximity to a reservoir the fluid contents of which have been shown repeatedly to contain not only an abundance of the colon and typhoid bacillus, but also many other forms, as streptococcus and staphylococcus?

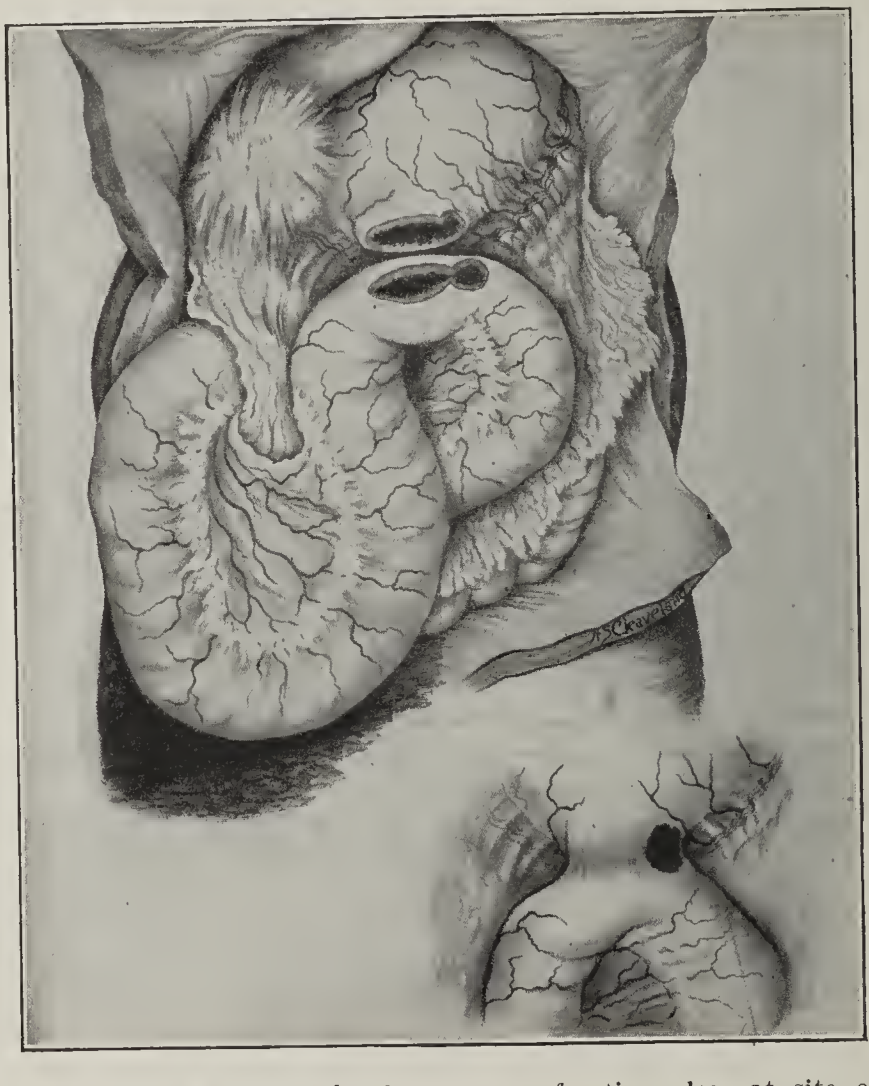

Fig. 2.—Lower right-hand corner, perforating ulcer at site of anterior gastrojejunostomy; above, appearance of former anastomosis on separating jujenum from stomach, also, at right-hand end of dissected anastomosis, perforating ulcer involving both stomach and jejunum.

The source of the infection of the gall-bladder need not concern us now. But we do need to remember that the typical and characteristic thing about practically every cholecystitis is its chronicity. Acute cholecystitis is a rare condition except when produced by the traumatism of gall-stones. The vast majority of the cases of cholecystitis are chronic because the bile seems to have the power of limiting the virulence of the poisonous organisms which are contained in it. But when this inhibiting influence is lessened, it is often expressed in the form of ulcer of the stomach or duodenum or jejunum. I believe this to be the rational explanation in every case of ulcer in this region of the abdomen, viz., a previous and long-existent cholecystitis. Hyperacidity may play a late part in these infections, but it is not the leading one. Hyperacidity is a common condition without obstruction, dilatation or prolapse. Hyperacidity, when long continued, produces a thickened and tough gastric mucous membrane; in other words, builds a wall against itself. Hyperacidity has no analogue in any other part of the body. Destructive hyperacidity is a chemical dream; while bacteria—some of which do, and others do not develop in the bile—form a focus of infection in the gall-bladder that has back of it all the possibilities spelled by the word infection.

The case which forms the basis for this paper has a known history of cholecystitis for twelve years. The anterior gastro-enterostomy improved the patient's nutrition for eight years to the degree at which it was possible for him to overcome the ill effects of his infection. But the anterior gastro-enterostomy in 1900 did nothing to relieve the chronic gall-bladder infection. The gall-bladder was left buried in adhesions. Because of this peristalsis was inhibited in all these structures, stasis of infected bile was perpetuated, and the chronic infection remained as a future menace to the stomach and the first portion of the small intestine. This menace of infection again became a certainty when it expressed itself finally by a hemorrhage in March of last year.

As I pointed out in my previous paper,[3] chronic cholecystitis may also be the "cause of cirrhosis of the liver in an individual otherwise free from the usual history that precedes the average case of this disease, viz., chronic alcoholism," and I gave the history of three cases which bear out my statements. These are the cases of cholecystitis in which the liver and pancreas bear the brunt of the infection, and not the stomach or small intestine. To quote again from that paper:

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[2] Paterson: Ann. Surg., August, 1909.

[3] Percy, J. F.: The Practical Significance of Certain Common Symptoms in the Upper Abdomen, The Journal A. M. A., 1905, xlv, 98.

> As long as we have ulcer in the stomach or duodenum, or an infected gall-bladder, to furnish a long-continued infection through the lymphatics to the liver and pancreas, we are sure to have occasionally a patient who will die following operative procedures in the upper abdomen, régardless of the skill with which such operative procedures are conceived, or by whom carried out.

Is it necessary for me to add that infections of the liver and pancreas due to a chronic cholecystitis furnish a larger mortality, with or without operation, than do the infections in this region which result in ulcer?

In closing, permit me to urge that every gastroenterostomy for ulcer, or its sequelæ, have combined with it drainage of the gall-bladder, unless the operator fears that the additional traumatism may add too much of additional danger to the outcome for the patient. This was true in the case which I have reported above. At the present time, ten months following the operation, the patient is in perfect condition in every way. Not only is this true as to normal gastric acidity, but weight, hemoglobin and strength are also normal. But the patient still has his chronic cholecystitis.

The cases of ulcer herein referred to in which cholecystitis is not present are so few in number that they may almost be ignored. I believe that cholecystotomy is practically always indicated because their successful and permanent cure can only thus be secured.

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# A METHOD OF TREATING MANDIBULAR FRACTURES *

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Modern surgical science teaches that the essential requirements for successful treatment of mandibular fractures are readjustment of fragments, restoration of normal dento-articular plane, fixation, immobilization, rest, nourishment and aseptic hygiene.

Of these cardinal factors there is little doubt but that fixation and immobilization have always proved the greatest problems. Surgical history is replete with various and many methods for the accomplishment of these ends, and a review of the literature on this subject shows that during the past half century, or since the Civil War, there have been two general schemes in vogue, each with numerous modifications, namely, the application of external support through medium of mento-mandibular splints, with occipitomental counter-pressure and the application of internal support through adaptation of interdental splints, with occipitomental counter-pressure.

Generally speaking, the medical profession has advocated the first, and the dental profession, from which it emanated, has championed the second method.

In addition to these, there has been frequent recourse to processes of wiring and in recent years to a natural development of these processes, the adjustable fracture bands and traction-bars.

So many well-founded objections have been raised against the use of external splints, mainly on account of their general inefficiency in maintaining adjustment of contour and articular plane, that the method has become practically obsolete. The introduction of interdental splints marks an epoch in the history of maxillary fractures of which dentistry may well be proud. It gave at once such assurances of holding the adjustment and maintaining the articular plane, thus restoring normal function and preventing deformity, that it rapidly sprang into prominence and custom. But the indiscriminate use of these appliances without due consideration of the individual requirements of each case, or of the kind, style or application to the cases presenting, combined with such objections as uncleanliness, strain and soreness of muscles from jaws being kept open, the length of time required before appliance could be constructed and the discomfort to the patient in securing proper impressions, have produced a marked decrease in their popularity.

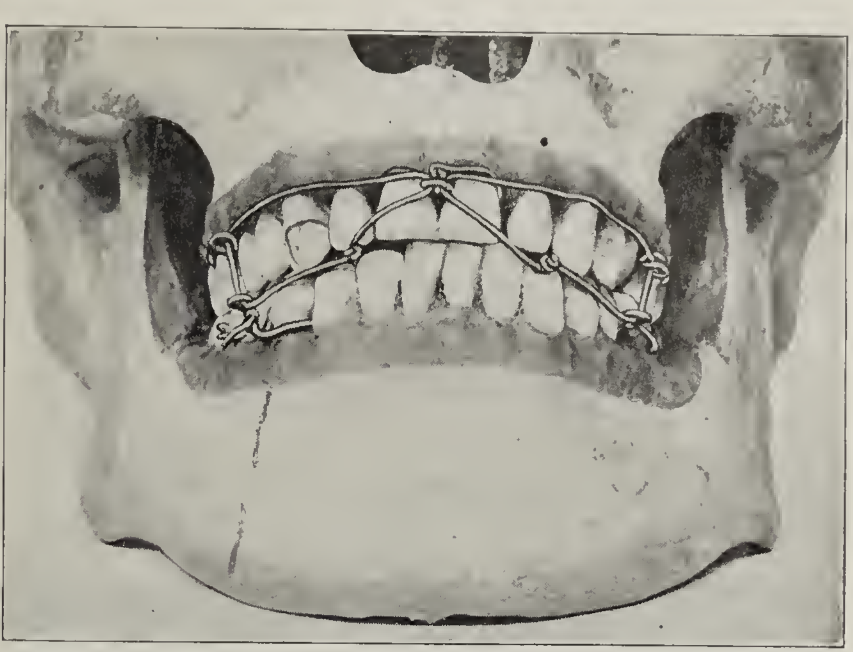
Fig. 1.—Front view, showing detail of wiring by anchor loop and traction wire method.

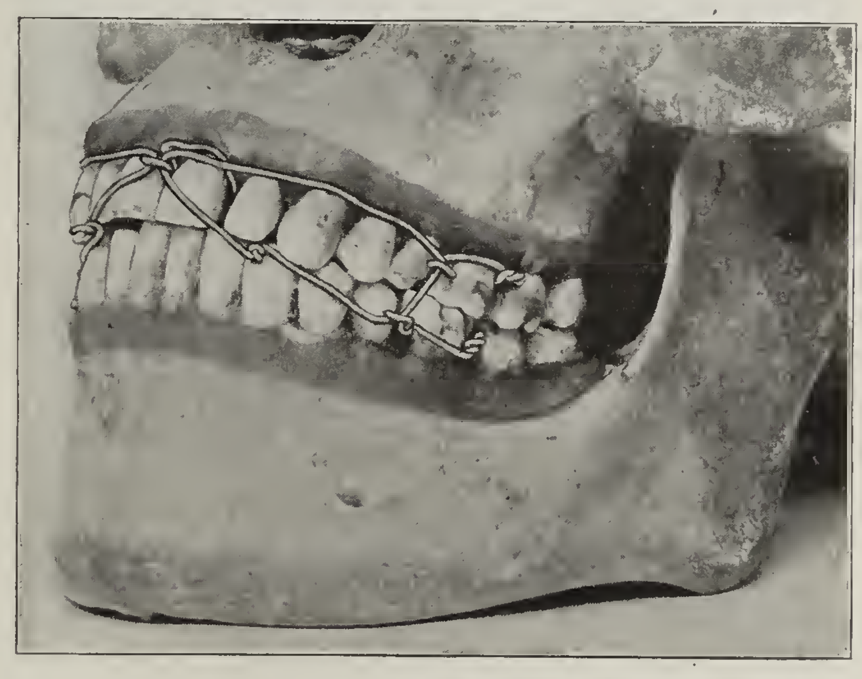
Fig. 2.—Left lateral view of same subject.

The objections to the usual methods of wiring have been due to faulty modes of application and to the kind, size and strength of wire employed. In a great majority of cases the ordinary silver suture wire, 26 to 30 gauge, has been used. This always stretches under stress, becomes loosened from around the teeth, releasing the traction necessary to fixation and is often forced into

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* Read in the Section on Stomatology of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

the soft tissues, producing distress to the patient and the usual consequences of irritation and inflammation.

The adjustable fracture band and traction-bar method has proved very efficient. Its disadvantages accrue from the numerous appliances required, which tend to hinder its general applicability.

Being firmly convinced that a process of wiring presented the simplest, easiest, quickest and surest method of treating these cases, I began a series of experiments some years ago, with a view to the improvement of its technic and the development of a standard method whereby rigid fixation and absolute freedom from mobility could be obtained. It was recognized early that much heavier wire, less ductile than silver, would be necessary, that the old figure-of-eight plaiting of wire across the line of fracture must be discontinued, and that some plan to prevent lateral mobility of jaws must be devised.

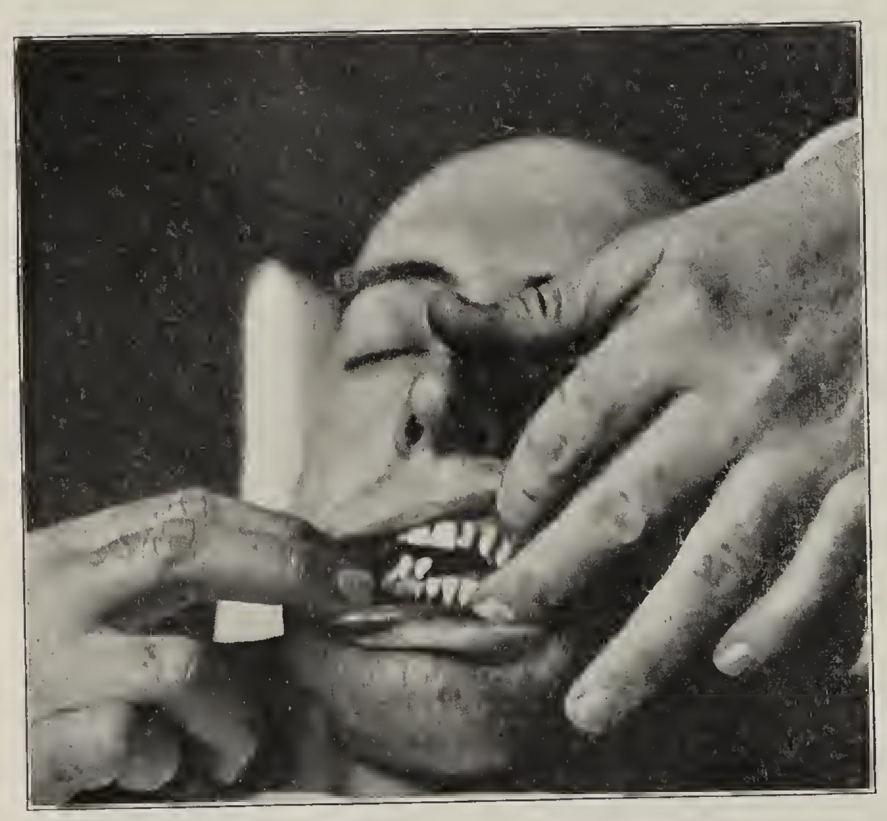

Fig. 3.—Cadet ————, U. S. M. A. Compound fracture, transverse through socket of right lateral. Showing deformity one hour after occurrence.

With these objects in view, various schemes were tried, with varying success, until the following method was adopted in 1903. Since then it has been used exclusively, with such splendid success that not one case of failure to unite, deformity, deflected articular plane or impaired function has resulted. For purpose of illustrating the method let us suppose a case with simple fracture, slightly transverse through socket (distally) of right first bicuspid and mental foramen, slight deformity, articular plane deranged, long anterior fragment drooping somewhat and short posterior fragment drawn slightly upward and inward—the typical picture. The mouth is first thoroughly cleansed with hot antiseptic wash and swabs, the location and extent of fracture determined and the fragments adjusted and articular plane restored. Then a piece of soft drawn copper wire, about 4 inches long, previously annealed and sharpened at each end, is inserted from without inward between the right lateral and cuspid, is pulled through about half its length, burnished lingually to cuspid and then inserted from within outward between cuspid and first bicuspid, pulled through buccally again, where it is held. The other end is now brought back and inserted at the latter interproximal space, pulled through taut, burnished lingually to first and second bicuspid, carried back across line of fracture, inserted from within outward between first molar and second bicuspid, pulled through buccally again, brought forward taut across line of fracture and twisted with remaining end at a point opposite an interproximal space. The adjustment of contour and articular plane is now verified; after which the ends are tightly twisted, bringing firm traction through axis of each fragment across line of fracture which temporarily will hold the parts in their exact position. The twisted ends are clipped off, leaving a stub about an eighth of an inch long; this stub is turned upward and inward, entering the interproximal space far enough to prevent it from injuring any soft tissues with which it may come in contact. Immobilization is next accomplished by wiring lower to upper teeth, while occupying normal occlusion. This is done by the following original method, which insures against the possibility of *any* mobility, either lateral or perpendicular: First, an anchor loop is made by taking a six-inch piece of annealed soft-drawn copper wire, 20 gauge (B. & S.), bending it in the middle around a small-sized mandrel about one-thirty-second of an inch in diameter, and twisting tight by one full turn with flat-nose pliers (the twist may be strengthened by "tacking" together with a small bit of hard solder). The two long ends are now straightened out and placed parallel to one another, one end being snipped off one-fourth of an inch shorter and both ends pointed. They are now inserted from without inward, between the two superior central incisors, pulled through taut until loop rests, horizontally, firm against both teeth at the mesocervical border. Each end is now carried laterally from median line, burnished, respectively, to lingual surface of each central, and inserted from within outward between its respective central and lateral, pulled through firmly, brought forward to median line, above loop, and twisted tightly together, clipping off and turning stub into interproximal space as before noted. This forms a solid, permanently fixed, median anchor loop from which counter-traction may be

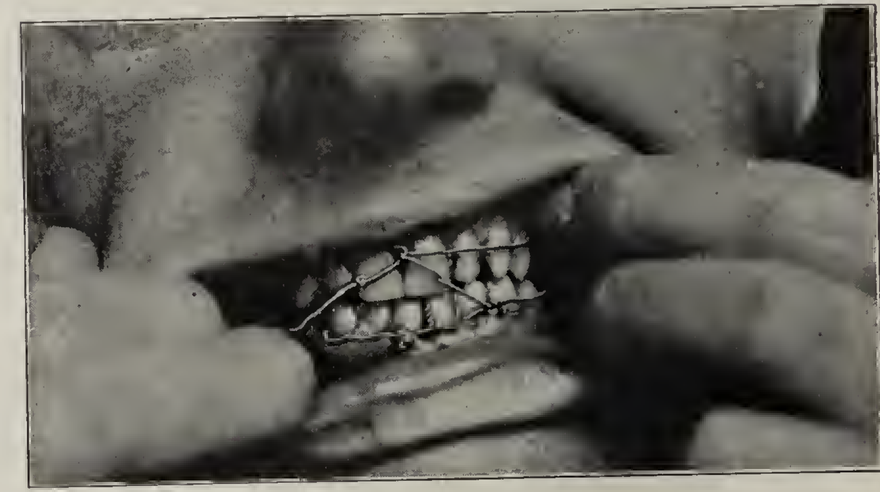

Fig. 4.—Same patient, front view, with jaw wired.

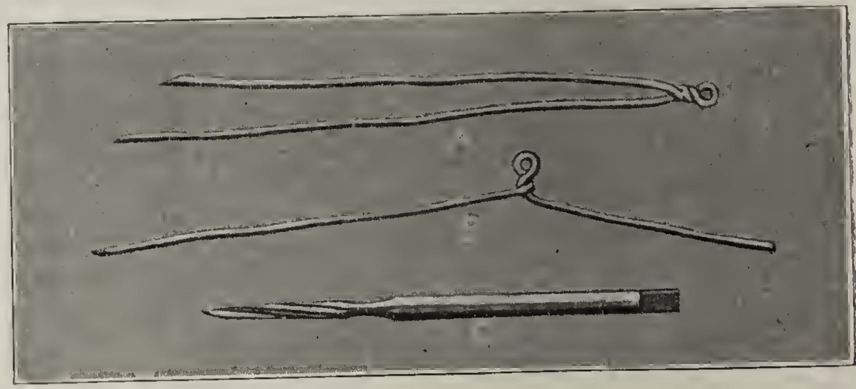

Fig. 5.—Median and lateral anchor loops and Peeso's reamer.

had from each lateral half of mandible for support and the prevention of lateral mobility. Four pieces of the same wire, about 3 inches long, are in turn bent around the mandrel as before cited, forming the loop about one-third distance from one end, and the long end sharpened. These lateral anchor loops are placed around solid teeth, one on each side, usually first molars or second bicuspids, in both upper and lower jaws, and serve as anchorages for the traction wires, one for each side. These traction wires, threaded through all the loops commencing with median, then superior lateral, then inferior lateral and finally twisted with outer end midway between inferior lateral and median loop, exert a firm and constant pressure between upper and lower jaws and at the same time maintain counter-traction laterally. The twist is clipped short and may be turned upward under upper teeth. The lateral loops are positioned by inserting long ends into mesoproximal spaces of the respective teeth selected, pulled through taut until loop rests horizontally against cervicoproximal border, then carried backward, burnished to lingual surface, inserted from within outward at distoproximal space, pulled through firmly and twisted to outer end as near the latter proximal space as possible in order that the increased size of twist, being too large to pull back through space, will prevent the anchorage loop turning under stress of subsequent traction and also that the twist may be clipped off and turned into the space as above shown. The traction wires are about 7 inches long, of same material, and should be annealed before being used. Care should be exercised to keep each one perfectly straight between loops and pulled taut in passing through each loop. When properly placed there will be produced a triangular geometrical figure with its first "stretch" a long horizontal line from median to superior lateral loop, a short perpendicular line from superior to inferior lateral loop and a long slanting diagonal line from inferior lateral to median loop, in which the twist has been made. With these heavy traction wires firmly fastened from each side of jaw with teeth in normal contact, there is little likelihood of any kind of motion between either the fragments or the jaws. Thus we have absolute fixation and immobilization exemplified in one operation of two stages.

It usually becomes necessary to tighten the wires after the second day. This is readily accomplished by simply turning an angle with narrow-beaked flat-nose pliers in each long stretch of each traction wire, thus taking up the slack which may be caused by loosened lateral anchorages, from inflammatory processes or by the stress of traction on the respective teeth. This tightening can be done every few days, as required, until the angle thus formed may be turned so far as to produce the letter Z. It seldom reaches this point, however, if care is exercised in keeping wires straight between loops and taut at each, when they are first applied.

Should a wire break or become ineffective from being stretched, a very firm occipitomental bandage is applied and both traction wires cut and removed. The anchorage loops are now tightened and new traction wires applied as before.

In cases in which the teeth are irregular or crowded too close together to permit the insertion of wires between them, an opening is made through soft tissues and alveolar process about one-eighth of an inch below its superior border and between the roots of teeth. This is done by quickly forcing a rapidly revolving Peeso reamer through at the point desired, and is usually accompanied by very little pain and slight hemorrhage. The subsequent tight pressure of wires on these soft tissues requires no other attention than the maintenance of cleanliness, as the position of wire is accommodated and the pain is negligible. In severe cases, in which a general anesthetic is required, the whole operation above outlined should be completed except the insertion of traction wires. These should not be introduced until the next day, after the fear of nausea or vomiting has passed. Even then it is well to leave a small pair of wire-cutting shears with the attendant, with instructions how and when to use them should such interference be necessary.

With this means of securing durable fixation and thorough immobilization, the physiologic function of reuniting takes place readily and rapidly.

The patient is fed on liquid diet, consisting of broth, thin gruel, milk, custards, etc., every two hours, with egg-nog three times a day, taking it through a rubber tube which may enter the mouth either through an existing vacuity or by being forced back through the post-dental space.

The patient rarely experiences pain after forty-eight hours, and if the usual instructions in regard to rest, nourishment and oral hygiene are followed the wires may be removed during the latter part of the third week, a firm occipitomental bandage being substituted for them for several days following. In removing the appliances, the traction wires are first cut and slipped out, leaving all anchorage loops *in situ* for subsequent use should it become necessary, for any reason, to fasten up the jaws again. When everything is finally removed the teeth, mouth, tongue and gums should be thoroughly cleansed and the patient instructed in the discriminate use of the jaw for a period of several weeks.

With some nervous patients having a hysterical tendency, it is good practice to supplement this wiring process by adjusting one of the many forms of occipitomental bandages—this as much for the psychic effect on the patient as for any mechanical assistance rendered.

Hot antiseptic mouth-washes should be used five or six times daily and all the loops, wires, teeth, gums and mucous surfaces thoroughly swabbed with a 50 per cent. solution of hydrogen dioxid at least once a day, followed by the hot antiseptic solution.

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## ABSTRACT OF DISCUSSION

Dr. M. I. Schamberg, New York: In treatment of fractures of the jaw, we are not always able to employ anything which depends on the occlusion of the teeth, because in some cases the teeth are absent, but when there are a sufficient number of teeth to use one jaw to splint the other, I think it is the ideal method of treatment. I do not altogether agree with Dr. Oliver that so elaborate a method of wiring is essential, as I have achieved good results from the use of very simple methods. That is, taking ordinary brass wire, passing it between the teeth, and bringing it up taut as for the retention of a rubber dam. I do this in several parts of the mouth, thus supporting the lower jaw. I frequently find it necessary to run these wires in various directions to maintain proper traction. In dealing with these fractures, owing to the fact that many of them reach us after the patient has gone through other hands and reduction has not been complete or has not been maintained, I have found it necessary to pass the wire through the inter-dental space between the bicuspid of one side and create traction forward by means of this by an assistant while the jaws are brought into position. I believe that the method outlined by Dr. Oliver is a valuable one, particularly because it gives the part absolute physiologic rest. It seems to me unreasonable to expect good results with the use of splints which permit the patient to masticate during repair. A patient can live for many weeks on liquid nourishment.

Dr. J. E. Power, Providence, R. I.: I agree with Dr. Schamberg that the more simpler methods of using wire have given excellent results. I cannot, however, agree with either Dr. Schamberg or Dr. Oliver in the recommendation of any appliance that will cause absolute fixation of the upper and lower jaws. I believe that it is unfair to incapacitate the patient if the fracture can be treated in any other way. Dr. Oliver describes in his paper the method which I have used in what is known as "first aid to the injured"—not, however, with the exacting technic or elaboration which he has demonstrated here. In fractures such as Dr. Oliver has described I first get an impression of both the upper and lower jaws, then I make plaster models, sawing the model through the lines corresponding to the lines of fracture. I then reconstruct the model, first getting normal occlusion, with the opposite jaw. A die and counter die are then made and a metallic splint is swagged (preferably of aluminum) to fit over the teeth on the reconstructed model. The time consumed is not much more than one hour, and the operator may have the prosthetic assistant attend to the making of the splint. If the model has been properly reconstructed according to recognized anatomic lines, the splint can be easily adjusted. Its advantage is that the appliance does not incapacitate the individual in any way, and it does not interfere with the natural method of feeding. Three or four hours after the splint is adjusted the patient can go on with his regular work, without any inconvenience. Dr. Schamberg places great stress on physiologic rest. If the cardinal principle of surgery is rest, then we bring it about in the case of fracture, by fixation. If there is a fracture through the bicuspid region such as the one described by Dr. Oliver, and the fragments are brought together and held in position by a metallic splint, the parts are given physiologic rest. Physiologic rest does not mean absolute rest of the whole oral cavity and its appendages, if only one of the bones is fractured. This is demonstrated in the general practice of surgery. If a fractured limb is subjected to absolute rest for a long period, there will be muscular atrophy; this is guarded against by the general surgeon through the medium of massage of the parts involved. If this great law of use and disuse applies to a limb, it is reasonable to believe that other parts of the body will be likewise affected. I claim, therefore, that it is an advantage to overcome this tendency to muscular atrophy, by allowing the patient to use his jaws and by holding the fragments in position with the splint which I have described, whereby the proper amount of physiologic rest is applied to the proper area. I think that absolute rest of the jaw which is not affected, as well as of the affected one in uniting them by any method which will impair their normal action is a disadvantage both to the process of repair and to the comfort of the patient.

Dr. George V. I. Brown, Milwaukee: There are many conditions under which we have to care for fracture of the jaw; therefore, we need many appliances and different forms of treatment. Dr. Oliver offers his method as one kind of treatment and would, no doubt, make distinction in the treatment of other cases. He has given a method of wiring the jaws which is undoubtedly one that would give absolute immobility and is free from the disadvantage of silver wire, which I think a very important improvement. I abandoned silver wire some time ago, because it is not trustworthy. There are a few principles in the treatment of fracture which I try to keep in mind. One is, I never fix the jaws immovably unless I know that I am obliged to. There are many reasons for this: one Dr. Oliver himself called attention to—in case of vomiting this is sometimes a very serious condition.

Dr. M. L. Rhein, New York: What other objections to immobilization have you?

Dr. Brown: None to immobilization of the fractured bone, but much to fastening the two jaws immovably in contact with each other. One is vomiting. Again there may be septic infection. If it be a comminuted fracture there are apt to be sequestra of bone coming away, and in these, as with other cases, it is important to be able to get into the mouth and keep it clean. Again, there is the question of food and nourishment. Or, there may be other injuries which make jaw fixation inadvisable.

Dr. M. L. Rhein, New York: I agree with Dr. Brown on the presentation of Dr. Oliver's improved method, and I want to emphasize strongly one of Dr. Brown's points, and that is the ultimate method of immobilization. It is often important to delay to some extent in the manner described. If there are any sequestra of bone in the fracture it is important that they should be thoroughly diagnosed as early as possible. I have a number of such cases that have slipped by the hands of surgeons without such a diagnosis having been made, necessitating a subsequent operation on the mandible. At present, with the aid of the *x*-ray, it seems impossible to make such an error, and I think this is another instance in which the value of the radiograph when it is obtainable is of great importance in determining the absolute line of fracture, as it will also readily show whether or not there are any comminuted pieces of bone necessitating operative interference before any form of immobilization is permanently used.

Dr. W. C. Fisher, New York: I think that there is one class of cases in which Dr. Oliver's method is very applicable; those that might be termed vicious. Patients who are in the habit of taking intoxicants, sometimes become very unmanageable and tear off the splints, and in such cases this method would be most desirable. I recall the case of a patient with a fractured mandible, acquired in a drunken row. After having an interdental splint in place for about a week, he became so crazy for a drink he went to a saloon and tore off the splint in order to drink. It was necessary to wire his jaw. Some method such as described by Dr. Oliver would be far better than wiring the bone.

Dr. M. I. Schamberg, New York: We have overlooked the fact that this form of treatment is applicable to all forms of fracture at or above the angle of the jaw to much better advantage than any splint which enters the mouth. Anything which tends to distend the mouth or which depends on the adjustment of a splint is not serviceable in cases of fracture at the angle or above the angle. When the fracture is at the neck or about the head of the condyle I believe that the wires should be so placed that there can be passive motion at proper intervals.

Dr. Stewart L. McCurdy, Pittsburg, Pa.: Without referring particularly to the method, it appears to me to conform in some respects to that suggested by Angle, except that he applies bands instead of wires in order to secure replacement of bones. I desire to make two points. I use iron wire. I have taken *x*-ray photographs of these iron sutures year after year during the last eight years, and find that the iron eventually becomes disintegrated and entirely disappears, so that it is harmless so far as its action on the tissues is concerned. As to the adjustment of the bone itself, being a general surgeon, I use the means at my command, just as the dentist uses the means at his command. I use the through-and-through method of wiring in all these cases. Several years ago I reported 18 or 20 cases in which this method had been used.

Dr. R. T. Oliver, West Point, N. Y.: While I do not claim that this method of treating fractures will successfully meet the requirements in every case, yet I think its application in general will come nearer being the correct treatment for more cases of fractured jaws than any other one method. Neither this method nor any other can be hailed as the universal one for all classes of cases. I merely attempt to portray a method of treating mandibular fractures, in which I bring out an original scheme of securing absolute immobilization by a process of wiring. I prefer the word adjustment instead of reduction in speaking of fractures of the jaw. We reduce luxations but really do not reduce fractures. I am not trying to change the nomenclature of surgery but this is the way it appears to me. Some one suggested that the question of occlusion or the articular plane could be dispensed with, in favor of some other things of greater importance. I want to say most emphatically that the most important thing in treating jaw fractures is to restore occlusion and reproduce the function of mastication. Even deformity must take second place to impaired function. This is especially true in the army, where the soldier's physical fitness and military efficiency is to a great extent dependent on his ability to masticate his food thoroughly in preparation for the process of digestion and assimilation, in order that his full physiological powers may be maintained. His personal appearance counts for naught. Of course there are a few cases in which impaired functions and deformity cannot be restored together, but if it comes to a question of one or the other, it certainly is for the best interest of the patient that his ability to masticate receives attention first. I believe that both anatomic and physiologic rest are essential in these cases. The earlier we can operate and get the end of the fragments together, thus facilitating the initial processes of callus formation, the quicker and less troublesome will be the cure.

The remarks of Dr. Schamberg in regard to the continuation of the old method of wiring, are rather surprising. I presume he refers to the method of using small guáge silver wire by the figure-of-eight method or some modification of it. I have used and seen it used by able surgeons, many times, and its reliability in these cases is always questionable. The failures to maintain fixation and immobilization are not through technic, but through fault of the wire itself; generally it is too small and too ductile to withstand the stress of tension. In the methods spoken of by Dr. McCurdy, I believe there will be extensive oxidation of the wire used, with more or less permanent stain of the tissues and a marked metallic taste complained of by the patient.

The method I have described was developed during my service in the Philippine Islands and is the result of a gradual evolution of experimental wiring in these cases. During the early days of foreign service, before the department furnished adequate equipment, many makeshifts had to be utilized. On one occasion, I was called hurriedly to one of the reserve hospitals in Manila to attend a case of multiple compound fracture of the mandible. The man had been thrown and stepped on by his horse and was in such pain, with profuse hemorrhage, that an immediate operation was necessary. Previously I had always used silver wire—the Fleurs sutures—but there were none available at that hospital and as an expedient an orderly was sent with a note to a nearby Signal Corps station requesting some 20 guage wire. He returned with a big roll of copper, field telephone wire, from which I burned the insulation. After annealing and sterilizing, this was used and proved so efficacious and superior to the silver wire in being tougher, less ductile and possessing greater stability of the twists, that it has been used ever since.

Some one referred to the use of modeling compound. This material has proved useful in emergencies, and first-aid treatment, but I do not wish to discuss its possibilities at present as it will be covered in another article now under way.

# THE FUNCTIONS OF A UNIVERSITY MEDICAL SCHOOL *

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The functions of a university medical school are many, varied and important. Some pertain to the school itself, some more particularly concern the university as a whole, while others are chiefly employed with affairs that lie quite outside of the university. All are correlated, however, and more or less mutually dependent. It is my purpose in writing this paper to outline briefly what a university medical school should be and some of the things that it should do.

Without men of proper intellectual and temperamental equipment no great work can be accomplished; consequently the school must be developed and directed by a faculty, the members of which have both the inclination and the ability to move forward in the right direction. A university professor should be possessed of a broad fundamental training, including both the humanities and the sciences, and on this as a foundation he should develop expert knowledge of the special subject in which he is to instruct others. His training should be both general and specialized. The former gives him a broad outlook and causes him to realize that all knowledge is correlated, while the latter is essential to every one who has any claim to leadership. Appreciation of productive scholarship in American university medical schools is growing, and the research now being done in some of the best of these schools begins to compare favorably with that of European institutions. However, it still remains difficult for university presidents and boards of control to distinguish between pseudoscholarship and real scholarship in the selection of professors, and appointment to such a position in this country is no guarantee that the appointee has either culture or learning. In this particular the university medical schools are faring better than other university schools, because in the former nominations for new professorships and to fill vacancies have been generally left to the faculty. Some universities seem to feel that they are doing their full duty if they fill one or two chairs with research men. As a friend of mine has expressed it, they act as if the possession of a silk hat is the sole requirement of a well-dressed man. The demand for productive scholarship in university medical schools should be more fully extended to the clinical subjects than has been evident up to the present time. It should be expected of each professor not only that he master his specialty, but that he labor to make worthy contributions to it. This it is that has made German medical science so pre-eminent. The old fallacy that a research man is only a dreamer, without practical knowledge, and consequently not a successful teacher, is slowly, too slowly, fading away in this country. The deepest inspiration for work comes only to the one who can occasionally drink from the head fountain of knowledge, and opportunity for research is as essential to the teacher of any branch of medicine as is air to the support of life. The university professor who does not devote a considerable portion of his time to honest and earnest endeavor to extend the bounds of knowledge is unworthy of his position and should be replaced.

The evolution of the combined course for the medical student has been an important and wise move. That it has its deficiencies is true, but there is always the opportunity for improvement. I would be pleased were it to provide for a more extended and thorough knowledge of the classics. The small requirement in Latin is not wholly worthless, but it is altogether inadequate, and the absence of any requirement in Greek is unfortunate. It is true that the medical student learns something of Greek in every subject even without knowledge of the alphabet of that language, but he too often only sees through a glass dimly, while two years of proper preparation in Greek would enable him to discern more clearly the significance of the terms that he employs daily. However, even with its deficiencies, the combined course gives at least the opportunity for the medical student to start on his professional studies from a point of great advantage. The humanities and the sciences, in their fundamental principles at least, afford him a sure and safe foundation on which he can proceed to erect the professional superstructure. The principles of chemistry, physics and biology which he has acquired are the foundation stones on which he is to build. The modern languages place within his reach most needful help. His mathematical studies give an idea of the necessity of exactness and fitness of proportion, and, as he builds, his general studies, history, literature, political economy, psychology, etc., supply the windows from

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* Read before the Sixth Annual Conference of the Council on Medical Education of the American Medical Association, Chicago, Feb. 28, 1910.

which he can look out over the wide realm of human experience. Surely, our successors in medicine, in the mass, should add much to the science and advance the practice of our profession.

Next to the selection of a proper faculty and provision for well-prepared students comes the equipment of the medical school. To this important subject I can devote only a few sentences. Fortunately the Council on Medical Education has formulated a somewhat detailed statement on this subject, and to this I refer those who wish to investigate this matter. More than thirty years in a relatively small school and observation of others, both small and large, good and bad, lead me to say in general terms that the primary cost of a suitable building and its proper equipment for a school with an entering class of from fifty to one hundred students cannot now be provided for with less than one-half million of dollars ($500,000). It should be understood that this does not include hospital facilities, which would multiply the above figures by not less than four. Moreover, it provides laboratories and class rooms of only the plainest kind, and it makes no provision for any equipment above that which is absolutely essential to high-grade work. The yearly support of such an institution, again apart from the hospital, demands nearly two hundred thousand dollars ($200,000). With average tuition and laboratory fees the annual income of a medical school should be multiplied by at least three, better by four, in order to balance the necessary expenditures. As I have elsewhere pointed out, a medical education worthy of the name is the most expensive professional training offered in this country. The time has passed when a group of physicians can combine and launch a medical school and give anything like proper training to its students. The medical school of to-day must have behind it private endowment or state aid. Even universities should not attempt to establish medical schools unless they can afford the expenditures mentioned above, and provide adequate hospital facilities besides. To maintain a medical school inadequately is, in a certain and large sense, criminal, because it means the sending out of unqualified practitioners, and this means danger to the health and life of those whom they serve. I have elsewhere attempted to show that the state does wisely and serves its own interest in supplying the best medical education.

Of the functions of the medical school that lie quite within itself, I shall refer to only two. That of the thorough instruction of students naturally comes first, and needs no lengthy discussion. I desire to emphasize the fact that in many of its branches medicine has become an exact science, just as truly as mathematics, physics, chemistry and astronomy. This is true of anatomy, histology, bacteriology, physiology and pathology. In these studies, close observation, often with the aid of instruments of precision, is an essential, and carelessness in method is no longer permissible. The detection of the diphtheria or other pathogenic bacillus, the recognition of cancer cells in a tissue and the separation and identification of strychnia and other chemical poisons are exact scientific procedures, and the same is true of the production and employment of antitoxin. Without proper apparatus and its correct application these investigations cannot be made, and the findings are as definite and certain as those of the chemist or physicist. Good intention, affability in manner and even rectitude in conduct, all desirable in themselves, do not make a skilful physician. They cannot be employed in the diagnosis of disease, nor will they impart skill in surgical procedure. Looseness in statement and carelessness in method are not tolerable in either the teacher or the student of medicine.

Of the additional functions, some, as I have stated, lie within and some without the university. Of the former I will speak first. There are many advantages in the close association of the college and the different professional schools, which together constitute our larger universities. The collegiate department should serve for preparation for the professional schools, and the smaller colleges should also attempt to perform this function. In medicine at least the advances of the past few years have been so great that the secondary schools no longer suffice to fit the student for his professional studies. The Association of American Universities has done well in its definitions of a college and a university school. The college is regarded in these definitions as the preparatory department for the university schools which collectively constitute the university. An important function of the university medical school is to command the respect of the faculties and students of the college and other professional schools by the thoroughness of its instruction and the extent and value of its productive scholarship. The medical school should be a leader in both culture and knowledge. The uneducated, narrow man, ungrammatical in speech and of limited intellectual vision, whatever be his skill in his specialty, does not make a desirable professor in a university medical school. Scientific medicine deserves and should win the respect of the learned. In some things the medical man should be the leader.

Within the past decade a movement, such as the world has never before known, founded on medical research and discoveries, has been inaugurated and holds within itself the promise of the greatest good to the race. I refer to the realization, which is just beginning to dawn on the most enlightened men, that disease is the heaviest burden that humanity carries in its slow and weary escape from the mire of superstition on its way to the uplands of human betterment, and that disease is, for the most part, a result of man's ignorance, and consequently the more preventable as he grows in wisdom. Medical discovery has rendered obsolete discussions of "the struggle for existence," "the survival of the fittest," etc., and has demonstrated the plasticity of life and its ready response to alteration in environment. In this light the history of the world is being reread, and we are learning that civilization advances or recedes with the improved or diminished health of the people. The development of scientific medicine means the physical, intellectual and moral betterment of the race. That this is being recognized by the more intelligent of all nations is shown by the enthusiasm and energy now being developed in the antituberculosis crusade, the eradication of malaria, typhoid fever, uncinariasis, pellagra and other diseases. This most beneficent endeavor had its conception in the laboratory and clinical studies of scientific medicine. It is from these sources that it draws its sustenance and strength, and the nation that fails to foster medical investigations will surely recede in civilization. That this movement for the evolution of the better man has not yet met with an enthusiastic reception in our American universities must be painfully evident to those acquainted with the prevalent conditions in these institutions. Hundreds of teachers go out each year from our best universities without even the most elementary knowledge of either physical or mental hygiene. The examinations made in our gymnasia are for athletic purposes and concern themselves but little or not at all with the detection of incipient tuberculosis or slight abnormalities of the heart. Men who are to become sanitary engineers are graduated without training in the bacteriologic examination of drinking-water. Those who are to become potent factors in the framing and execution of our laws go from their universities in ignorance of a nation's best asset, public health.

Please do not understand that I am saying these things in a spirit of captious criticism. I might have made these statements much stronger and still not overstep the truth. I have called attention in this mild way to these defects in order to point out that it is one of the functions of the university medical school to remedy them. Medical men in these schools should give lectures and demonstrations to the students of other departments on preventive medicine. The consequences of venereal diseases should be described without magnification, and with rational advice to the unfortunate. The nature of infection and the avenues through which it is spread should be discussed. Were I not a professor of hygiene I should say that every university student should have instruction in this branch and should submit to a most thorough physical examination twice a year and should he be found to carry any infection dangerous to others, whether it be pulmonary or venereal, he should be compelled to conform to just rules and regulations. I am aware that some effort is being made in these directions in universities, and the purpose of these remarks is to encourage it, for the need is great and the result will amply repay the service.

The academic professor has somewhat reluctantly learned to recognize that scientific medicine offers a legitimate field for research, and graduate students are now permitted to work in our laboratories. We should return this compliment and urge on our students a further and broader acquaintance with psychology, history and literature, for I would not imply that the medical school is the only department of the university that may confer favors.

Only a few days ago a professor of history applied to me for a medical man who might help him in the interpretation of documents bearing on a certain period of English history. It is good for all to change the viewpoint occasionally, for by so doing we extend the field of vision and gain a clearer perception. Interchanges of opinion among men of diverse callings should be mutually beneficial.

Medicine is taking its place among the exact sciences, and in doing so it discards the mantle of metaphysical speculation which it once wore. It consists of facts gathered from the various sciences that may be used in the prevention or cure of disease. It is no longer divided into schools founded on speculative dogma, or on theories evolved from the inner consciousness. Its triumphs are won only by patient toil in the laboratory and by exact observation at the bedside. It tolerates no *ipse dixit* and acknowledges no authority save that of scientific demonstration. The world has never been in greater need of its help than at the present time. The purpose of medicine is the evolution of the better man, free from disease, both inherited and acquired. In material rewards medicine benefits most abundantly those who do not practice it. In both prevention and cure it serves not only the individual, but his neighbor as well. Its future in this country is largely in the keeping of our universities and the administrative boards of these institutions have a duty to perform which they cannot shirk without detriment to the future welfare of the people.

Of the functions of the university medical school that lie outside the university I have time to mention only two, and with these I must content myself with scarcely more than mention. The faculty should take an active part in the education of the public in preventive medicine. This can be accomplished by popular scientific lectures, given orally and disseminated in print. It should support state, municipal and rural boards of health, be ready with the best advice concerning the securing of wholesome drinking-water, the most scientific methods of disinfection and the administration of wise pure food laws. In the second place, the laboratories and clinics of the school should be open to all legally qualified practitioners of medicine, who should feel that they are welcome to turn to these sources of exact information whenever they desire to acquaint themselves more thoroughly with the advances made in their profession.

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# SOME NEW FEATURES IN THE CLASS METHOD OF TREATING TUBERCULOSIS *

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## THE CLASS METHOD OF TREATMENT

The class method of treating tuberculosis has grown in popularity since its inauguration in Boston by Dr. Joseph H. Pratt on July 1, 1904. There are now many tuberculosis classes in different parts of the United States, especially throughout the East. All present certain features in common.

Each patient keeps in a special book a daily record of his temperature, pulse, food, hours in the open air, etc. Special books have been printed for this purpose, costing five or ten cents apiece, although any small note-book will answer.

The patients are visited in their homes by a paid nurse or social worker or by a volunteer friendly visitor. The visitor inspects the house, shows the patient how to live, and sees that he carries out the details of the treatment. The financial condition of the patient and of his family is investigated. In some instances direct assistance is given from the class funds (when such exist), in others appeal is made to charitable organizations, fraternal societies, religious bodies and benevolent individuals. A few classes have no visitors.

A fund is frequently provided for furnishing tents, cots, reclining-chairs, blankets, record-books, thermometers, sputum-boxes, paper napkins, paper bags, milk, eggs, olive-oil, car-fares, etc., and for erecting platforms, balconies, awnings and screens, and to meet the expenses of moving the patient to a more suitable house. This money may be supplied by a church or by a hospital or by private individuals. The expenses of the Emmanuel Church Class from July 1, 1904, to May 1, 1907, were about $2,000. Many classes, however, have no such fund, the patients themselves having to furnish the things they need or being supplied through some outside charitable agency.

Once a week the patients assemble for examination, instruction and encouragement. The physician in charge sees each patient in turn. Sometimes he also talks to the assembled class and endeavors to stimulate a spirit of emulation among the patients, posting on a blackboard the greatest gains in weight and the greatest number of hours spent out of doors. In some classes the members sit by themselves for about half an hour before the physician arrives and compare notes.

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* Read at a meeting of the Philadelphia County Medical Society, Dec. 22, 1909.

This weekly meeting is the distinctive feature of the class treatment. Its success depends largely on the personality of the physician in charge. In many instances, however, it does not differ from the ordinary dispensary hour, owing to the difficulty experienced by many class leaders in maintaining their enthusiasm while giving the same talk to the same patients for the eighth or tenth time, and in stimulating rivalry among patients who, after several months, desire to get well rather than to excel in detail.

The method of treatment adopted in the various classes depends largely on the individual views of the physician in charge and the conditions to be met. Dr. Pratt, of Boston, requires all his patients to sleep in the open air. Owing to the absence of yards, verandas or arch-ways in New York City, none of Dr. Niles' class slept out of doors. Some physicians demand of the members absolute rest; others permit graduated exercise and labor. Milk forms the basis of the diet in one class, three substantial meals in another. Drugs are little used in many classes. Some employ hydrotherapy; others do not. The same is true of the use of tuberculin.

### THE UNIVERSITY OF PENNSYLVANIA TUBERCULOSIS CLASS

The tuberculosis class of the Medical Dispensary of the Hospital of the University of Pennsylvania has been in existence for over two years. Formed originally of the tuberculosis patients from my room in the medical dispensary it now receives from all the rooms in this dispensary, through the social service, tuberculous patients who are considered suitable for class treatment. There is no fund at the disposal of this class; nor is there any expense connected with it: it costs the University Hospital nothing.

The patients are visited at intervals by the social worker of the hospital or by volunteer friendly visitors. The social worker investigates the financial condition of each patient and, where necessary, solicits aid from charitable organizations or from the patient's relatives, employer, pastor or church. The visitor furnishes the class instructor with a written report of the home conditions and reports from time to time whether the instructions are being carried out.

The patients provide themselves with clinical thermometers, sputum-cups, paper napkins and paper bags, which they can obtain from the hospital at wholesale cost price. In a small note-book each keeps a daily record of the amount and character of the food taken, the number of hours spent in the open air, and in sleep, rest, exercise and work, the number of bowel movements, the amount and character of the cough and expectoration, the morning and evening pulse and temperature, etc.

The home conditions are modified according to the possibilities of the house and the patient's means. One member sleeps on the roof in an army tent. Another put his mattress on the floor of a flat roof and slept on it, bringing in the mattress when it rained. He could not afford a cot. A third improvised a tent in a corner of the yard by throwing an old carpet over the side and back fence and over a clothes-line. Still another used a pole instead of a clothes-line and a rubber sheet instead of a carpet, thereby being able to remain out in the rain. Members sleep on porches, in back kitchens and in bedrooms with windows wide open, top and bottom.

The class meets once a week. It is a class in fact as well as in name. The first hour is devoted to lectures or talks by the class instructor and his assistant; to lectures and talks given by the patients themselves; to a general clinical conference in which the patients' records are criticized by both the instructor and the class members, and instruction is given by both; to public investigations into cases that do poorly to determine the cause, from which lessons are drawn for the benefit of all; and to a quiz to find out what the members know and do.

During the second hour the patients are seen one at a time, their chests or blood examined as required, and the treatment modified to suit the individual case.

It is in the management of the first hour that the University of Pennsylvania Hospital tuberculosis class differs from all other classes. The talks by the instructor teach not only the management of the disease, but its prevention as well. Sometimes I give the same kind of talk I give when addressing a labor union or a home and school association. At other times, especially when a new member is present, I outline the life a consumptive should lead. On different days I may give short talks on fresh air, food, clothing, bathing, the avoidance of infection, etc. The reason for each measure advised is always explained. I impress on the patients the particular need for hygiene in the members of their families, and the importance of having them examined, especially on the first evidence of ill health. The possibility of the occurrence of tuberculosis without much apparent illness is emphasized. I find this very necessary, as the husband, or wife, or other relatives, or a friend, of a patient who is improving will often insist that the patient has not consumption, because the picture of health presented does not conform to their preconceived notions as to the appearance of the disease. At one time I used to encourage the patients in the belief that they would recover completely, but during the past year I have been telling them they never will be cured, although they may become strong and able to work. I constantly remind them that the germs will always lurk somewhere in their systems, ready to become active whenever the patients relax their hygienic régime, and I endeavor to make them realize that for them eternal vigilance is the price of health. This insistence on the continuation of care and precautions throughout the patient's life renders a relapse less likely.

### INSTRUCTION GIVEN BY THE PATIENTS

After the patients had been told the same things a number of times I noticed that they seemed to lose interest. As it was necessary for them to hear the same story over and over again, I conceived the idea of varying the monotony by having the patients themselves occasionally give the talks. It did not take long to discover that, despite their frequent instruction, the patients' knowledge was not always accurate, clear, well ordered, or available. When a patient who is lecturing makes a mistake I invite criticisms by the other patients, frequently stopping the speaker and asking one of the others if he agrees with the speaker, and, if not, why not. I always supplement the member's talk, explaining in greater detail the matters that apparently have not been made clear and laying emphasis on what has not been sufficiently brought out.

In this way the patients not only have their own knowledge better grounded and freed from inaccuracies, but they become proficient in giving lectures on the prevention of tuberculosis and the management of the consumptive, and are thus able to repeat to their relatives and friends what they have learned in the class.

Sometimes the older members of the class instruct a newcomer, one speaking on the disposal of sputum, another on the separation of the eating utensils, another on living in the open air, and so forth, always, of course, under the direct guidance of the instructor. The new patient listens attentively to those who are themselves following out successfully the directions they are giving. When a fellow consumptive describes his own arrangement for sleeping in the yard and his scheme for keeping his dishes, knife, fork and spoon separate, these things do not seem so impracticable and visionary to the skeptical new patient as when ordered by the physician.

When the instructor examines the patients' records he comments favorably or adversely, and also invites criticism from the class. A patient who has done poorly is made to describe in detail his life during the previous week, while the instructor and class try to discover the reason for his going backward. His error then furnishes a text for a talk by the instructor or by a class member. In this way all profit by the experience of each and are prevented from making similar mistakes.

In order to make sure that the patients do not forget what they are taught, they are questioned from time to time as to what they are doing and the reasons for it.

### RESULTS OF THE CLASS TREATMENT

The results of this class treatment have been excellent. Nearly all the patients showed improvement. Large gains in weight were common. A great many patients, including some in the third stage of the disease and one who had suffered from severe laryngeal ulcerations, resumed their occupations. One man with cavities, whose fever remained over 103° for weeks at a time and who at first had to be kept at absolute rest, was walking five miles a day without fatigue and gaining in weight when he left the class to enter a sanatorium. A youth, who, in addition to his pulmonary lesion, had had two different severe attacks of bone tuberculosis with necrosis, worked eight hours a day, and in addition during the summer played on a ball team every evening and Saturday afternoon. He even started to play football until I found it out and stopped him.

An active educational campaign is carried on by the class patients. By precept and example they instruct relatives, neighbors and friends. The following case illustrates the amount of good they can accomplish: A patient always told her husband what she learned in the class. He, in turn, repeated the talks to his fellow workmen, with the result that ventilators were installed in the building where he was employed and windows were raised, and at noon instead of resting in the warm stuffy office, as formerly, many of the clerks took long walks. Some of the employees tried to convert their wives to proper hygienic living, and when a wife objected to fresh air at night, got up after she had fallen asleep and gently opened the windows. This same patient visits other persons known to have consumption or supposed to have "a cold" or "chronic cough," sees that they are properly looked after, and gives them advice and encouragement. She is now one of the friendly visitors of the Philadelphia Society for Organizing Charity.

A patient who was operated on for hemorrhoids in one of the general hospitals had to teach the nurses there how to keep her dishes separate and how to prevent her from becoming a source of danger to the other patients.

Two of the members who took up tuberculosis nursing surprised the other nurses with their knowledge concerning the management of the disease and their skill in taking pulse and temperature.

### CASES SUITABLE FOR CLASS TREATMENT

I regard every ambulant tuberculous patient as suitable for class treatment. A high degree of intelligence is not essential. The instructor should be able so to present the subject that any mind can grasp it. I do not recognize the existence of the "unteachable consumptive." Even careless and combative persons have been inspired and spurred to action by their association with earnest and enthusiastic fellow sufferers, all eager to get well and to help each other.

The only really unsuitable patients are those who should be confined to bed for long periods of time. Yet I have sometimes included such in the class when it was impossible for them to procure a physician or gain entrance to a hospital or sanatorium. They either get out of bed every week or two to attend the class or a relative brings the patient's record to the class meeting and reports on his condition.

Some classes graduate the members when the disease is arrested and the patients are able to return to work. It is my belief, however, that they should always remain in the class, even if they attend but once a month. A number of the members of the University of Pennsylvania Hospital class are working. In fact, it is often these persons in whom the process has been arrested that are most in need of supervision, as they tend to become careless and in consequence suffer relapses.

### ADVANTAGES OF THE CLASS METHOD OF TREATMENT

For ambulant cases the class method is, to my mind, the best method of treating tuberculosis. Its educational value to the patient, to his family, and to the public cannot be excelled. The patient learns how to live and work so as to keep well himself and not infect others.

In the ordinary dispensary there is not the time for the oft-repeated instruction and the constant questioning to find out whether the lesson has been well learned. Without the patient's record and the nurse's report it is impossible to know how thoroughly the directions have been carried out. The inspiration and spirit of comradeship engendered by the class is missing in the ordinary dispensary.

In the sanatorium the patient lives in a tent or shack or other building especially adapted for the fresh-air treatment, with every moment of his life outlined for him. Returning home to unfavorable surroundings and to people unfamiliar with the management and prevention of the disease, left to his own resources and often lacking the ingenuity to adapt the changed conditions to the life he should lead, he only too frequently falls back into the old ways that first rendered him susceptible to tuberculosis, relapses, and dies. This outcome is rendered more likely when the sanatorium treatment is made unpleasant as well as rigorous, in order that the patient shall not want to remain long, but shall try to be cured in six months and to remain cured, so that he shall never have to return. In such a case the patient comes to regard his treatment as something disagreeable, to be endured for six months for the sake of being cured, but to be avoided ever after. When proper living is forced on an unwilling patient by the discipline of an institution it is not so likely to be followed, after the removal of restraint, as when the compelling force comes from the patient himself, from his own understanding of the importance of, and necessity for, this mode of life.

The class method of treatment should be carried out in every tuberculosis dispensary. The increase in effectiveness will certainly justify the slight additional work or cost. Nor need there be any extra expense.

If class instruction were given to all sanatorium patients and if on leaving the institution they join a tuberculosis class, the good results obtained in sanatoriums would doubtless be more lasting and relapses less frequent.

I know of no other factor in the fight against consumption at once so available and inexpensive and withal so far-reaching and so lasting in its effects as the properly conducted tuberculosis class.

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# GONOCOCCUS VULVOVAGINITIS IN CHILDREN

## WITH RESULTS OF VACCINE TREATMENT IN OUT-PATIENTS

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Increased scrutiny in examining little children for admission to hospitals, asylums, day nurseries, kindergartens and other institutions has led to a surprising increase in the number of cases of gonococcus infection of the vagina seen in out-patients. The treatment of this class of patients, surrounded, as they generally are, by uncleanliness and poor hygiene, living in crowded tenements in families with no knowledge of the highly contagious character of the disease, has become a problem of much importance. A careful record has been kept of all the cases referred to the Vanderbilt clinic during the past three years, the total number of proved gonococcus origin being 344. These cases constituted a separate class in the department of pediatrics, and, through the interest of Dr. L. E. LaFetra, chief of clinic, additional facilities were extended regarding nurses and supplies. In the microscopic examination of smears from the vaginal secretion in all these cases, the organisms were decolorized when stained by Gram's method. All cases from which the smears showed either extracellular organisms, or those which were not decolorized, are excluded from these statistics. In many instances the first and second smears failed to show the gonococcus, but subsequent examinations revealed it. The doubtful or "suspicious" cases showing many leucocytes in the stained smears of the secretions are not here considered.

With the older children an endeavor was made to discover the extent of invasion by the gonococcus at the time of obtaining the smears, to find in what proportion of cases the parts beyond the hymen were involved and how deeply the gonococcus penetrated. A piece of glass tubing, 3 inches long, ¼ to 5/16 of an inch in diameter, its lumen at least ⅛ of an inch, was threaded with a string to whose middle was tied a cotton plug. The ends of the loop were then tied and the portion passing through the tube was drawn on so that the plug became firmly fixed in one end of the tube. The whole was sterilized and then introduced into the vagina as far back as the posterior cul-de-sac; the cotton plug, to prevent contamination by the secretion about the vulva, was then removed by drawing on the outer string, a platinum loop was then introduced through the lumen to the posterior cul-de-sac and a loopful of the secretion was removed.

It was possible to examine 40 cases in this manner. The very important result of these investigations was that in every one of the 40 cases gonococci were found to have invaded the upper part of the vagina.

In 15 cases in which the hymen was not intact, a visual examination of the cervix was made by means of a male urethral speculum and head mirror; in but one case the cervix was congested and slightly inflamed; in all the others the cervix was tightly closed and sealed by the normal mucous plug. The cervical canal, endometrium and their adnexa are apparently very seldom infected by continuity in little children.

### AGE

In the 344 cases observed, the average age of the patients was 5.1 years; the youngest was 3 weeks; the oldest was 12½ years. One hundred and fifty-one patients were under 5 years, the remaining 193 being over 5 years of age.

### ETIOLOGY

| | Cases. |
|---|---|
| Discharged from hospitals | 60 |
| Referred from day nurseries and kindergartens | 24 |
| Referred from orphan asylum and foundling home | 3 |
| Mother giving history of leucorrhea | 70 |
| Mother giving no history of leucorrhea | 75 |
| Sleeping with sister giving history of vaginal discharge | 28 |
| Sleeping with sister giving no history of vaginal discharge | 29 |
| Sleeping with child giving history of vaginal discharge | 3 |
| Sleeping with child having ophthalmia | 2 |
| History of "attempted rape" | 1 |
| Unknown etiology | 49 |

In 4 cases there was direct evidence that the father, mother and the child all suffered from gonococcus infection at the same time, the father having the original urethral infection.

In 8 instances there was direct evidence that the mother had had a discharge shortly after marriage. In these cases there was urinary evidence of a previous urethritis in the father.

There was one instance of infection of 4 children of one family; 3 instances of infection of 3 children of one family; 19 instances of infection of 2 children of one family. In 7 hospital cases and 4 which were not hospital cases, the infection had followed scarlet fever.

### DURATION OF VAGINAL DISCHARGE PREVIOUS TO COMING UNDER TREATMENT

| | Cases. | Average Age, Years. |
|---|---|---|
| 5 years | 3 | 8.2 |
| 4 years | 4 | 7.6 |
| 3 years | 2 | 8.1 |
| 2 years | 9 | 8.0 |
| 1½ years | 22 | 4.6 |
| 1 year | 12 | 3.1 |
| 6 months to 1 year | 52 | 4.5 |
| 6 months to 3 months | 55 | 5.3 |
| 3 months to 1 month | 42 | 5.9 |
| Under 1 month | 143 | 5.2 |

### SYMPTOMATOLOGY

Most of the cases gave a history of burning micturition, without undue frequency, at the onset of the discharge.

Edema of the vulva was generally present, but of short duration after treatment was instituted.

Discharge was present in all cases, the majority having the thick, yellow purulent type. The length of time the discharge remained purulent depended greatly on the cleanliness of the mother, being in inverse ratio to her efforts. Clean underclothing and frequent bathing of the vulva shortened the time of the purulent discharge. A mucous discharge, so small in amount as not to stain the child's clothing, may be indefinite in its duration and contagion. This was proved in many cases in which the patients returned to the clinic, when requested by postal card, after no treatment for a period as long as two years, the mother thinking the child cured when the clothing was not stained by the discharge. The gonococcus was present in 14 cases out of 61 patients who returned, with no treatment for periods from two years to six months. These 61 cases had previously been discharged as cured, after local treatment by irrigations.

### COMPLICATIONS

Ophthalmia from auto-infection strangely enough occurred in but four cases; one of these resulted in marked corneal ulceration and partial blindness.

Arthritis was present, as far as ascertained, in only 3 cases; 2 involving the ankle and 1 the knee. It is presumable that more cases occurred, but it was difficult to obtain any such history on account of the cases being out-patients.

Nocturnal enuresis, not pre-existing, was present in 10 cases. The majority of these cases improved with local cleanliness.

Inguinal adenitis was very infrequent, occurring in only 2 cases. Neither one suppurated, subsiding under rest in bed and local applications.

No cases of cystitis or urethritis were observed, and there was not a single instance of pelvic or general peritonitis, though such cases have been reported by others.

In a number of the older children, masturbation was most likely a factor in prolonging the inflammation and the discharge.

### TREATMENT

Printed instructions were given to each mother containing information and directions on the following points:

1. Vulvovaginitis in little children is a local contagious disease which requires treatment until the physician pronounces the child cured. It sometimes persists for months.
2. To avoid infecting other members of the family, the hands should always be washed thoroughly both before and after bathing the parts. The discharge, if carried to the eyes, may cause blindness.
3. The child should sleep alone. No one else should use any toilet articles, towels, napkins or wash-cloths used by the patient. All napkins, sheets, underclothing, towels and wash-cloths should be either boiled or immersed in a phenol solution, before washing. Bath-tubs, basins and everything else coming in contact with the patient should also be washed with this solution.
4. It is advisable that all children with this disease should wear a napkin or pad, which should be changed daily.
5. Parents are cautioned not to allow the child to mingle intimately with other little girls. The child should not attend school or day nursery lest other children become infected.
6. The parts should be cleansed externally at least four times daily with a solution of borax or boric acid crystals, one teaspoonful to a pint of boiled water.

### TREATMENT BY IRRIGATIONS

The following irrigations were tried:

1. Potassium permanganate, 1 to 4000 solution.
2. Condy's fluid,[1] 1 dram to a pint (this is a solution of potassium permanganate and alum sulphate, in which, by the combination, a larger amount of available oxygen is evolved)
3. Physiologic salt solution, 0.9 per cent.
4. Boric acid solution, 3 per cent.
5. Formalin solution, 1 to 1000.

The best results as regards cleansing were obtained with Condy's fluid.

The following instillations, in each of which two drams of the solution were instilled, were tried in conjunction with the irrigations:

| | |
|---|---|
| 1. Silver nitrate | 1 to 5 per cent. solution. |
| 2. Protargol | 1 to 10 per cent. solution. |
| 3. Argyrol | 20 to 50 per cent. solution. |
| 4. Ichthargan | ½ to 5 per cent. solution. |
| 5. Collargol | 1 to 5 per cent. solution. |
| 6. Ichthyol | 1 to 10 per cent. solution. |
| 7. Emulsion *Bacillus bulgaricus.* | 10 to 50-per cent. solution. |

Treatment by tampons of ichthyol, 5 per cent. and ichthyol 2.5 per cent. with iodin 1 per cent. and hydrastis 5 per cent., were tried with poor results.

Suppositories of 10 per cent. ichthyol were used with no permanent results.

Each mother was instructed in the clinic and at her home in the care of her own hands, both before and after the treatment, the preparatory cleansing of the vulva, the preparation of the douche, the sterilization of the catheter and the introduction of the catheter. This was done by actually making her give the douche in the clinic, by printed instructions and by the nurse visiting the home to see that the treatment was properly carried out. The nurse's visits were continued if the patient did not make a weekly visit to the clinic, as was ordered in all cases. When patients lived at a distance, postal cards were sent to them, and in this way a fairly close record of the attendance was kept. The danger of "overtreatment" was reduced to a minimum by frequent examinations of the child at the clinic.

The method of treatment was as follows: The child was placed in a dorsal position with the thighs flexed on the abdomen. The labia were held apart while the vulva was carefully sponged with an antiseptic solution (1 to 4,000 bichlorid of mercury). The sterile catheter attached to a fountain syringe, after being anointed with sterile lubricant, was gently introduced into the vagina. Two quarts of solution were used as the irrigation. Once weekly this routine was carried out in the clinic, and an instillation of one of the astringent silver preparations was given before the catheter was removed, by means of a glass hand-syringe. The foot of the table was kept elevated and the instillation was allowed to remain for a period of five minutes. Irrigations were given by the mother at stated intervals at home; if the secretion was profuse they were given daily, the intervals were made longer as the secretion lessened in amount. Irrigation solutions were tried at varying temperatures, ranging from 105 to 120. No apparent benefit was noted following temperatures over 110.

### TREATMENT BY VACCINES

Following the results of Cole and Meakins[2] in the use of vaccine therapy in gonorrheal arthritis in adults, the record of 25 cases reported by Butler and Long[3] and 41 cases reported by Churchill and Soper,[4] the two latter in children with vulvovaginitis confined in hospitals, the same treatment was undertaken in out-patients. Eighty-four patients in all have been treated by this method. Because the patients were out-patients, because of the lack of time and because of the experience of others in the use of the vaccine in adults, I omitted taking the opsonic indices, except in a few of the early cases. I do not deem it necessary to take the opsonic index, as there seems to be little relation of the index to the vaginal discharge.

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[1] Condy's fluid, according to the National Dispensatory, is made by mixing 53 parts of potassium permanganate, 333 parts of crystallized aluminium sulphate, and 777 parts of hot water. On cooling, potash alum crystallizes out, which is separated from the liquid. The latter hence consists of a solution of potassium sulphate and permanganate of aluminium. The U. S. Dispensatory states that "all the available oxygen of the permanganic acid is utilized, whereas only 60 per cent. of this amount is utilized with the simple alkaline permanganate."

[2] Cole, Rufus I., and Meakins, J. C.: Treatment of Gonorrheal Arthritis, Bull. Johns Hopkins Hosp., June-July, 1907.

[3] Butler, W. J., and Long, J. P.: Vaccine and Serum Treatment of Gonorrheal Vulvovaginitis in Children, The Journal A. M. A., March 7, 1908, i, 744.

[4] Churchill, F. S., and Soper, A. C.: Inoculation Treatment of Gonococcus Vulvovaginitis in Children, The Journal A. M. A., Oct. 17, 1908, ii.

Three separate vaccines were used:

1. Vaccine prepared from 16- to 18-hour blood-agar cultures from acute male urethritis, prepared after the method devised by Wright by Dr. R. V. Lamar of the Rockefeller Institute for Medical Research. The strength of the emulsion was 100,000,000 killed bacteria to 1 c.c.

2. Vaccine from a stock culture at the Presbyterian Hospital belonging to Dr. J. C. Meakins. The strength of this emulsion was also 100,000,000 to 1 c.c.

3. Stock vaccines prepared by Parke, Davis & Co., the strength of which were 50,000,000, 100,000,000 and 500,000,000 per cubic centimeter. No attempt was made to use the autogenous or personal vaccine from the patient's own organisms.

The injections were made under strict asepsis into the gluteal muscles with an ordinary glass hypodermic syringe. In using small quantities of the vaccines, sterile physiologic salt solution was employed as a diluent.

The number of vaccinations in the individual cases varied according to the age, severity and chronicity, the smallest number to accomplish a cure being four and the greatest number being eighteen.

In endeavoring to arrive at some conclusion regarding the dose of vaccine to administer to children, I selected an older child who had been affected for a long period and whose parents were more intelligent than the ordinary out-patient. A large dose was injected for three consecutive days, the child being put to bed under the constant care of a trained nurse. This child was 8 years of age and had been treated by the irrigation method for seven months. I injected 1,000,000,000 killed bacteria into her buttock at one dose each day, and had her temperature and pulse taken every two hours. She not only showed no rise of temperature, but no local reaction whatever and no subjective symptoms.

In the majority of cases, regardless of age (except under 6 months) I started the treatment by an injection of 50,000,000 every fifth day, increasing the dose by 10,000,000 until five injections were given, i. e., 90,000,000. The interval was now made ten days before another was given. Smears of the remaining secretion were taken and stained by Gram's method at each visit after the fifth injection. In most of the acute cases six injections were sufficient for a complete cure. In the cases of long standing it was necessary to use an increased number of injections, bringing the dosage up to 200,000,000.

No patient was pronounced cured unless free from gonococci by Gram's method, once weekly for four weeks and two additional examinations at intervals of two weeks. If no gonococci were present after these six examinations and no discharge evident, I considered the child cured. I have had 19 children return to the clinic after a period of three months following their sixth examination and found no evidence of the infection present.

Occasionally an extremely slight local reaction took place, but this in every case subsided in twenty-four hours. The reaction was never sufficient to cause any pain or tenderness. General constitutional disturbance never occurred following any of the injections. Temperature charts were kept of the cases, the temperature being taken twice daily by the visiting nurses, who visited the patient's home while active treatment was being given.

No distinct rise in temperature following an injection was noted in any of the cases. No local treatment whatever was used, except external bathing, if excessive discharge was present. No irrigations were given.

Of the 84 cases treated by vaccines, 16 were of long standing which had been treated by other methods. In the majority of these 16 cases permanganate irrigations were previously used. Gonococci were present in all before instituting the vaccine treatment. These latter cases required a larger number of vaccinations and an increased dosage.

RESULTS

| Treatment. | Total No. of Cases. | Cured. | Uncured. | Lost. | Per Cent. |
|---|---|---|---|---|---|
| Irrigation ........ | 260 | 158 | 53 | 49 | 60 |
| Vaccines ........ | 84 | 76 | 5 | 3 | 90 |

Average length of time under active treatment by the irrigation method, 260 cases, 10.1 months.

Average length of time under active treatment by the vaccine method, 84 cases, 1.7 months.

Of the 84 patients who were given the vaccine, 16 had been under the irrigation treatment for long periods. Three of these patients were not benefited, 1 did not return and 12 were cured. Some of those who did not respond to the treatment with one vaccine frequently did well on one of the other vaccines. In the cases in which there was no benefit, new strains were used; increased dosage, less frequent dosage and more frequent dosage, was tried but with negative results. The 5 uncured patients were all over 5 years of age, two of them being over 9 years. Contrary to the findings in some other published results, in young infants, under 1 year of age, three cures were obtained by the vaccines, the youngest patient being 3 weeks old.

## CONCLUSIONS

Vaccine therapy has a place in the treatment of this infection in little children for the following reasons:

1. The short time required for a cure in over 85 per cent of cases.

2. The ease of administration of the vaccine; no special apparatus or knowledge of technic being necessary.

3. The vaccine is apparently harmless when used under aseptic precautions.

4. It is not necessary to take the opsonic index, with its complicated technic.

5. It eliminates irrigations, which direct the child's attention to its genitals, at times encouraging precocious masturbation. The frequent douches necessary in the irrigation treatment will, with the best care and gentleness, produce some injury when continued over a long period of time.

I wish to express my thanks, for the clinical cases referred to me from other hospitals and clinics, to Dr. R. V. Lamar of the Rockefeller Institute for Medical Research and Dr. J. C. Meakins of the Presbyterian Hospital, for cultures and vaccines, and finally to the visiting nurses' staff of the Vanderbilt Clinic, who have aided in making this record of cases possible.

125 West Seventy-sixth Street.

# BOTTLED MILK AS A HEALTH MEASURE

## AND SOME OF THE DIFFICULTIES ENCOUNTERED IN SECURING A PURE MILK-SUPPLY

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There is to my mind no more important matter for public consideration and action than the one of pure milk-supply, for the manifest reason that on this food product at least 50 per cent. of the present, and probably each succeeding generation, will depend for subsistence.

The best records up to 1910 show that ten bottle-fed babies die to one that is breast-fed. It has been demonstrated, within the past five years especially, that there is no reason to believe that the alimentary canal of the average infant is often incapable of digesting the food necessary for normal growth and development, when the food supplied, even though this is cow's milk, is of suitable quality and quantity; indeed, since strenuous hygienic lines have been drawn by men of our profession in some cities throughout the country the mortality rate has been lowered 20 per cent., and in a few cities, where the contest has been waged with great vehemence and intelligence, 50 per cent. salvation has been achieved.

If we would form anything like an adequate conception of the loss in mortality to child life, due wholly to filthy and adulterated milk, we shall need make some inquiry into statistical records along these lines. The reports of the U. S. Census Office for the year 1905 declare that the malign effects of artificial feeding of infants and the consequent impress made on the mortality returns become manifest by an examination of the vital statistics, but to gauge the exact ratio of infant deaths resulting from artificial feeding is very difficult. We have some very startling figures in this report, however. In a registration area with a population of 33,000,000 there were 105,553 deaths among infants under one year of age. Diarrhea and enteritis caused the death of 39,399 children in the first year of life. The U. S. government report for 1908 shows a total of 400,000 deaths of infants, and the report concludes that 200,000 of these could be prevented.

"About one-fifth of the total loss of life in the first year after birth," writes the Registrar-General of England, "takes place within a week of that event, while by the end of the first month the proportion reaches one-third, and by the end of the third month it exceeds one-half. From the first to the fourth month diarrheal diseases steadily increase in destruction."

In Paris and the cities in France having over 30,000 inhabitants the deaths from diarrhea by months per thousand infants under one year were as follows: June, July, August, September and October the average was 525, or more than one-half of all born during these months succumbed to gastro-enteric trouble.

According to Behring of Germany, of every 1,000 children born alive, 235 succumbed during the first year of life. Only 510 out of every 1,000 males born attain manhood. Not more than a third of those reaching maturity are found to be fit for military service. These sad facts he attributes very largely to the ulterior effects of infection derived in infancy from milk.

In the face of these astounding figures and facts we find that to better these conditions, which have cost and are costing us so dearly, is a problem of gigantic proportion and the elements entering into its solution are varied and complex.

In the first place, as soon as any one attempts to institute reform measures he meets with opposition on the part of the producers. This opposition is due to two causes—ignorance and a desire to receive the largest possible return for their product with the least amount of outlay. Of course, this second reason is really based on the first, ignorance, for it is now a well-known fact that our most up-to-date milk producers, those giving the most careful heed to all matters pertaining to sanitation, are really the men to whom the business is worth while from a financial standpoint.

While I have placed the milkmen, or rather their filth, first in the enumeration of factors in the death-rate of children, I do not regard them as our greatest foe, for they can be educated, coerced by law, or eliminated from the business by reason of non-compliance with the regulations affecting their product.

It has been my observation that time-serving politicians who have the appointing of boards of health, and their political allies, are the greatest menace to the furtherance of measures to prevent this onslaught on these helpless children. This condition of affairs prevails on the part of these office-hunters by reason of, first, their inordinate desire for office at any price—even at the cost of human lives; second, their ignorance of the grave questions involved in settling matters pertaining to higher sanitation, and, therefore, their utter inability (or, if not inability, unwillingness) to select men for this important work who have the intelligence, perseverance and firm decision of character to stand for the right at any cost. In other words, men are selected whom they believe they may dominate or control in the interests of their party.

Some of you may think I have overstated the condition that obtains throughout the state. Let me, therefore, refer to a few facts gleaned from the history of a certain municipality within this state having 125,000 people. The mayor stated before the council that the board of health of this particular city had been extravagant in that they had raised the salary of the clerk of the board from $1,000 to $1,500 and the salary of the health officer from $1.100 to $2,000 (although he, the mayor, was drawing $5,000 and his own clerk $2,000). He further stated that members of this body had exceeded their authority in that they had employed one extra meat inspector, making two for the entire city, with more than thirty slaughter houses to inspect, besides hundreds of markets throughout the city. This statement was made in the face of the fact that the statutes give to the board of health the right to employ as many meat and milk inspectors as they may deem necessary to carry on the work of sanitation. Not only do we find personified ignorance of the matter to which I have above alluded, but we find in this same municipality this same office-seeker siding with milkmen whose bacterial count runs into the millions, and the temperature of whose product was as hot as the streets on which it was being hauled during the days of July and August. I could go on *ad infinitum* touching these matters pertaining to this municipality, but suffice it to say that in the election the mayor received the votes of every man who was opposed to bottled milk, of every voter who desired to sell tuberculous and cancerous meat, of every citizen who had the right of franchise who was opposed to lifting his produce from the sidewalk a distance of two feet, so that it could not be contaminated by dogs, etc. He was sustained at the polls by every meat vendor who was opposed to screening his meat in the market to protect it from the deadly germ-carrying flies, and by every foreign and domestic voter who desired to supply so-called ice-cream, made from the most questionable products in most questionable quarters and containing in many instances not more than 4 per cent. butter-fat. Those engaged in peddling this product in cones (the latter handled by individuals whose personal habits as to cleanliness were superlatively bad, and whose practices in this line of dangerous work had been prevented—stopped—by effective legislation) supported him. In the last place, although not least, all the citizens who desired to run their businesses 365 days and nights of the year, except, it may be, on election days, supported this mayor that they might run in open defiance of a law which he had taken an oath to respect and execute.

He and his friends refer to his administration as a "business administration." Who pays the price? Can you count the cost of such a business administration?

This last illustration may be a little foreign to the qustion at issue, and my only object in referring to it is to show, or perhaps further to emphasize, that if we would obtain the highest standard in matters of sanitation and life saving, the work of departments of health must be divorced as far as possible from politics as politics is now understood and practiced in many cities and towns throughout this country.

I am not criticizing the man or the citizen, but the politician and those who control his political action in adopting methods to further political ambition at the cost of human life.

It is argued and apparently believed by many of these politicians to whom I have referred that the work of the health officer is of minor importance and that young and inexperienced physicians are glad to take the place for $1,000 to $1,200. That may be true, but we know that such men as these are overpaid even at such salaries. The fact is that, if progress is to be made along these higher lines, the work demands the most symmetrical, experienced and generally well-informed man that can possibly be secured for this very important work, and it is an insult to our profession to ask that this work be done for such compensation as I have mentioned.

It occurs to me that a member of the board of health should have license to state the truth and the whole truth regarding these obstructions to the securement of better and saner policies along these lines or matters in question, for throughout this state each member serves without financial compensation, and his only reward can be a knowledge of a duty well performed, and no one, therefore, may truthfully say of him that he is disgruntled by discontinuance of service.

As to bottled milk as a health measure I beg to recite some experiences in my own city touching this question. Notwithstanding strong organized opposition, the Board of Health of the City of Dayton passed and successfully fought through the courts a bottling regulation or provision which, when executed, will save scores of young lives every year. Inasmuch as the provision is the first of the kind within the state, and for that matter in the United States, I have thought it might be of interest to give it here *verbatim*, with the salient points, as well as those specifically controverted.

Section 1.—No person, firm or corporation, except such as may sell for consumption on the premises where sold, and dealers in dairy products exclusively, shall sell, offer for sale, expose or keep with the intention of selling any milk or cream, or both, in the City of Dayton, Ohio, unless such milk or cream is kept, offered for sale, exposed for sale, or sold in tightly closed and capped bottles or receptacles of a similar character which may be approved by the board of health of said city; the owners and operators of dairies, and all drivers of wagons who sell milk or cream at retail or deliver the same from wagons, shall carry, sell and deliver such milk and cream only in bottles or other approved receptacles as aforesaid. All milk and cream so sold in bottles or other receptacles, not to be consumed on the premises where sold, shall be taken and carried to the residence of the purchaser or place where intended for use in the said bottles or receptacles, and not otherwise.

Section 2.—No milk or cream shall be sold, offered for sale, exposed for sale or kept with the intention of selling in or at any milk depot, creamery, store or other place of business, unless such milk depot, creamery, store or other place of business shall be equipped for keeping said milk and cream, and the same shall be kept therein, at a temperature of 50 degrees, or lower, Fahrenheit.

Section 3.—The provisions of Section 1 of this regulation shall not apply to *bona fide* dealers in milk and cream at wholesale who shall sell at any one time a quantity of not less than two gallons of milk or two quarts of cream, and who shall each have a separate room in which said milk and cream shall be kept or offered for sale, with a floor space at least ten feet square, with suitable ventilation, and provided also with an additional room in which shall be washed and cleaned all cans, bottles, or other receptacles, and utensils of every kind used in connection with said business, all of which shall be subject to the approval of the Board of Health.

In a suit brought to test the validity of this regulation the plaintiff contended that it was unconstitutional and void, that it was unreasonable, that it was burdensome, that it was partial and did not act with uniformity on persons of the same class, and that it made unjust discrimination between them, and that it destroyed vested property rights, etc. Of course, in our answer we denied all of his allegations, except that he was engaged in the dairy business. We held that the purpose for which the regulation was passed was one of sanitation and preservation of health, first, to secure to the customer an equal distribution of butter-fat or a requisite amount required by law, 3 per cent. (a result out of the question under the old method of dipping from the cans); second, to prevent the delivery of milk to customers in unclean vessels furnished by them; third, to prevent dirt, dust and disease germs from coming in contact with the milk.

The court held that, in so far as the first purpose was concerned, the seller is not required to distribute the butter-fat equally among his customers. If he brings his deliveries up to the standard required by the Revised Statutes, 4200-12, he has met all the law of the state demands. We contended, and do now contend, that it is not only unsafe for the dairyman to attempt legal fulfilment of the law by handling of milk in cans for retail, with the dipping process, but that it is unsafe to the customer, in that he is cheated of one of the essential factors in milk necessary for the life and sustenance of children, to say nothing of the dangers of contamination under the old process.

As to our second ground the court said: "It is certainly not fair to impose regulations on one man because of the negligence or folly of another" (referring to containers placed out by customers for the reception of milk). Then the court proceeded to the third reason or ground held by us for requiring bottled milk, to wit: that dirt, dust and pathogenic germs come in contact with milk in cans which are being continually opened for the dipping of milk. This was given by the board as the principal reason for the adoption of the measure in question and was held by the court, after hearing all the evidence, to be reasonable and in conformity to law and common decency.

One fly falling into the pail has been shown to be capable of introducing 250,000 germs into the milk. Now, in some of the streets and alleys through which these milkmen drive their wagons, and from which they dip here and there to supply their customers, are not garbage-cans full and running over with morbific matter, which in some cases has been standing for weeks, without municipal interference, at a temperature of this climate in July and August? In the poorer sections are not these garbage-cans the receptacles into which cuspidors have been emptied, filled with sputum deposited there from the cavities of lungs of individuals in the last throes of consumption? Flies which have fed thereon and which have their bodies and legs teeming with the germs of tuberculosis leave this morbific feast to follow the milk-wagon and sup on the fresh milk that has fallen from the filthy dippers; not infrequently they fall into the can as the lid is removed to supply the next customer.

It needs no argument to convince one that milk delivered in bottles may be as insanitary and as disease-producing as that delivered in cans. Milk is no cleaner than the dirtiest thing it touches. Any bottles, can, pail, cooler or other appliance, if dirty, is a source of contamination. I am presuming when dealing with the bottling measure that the cattle have been tested for tuberculosis. This, however, is presuming too much, for many, many herds throughout this state are alive with tuberculosis, as was one recently supplying milk to Dayton, where, when the test was made by the state examiner at our instance, every cow of the entire herd of thirty-one was condemned and destroyed; and I wish to add that this important question of state inspection must be taken up in a way that will eliminate this great danger.

Under this regulation, I presume that the barn, the source of water-supply, the utensils used in milking, the toilet of the milker, the condition of the cow as regards cleanliness, is all that may be desired, or has passed muster of the dairy inspector. I contend that the milk so secured and delivered other than in bottles is a most flagrant source of disease and death.

It is indeed, a most difficult problem to render a can which has been used for some time sterile. The seams and indentations about same are most difficult, indeed, if possible, to clean, whereas bottles have a smooth surface and, too, are transparent, so that much may be discerned by inspection both by the seller and the buyer. By adhering to the following technic (all other precautions which I have enumerated having been followed out) the dealer will place a product within the hands of the consumer that means salvaton to children who have hitherto been sacrificed to dirt and greed.

First, wash the bottles in pure cold water; second, scrub them thoroughly with a brush, using hot water and some good soap powder; third, rinse them again in hot water; fourth, scald them out thoroughly with boiling water (steam is preferable to boiling water and should always be used when at hand); containers should be subject to boiling water or steam at least from five to seven minutes at a temperature of 212.

The temperature at which milk is held after cooling has much to do with its quality and fitness for food, especially for infants and children. One germ in milk at a temperature of 70 degrees will multiply itself 250 times in twenty-four hours. It is practically out of the question to deliver milk in cans in retail without the temperature of the milk reaching 70 degrees and above during the summer months or heated term; this means a product running into the millions of bacteria, both common and pathogenic; whereas in bottled milk, if the precaution is taken to which I have alluded, and these bottles filled with milk placed in crates surrounded by ice, a delivery should be made at a temperature never exceeding 60 degrees.

It is remarkable what may be accomplished by legislation and execution of the legislation touching these matters of cleanliness.

Men who have hitherto appeared to be wholly indifferent to all these important points of sanitation will be found inquiring diligently what they may do to be saved. It is then that a campaign of education may be of great benefit.

Dairy inspectors should be instructed (and they should be high-class men, possessing scientific knowledge on this subject) to advise the producer along all practical and scientific lines touching his product. The producers should be supplied with the practical literature furnished by the U. S. government touching all points in question.

The health officers should meet the producers in their dairy association and show them that for them to take higher rank and furnish a clean and safe supply of milk is for them not only to enhance their own financial well-being, but thereby to become great public benefactors and saviors of their race.

The matter of the urgent necessity of great care in the handling of all food products by reason of the dangers arising from carelessness is emphasized in a well-known case reported by Dr. George A. Soper,[1] that of a healthy woman, a cook, who had lived in many different families during a period of ten years preceding 1907, in each of which there developed in from 3 to 4 weeks after the cook had entered on her duties, typhoid fever among members of the household. In all twenty-eight cases of this disease were traceable to this source. The cook was removed to a reception hospital for observation. She denied ever having had the disease. Examination of the blood and urine was negative, but the bowel discharges were found to furnish cultures of the typhoid bacillus. The mode of infection is clearly indicated by the woman's occupation, and is a sad commentary on her personal habits of cleanliness.

It should be insisted that examiners or dairy inspectors inquire, not only subjectively but objectively if necessary, into the personal physical condition and habits of the handlers of milk.

During my administration as president of the Board of Health of Dayton many cases of what should probably be regarded as criminal negligence along this line have come to my attention. Nothing but the closest scrutiny on the part of those in charge of the work will eliminate this source of danger.

This work of reformation is an arduous one and one fraught with much discouragement. None but the strongest heart and bravest soul need enter the ranks, but those who are clear of head and honest of heart need not fear for their reward; it may not come in dollars and cents, but it will come, and come with a sense of duty well done.

307 Reibold Building.

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[1] Soper, George A.: The Work of a Chronic Typhoid Germ Distributor, THE JOURNAL A. M. A., June 15, 1907, xlviii, 2019.

# AN IMPROVED METHOD OF TRACHELORRHAPHY

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SYRACUSE, N. Y.

The operation of trachelorrhaphy has so often been unsatisfactory that the tendency has been to substitute amputation of the cervix. Repair of the cervix, however, is so simple; and, when the result is good, the patient is left in so much better condition than after amputation that it is well to search for the cause of the dissatisfaction and try to find some way to make the operation successful. The trouble with trachelorrhaphy is that the site of the repair is apt to be so thin that it cannot possibly withstand another labor. A section through such a repaired cervix would show a cavity barely closed at the side. This poor result is brought about, I believe, by the faulty method of through-and-through stitching by which the side of the cervix is compressed to thinness, the ligature drawing the mucous membrane within the canal almost into apposition with the mucous membrane covering the cervix.

The usual repair is made by cutting through and removing the scar tissue at the site of the old laceration, denuding the anterior and posterior lips from the depths of the angle to the apex of each lip, and closing the wound with several through-and-through stitches. Some surgeons use catgut, but many find that, on account of the narrow apposition, the catgut will not hold, and hence use silkworm gut or silver wire. Such a repair looks well, but the poor result is evident if, for any reason, it should be decided to amputate the repaired cervix. While the denuded lips were from one-half to three-quarters of an inch wide, the repair is only from one-eighth to one-quarter of an inch (Fig. 1). In such a cervix, the eversion, to correct which the repair was made, quickly returns with its unhealthy discharges, and the next labor tears open the double layer of mucous membrane which alone has held.

What steps can we take to make the repair a success? How can we bring together the broadly denuded muscular surfaces of the anterior and posterior lips without narrowing them? A repair of the cervix, I believe, should follow the method of layer suture so successfully used in closing the abdomen. I use a continuous suture in two layers. The needle is entered through the outside of the cervix near the angle of the wound (Fig. 2, a). This suture is carried very deeply back and forth into the muscular layer of the anterior and posterior lips, coming out at the front of the opposite lip (Fig. 2, b). Each stitch is pulled up as the operation proceeds, broadly approximating the depths of the wound. The suture goes to the edge of the mucous membrane of the cervical canal, passing through the superficial parts only at the points of beginning and ending. The superficial layers are then drawn together by running back the same continuous suture, coming out opposite the point of starting (Fig. 3), where the two ends are tied together. An amputated section of this cervix will show that it is equally thick in all parts and therefore properly repaired.

I use No. 1 chromic catgut, no tension on the stitches being required to hold the broad surfaces together. In case of bilateral laceration, I split and denude both sides, and then repair completely first one side and then the other.

In many cases it will be found that the cervix shows on one side a slight laceration without scar tissue, while on the other side there is a deep laceration causing hypertrophy, eversion and erosion. In these cases I do a unilateral repair, a wide wedge being removed from the bad side by which the hypertrophied parts are virtually amputated. While this will place the os uteri slightly on the side that has not needed repair, the operation is done with half the danger and in half the time required for other procedures, leaving perfect drainage with no possibility of stenosis. The cervix soon straightens itself and within a few months the os will be found at the apex. In many cases a deep wide unilateral operation is much better than a bilateral repair.

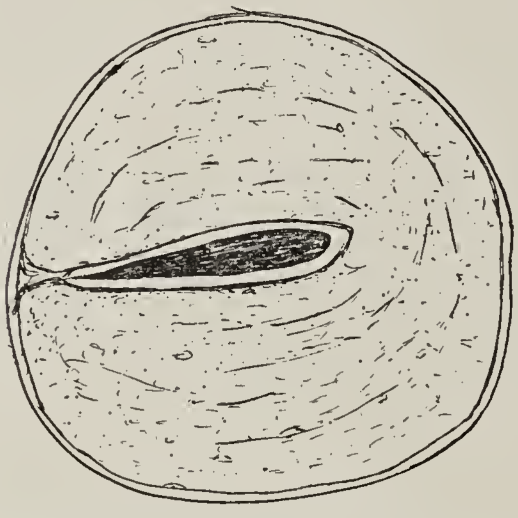

Fig. 1.—Amputated section of cervix, showing poor result of right unilateral repair.

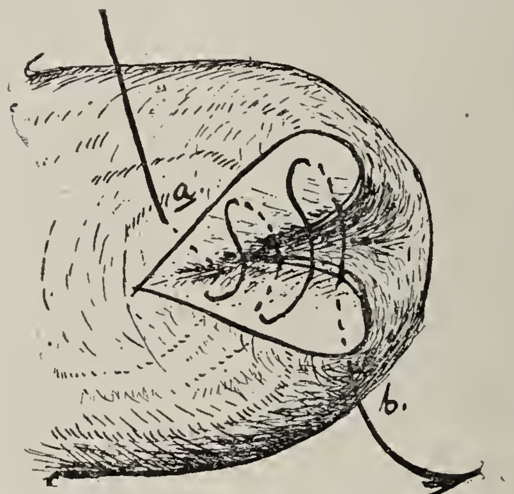

Fig. 2.—Deep suture for muscular layer starting at *a*.

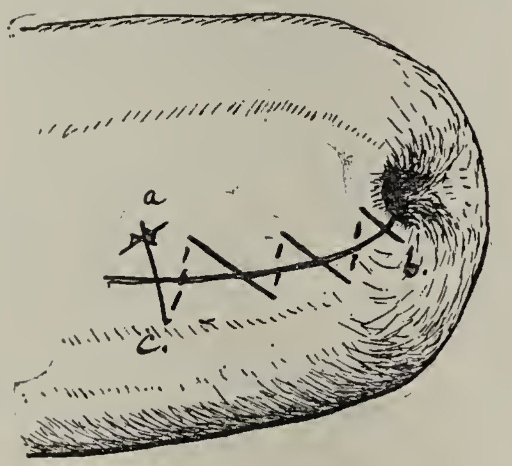

Fig. 3.—Superficial suture running back from *b* to *c*, and then tied with end *a*.

This method of layer suture on one or both sides is very simple and rapid and the result has been wonderfully satisfactory in my experience.

1000 East Genesee Street.

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# FORMALDEHYDE POISONING

HENRY F. HOYT, M.D.
EL PASO, TEX.

*History.*—A. K., a Japanese merchant, aged 24, had been given some medicine to take after meals—"a teaspoonful in a glass of water." He put the required amount into a glass and looked about for some water. He was in his place of business, into which he had just moved, and seeing on a table a gallon bottle labeled "Stafford water," a mineral water much used here, left by the former occupant of the premises, he filled the glass from the bottle and, as is often the case when taking medicine, did his best to gulp down the mixture as quickly as possible. He succeeded in swallowing over half of it before he discovered that something was wrong. He called for help, and as I was near I reached him in about a minute.

*Treatment.*—In that short time he was already in a state of shock with convulsions and only partly conscious. His assistants, all Japanese, were excited almost to frenzy, a condition which played such havoc with their limited English vocabulary that it was impossible to ascertain what had happened. I decided that I had to deal with a case of poisoning but of what nature or kind I had no idea. Seeing some salt on the table and a kettle of hot water on the stove I ordered them to make him swallow as much salt water as possible and to rub him vigorously at the same time, while I rapidly prepared a hypodermic of .0065 gm. of apomorphin. By the time I administered this they had succeeded in getting down about a pint of the solution. In a short time the emetic acted vigorously and continued to do so until we had refilled and emptied his stomach several times.

His tongue, mouth and throat were blistered but there was nothing in the odor of the stomach contents to give a clew as to the kind of poison he had taken. After he had rallied from the shock and the others had calmed down enough to talk coherently, I got the facts of the case. I removed the cork from the bottle of supposed "Stafford water," smelled the contents and my diagnosis was made. The "water" was a solution of formaldehyde left by the former tenant and was found to be the standard 40 per cent. mixture. From the patient's statement later he must have swallowed at least 100 c.c., possibly 120.

He developed a severe gastritis, with very sore mouth and throat, but made an uneventful recovery in about ten days.

This is the only case of formaldehyde poisoning I have ever seen and I find very little about it in the literature at my command. It is my opinion that, had the stomach not been full when he took the dose and had it not been emptied so promptly, the case would have terminated fatally.

# A PECULIAR CASE OF MERCURIAL POISONING

BURNLEY LANKFORD, M.D.
NORFOLK, VA.

The following case is submitted because of the unusual method by which the mercury was introduced into the system:

*History.*—Mrs. — sent for me hurriedly one afternoon; she was seen first at 7:15. She was very nervous, crying, and said that she had awful pain in her head and that fearing that she was pregnant, because the week previous her menses had lasted two days instead of four, she had followed the advice of a woman of her acquaintance, and two hours before calling me had inserted as deep as possible into her vagina two mercury bichlorid tablets (gr. 7.3 each). She had had no idea that they would hurt her, but she was having much pain and thought she was swollen. An examination was at once made. Each labium was found to be at least an inch thick, very red, tense and shiny, having a brawny feel. With some difficulty, owing to the marked swelling, one finger was introduced, and the entire vagina and vaginal portion of the cervix were found to be in the same brawny state. No trace of the tablets was found. No one was present to assist, but realizing the value of time I made a strong soap solution (a gallon), emptied therein the contents of a box of cooking soda and gave her myself a copious vaginal douche; then, using the handle of a bent tablespoon as a Sims speculum, with the patient in knee-chest position, the whites of five eggs were put into the vagina. The swollen labia served to retain the albumin. The white of one egg will neutralize about four grains of bichlorid: therefore the albumin was present in sufficient quantity, though too late, to neutralize most of the bichlorid; it seems likely, however, that the subsequent failure of the vagina to slough was due to the albumin. A hypodermic injection of morphin was given to relieve the intense suffering. Before the morphin was given the patient was beginning to be nauseated, owing, it seemed to me, to the excretion of the bichlorid into the stomach, and so as fast as she would vomit she was made to drink a pint or so of water which in a few moments she would vomit again. The case was then turned over to her family physician, mine having been an emergency call, and I saw the patient no more for seven days.

*Examination.*—The change in her was pitiful. She had been an unusually pretty woman, but though I had known her for years, I could not have recognized her in the woman before me. The entire, face, neck and chest, for several inches below the clavicles, were tremendously swollen, the eyes practically closed, the tongue so swollen and protruding that the lips were forced far apart. The tongue and buccal mucous membrane were a grayish black, and were sloughing; the teeth were loose enough to have been spit out; the breath emitted a most horrible odor. There was not much flow of saliva at this time. The bowels were moving very frequently, small, bloody, mucopurulent stools; for the passage of each, the patient would jump out of bed, and had done so for a week. Her mind was fairly acute, though she could not articulate because of the swelling. She did not complain of pain in her abdomen, nor was she tender or tympanitic at any time while under my observation. Pulse at this time was 130, temperature 101.5 F.

*Treatment.*—She had been a very hard patient to manage, so the nurse said, and would not submit to any treatment nor would she try to swallow. She was given a very plain talk about the seriousness of her condition and after that she was more amenable. The following treatment was instituted: By means of a 6-ounce glass syringe with a long slender tip, the buccal cavity was irrigated every hour with the following solutions, in the order named: chlorate of potash, phenol 1 per cent., hydrogen dioxid 25 per cent. Much débris was removed each time; hot wet packs were given every four hours; vaginal irrigations with normal salt solution every twelve hours; rectal irrigations of normal salt solution every four hours. The undiluted white of egg and milk, which the patient was soon able to swallow fairly well, was given by mouth. Phenolphthalein in emulsion (8-grain doses) was given every eight hours.

*Clinical Course.*—Following this treatment the patient improved for the next twenty-four hours. The foul odor of the breath was much less noticed, the buccal mucous membrane became cleaner-looking, the swelling subsided somewhat, the temperature came down to normal, the pulse to 100, the skin reacted nicely, the bowel movements became more watery, and with less tenesmus, and there seemed to be more urine. The urine was never examined or measured because it was always passed with the stools, and the patient never would submit to the catheter; she would tell the nurse when she voided, however, and that (with the absence of uremic symptoms) was the only guide we had to the amount of urine that was being passed. There was no retention in the bladder. These hopeful symptoms continued for about forty-eight hours, the swelling continued to subside, the pulse retained its good quality; the patient became able to swallow well and drank much water. The morning of the tenth day, however, her condition changed; the pulse grew quick and soft, the skin would not sweat, the secretion of urine seemed to have stopped and she no longer attempted to get up for her bowel movements. Her mind grew cloudy and she began to be drowsy, though she had previously slept very little. After another consultation, she was given strychnin, spartein, digitalin, caffein and sodium benzoate, but nothing seemed to avail. The drowsiness deepened into sleep, the sleep into coma from which she could not be awakened. Death ensued on the eleventh day after the poison was introduced. There were no convulsions, and death seemed to be due to heart failure. No autopsy could be obtained.

I have not been able to find report of such a case. It is hoped that this case may serve as a warning to the woman who is always advising her neighbor how she can "bring herself around."

505 Mowbray Arch.

# LINEAR AND SUBPERIOSTEAL FRACTURES OF THE LONG BONES IN CHILDREN

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Surgeon to the Boston Dispensary
BOSTON

The importance of this class of fractures is largely due to the fact that without a good *x*-ray picture they may remain unrecognized. Children are peculiarly liable to them. The necessity of a skiagraph in all cases of injury which in the past have been regarded as sprains and "bruises over the bone" is so well recognized as hardly to require comment. A skiagraph (two views) should be taken in all cases of injury to the extremities in children, even if a careful clinical examination is negative for fracture. The number of fractures of this class that remain unrecognized through failure to have an *x*-ray must be great, and especially so in the field of general practice, in which sometimes an *x*-ray may not be obtainable. Crepitus, abnormal mobility, and often swelling and ecchymosis may be absent in these cases of linear cracks and subperiosteal fractures in children. Without an *x*-ray a diagnosis can, however, be made in most cases from signs which are generally present, and the overlooking of which leads to error in diagnosis.

Careful examination will reveal very definite and valuable information. Localized tenderness along the seat of fracture is present, but, these fractures sometimes being such small affairs, longer and more careful search for them will have to be made than in ordinary fractures. The tenderness, when found, will always be increased by the classic test of lateral traction between fixed points above and below the seat of fracture. In long fissures or linear fractures, rotation will always be painful, and more so than any other movement. The relaxation of etherization will not aid our surgical sense in arriving at a diagnosis in the case of these often small and trivial solutions in the continuity of bones.

Case 1 (Clinic No. 10800).—A girl of 5½ years was seen at the Surgical Clinic, Boston Dispensary, April 27, 1909. The history was as follows: One day before she had fallen off a bed, injuring the right wrist. Examination showed no swelling or ecchymosis, very little tenderness, and some disability in using arm. Most of what little pain there was on examination the child referred to the wrist. The bony prominences were in perfect relation. There was no deformity, crepitus or abnormal mobility. An *x*-ray of the wrist was negative. Another examination showed slight, but definite tenderness over both bones of the forearm, and rotation of the radius was painful. Another *x*-ray was taken of the forearm and the picture showed a fracture of both bones, one transverse of the radius, and the other a slightly fissured linear fracture of the ulna. Treatment, antero-posterior and internal angular splints. Good functional and anatomic results.

Case 2.—A little girl of about 3 years was seen after a fall of a few feet from a chair onto the right foot. There was lameness and pain in the right foot and ankle. There was no pain or swelling of the leg. Examination of the ankle was negative. A fixation dressing was applied and the child kept off her feet. Pain and immediate disability followed attempts at weight bearing on the right foot. All symptoms, however, were referred to the ankle. A careful examination of the whole tibial region was now made. No swelling, crepitus, or abnormal mobility was found, but an area of considerable tenderness over the tibial crest, which either was not present or had been overlooked at the first examination. The *x*-ray showed a linear fracture of the tibial shaft, a mere "crack" in the bone. There was nothing found wrong with the ankle. Treatment, plaster-of-Paris fixation. Good result.

Case 3 (Clinic No. 8624).—A boy of 13 was seen at the surgical clinic, Boston Dispensary, April 3, 1908. The history was as follows: While playing ball at school that morning he had fallen, twisting his left ankle, the weight of the body coming on the ankle. Examination of the ankle was negative. There was no swelling or deformity of the leg, no crepitus or abnormal mobility, or displacement. The only sign present was an area of tenderness along the tibial crest, which was increased on rotation. The *x*-ray showed a linear fracture of the tibia running down subperiosteally to just above the ankle. Treatment, plaster-of-Paris fixation, recumbency for a time. Good anatomic and functional result.

Treatment of these cases should be of the simplest sort that is adequate to maintain fixation until union is solid. The result anatomically and functionally should in most cases be perfect.

A rough imitation of a subperiosteal linear fracture may be obtained by painting a small piece of wood—a wooden tongue-depressor answers well—with flexible collodion. After drying, a coating densely adherent to the wood is left, which represents periosteum. The wood is now held in a clamp and pressure exerted on its long axis. After a certain amount of pressure a linear crack appears in the wood, but the collodion envelope (periosteum) remains intact. If the pressure is increased the collodion envelope (periosteum) is torn through and we have an ordinary closed fracture.

## CONCLUSION

Definite, localized, and well-marked points of tenderness may be found in most of these cases of linear cracks and subperiosteal fractures in children if long, careful search is made for them. Such findings, with increase of pain on firm pressure and rotation with all the classic signs of fracture absent, generally means a slight linear fracture. A diagnosis can in most cases be made clinically. An anesthetic will not help in the diagnosis of these fractures. An *x*-ray should be taken whenever possible. In all cases of injury in which fractures of this nature are suspected, the bony landmarks are in perfect position, and there is no displacement, rough manipulation and forcible testing for crepitus are uncalled for and may do harm by increasing the fracture, which, as the position is perfect, we should avoid particularly.

In these cases children often complain of pain and trouble at a distance from the real seat of fracture. The *x*-ray examination should not be confined to the part complained of, but should include the neighboring long bones as well.

903 Boylston Street.

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# PROCTOCLYSIS AND A NEW INSTRUMENT

EUEIDAS K. SCOTT, M.D.
BOISE, IDAHO.

Proctoclysis unquestionably offers to the physician and surgeon a valuable means of relieving human suffering and aiding the vital powers to resist and overcome disease.

Of the two methods—continuous flow and drop method—of administering salt solution by way of the bowel, the drop method offers the preferable technic to the physician, and more comfort to and more ready acceptance by the patient.

These objections to the continuous flow method present themselves:

1. Many conditions of rectum, lower bowel and pelvis make pressure of a rectum full of fluid very uncomfortable to the patient and the fluid difficult to retain.

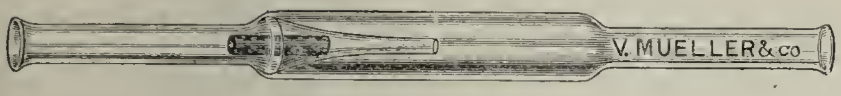
2. Many severe general conditions of patients cause a relaxed sphincter, and thus fluid escapes.

3. The regurgitation of intestinal contents into the apparatus means inconvenience and difficulty in thoroughly sterilizing it.

4. It requires a proper connection and tubing for escape of gases.

These objections are practically overcome by the drop method together with a small glass sight tube and the hard rubber regulator, as shown in the illustration.

The sight tube obviates the necessity of withdrawing the rectal end to note the working of the apparatus. The flow of the liquid can be observed readily without an expensive gauge. Gravity and varying the size and shape of the regulator will regulate the rate of flow from a constant stream to a few drops per minute. A pint and a half of fluid every two hours serves best for general conditions. That means about three drops in two seconds. By timing the rate of drops the amount per hour is noted at once. Back flow into the container is practically eliminated, as the bowel will absorb it at that rate, and there will be no excess unabsorbed.



Hard rubber regulator and glass sight tube for proctoclysis.

Gases can readily escape through the apparatus when the sight tube and regulator are used. The apparatus does not become contaminated with the contents of the bowel.

Patients have almost perfect ease and comfort with this method—a point of no trivial concern to the medical man. The results are more definite and uniform, as a constant, perfect working apparatus is assured and, combined with an irrigating thermometer, is undoubtedly a most valuable contrivance for proctoclysis.

417 Overland Building.

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# AN UNUSUAL PRODROMAL MANIFESTATION OF IDIOPATHIC EPILEPSY

ALFRED GORDON, M.D.
PHILADELPHIA

Aura preceding an epileptic discharge may be motor, sensory, psychic, or psychomotor. Among the various well-known psychic "warnings" of an oncoming seizure the one here described presents such rare features that its placing on record is warranted.

A boy of 12, suffering from essential epilepsy since the age of two and being affected at irregular intervals with attacks of grand mal and petit mal, began to develop an unusual aura preceding the major seizures. Two days before a fit occurs he becomes exceedingly restless, although he is habitually morose, quiet and of a pessimistic disposition. The restlessness is followed by a desire to embrace and kiss any one who enters the house.

He spends his time in ceaselessly throwing his arms around the neck of every person in the house, be it relative, stranger, or servant in the kitchen. The embrace is accompanied by rough kissing in which he repeats the act a great many times and ends with biting the kissed spot of the face. The kissing is only interrupted by eating and sleeping. But as soon as he is done eating or wakes up after a sleep he resumes his peculiar occupation. He does not hesitate in doing so while on the street, and for this reason he is kept strictly in the house until the attack of epilepsy has passed.

The act of kissing is sometimes replaced by the act of laughing. The laughter is then unusually loud and unusually long and, according to his mother, it lasts sometimes five minutes. No measure employed at that time to arrest the "enervating" act is of any avail. He must go on and not be interrupted. As soon as he is done laughing he resumes his act of embracing. Curiously enough, the laughing, embracing and kissing, in spite of being prolonged and almost without intervals, do not apparently exhaust the patient. At the time of his meals his restlessness ceases and at 7 o'clock in the evening he asks to be put to bed.

During the forty-eight hours of this unusual activity the boy realizes the situation and is well aware of his acts. He converses rationally, answers questions, but when asked to cease his actions, he claims that he makes efforts, but is hopelessly incapable to arrest them. He "must go on," "something forces" him to do so, he says. His mother also states that sometimes (not in each attack) the kissing is substituted by striking or slapping. He seizes every person in the house and strikes them several times in succession with his open hand over the back or else over the face. His little brothers or sisters are the usual victims of this performance.

It is also interesting to observe that during the time he is indulging in the peculiar propensities mentioned, his appetite is extremely great so that no amount of food can satisfy him, and he excretes an unusual quantity of urine with a remarkable frequency (almost every half hour).

The unusual psychomotor manifestations described above last forty hours, after which he suddenly falls unconscious and goes through all the phases of a genuine major attack of epilepsy, viz., tonic and clonic convulsions, frothing at the mouth, biting of the tongue. An attack is followed by a profound sleep. After he regains consciousness and the habitual mental hebetude disappears he is able to recall the peculiar prodromal phenomena. He feels much embarrassed for his singular behavior, for embracing and kissing so profusely strangers and relatives. He then becomes depressed for a period of five or six days.

The prodromal manifestations described made their first appearance only at the age of nine and they appear only before an epileptic seizure. The latter occur irregularly, but not more frequently than once in three or four months. The appearance of the peculiar phenomena which never fail before a fit—and especially their regularity—is an excellent warning for the patient's relatives so that they are able to take the necessary precautions to avoid accidents.

The interesting part of this observation lies in the manifestations of the unusual symptoms preceding an epileptic convulsion, *viz.,* in the exaltation of physical and mental functions, in the regularity of the prodromal manifestations and, finally, in the fact that the latter were accompanied apparently by a complete lucidity of mind, but by a complete inability to control them on the patient's part. The actions were automatic, uncontrollable, impulsive.

Can such actions be considered conscious? Although the patient was able to answer questions and, according to the mother, knew what he was doing, nevertheless the automatic acts could hardly be considered conscious. The automatic nature of the acts preclude voluntary efforts and therefore they are unconscious or subconscious.

Extreme restlessness with exaltation of all functions with apparent lucidity of mind are characteristic of the maniacal phase of manic-depressive insanity.

Was the condition in the present case an analogous occurrence?

Could the singular manifestations preceding the major attacks of epilepsy be considered as attacks of *petit mal?* I am inclined to accept the latter view.

1430 Pine Street.

# THREE CASES OF INFECTION WITH THE DWARF TAPEWORM (HYMENOLEPIS NANA) IN CHILDREN

OSCAR M. SCHLOSS, M.D.
NEW YORK

During the past eighteen months I have encountered 20 cases of infection with the dwarf tapeworm in children, 14 of which have been reported in a previous paper.[1] Three of the six additional cases encountered present points of sufficient interest to warrant an additional report.

Since the paper of Stiles[2] in 1903, a number of cases of infection with *Hymenolepis nana* have been reported in this country. Stiles predicted that the dwarf tapeworm was going to prove a common American parasite, and from my experience it is one of the commonest intestinal worms in children.

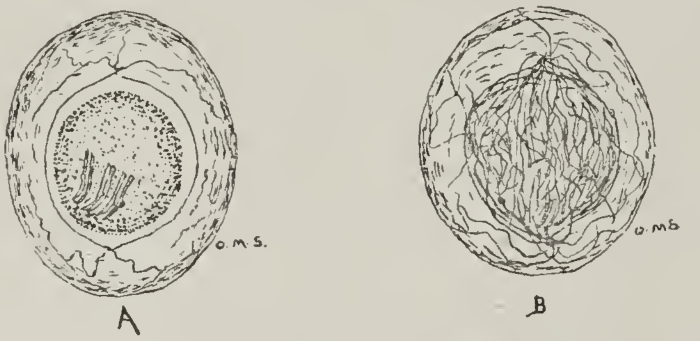

Fig. 1.—Ova of *Hymenolepis nana, greatly* enlarged; A, showing embryo; B, superficial focus showing filaments.

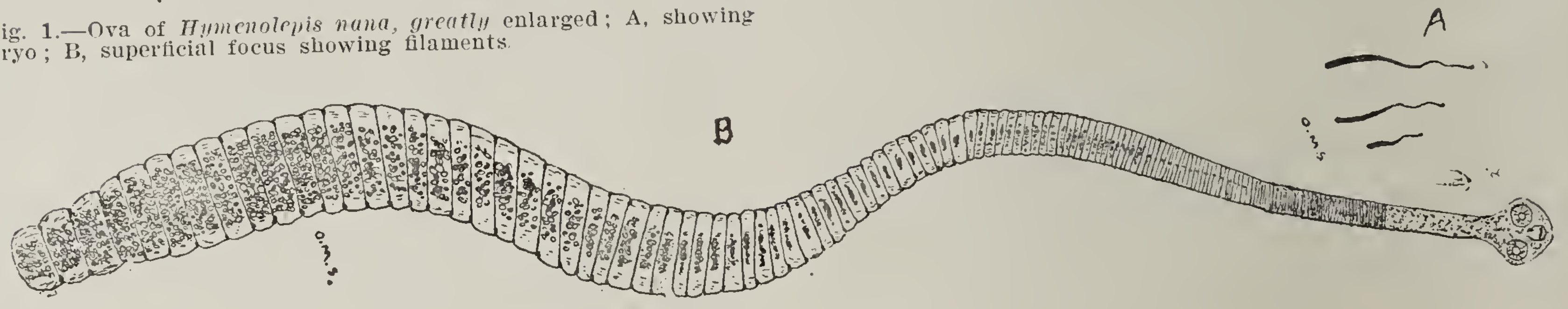

Fig. 2.—*Hymenolepis nana;* A, actual size; B, enlarged.

The dwarf tapeworm is the smallest cestode parasite of man, and great numbers of the worms are usually present in the infected cases. In the cases in which I have been able to make an estimate, the number of worms passed after treatment has ranged from 50 to over 2,000.

The presence of this parasite is indicated by the occurrence of the characteristic ova in the feces. The ova are usually colorless, though they may assume a slight brownish tint when they have stood in contact with the feces for some time. They have a slightly oval outline and are easily seen with the low power of the microscope (Leitz objective No. 3 or an equivalent). The eggs have two distinct membranes and within the inner is the embryo, which contains six booklets. The inner membrane has a slight projection at each pole, from which delicate filaments arise and ramify in the space between the membranes.

It is beyond the scope of this paper to attempt a description of the parasite, but the reader is referred to the text-books on helminthology or to the references given.[3]

## CASE REPORTS

Case 1.—*Patient.*—P. G., male, aged 3½; born in New York City; Italian parentage. There was nothing important in the past history. The patient had not been entirely well for over a year. He had become pale and listless, though there was no apparent loss of weight. He was restless during sleep and frequently cried out during the night. The appetite was poor, the bowels constipated. The patient suffered from frequent attacks of abdominal pain which was referred to the epigastrium. The pain was of moderate severity and for several months two or three attacks had occurred each day.

*Examination.*—This showed a pale, fairly well-nourished child who did not appear acutely ill. The temperature, pulse and respirations were normal. The mucous membranes were pale and there was slight puffiness beneath the lower eyelids. The physical examination was otherwise negative. The feces contained numerous ova of *Hymenolepis nana.* The hemoglobin was 55 per cent. (Sahli hemometer) and the number of red blood cells was 3,900,000 per cubic mm. A differential count of 500 white cells gave the following percentages: Polynuclear cells 26.8 per cent., lymphocytes, 45.6 per cent., large mononuclear and transitional cells 16 per cent., eosinophil cells 10.9 per cent., basophil (mast) cells 0.2 per cent.

*Treatment and Course of Disease.*[4]—The usual treatment was given and numerous dwarf tapeworms were passed. Two thousand worms were counted but there were easily twice this number. Twenty days later the feces contained no ova. The child has shown great improvement. There has been no recurrence of the abdominal pain and sleep is normal. The patient is still (six weeks after treatment) rather pale.

Case 2.—*Patient.*—W. W., male, aged 5; was born in New York City of Irish parentage. The past history was negative. Two months before admission the patient began to lose weight and to be pale and irritable. He slept poorly and would frequently awake and cry out during the night. He had suffered from attacks of abdominal pain for about five weeks. The pain was referred to the epigastrium and would often occur several times a day. These symptoms remained the same until three weeks before admission when the patient had a general convulsion. All four extremities were affected; the convulsive attack lasted about three minutes and was followed by unconsciousness for about fifteen minutes. Similar convulsive attacks occurred two weeks and one week before admission.

*Examination.*—The child was moderately well nourished, with slightly pale skin and mucous membranes. With the exception of adenoid and tonsillar hypertrophy there were no abnormal physical signs. The hemoglobin was 70 per cent. (Tallquist scale) and a differential count of 500 leucocytes as follows: Polynuclear cells 45 per cent., lymphocytes 40.3 per cent., large mononuclear and transitional cells 7.6 per cent., eosinophils 7 per cent. A moderate number of the ova of *Hymenolepis nana* were found in the feces.

*Treatment and Course of Disease.*—The routine treatment was given. About 300 dwarf tapeworms were expelled and twenty days later no ova could be demonstrated in the feces. There has been no recurrence of the convulsions and the other symptoms have disappeared (one month after treatment). The mucous membranes are still slightly pale.

Case 3.—*Patient.*—C. G., male, aged 6; born in New York City. This patient is a brother of Patient 1. The symptoms in this case were almost identical with those in Case 1. The attacks of epigastric pain were less frequent and not so severe. The appetite was poor, the bowels constipated.

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[1] Archives of Pediatrics, February, 1910.

[2] Stiles: New York Med. Jour., 1903, lxviii, 877.

[3] For a complete description of the parasite and a review of the literature, see Ransom, Bull. 18, Hyg. Lab. U. S. P. H. and M.-H. S., 1904.

[4] The treatment used in these cases was that usually followed in the case of the larger tapeworms. Oleoresin of malefern was used and was given in three to five doses. One half to one dram is usually sufficient and has, in my experience, been without ill effects. A single treatment is not always sufficient. It is possible that the heads of some of the parasites are left in the intestine, or parasites in embryonic stages may be present, which are unaffected by the treatment.

*Examination.*—The hemoglobin was 60 per cent. (Sahli hemometer). Five hundred leucocytes were counted and were in the following percentages: Polynuclear cells 49.9 per cent., lymphocytes 22.5 per cent., large mononuclear and transitional cells 13.8 per cent., eosinophils 13 per cent., basophils 0.4 per cent.

*Treatment and Course of Disease.*—Three hundred dwarf tapeworms were expelled by treatment. The feces were examined twenty days after treatment and no ova were found. A second examination thirty-six days later was also negative. The symptoms were relieved by treatment and up to the present time have not recurred.

In many instances the dwarf tapeworm seems to be entirely harmless, judging from the absence of symptoms. In other cases symptoms are present which are usually mild, but in certain instances are rather severe. The three reported cases showed symptoms of unusual severity and give sufficient evidence that in a few cases at least the dwarf tapeworm may give rise to obscure gastro-intestinal or nervous disorders.

These cases were from the service of Dr. Eli Long in the pediatric clinic of the New York University and Bellevue Hospital Medical College. I desire to acknowledge my indebtedness for the privilege of making this report. I also wish to thank Miss Eleanor Ketcham for valuable assistance in carrying out the treatment and in following the cases.

54 West One Hundred and Fourth Street.

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# RUPTURE OF THE URINARY BLADDER OPERATED ON SEVENTY-SEVEN HOURS AFTER INJURY

JAMES R. JUDD, M.D.
HONOLULU, H. I.

With the literature at my disposal, I was under the impression that this was a very unusual case in respect to the interval of time between the injury and the laparotomy. In von Bergmann's surgery, vol. v, a case of Roses is recorded in which the patient was operated on 48 hours after the injury, and this is considered as probably the longest interval of time on record followed by a successful outcome. Quick,[1] however, reported an extraordinary case of 254 hours' interval. In this case the patient was able to void some urine, and the rupture "admitted the thumb rather tightly." The same article mentions Blumer's patient, operated on on the sixth day, and Alexander's case with 90 hours' interval. While the above reported cases render mine not unique, there is enough of interest to make it worth reporting.

*History.*—The patient, a native Hawaiian, aged 55, after a debauch fell off a veranda, a height of about six feet, and struck his abdomen. He immediately felt a sensation of something giving away inside of him and was unable to void any urine. He suffered considerable pain in the bladder region, and noticed that the abdomen began to swell. From Thursday, August 12, at 7 a. m., until Sunday, August 15, at 1 p. m., when he was brought to the hospital, he had passed no urine, the distention of the abdomen had increased, and respiration was becoming embarrassed.

*Examination.*—This showed a thin, sickly-looking adult, who lay on his back with his legs flexed. The pulse was 120 and feeble; respiration was 40 and labored, and temperature was 98. The abdomen was very much distended and the skin tense. There were no visible signs of injury. There was tenderness over the entire abdomen and the percussion note was dull. A catheter drew off a few drops of clear urine.

*Operation.*—Operation was performed at once. On opening the peritoneum, a jet of urine shot up to a height of about four feet. The amount of urine free in the abdominal cavity was estimated at six quarts. The posterior wall of the bladder showed a transverse rent with ragged edges, easily admitting four fingers. The peritoneum was everywhere injected but there was no evidence of peritonitis. The edges of the bladder rent were freshened and the wound sutured by a plain catgut through-and-through continuous suture including all the coats, followed by a Dupuytren silk suture for the peritoneal coat. The abdominal cavity was flushed out with salt solution and the parietal peritoneum sutured without drainage. The bladder was drained as in a suprapubic cystostomy. The abdominal wall was then closed, allowing exit for the tube.

*Result.*—The patient was placed in the Fowler position and did well for four days, when he began to show symptoms of delirium tremens and, when he was not being watched, he disconnected the tube and made his exit from the hospital. He was found after having walked about 200 yards and was put back to bed. The next day, in his delirium, he pulled the tube out of the wound, causing severe hemorrhage. A catheter was then placed in the urethra and the urine drained partly through the catheter and partly through the suprapubic wound. From that time on recovery was uneventful. The catheter was removed in five days and the patient began to pass urine successfully. There was at no time any evidence of cystitis. The man was out of bed in two weeks with a granulating wound which in two weeks more had entirely closed.

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[1] Ann. of Surg., January, 1907.

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# POLYCYTHEMIA DISAPPEARING AFTER REMOVAL OF THE APPENDIX

BAYARD HOLMES, M.D.
CHICAGO

Polycythemia, so often overlooked in routine examinations of the blood, must be considered a master symptom. It is not an anhydremia but a plethora, probably of toxic origin. It is directly due to an increased activity of the hematopoietic function of the bone-marrow as the histology shows at autopsy.[1] The fact that the polycythemia is so obvious (6,000,000 or more), is due to the effort of all the organs to dispose of the increased volume without raising the blood-pressure. Boycott and Douglas[2] demonstrated in 9 cases of polycythemia that the volume of blood was two or three times the normal, thus resembling chlorosis, ankylostomiasis and pernicious anemia. Thus the plethora of the ancients is restored to us in a new light.

The close relation between methemoglobinemia and polycythemia is so intimate as to make us associate them in searching for their etiology. In half of all the cases of sulphmethemoglobinemia and methemoglobinemia the patients have had a true polycythemia.[3]

The uncertain origin of polycythemia leads me to report the following case:

*History.*—E. J., aged 21, came to me with the diagnosis of appendicitis. He was a tall brunette and weighed 128 pounds. His father died at 57 of some abdominal disease, possibly cholangeitis. His two brothers are well and resemble him and their mother strongly, except in size. In that particular they resemble their father. While in school he became weak, dizzy and nervous, so that he could not rely on himself to do his work. He persisted for a few months, however, and then in 1908 went home. He was troubled with both diarrhea and constipation and was treated for mucous colitis. He made some improvement under the prescribed diet and the mucus disappeared but the attacks of general and abdominal distress continued. One of these spells was attended by so much tenderness over the region of the apendix that the patient's physician recommended the removal of the appendix.

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[1] Weber and Watson: Internat. Clinic, 1905, iv, 47.

[2] Boycott and Douglas: Jour. Path. and Bacteriol., 1909, xiii, 117.

[3] For bibliography see Quart. Jour. Med., 1909, ii, 128.

*Examination.*—The history was so much like a severe toxemia that I doubted the diagnosis for a time. The cerebral and neurasthenic symptoms, with abdominal discomfort, made me think of a long line of the diseases of uncertain origin. The examination of the blood which was made in my office, at Wesley Hospital and in the laboratory of the Northwestern University showed a high grade of polycythemia, 7,750,000 on the average. Many blood examinations were made by various observers and all agreed in a high red count without abnormality in white elements. The blood-pressure varied between 130 and 160 at various times. No spectroscopic examination of the blood was made as I did not at that time recognize the possibility of a methemoglobinemia. As I remember the patient now he did not show any cyanosis, or have any clubbing of the fingers. His spleen was not noticeably enlarged.

*Operation.*—In spite of my misgivings and with full understanding of the situation by the patient, his friends and his physician, I removed the appendix in July, 1909. There was evidence of a chronic appendicitis but unfortunately no examination of the colon or intestines was made through the small opening. There was no lymphadenitis such as we find in typhoid and no tuberculous peritonitis.

*Postoperative History.*—During the week in the hospital after the operation there was no change in the blood-count. On the patient's returning home he was advised to take the outdoor and forced feeding treatment, and a buttermilk and sauerkraut diet was especially urged. In September the blood was found entirely normal by Dr. Schooler of Pontiac. In February the patient called and seemed much improved in general appearance. He weighed 147 pounds. His blood was entirely normal, 4,800,000 reds, 7.500 leucocytes in normal proportions.

The possible relation between colon bacillus infection and polycythemia makes this observation, which seems to me unique, worthy of record.

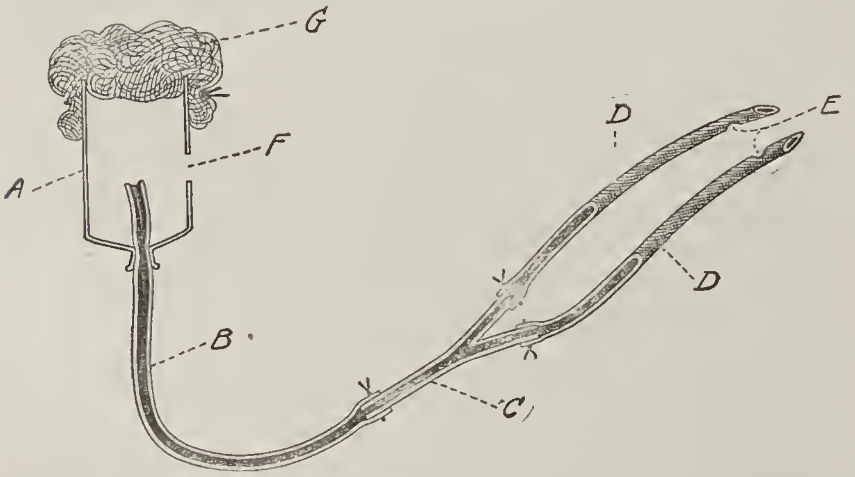
92 State Street.

# AN EMERGENCY APPARATUS FOR ADMINISTERING AN ANESTHETIC

GEORGE A. CATHEY, M.D.

PORTLAND, ORE.

One morning a man was brought into the surgery of the Good Samaritan Hospital with the right side of his face badly lacerated, requiring an operation. The anesthetic was started, and while the patient was being scrubbed the surgeons realized the difficulty of doing the operation with the ordinary inhaler constantly in the way. Within five minutes I devised and had ready for operation the apparatus shown in the illustration.



Emergency anesthesia apparatus. A, ether can with bottom cut out; G, twelve layers of gauze tied over end of can; F, hole in side of can, size of a dime, to regulate amount of air; B, rubber tubing; C, connecting Y from stethoscope; D, catheters with ends cut off on the bevel to be inserted in the nostrils; E, holes in side of catheters to insure vent.

The tubes were introduced into the nostrils, the anesthetic was continued, and the operation finished without interference from administration of the anesthetic.

## New and Nonofficial Remedies

SINCE THE PUBLICATION OF THE BOOK "NEW AND NONOFFICIAL REMEDIES, 1910," THE FOLLOWING ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK ARE ASKED FOR.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

(*Continued from page 1142*)

**THIOL.—Thiolum.**—Thiol is a water soluble mixture of sulphurated and sulphonated petroleum oils.

Thiol is prepared by heating certain paraffin oils with 10 per cent. of sulphur, by which a partial addition of the sulphur takes place. The thiol oil thus formed is then treated with sulphuric acid for sulphonization. The excess of sulphuric acid is washed out by water and the sulphonated product neutralized by ammonia and the solution freed by dialysis from all inorganic salts. The dialyzed product evaporated to dryness contains about 12 per cent. of sulphur. For therapeutic purposes the evaporation is not carried to absolute dryness but the product is marketed either in the form of a syrupy liquid (Thiol Liquid, see below) or as a powder (Thiol Dry, see below).

Thiolum is a brown powder with a pleasant odor resembling Russia leather, having a somewhat bitter and slightly astringent taste. It swells up in water and finally dissolves. It is also soluble in alcohol and slightly soluble in ether.

Thiol should not markedly redden litmus paper.

*Actions and Uses.*—Thiol is said to have a drying, astringent, antiphlogistic, and disinfecting action. Taken internally it is said to favor digestion and defecation. It is said to be useful in skin diseases, especially in dermatitis, acne, eczema, erysipelas, erythema, furunculosis, herpes, pruritus, pityriasis, etc. It is also claimed to be useful in burns, in rheumatism and in certain diseases of women.

*Dosage.*—It may be applied locally in the form of liquid thiol in full strength or in solution with glycerin or water or in the form of ointment or a 2 per cent. solution of liquid thiol may be used as a spray. Internally it may be given in the form of dry thiol in the dose of 0.1 to 0.2 Gm. (1½ to 3 grains) three times a day. Dry thiol may be employed as a dusting powder, either alone or with 80 per cent. of starch or in the form of ointment or of paste.

Manufactured by J. D. Riedel Aktiengesellschaft, Berlin, Germany (Riedel & Co., New York). U. S. trademark 16,553.

*Thiol Dry.*—Thiolum Siccum.—Thiol Dry is a brown powder with properties corresponding to the description of thiol, containing from 8 to 9 per cent. of sulphur.

*Actions, Usage and Dosage.*—See Thiol.

*Thiol Liquid.*—Thiolum Liquidum.—Thiol liquid is a preparation of thiol containing about 1.8 to 2 per cent. of sulphur.

It is a dark brown neutral liquid of a not unpleasant smell resembling that of Russian leather. It is easily soluble in water and glycerin but only slightly soluble in ether.

*Actions, Uses and Dosage.*—See Thiol.

### ARTICLES ACCEPTED FOR N. N. R. APPENDIX

The Maltine Company, Brooklyn, N. Y

*Maltine*[1] *with Cascara Sagrada.*—Each 100 Cc. is said to represent cascara sagrada (Rhamnus Purshiana) 12.5 Gm. (60 grains in a fluidounce) in a mixture containing maltine 96.115 per cent. and alcohol 3.885 per cent.

*Maltine with Cod Liver Oil.*—A liquid said to represent maltine, 56,115 per cent.; glycerin, 10 per cent.; cod liver oil, 30 per cent.; alcohol, 3.885 per cent.

*Maltine with Creosote.*—Each 100 Cc. is said to represent beechwood creosote, 0.83 Cc. (4 minims in a fluidounce) in a mixture containing maltine, 96.115 per cent., and alcohol, 3.885 per cent.

*Maltine Ferrated.*—Each 100 Cc. is said to represent iron pyrophosphate 1.65 Gm. (8 grains in a fluidounce) in a menstruum containing maltine, 96.115 per cent., and alcohol, 3.885 per cent.

*Maltine with Hypophosphites.*—Each 100 Cc. is said to contain calcium hypophosphite, 0.64 Gm. (3 grains in a fluidounce), sodium hypophosphite, 0.64 Gm. (3 grains in a fluidounce), and iron hypophosphite, 0.42 Gm. (2 grains in a fluidounce) dissolved in a solution of ammonium citrate and to contain maltine, 96.115 per cent., and alcohol, 3.885 per cent.

*Maltine with Olive Oil and Hypophosphites.*—A preparation said to consist of maltine, 65 per cent.; pure olive oil, 25 per cent.; glycerin, 10 per cent.; to which per 100 Cc. there is added calcium hypophosphite, 0.6 Gm. (3 grains per fluidounce); sodium hypophosphite, 0.6 Gm. (3 grains per fluidounce).

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[1] Maltine plain is already in N. N. R. Appendix, which see.

*Maltine with Phosphate of Iron, Quinia and Strychnia.*—Each 100 Cc. is said to represent iron pyrophosphate, 0.83 Gm. (4 grains in a fluidounce); quinine sulphate, 0.21 Gm. (1 grain in a fluidounce); strychnine (alkaloid), 0.0066 Gm. (2/75 grain in a fluidounce) dissolved in a solution of ammonium citrate and to contain maltine, 96.115 per cent., and alcohol, 3.885 per cent.

*Maltine with Wine of Pepsin.*—A liquid said to consist of maltine, 27.5 per cent.; wine of pepsin, 71.5 per cent.; and fluid extract of gentian, 1 per cent., the percentage of alcohol in the mixture being 18 per cent.

*Malto-Yerbine.*—A liquid said to contain in each 100 Cc. an extract of 6.6 Gm. (30 grains in a fluidounce) of eriodictyon (Yerba Santa), also flavoring composed of the essential oils of anise, cassia, coriander and caraway in a mixture containing maltine, 96.115 per cent. and alcohol, 3.885 per cent.

The extract of Yerba Santa employed in Malto-Yerbine is prepared as follows:

The leaves of Yerba Santa in coarse powder are boiled under pressure for six hours and inert matter separated by a filter press. The filtrate is concentrated with a certain quantity of maltine at a high temperature until the product has reached a density of 1.35 This extract is mixed in proper proportions with maltine of extra diastasic strength to make up for the diastasic strength lost through heat during the concentration of the drug with maltine.

*(To be continued)*

# Therapeutics

## TUBERCULOSIS

Any suggestion that even apparently tends to the successful treatment of this disease is worthy of general consideration, and the careful observations of Dr. John F. Russell, of New York, should not be allowed to pass by without comment. In the *Medical Record* of Nov. 27, 1909, and Dec. 18, 1909, he discusses his observations on the value of lime to the nutrition and its apparent ability to aid in Nature's healing of pulmonary tuberculous lesions.

He calls to mind that lime forms three-fourths of the total mineral salts of the body, and that it is found in all tissues and fluids, and that the most important lime salt is the insoluble phosphate. The chief lime-carrying food is milk, and, next to it, eggs, and it is certainly conceded that milk and eggs are most important in the diet of a tuberculous patient. It seems to be a chemical fact that the phosphate of lime is most ready for absorption and nutrition when it is in chemical union with a proteid. Whether a lack of lime is a predisposing cause of the successful growth of tubercle bacilli, as apparently believed by Russell, he seems to have shown that the more lime that is presented to these patients in a manner in which it can be absorbed and assimilated the more likely are they to improve and the more rapid is their, at least temporary, recovery. He has noticed, that when natural lime is presented in such a manner that patients will absorb it, that an effusion and symptoms of acute pleurisy occur over the region of lung that is diseased. The patients have increased temperature and pain, and all the signs of a plastic pleurisy. These symptoms last for a week or more, and, he says, as a rule the more marked the lung lesion the more marked the physical signs of pleurisy. After these acute symptoms subside and the slight effusion begins to organize, he finds that local improvement in the diseased lung can soon be determined. The time at which these symptoms of pleurisy develop is from the sixth to the sixteenth week after the treatment is begun.

Russell finds that the best method of administering the phosphate of lime, so that the patient may assimilate it, is by causing its combination with casein by acidifying milk with dilute hydrochloric acid. He says this cannot be well done by administering the acid after the patient has drunk milk, but a combination of egg and milk previously prepared makes, in his estimation, a successful lime food. "Two eggs are beaten, strained and mixed with enough milk to make a quart. Then 4 fluidrams (16 c.c.) of dilute hydrochloric acid are added to the mixture and stirred until thoroughly mixed. The mixture is then bottled and placed in an ice chest, and the patient drinks a pint in the morning and a pint in the evening. The size of the curds in the milk varies with the temperature of the milk at the time when the acid is added; the warmer the milk the thicker the curds, but they are always soft and easy to digest. The taste of this combination is not unpleasant."

Russell explains the action of the hydrochloric acid as, "first, to activate rennet zymogen; second, to activate pepsin zymogen; third, to stimulate the secretion of the pancreatic juice" by the promotion of the production of secretin from the intestinal glands, which hydrochloric acid has the power to do.

Russell insists that a patient is not successfully treated unless he gains weight up to the standard that was his previous normal. Russell does not strive to increase the patient's weight after he has attained his normal.

As noticed in other feverish processes, when there is fever in tuberculosis, probably the hydrochloric acid of the stomach is diminished in amount. Also, it is a fact that an increased amount of milk or increased amount of fats, as so generally ordered and prescribed in tuberculosis, will inhibit the normal output of hydrochloric acid. Both of these facts make it physiologically correct to administer dilute hydrochloric acid.

Russell does not presume that the increased amount of lime which he aims to have his patients assimilate will act as a poison to the tubercle bacillus, but he claims that when there is lime starvation or insufficient lime in the tissues that the cells do not properly function, and if lime in normal amount reaches the blood it will restore the normal protective function of the cells in producing a fibrosis at the point of irritation caused by the growth of the bacillus. His choice of the casein method of increasing the lime is because it has a peculiar affinity for lime salts, particularly the phosphate, and combines with them chemically. The investigations to which he refers also show that in the absence of rennet the chemical combination of lime and casein will not take place, and the rennet zymogen of the stomach will not act if there is not free acid present. Consequently, Russell has devised his method of increasing the absorption of lime on a scientific basis.

In further elaborating his theory that lime starvation may predispose to the growth of the tuberculous process, he instances the fact that pregnancy and lactation, with its drain on the mother's lime salts, and prolonged fever with the consequent diminished nutrition from the diminished amount or absence of normal hydrochloric acid in the stomach, all predispose to tuberculosis.

A tendency to repeated attacks of hemoptysis and other hemorrhages is now generally conceded to be due to lack of the proper amount of lime in the blood. Also, tuberculous processes that are healing require an extra amount of lime. All of these conditions, then, seem to show that an extra amount of lime is needed in tuberculosis.

Another interesting fact pointed out by Russell in this discussion of lime starvation is that cows are much more likely to be affected with tuberculosis than are bulls or calves, and, of course, it is the cow that is losing a large amount of lime with her milk; i. e., it would take more lime in a properly assimilable form to keep the lime content of her tissues normal than in the calf or the bull. Therefore, this dietetic suggestion of Russell's for tuberculous patients is worthy of practical application.

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## THE AMERICAN MEDICAL ASSOCIATION—ITS POLICIES AND ITS WORK

### V. THE COUNCIL ON PHARMACY AND CHEMISTRY

In this series of editorials dealing with the work of the American Medical Association it is, in the nature of the case, impossible to prevent repetition. The work of the Association is so far-reaching and ramifies in so many directions that no one phase can be considered except in its relation to others. For example, it is impossible to discuss the work of the Council on Pharmacy and Chemistry without touching on the relation of the medical press to the proprietary question; neither is it feasible to deal with the work of the Association laboratory without dwelling to some extent on the "patent medicine" evil. We make no apology, therefore, for saying some things more than once. Reiteration of facts can do no harm; probably it is what is needed.

The organization of the Council on Pharmacy and Chemistry and the publication in The Journal of the work accomplished by the Council have made more enemies for the Association and its journal than all other activities of the Association combined. When it is realized that millions of capital were and are invested in the manufacture of fraudulent proprietaries and that a large portion of the medical press was and is deriving its existence directly or indirectly from the proprietary interests, it is not surprising that the most strenuous opposition arose when the Council undertook to tell the medical profession the truth about therapeutic frauds.

The cheap newspapers have consistently defended the "patent medicine" humbugs; for the same reasons the poorer class of medical journals have fought the work of the Council; not openly, except at first, for that would be impolitic, but by attacking the Association and by attempting to discredit its officers. It is a demonstrable fact that, SHOULD THOSE PREPARATIONS WHICH THE COUNCIL HAS SHOWN TO BE FRAUDS CEASE TO BE ADVERTISED, ONE-THIRD OF THE MEDICAL JOURNALS IN THE UNITED STATES WOULD GO OUT OF EXISTENCE.

It is unnecessary again to give in detail the reasons which brought the Council into being. The disgraceful condition into which drug therapy in the United States had sunk; the shameless impositions practiced on the public and the medical profession by proprietary frauds; the brazen way in which men without knowledge of medicine or pharmacy assumed to teach physicians how to treat disease; the subordination of the medical press to the nostrum interests—these were but some of the grosser abuses which had resulted from the unrestricted manufacture and sale of proprietary remedies. These evils the Association, through its Council on Pharmacy and Chemistry, hoped to correct; and these evils it has been, and still is, correcting with a success that is plain to all those who have taken even a superficial interest in the questions involved, and is even more clearly evidenced by the nature of the opposition it has aroused. In its work the Council has received the aid and approval of men—in both the United States and Europe—who rank among the highest in their professions, a cooperation that has meant much to the medical profession of this country.

Neither is it necessary to enlarge on the aims and objects of the Council; with these the medical profession, by this time, is thoroughly conversant. Moreover, this phase of the subject was exhaustively discussed by Professor Sollmann in his series of articles on "The Broader Aims of the Council." It is more important that physicians generally, and members of the organization especially, should be brought to a realization of what the Council on Pharmacy and Chemistry has actually done in the five years of its existence.

Proprietary products submitted to the Council are not hastily or superficially examined, but to each the most painstaking and careful consideration is given. Notwithstanding this, the Council has critically examined and thoroughly considered the claims made for more than one thousand products, of which over six hundred[1] have been accepted for inclusion in "New and Nonofficial Remedies," while nearly four hundred have been rejected. There are, of course, hundreds of nostrums which on their face are so plainly fraudulent that no intelligent physician could be misled by them and to which, since they stand self-condemned, the Council has not attempted to give more than a superficial examination. It is impossible for one not conversant with the details to realize the amount of work these figures represent. Nor does the examination of proprietary products which the manufacturers themselves have submitted comprise nearly all the labors of the Council. A large number of widely advertised preparations for which specious claims are made have been taken up on the Council's own initiative and their viciousness made plain to the medical profession.

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[1] It should be said that at the time the Council was organized probably not one-half of these six hundred preparations conformed with the Council's requirements. An honest desire on the part of the manufacturers to better the status of therapeutics caused them to modify their claims and made the acceptance of these products possible.

In addition to the vast amount of work that has been done on proprietary products, a number of drugs that are neither proprietary nor official have been considered by the Council. Such of these products as seem to have some therapeutic virtue have been described in "New and Nonofficial Remedies," while descriptive and critical reports have been published on those that are without proved value and whose deletion from the already overburdened materia medica would be desirable.

One phase of the work that at first was merely incidental to the general duties of the Council finally became of sufficient importance to warrant a special report, namely, that of curbing to some extent the misquoting of medical literature by proprietary manufacturers for their own ends. So extensive had this abuse become that even the more conservative manufacturers were guilty of grossly misrepresenting the views of medical writers. The Council took up one glaring instance and published an extensive report on the subject. The value of the preparation itself was not discussed, the only question being that of the garbling and misquoting of contemporary medical literature dealing with the preparation. That this report, together with the careful scrutiny to which the Council subjects the advertising matter of all preparations which it considers, has done much to cause manufacturers to be more conservative and truthful in praising their products and in quoting literature, is evident to any one who cares to compare the advertising "literature" of to-day with that issued five years ago.

Physicians, with the laity, have long held exaggerated views regarding the food-value of meat-extracts, though it has been proved, time and again, that, aside from possessing mildly stimulating properties, they are practically valueless. Moreover, while meat-*juices* have a distinct food value, many so-called meat-juices on the market are practically meat-extracts. The Council published the results of a most exhaustive chemical examination of some of the most widely advertised preparations for which great nutritive value was claimed and its practical absence was proved.

Within the past year the Council has devoted some time and work to the consideration of serums and vaccines, and through its initiative a symposium on these subjects was presented to the Section on Pharmacology, in which the best authorities in the United States were represented. From the conclusions reached by these authorities the Council prepared descriptions of the various products found on the American market.

In brief, then, it may be said that the Council has examined practically every proprietary article of any value now on the market, and that those which have not been accepted are unworthy of the physician's consideration.

It has shown up the fraud, misrepresentation and deceit connected with the exploitation of many of those proprietary articles which were a disgrace to pharmacy, a detriment to scientific medicine and a danger to the public.

It has—by insisting that products to be acceptable shall be advertised truthfully—done more to raise the commercial ethics of pharmaceutical manufacturers than any other agency—not even excepting the national Food and Drugs Act.

It has made plain, in a manner never before attempted, the strictly limited value of many largely advertised "meat-juices."

It has furnished the profession with information regarding the value of numerous unofficial, non-proprietary drugs and has thereby done much to dispose of the useless lumber of the overloaded materia medica.

It has thrown light on that valuable and ever widening branch of therapeutics, serum therapy, and, so far as our present knowledge will permit, has separated the wheat from the chaff.

It has, in fact, at all times tried to make plain to the medical profession the vast possibilities of rational, sane and scientific drug therapy as contrasted with the haphazard and vicious results of nostrum-prescribing. It has consistently, persistently and insistently told the truth about proprietaries—good, bad and indifferent—without fear or favor.

Therapeutics in the United States has progressed more in the last five years than it did in the previous fifty—and the Council is responsible for it. The American physician has a clearer conception of the possibilities and limitations of drugs to-day than he ever had before—and the Council is responsible for it. Purer and more reliable pharmaceuticals can be had now than ever before was possible—and the Council has been largely responsible for it. The reading pages of medical journals now published are freer from nostrum testimonials disguised as original articles than has been the case for a quarter of a century—and again the Council is responsible for it.

This work has not been accomplished without arousing the most active antagonism of those nostrum manufacturers whose products were exposed and of those medical journals whose existence depends on the advertising receipts from such manufacturers. When millions are invested in perpetuating a profitable fraud there can always be found those who will seek to justify the dishonesty—and the nostrum business is no exception. By open opposition, by innuendo and crimination, every effort has been made by the interests affected to disorganize the forces of therapeutic decency and to destroy the splendid work the Council is doing. Happily, however—and to the credit of the organized profession be it said—these efforts and this destructive criticism have failed, for the profession has decided that the work of the Council *is* worth while, that the advance made shall be maintained and that therapeutics shall not be allowed to lapse into its previous deplorable condition of utter subjection to the commercial spirit.

## WILLIAM HENRY WELCH

The great dinner[1] in Baltimore April second, in honor of Dr. Welch, President-Elect of the American Medical Association, is unique among events of this kind because of the participation in it of so many representative leaders not only in medicine but also in the fields of general learning, of industry and commerce, and of politics. This outstanding feature of this remarkable event testifies better than almost anything else could to the general appreciation of the truly commanding position which Dr. Welch occupies and for many years has occupied in the medical and scientific activities of the country. How he reached such pre-eminence cannot be told fully at this time; a few imperfect and cursory touches only may be given of his remarkably useful career, the keynote of which is the unselfish and untiring devotion of a superb and finely trained intellect to the service of medicine. After his graduation in medicine (College of Physicians and Surgeons in New York, 1875), Dr. Welch turned his attention to pathology and for the next three years or so we find him at work in various German laboratories. Under the direction of that brilliant experimental pathologist Cohnheim, whose death at a comparatively early age seems such a great loss to science, he completed an important investigation on experimental pulmonary edema. He was present in Breslau when Koch, then unknown, came from Posen to show Cohnheim his work on anthrax and heard the latter's prophetic remark: "There is a great man of whom we shall hear much in the future!" A few years later, he took part in Koch's first course in bacteriology in Berlin. This must suffice to indicate the nature and extent of his earlier training.

He was professor of pathology in Bellevue Medical College in New York, when he was called to the newly founded Johns Hopkins University as professor of pathology and pathologist to the Johns Hopkins Hospital, being the first member of the faculty that was entrusted with the difficult task of establishing a complete medical school on the highest plane yet attempted in this country. The success of that attempt and its influence on our ideas of medical education in general are now matters of history. That the Johns Hopkins Medical School has been one of the leading medical schools of the world since its first inception, owing largely to the wise counsels, lofty ideals, and ability of Dr. Welch, its first dean, is not questioned by any one at all familiar with its development.

We may now consider briefly Dr. Welch in the threefold capacity of teacher, investigator, and adviser in affairs of medical and scientific nature. Dr. Welch is a great teacher. Always fully abreast with many lines of work by virtue of a faculty of easy acquisition, following closely the developments with keen and critical appreciation, endowed with an apparently phenomenal memory, he possesses an enviable power to impart knowledge with a facility that excludes all sense of its costing any effort whatever. Lucidity and ease of expression, close reasoning, the thoughts moving in orderly sequence, a judicial calmness and an all-pervading sanity—these are striking characteristics of his writing and speaking.

Primarily a pathological anatomist firmly rooted in cellular pathology, he has produced original work of the highest quality in pathologic anatomy, in experimental pathology, and in bacteriology, the details of which need not be given here. Many of his articles and contributions to text-books and systems are classical in their comprehensiveness and clearness; for example, the introduction to general pathology in Flint's work on practice, the article on thrombosis and embolism in Allbutt's system, the Huxley lecture on immunity, the papers on venous thrombosis in cardiac disease and on infections caused by the *B. aerogenes capsulatus* (discovered by Welch and Nuttall in 1892 and sometimes known as *B. welchii*).

Associated with profound scientific and scholarly attainments is the grace and charm of a personality that inspires affection and intellectual effort. Consequently a large amount of fine investigative work has been carried out by assistants and students working under the direction of the master. The pathologic laboratory of the Johns Hopkins Hospital very soon became the accepted center—the pathologic mecca—in the United States and Canada for investigation and training in pathology. Now former workers and assistants in that laboratory occupy a large number—too large to enumerate—of our most important pathologic posts, while many others have reached eminence in other branches of medical science as well as in practical medicine and surgery. Dr. Welch has had a larger part than any other person in training those who are now leading and about to take the lead in our medical teaching and investigation.

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[1] Reported in the News Department in this issue.

Many-sided, of clear vision, and in close touch with every aspect of medical science, Dr. Welch is rendering most important service in the capacity of adviser not only to individuals but also to institutions and to local and national governmental bodies. It is said that his advice led to the creation of the Yellow-Fever Commission of the U. S. Army, which, with the lamented Reed at its head, accomplished the epochal discovery of the rôle of the mosquito in the spread of yellow fever. The needed presence of a medical man on the Isthmian Canal Commission is due largely to the same influence. Occasionally instances become known illustrating that suggestions from Dr. Welch have borne rich fruit through the work of others, notably the demonstration of the filterable character of the yellow-fever virus. An enumeration of the more important positions occupied by Dr. Welch at the present time will emphasize better than anything else the value placed on his advice and co-operation: He is president of the board of directors of the Rockefeller Institute for Medical Research, the director of which, Dr. Flexner, his former assistant, is doing such splendid work; member of the board of the Carnegie Institution and chairman of the executive committee; president (since 1898) of the Maryland Board of Health; member of the Charter Revision Committee of Baltimore, and, last but not least, President-Elect of the American Medical Association. And here we take leave for the present of our representative in a uniquely wise significance, while at the zenith of a career of unparalleled usefulness, universally respected, honored as few are honored, beloved by all who know him.

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## THE AUTOMOBILE AND THE PHYSICIAN

The automobile is a part of the higher standard of living toward which all are striving, and in many occupations and conditions is as indispensable as the other necessities of to-day which only yesterday ceased to be luxuries. It is no longer a plaything of the rich; it is an efficient aid in practical progress—in the every-day work of the world—just as is any other piece of labor-saving machinery. Like other epoch-making inventions, it is a social and industrial force, but its novelty, its convenience, and the pleasure and relaxation it affords have absorbed general attention largely to the exclusion of its wider significance and importance, which, after all, is a not infrequent occurrence in the case of innovations of far-reaching importance. A future by no means remote will no doubt show that its influence in many directions has been marked. It would be interesting to speculate a little along this line.

Civilization, it has often been said, depends much on transportation. There are, of course, limitations to the services which may be rendered by steam and electric railways and by water transportation; so that even with their fullest development certain areas will be left without those means of rapid communication. The automobile is supplying this hiatus in transportation facilities. It brings the remote districts into quick communication with the centers of business, in touch with the markets, with the cities, the centers of education and culture. Already it has had a wide-spread influence on the roads of the country, calling attention forcibly to the value of good roads for everybody, whether auto-users or not. It will make possible a vast extension of the rural mail service, aiding the dissemination of knowledge. It will make possible the centralization of country schools, which has been found desirable, and which is already attempted with the slower means of transportation. In rural communities it will make possible residence in towns or villages, with the many advantages which closer social communion offers, thus overcoming the chief objections to rural life, without interfering with the successful cultivation of the soil under the scientific methods now being so rapidly developed. On the other hand it will enable the dweller on the farm, by means of this time-eliminating device, to keep in close touch with his neighbors and friends, or with the neighboring city, town and village, with the social and cultural advantages they afford. With this concentration of the rural population in towns and cities, or even without it, it is evident that this means of locomotion will give every one freer access than ever before to all the privileges of hospitals. More hospitals will no doubt be built in the smaller places; and the manifest advantages to the sick and the well need be no more than suggested here.

To the physician perhaps more than to any other member of the community the automobile is indispensable. Business can wait, if need be, but the work of the physician requires prompt attention always. His duties call him hither and yon, frequently at time-consuming distances. The automobile offers him a mode of conveyance which is always ready and which enables him to cover much ground at the least expense of time. Naturally it wins his approval, as is evident from the articles in this issue. These contributions from many readers express various opinions about the automobile, the kind of car to choose and the way to care for it, but with few exceptions they are favorable to its use by the physician.

It is interesting to compare the contributions of this year with those of previous issues. Some problems are passing away and new ones have taken their place. The high-wheel car seems to be less used. The pneumatic-tire problem is still with us, no substitute which is entirely satisfactory having been found. The pneumatic tire, however, is being perfected, and when properly used is giving somewhat less trouble than before.

Automobiles as a class are now made more reliable than those of two or three years ago. They are more available for the man who must be his own chauffeur and mechanician. The time seems not far away when it may almost cease to be necessary for a man to have some little mechanical ability in order to be a successful automobilist. Apparently there are a number of cars on the market which will give eminent satisfaction to the physician. It is clear, however, that the automobile cannot be operated and maintained for little or nothing. A man who uses it considerably for pleasure is apt to feel the need of an increase in his income. On the other hand, the man who uses his automobile largely for his practice will surely add to his income. It is the almost universal testimony that it enables a man to cover more ground and to see more patients and still to have more time for study and pleasure.

A part of the space given to the subject in this issue is taken up with an analysis of the replies to questions which we published asking for various facts in the experience of our automobile readers. We take this occasion to thank our contributors for what they have written, and to express the desire that the automobile may continue to be a source of profit and recreation to them.

### THE NAMES OF THE AUTOMOBILES

As has been the custom, the names of the machines referred to are not given in the automobile articles, but are designated by reference numbers. A folder containing these numbers and the corresponding names and also containing a list of names and addresses of automobile manufacturers will be sent to any one who requests it and encloses a self-addressed, stamped envelope. Automobile contributors and those who sent in answers to the questions we printed need not ask for the key as a copy will be sent to each of them.

### THE TEMPTATION TO "SCORCH"

There is probably no profession or occupation that has received more benefit from the advent of the automobile than has the medical profession. The time saved in going about enables the practitioner to widen the area of his activities, to see more patients, and, above all, to have more leisure for study, for reviewing his case histories and for recreation. The recognition of these advantages constitutes a constant temptation to reap more benefit by hurrying while on the road, and the habit of hurrying tends to foster that enjoyment of speed for its own sake which, when unrestrictedly indulged, has been aptly termed the "speed mania." All but the most timid have felt the fascination of speed, and frequent indulgence in this pleasure soon leads to a dissatisfaction with milder paces that it is difficult to disregard. The physician's machine, with its red cross, is almost everywhere somewhat privileged in the matter of speed, and rightly so, as the comfort of some sick person is frequently at stake, and life itself may depend on the promptness with which the physician responds to a call. While physicians as a rule do not abuse this privilege, there are some who take advantage of the leniency of the police and of public opinion to maintain a speed which is a danger to themselves and to others. Of the innumerable automobile accidents that occur no small proportion is due to excessive speed and careless driving. In a matter which so directly concerns the public safety the physician surely should set an example and avoid even the appearance of putting in jeopardy the life and limb of passers-by. The sentiment within the profession should be strong enough to discourage the immoderation of the few who are reckless. Having taken heed of the beam in our own eye, we can turn with better grace to the mote in the eye of the lay scorcher. When an abuse endangers the public, the medical profession, above all others, must be beyond reproach, or be condemned out of its own standards and precepts.

### SANITATION IN PANAMA

The annual report of the Department of Sanitation of the Isthmian Canal Commission for the year 1909, just issued, shows that the remarkable record already established by this department has been fully maintained. Colonel Gorgas' letter of transmittal shows that the death-rate for the past six years has been as follows: 1904, 13.26; 1905, 25.86; 1906, 41.73; 1907, 28.74; 1908, 13.01; 1909, 10.64. The marked decrease since 1906 is in spite of the large increase in the number of employes; in 1906 there were 26,547 and in 1909, 47,167. The total number of deaths in 1909 were only a very few more than the total number in 1905, at which time, the entire force only numbered 16,512. Still more remarkable is the death-rate from disease among white employes, which only amounted to 3.88 per thousand for the year. The death-rate from special diseases is also remarkably low. During the year, there were only 13 deaths from typhoid, a ratio of 0.27 per thousand, while the death-rate from typhoid in the state of Pennsylvania for the same period was 5.03 per thousand. Only 8 deaths from dysentery occurred, not one of which was among white employes. The death-rate from pneumonia was about the same as that in New York City, while the total number of deaths from malaria for the year amounted to only 52. If the cities of Panama and Colon and the country in the Canal Zone between them is included, the total death-rate for all inhabitants for the entire year is 18.19, or 31 deaths less per thousand than in 1905, a saving of over 4,000 lives. The most remarkable of all, however, is the fact that not a single case of yellow fever, bubonic plague, or smallpox has occurred on the Isthmus during the past year. The work of the Sanitary Department of the Isthmian Canal Commission continues to be an object lesson of what can be accomplished by careful, patient, scientific work in freeing tropical and pest-ridden regions from diseases and in saving the lives not only of Europeans and Americans but of the natives as well.

## *Medical News*

### ALABAMA

**Conference of Charities and Corrections.**—At the annual meeting of the Alabama Conference of Charities and Corrections, held in Birmingham, March 22, the following physicians were elected to office: Dr. Thomas D. Parke, Birmingham, president; Dr. John B. Stagg, Pratt City, member of committee on membership. Among the interesting topics discussed was the "Assimilation of the Immigrant," on which a paper was read by Dr. Haickel A. Elkourie, which was discussed by President Abercrombie of the University of Alabama.

### ARIZONA

**Personal.**—Dr. Ralph L. Alexander, Tempe, has been appointed local surgeon to the Maricopa and Phoenix and Phoenix and Eastern railways.——Dr. Clarence Guenter has been appointed assistant chief surgeon of the Randolph Lines with office in Tucson.

**State Association Meeting.**—The nineteenth annual session of the Arizona Medical Association will be held in Phoenix, April 20 and 21, under the presidency of Dr. Robert N. Looney, Prescott. The oration in medicine will be given by Dr. J. Wilson Shiels, San Francisco; the oration in surgery by Dr. Wesley W. Beckett, Los Angeles, and the oration on state medicine by Dr. James A. Egan, secretary of the State Board of Health, Springfield, Ill.

### CALIFORNIA

**Health Interests to Merge.**—Representatives of leading public health associations of the state will meet in Sacramento April 18, to discuss the project of merging the health interests in a general association, to be known as the "Affiliated Health Associations of California."

**Rules Against Vaccination.**—In the case of the State Board of Health against the city of Watsonville, in which the board of education refused to enforce the new vaccination law, Judge Lucas F. Smith in the superior court of Santa Cruz, is said to have decided that vaccination law is unconstitutional and that it is class legislation in that it provides for vaccination of public school children and not private school children.

**Medical Society Sues.**—The Medical Society of the State of California has brought suit, based on the violation of the copyright law, in the circuit court asking an injunction against the Kaplan Medical Publishing Company. The defendant company published the official register for the society for the three previous years, and in October and January is said to have included the register in its own digest published quarterly.

**Personal.**—Dr. Charles R. Blake has been appointed health officer of Point Richmond, vice Dr. Hawley N. Barney.——Major Paul A. Adams, Los Angeles, surgeon of the First Brigade, N. G. Cal., has resigned and has gone to Honolulu as First Lieutenant, Medical Reserve Corps, U. S. A. Dr. Charles W. Decker, Los Angeles, has succeeded Major Adams.——Drs. Elmer R. Pascoe, J. S. Derrick, Charles T. Palmer and Chester L. Magee have been appointed assistant health officers of Los Angeles.——Dr. William E. Carter has been appointed assistant police surgeon of Los Angeles, to succeed Dr. Charles W. Bonynge, who has resigned and will take charge of the State Board of Health laboratory, Berkeley.——Dr. Philip A. Bill, North Beach, San Francisco, was assaulted and robbed near his home, March 7.——Dr. William T. Lum, Alameda, has been appointed a member of the board of education.

### ILLINOIS

#### Chicago

**Rush College Alumni.**—At the twentieth annual reunion and dinner of the class of 1890 of Rush Medical College, Drs. E. Fletcher Ingals and Arthur D. Bevan delivered addresses. Dr. T. F. Wilcox was elected president; Dr. Henry D. Anderson, second vice-president; Dr. Emanuel Friend, Chicago, secretary, and Dr. Thomas H. Culhane, Rockford, necrologist.

**Personal.**—Dr. E. Fletcher Ingals has been elected an honorary member of the Vienna Laryngologic Society and corresponding member of the Royal Society of Physicians, Budapest.——Dr. Howard T. Ricketts, assistant professor of pathology in the University of Chicago, has resigned to accept a professorship of pathology in the University of Pennsylvania.——Dr. Hugh A. Cuthbertson and sister and Dr. James T. Campbell and mother sailed from Boston, April 2, for Vienna via the Mediterranean.

**Anti-Spitting Crusade.**—The first concerted movement by Chicago organizations to enforce the anti-spitting ordinance was started March 31, at a meeting attended by representatives of the police and health departments, men's and women's clubs, social settlement, United Charities and the Chicago Tuberculosis Institute.——The Chicago City Railway Company has announced that it will have new posters placed in all its cars warning against spitting, and that transfers will have similar matter printed on their backs.

### KENTUCKY

**New Hospital.**—The Children's Free Hospital, Louisville, has been completed and was formally dedicated April 1.

**Personal.**—Dr. Edward Davenport, Hampton, was operated on in Paducah, March 18, for appendicitis.——The office and equipment of Dr. William C. Wilkerson, Clintonville, was destroyed by fire, March 17.

**A Graphic Object Lesson.**—The Louisville *Courier-Journal*, in its issue of March 24, published a series of illustrations to show that the Louisville City Hospital is crowded and in bad need of repair, as an object lesson to create public sentiment in favor of the bond issue of $1,000,000 for a new hospital, to be voted on in November.

**Society Meetings.**—The Paducah Medical and Surgical Society met recently and reelected for the third time the following officers: Dr. John G. Brooks, president; Dr. Oliver R. Kidd, vice-president; and Dr. James T. Reddick, secretary-treasurer.——At the annual meeting of Hardin County Medical Society, held in Elizabethtown, March 10, an insurance society was organized, to be known as the Hardin County Insurance Society, and the following officers were elected: Dr. D. C. McClure, president; Dr. John M. English, Elizabethtown, vice-president; and Dr. Charles T. Riggs, Upton, secretary.

### MARYLAND

**Personal.**—Dr. R. C. Wells has been elected health officer of Hamstead.——Dr. J. McPherson Scott has been elected mayor of Hagerstown.

**Optometry Bill Passes.**—The optometry bill, which was opposed by the Medical and Chirurgical Faculty of Maryland, passed the senate April 1. Thirteen counties were exempted from operation, but Baltimore City was not included.

#### Baltimore

**The Welch Dinner.**—The banquet to Dr. William H. Welch is reported in General News and is also commented on editorially.

**Entertainment for Children's Hospital.**—The proceeds of the performance of "The Belle of New York" by the Paint and Powder Club, March 28, amounted to $2,850. This will go to the Children's Country Hospital School, located in the suburbs of Baltimore, which has accommodation for 25 patients.

**Alumni Meeting.**—At the annual meeting of the General Alumni Association of the University of Maryland, held in Lancaster, Pa., Dr. Eugene F. Cordell spoke on "The Duty of the Alumnus." Dr. Henry W. Fishel, Harrisburg, Pa., was elected president, and that city was chosen as the meeting place for 1911.

**Personal.**—Dr. Henry Barton Jacobs has been elected governor and Dr. B. Bernard Browne, historian, of the Society of Colonial Wars.——Dr. William D. Booker, clinical professor of pediatrics in Johns Hopkins Medical School, has asked to be relieved of his duties and has been made emeritus professor.——Drs. Louis V. Hamman and Paul W. Clough sailed for Europe April 2.——Dr. Harvey W. Cushing of Johns Hopkins Medical School, has under consideration a call to Washington University, St. Louis.

### MISSOURI

**To Enlarge Medical School.**—The plans of President Brookings for the enlargement of the Medical Department of Washington University have been given an impetus by the voluntary offer of Adolphus Busch to join other citizens of St. Louis and the state in a movement to provide St. Louis with a medical college similar to Johns Hopkins University, Baltimore.

**Alumni Association Meets.**—The Barnes University Alumni Association, at its annual meeting, March 25, elected the following officers: President, Dr. Walter U. Kennedy; vice-presidents, Drs. Orril L. Suggett and Genevieve S. Beckham; secretary, Dr. Charles A. Vosburgh, and treasurer, Dr. Elbert J. Lee, Jr., all of St. Louis. The association decided to give a banquet during the meeting of the American Medical Association.

**Personal.**—Dr. Henry E. Miller, St. Louis, has returned from abroad.——Dr. Newton McVey, Kansas City, has been appointed state bacteriologist.——Dr. Abra C. Pettijohn, Brookfield, has been elected superintendent of State Hospital for the Insane, No. 2, St. Joseph.——Dr. William R. Strickland has been appointed postmaster of Rockport.——Dr. C. A. Gould has been appointed assistant city pathologist of St. Louis.

## NORTH CAROLINA

**Charter Granted Sanitarium.**—A charter has been issued to the Greensboro Sanitarium with capital stock of $100,000.

**Hookworm Work.**—Dr. John A. Ferrall, Kenansville, has been designated by the North Carolina State Board of Health as special assistant secretary for the study and prevention of hookworm disease, and has removed to Raleigh.——Dr. Charles W. Stiles, United States Public Health and Marine-Hospital Service, has taken up his residence in Raleigh, and will make the city his official headquarters for the work of the Rockefeller Hookworm Commission, in its special investigation in the southern states.

**Personal.**—Dr. Edward J. Wood, Wilmington, has been elected president of the Medical Society of the State of North Carolina to fill the unexpired term of the late Dr. James A. Burroughs, Asheville.——Dr. John A. Williams, Greensboro, announces his retirement from general practice April 1. He will give his entire attention to surgery and consultation work.——Dr. Lucius B. Morse has moved his sanatorium from Chimney Rock to Hendersonville. The new building will accommodate 30 patients.

## NEW YORK

**Tuberculosis Preventorium Incorporated.**—The Tuberculosis Preventorium, founded by Nathan Straus, which has for its object the prevention of tuberculosis among children, has received a certificate of incorporation and may operate in the states of New York and New Jersey.

**Appoints Delegates.**—Among the delegates appointed to represent the state at the National Conference of Charities and Corrections which will convene at St. Louis, May 19 to 26, are Drs. Albert W. Ferris, New York City, Charles F. Howard, Buffalo, and Hortense V. Bruce, Hudson.

**Study of Hysteria.**—The State Lunacy Commission announces that a systematic study of hysteria will be begun in the various state hospitals under the jurisdiction of the commission. This work is the result of the methods and studies introduced by Dr. Adolph Meyer, retiring director of the Pathological Institute.

**Open-Air School.**—Rochester is making a new effort to safeguard the physical welfare of its school children, and has established an open-air school, the outcome of the day camp established by the Rochester Public Health Association, through the efforts of Mrs. Porter Farley and Dr. Montgomery E. Leary. The first sessions of the school were held at the day camp, and these were continued until the Christmas holidays. Children from the entire city are admitted after examination by Dr. Joseph Roby, physician in charge, and carfare is furnished these children by the association.

**Tuberculosis Talkettes.**—The Rochester Public Health Association has decided to publish a series of forty leaflets on the various phases of the tuberculosis problem, which will be distributed to every health association in the country. The first "talkette" will be on "Consumption; A Brief History of the Disease," by Dr. Montgomery E. Leary, supervising director of the Public Health Association. Other talkettes to follow at short tintervals are on "Consumption; What it is and Why;" "Inhaling the Germ;" "Systems that Resist the Germ;" "Exploded Theory of Heredity;" "Carelessness;" "Fly, First Assistant to Death;" "Destruction of Tuberculous Expectoration;" "Destruction of Expectoration with Acids;" "Safeguarding the Public;" and "Disinfecting the Sick Room."

### New York City

**Learning How to Fight Tuberculosis.**—A committee of seven appointed by the City Council of Portland, Me., has been visiting this city in order to learn how New York is fighting tuberculosis. The Health Commissioner spent a day showing them the methods employed by the Health Department and the city hospitals.

**Precaution for a Safer Fourth of July.**—Fire Commissioner Waldo, pursuant to an order from Mayor Gaynor, has issued the following notice, which should prevent the large number of accidents and cases of tetanus that have occurred in past years: "Notice is hereby given to all concerned that the Fire Commissioner hereafter will not issue any permit for the retailing of fireworks, Chinese crackers, rockets, blue lights, Roman candles, colored pots, lance wheels and other works of brilliant colored fire."

**Boiled Milk Recommended.**—At the direction of Health Commissioner Lederle an exhaustive examination of New York's milk supply has been made which has disclosed the fact that several epidemics of typhoid fever are directly traceable to infected milk. One epidemic was traced to a milk handler who was a typhoid patient forty-six years ago and during all the intervening years has been a distributor of typhoid bacilli. The work has been carried on under the direction of Dr. Herman M. Biggs, and on the presentation of his report to the Board of Health the three members, Commissioner Lederle, Health Officer Doty and Police Commissioner Baker adopted a resolution recommending that milk used for drinking purposes should be either pasteurized or boiled. It was also stated that it seemed probable that a certain percentage of the cases of diphtheria and scarlet fever occurring in New York City result from milk infection.

## PENNSYLVANIA

### Philadelphia

**Personal.**—Dr. Alexander C. Abbott has been selected as delegate to the International Congress on Hygiene and Medicine which meets in Buenos Aires next month.——Dr. Charles H. Frazier, clinical professor of surgery at the University of Pennsylvania, was operated on for appendicitis, March 30.——Dr. Almer H. Tomlin, who was operated on for appendicitis at the German Hospital, March 30, is reported to be improving rapidly.——Dr. M. F. Shaughnessy sailed for Europe, March 30.

**Insurance Company's Life-Saving Movement.**—The Metropolitan Life Insurance Company has made arrangements with the Visiting Nurse Society of this city to carry on the company's scheme of visiting sick policyholders in their homes and giving them all possible aid to tide them over their illness. The movement is not philanthropic, but a purely business arrangement. The policy of the company is to cooperate with the attending physicians, and the nurses' business will be to carry out the doctor's orders, and prevent the disastrous consequence of ignorance and neglect in the sick room. The free nursing service will be extended to the rich, poor and middle classes, irrespective of the amount of insurance they carry and of creed, nationality and color. It includes not only attention during the day, but will provide a nurse at night if the patient is critically ill.

**Old-Home Week at the University.**—Old-Home Week of the Medical School of the University of Pennsylvania was inaugurated, March 28, with clinics and a luncheon at the University Hospital. In the evening several hundred physicians attended the smoker of the Philadelphia Alumni Society of the Medical Department. Vice Provost Edgar Smith gave an illustrated lecture on the progress of the university since its founding. Following the lecture an appeal was made by Dr. Swithin Chandler to start a fund to erect a monument to Dr. John Morgan, the first dean, over his grave in St. Peter's Church, Philadelphia. The following officers of the Philadelphia Alumni Association were elected: President, Dr. George C. Stout; honorary vice-president, Provost C. C. Harrison; vice-presidents, Drs. J. Gurney Taylor, Lewis H. Adler, Jr., and Howard A. Sutton; secretaries, Drs. B. Franklin Stahl and Herbert S. Wray; treasurer, Dr. Herbert B. Carpenter; executive committee, Drs. Luther C. Peter, Charles A. E. Codman, Clarence P. Franklin, Stephen E. Tracy and Charles J. Hoban. On March 29 the centenary of the foundation of the chair of obstetrics was commemorated with exercises at the College of Physicians. This included an address by Dr. Barton C. Hirst, on Richard Penrose and biographies of Professors Chapman and Jackson, to whom tablets were unveiled Wednesday, were read by Drs. S. Weir Mitchell and James Tyson. On Wednesday the bronze tablets of Chapman and Jackson were unveiled in the Medical Building by Dr. R. Tait McKenzie. Dean Allan J. Smith of the medical department delivered the address of acceptance.——The banquet of the medical alumni was held Wednesday evening at which nearly 300 were present. At the close of the banquet, Provost C. C. Harrison made an address, the chief interest of which was the announcement of faculty changes and new appointments. These were detailed in The Journal last week, page 1145. The following officers of the Society of the Alumni of the Medical Department were elected: President, Dr. Samuel S. Stryker, '66, Philadelphia; vice-president, Drs. James B. Walker, '72, Philadelphia; George A. Piersol, '77, Philadelphia; Charles W. Burr, '86, Philadelphia; George W. Guthrie, '76, Wilkesbarre; Edward Jackson, '78, Denver; William A. Edwards, '81, Los Angeles;

Thomas M. T. McKennon, '82, Pittsburg; historian, Dr. Roland G. Curtin, '66, Philadelphia, and secretary and treasurer, Dr. Edward A. Shumway, '94, Philadelphia.——The members of the class of 1890 of the medical department, who returned for "Home Week," celebrated the twentieth anniversary of their graduation at a banquet, March 31, at which 18 members of the class were present. The class of 1884 held an informal dinner the same evening over which Dr. George E. de Schweinitz presided.

## OHIO

**Greene Guest of Honor.**—Three hundred members of the Montgomery County Medical Association tendered a banquet to Dr. Duff W. Greene, Dayton, March 4, to celebrate his homecoming after an extended tour of professional research in India.

**Personal.**—Dr. Daniel W. Reddin, North Baltimore, was operated on for appendicitis, March 21.——Dr. Edgar B. Foltz, Akron, sailed for Europe, April 2.——Dr. Jerry M. Hyde has been appointed health officer of Nelsonville.——Dr. Ezra Burnett, Delphos, was thrown from his buggy in a runaway accident, March 9, and sustained painful injuries.——Dr. Frank W. Rodgers, Findlay, is reported to be seriously ill with paralysis.——Dr. Mark Millikin, Hamilton, has been appointed local surgeon for the Pan Handle System.——Dr. William D. Cunningham has been appointed health officer of Girard.

## RHODE ISLAND

**Personal.**—Dr. Charles F. Peckham, Providence, has been elected surgeon-general of the Rhode Island National Guard, vice Dr. George H. Kenyon, Providence, resigned.——Dr. Frederick T. Rogers, Providence, was operated on for appendicitis at Parade St. Sanitarium, February 17.

**Society Election.**—Providence Medical Society, at its annual meeting March 7, elected the following officers: President, Dr. Jacob C. Rutherford; vice-president, Dr. Franklin P. Capron; secretary, Dr. Frank M. Adams; treasurer, Dr. Winthrop A. Risk; councilor, Dr. Joseph H. Akers, and delegates to the state medical society, Drs. Herman C. Pitts, George S. Mathews, Frederick G. Phillips, Henry W. Burnett, Charles F. Deacon, George T. Spicer, Carl R. Doten, George H. Crooker, Clarence H. Gardner and Franklin P. Capron.

## SOUTH CAROLINA

**Health Officers Elected.**—At the annual meeting of the Charleston Board of Health, Dr. John L. Dawson was reelected vice-chairman, and Dr. J. Mercier Green, secretary.——Dr. Edwin P. Derrick has been elected a member of the board of health of Lexington.——At the reorganization of the board of health of Anderson, Dr. Joseph O. Wilhite was elected chairman and Dr. J. Bennett Townsend, secretary.

## TENNESSEE

**Personal.**—Dr. Edwin B. Anderson has been elected chief of the summer medical staff of Erlanger Hospital, Chattanooga, vice Dr. Henry Berlin, and Dr. J. Jefferson Gee has been elected secretary of the staff.——Dr. George E. Hatcher has been appointed assistant superintendent of the Central Hospital for the Insane, Nashville.

**Hospital News.**—Dr. George W. Hubbard, dean of Meharry Medical College, Nashville, announces that the work on the new George W. Hubbard Hospital will soon be commenced. The building will have cost $50,000 when completed.——At a meeting of the Chattanooga Tuberculosis Sanatorium Association, March 9, an eighty-acre tract of land near Tyners, donated by the City Water Company, was accepted, and a committee was appointed to raise funds for improvement of the site and the erection of buildings thereon.

## TEXAS

**District Society to Meet.**—The Northwest Texas Medical Association will hold its annual meeting in Wichita Falls, April 12 and 13, under the presidency of Dr. Wade H. Walker, Wichita Falls.

**Medical Society Organized.**—At a meeting of the local physicians, March 24, the Nacogdoches Medical Society was organized, with Dr. Joel H. Barham, president; Dr. John H. Reagan, vice-president, and Dr. Robert P. Lockey, secretary-treasurer.

**Quarantine Station Completed.**—The state health officer, Dr. William M. Brumby, reports that the Galveston Quarantine Station is now completed. It now includes a modern hospital, wharves and slips, and is now prepared to cope with any emergency that might arise.

**Personal.**—Dr. Morris Boerner has resigned as a member of the staff of assistant physicians of the State Lunatic Asylum, Austin.——Dr. H. Powell Luckett has resigned as city physician of Bastrop.——Dr. Thomas J. Milner, Greenville, has been reelected health officer of Hunt county.——Drs. Thomas W. Moore and Otto Ehlinger, LaGrange, were painfully injured in a runaway accident, February 12.——Dr. Paul Renger, health officer of Hallettsville, was operated on recently in Cuero for appendicitis.——Dr. L. C. Logue, Columbus, has been appointed a member of the staff of assistant physicians of the State Lunatic Asylum, Austin.

## VIRGINIA

**Railway Surgeons Coming.**—The Association of Southern Railway Surgeons will assemble in Richmond May 24, for its fifteenth annual meeting, under the presidency of Dr. Charles H. Starkel, Belleville, Ill.

**Dentists Must Have Medical Education.**—Last week the state legislature passed a law requiring that all dentists entering the state to practice after Jan. 1, 1914, shall have a medical education.

**Legislative Appropriation.**—The House of Delegates has appropriated $40,000 for the State Board of Health and $40,000 for buildings and improvements at the Catawba Sanatorium for Tuberculosis for the first year; for the second year, $20,000 is appropriated for the board and $27,000 for maintenance of the sanatorium.

**Indictment Quashed.**—An indictment recently returned by the Norfolk grand jury against Drs. J. J. McKanna, Jr., and Charles Lincoln, charged with practicing medicine without a license, was quashed in the corporation court, February 14, on the ground that the charges were not specific.——Dr. McKanna has, it is said, agreed to leave the state.

**Personal.**—Dr. Guy Hinsdale, Hot Springs, has returned from a visit to Europe.——Dr. Powhatan S. Schenck has been reappointed state quarantine officer at Norfolk.——Dr. Carlisle L. Nottingham, Cape Charles, has been appointed a member of the board of health of Northampton county, and surgeon-in-chief of the New York, Philadelphia and Norfolk Railroad.——Dr. Garland P. Moore and family, Cape Charles, have started for Japan.——Dr. Joseph N. Barney, Jr., Fredericksburg, has been appointed a member of the State Medical Board for the first congressional district.

## WISCONSIN

**New Tuberculosis Dispensary.**—A free dispensary for tuberculosis was opened March 15, by the Society for the Care of the Sick, in Trinity Hospital Building, Ninth and Wells street, Milwaukee.

**Sanatorium for Racine.**—The city council has authorized the Racine Branch of the Wisconsin Antituberculosis Association to build and equip two cottages for the care of advanced cases of tuberculosis on the grounds of the present isolation hospital.

**Personal.**—Dr. Arnold H. Drexel, Milwaukee, has started for Vienna.——Dr. Hasse A. Meilike, Clintonville, has been reappointed a member of the State Board of Health and Vital Statistics.——Dr. William J. Allen, Beloit, has been appointed assistant health officer.——Dr. George N. Hidershide, Arcadia, who is under treatment at Winona Hospital, is reported as progressing favorably toward recovery.——Dr. Charles D. Packard, Rhinelander, who has been seriously ill with inflammatory rheumatism, is convalescent.——Dr. J. A. Drury, Peppin, has started for Europe.

## GENERAL NEWS AND COMMENT

**Dinner to Surgeon-General of Navy.**—Surgeon-General Charles F. Stokes, U. S. Navy, was the guest of honor on March 29, at a dinner at the University Club, Philadelphia, tendered by Dr. Corbin J. Decker, U. S. Navy, at which a number of representative physicans were guests.

**Canal Zone Physicians Meet.**—The fourth annual meeting of the Canal Zone Medical Association was held at the Ancon Hospital, March 9. Dr. James C. Perry, Ancon, was elected president; Dr. Lloyd Noland, Cristobal, vice-president; and Dr. John W. Ross, Jr., Ancon, secretary-treasurer.

**Transactions of International Congress Ready.**—The general secretary of the Sixteenth International Medical Congress (Budapest) writes that the general transactions will be distributed to the members of the congress during April. According to the congress regulations, each member is to receive a copy of the general report as well as that of the section in which he was inscribed. They are to be accompanied by a work on "Protection of Child-Life in Hungary," presented to each participant in the congress by the Hungarian minister of the interior.

## THE WELCH DINNER

### Grand and Impressive Banquet Given to Prof. William H. Welch in Baltimore

The dinner to Prof. William H. Welch, held in honor of his election as President of the American Medical Association, at the Belvidere Hotel, Baltimore, April 2, was the most remarkable banquet ever held in Baltimore. It was attended by about four hundred and fifty men and women, and no one left until it was all over, at about 1 o'clock in the morning. There were many distinguished guests present, some coming from a considerable distance. Letters and telegrams were read from many others, including some warm friends in England and Germany.

The designated reason for the gathering was to congratulate Dr. Welch on his being President-Elect of the American Medical Association, but the occasion provided a delightful opportunity to Dr. Welch's many friends and admirers of expressing their love and esteem, and honoring him for his attainments as a scientist and a citizen.

Dr. Welch passed to the dining-room through a double line of his applauding friends, and the ovation which he received was a remarkable one, such as is rarely given to a private citizen. The dinner itself was most elaborate and gave abundant evidence of the extraordinary pains which had been taken over every detail. The beautifully decorated hall was adorned with spring flowers, each table in a different manner, and an orchestra provided music.

Dr. William S. Thayer was Toastmaster and he presided in a most happy manner, introducing each speaker with most appropriate words. We give below his introductory speech in full. The addresses were by Dr. S. Weir Mitchell who also read a poem which is printed below and which was received with great delight, Dr. William T. Councilman of Harvard University, Dr. J. A. Witherspoon of Nashville, Tenn., Dr. S. Alexander of New York, Dr. Henry Barton Jacobs, Maj.-Gen. Leonard Wood, and Dr. Abraham Jacobi.

Dr. Jacobi spoke in characteristic vein and we are fortunate in being able to present his remarks in full below. Professor Councilman was decidedly facetious, declaring that "no man should receive credit for what he is," and assumed for himself and his associates the responsibility for having made Dr. Welch the great man he is. His remarks were most interesting and decidedly amusing. He paid a high tribute to Professor Welch, declaring that "no man has ever heard him say evil of his fellows." He declared Dr. Welch to be "incorruptible," "unsalable," and a man whom his associates had learned to love.

Dr. Witherspoon spoke in his usual eloquent vein and named Dr. Welch the "father of scientific progressive medicine" and "the smartest man in the world."

Dr. Henry Barton Jacobs was announced as the man who proposed the dinner and was applauded with the hearty appreciation of the assemblage for his part in such a successful and important function. He stated that the medallion which was such a prominent feature of the occasion was suggested as the most fitting memorial to Dr. Welch by Dr. Rupert Norton of Johns Hopkins Hospital. All the lights were turned off except one and that one shone brightly on the medallion amid rousing cheers. The medallion is of gold and contains the words: "From His Friends." Large bronze copies have been made for presentation to the Johns Hopkins Hospital and to the Medical and Chirurgical Faculty of Maryland.

We are printing below a number of the speeches and it is a matter of regret that we cannot give in full the others, which were not delivered from manuscript. Keyed up to the high pitch of enthusiasm which the occasion demanded, every speech was a gem and combined to make the occasion one never to be forgotten by those so fortunate as to be present.

#### INTRODUCTORY ADDRESS BY THE TOASTMASTER, DR. THAYER

*Colleagues and Friends:*—At the outset, in the name of Maryland and Baltimore, let me greet you who have come from distant parts to join in doing honor to the friend to whom every one of us owes a personal debt of gratitude and affection. And then for us all, and for the many others who cannot be here, let me tell him what a happy moment this is for us.

Last June, as one of the friends who is not with us to-night has said, the American Medical Association elected its foremost member to the presidency. But 'twas not without difficulty, for his modesty had led him to hide for some time behind the armour of protecting technicalities. And it may as well be confessed that his presence here to-night was obtained only by strategy.

When, last fall, through the generous initiative of Ellis and Jacobs, there was called together a small group of Welch's friends and students who felt that they must have some opportunity to express that which filled their hearts, it fell to me to tell Dr. Welch our plans. Our modest suggestion was met by a categorical refusal. The invitation was finally accepted only on condition that the demonstration should be essentially a "home affair," and that the gathering should be as small as possible.

Dr. Welch, we have kept our word. This is the smallest gathering which could begin to express what we would say to you.

And now that we have our friend prepared, as it were, on the table, the orthodox procedure would be to enter on a minute and critical and objective dissection—to lay bare coldly his accumulated treasure. But alas, one must confess the impossibility of objectivity in such a case. And so, to use the formula of the wise man who has insisted so amusingly on the necessary subjectivity of all utterances, I shall now proceed to say a few words about myself, *apropos* of Dr. Welch!

I well remember the first time that I ever heard Welch's name; it was nearly twenty-three years ago. An honored instructor had advised me to buy a certain book on the practice of medicine, because, in addition to the many excellencies of previous editions, this last had been revised, and in many parts largely rewritten by a certain Dr. Welch, whom he regarded as the ablest physician in the country. Three years later, as I was on my way to take up my work in Baltimore, another instructor told me that he felt that the greatest privilege of life at the Johns Hopkins Hospital would be the proximity to Dr. Welch. He well remembered an involved discussion at a medical meeting at the end of which a young man of modest appearance arose and in a few, wise, simple, direct words cleared up the whole matter. He had been immensely impressed and had since regarded him as one of the most remarkable and ablest men in this country. How well to-day, do we all realize the justice of this observation.

At this time, twenty years ago, his influence which had been felt so deeply in New York, had already been quietly exercised in the selection of the original staff of the Johns Hopkins Hospital. Already, for five years, he had been at work in the laboratory, surrounded by a group of students whose names are all well known to-day. From that little laboratory, cramped and crowded, even when I first knew it twenty years ago, what an inspiration has gone forth! Although the contributions which have appeared under Welch's name have been relatively few, his influence has been felt in almost every great work which has been done in the last twenty years by American students.

In the old laboratory by his side in the early years worked Sternberg and Councilman and Booker and Halsted and Sewall and Nuttall and Mall and Abbott and Williams and Howard and Flexner and Hewetson and Barker and Reed and Cullen and Wright, and many others. And what suggestion and encouragement did we all receive from the delightful talks when the "Father," as we lovingly called him, passed from desk to desk, and from his words at the meetings of the little medical society in the hospital library. But that inspiration was for no small group of men. One by one these students have carried abroad his spirit and his teachings until there is scarcely a laboratory in this country that does not contain men who owe their success to that which Welch has given them.

How rich already are the fruits of his work!

It is to you, Dr. Welch, that Councilman owes the inspiration that has guided his useful and eminent career.

It was your teachings that led to the able work of Mall and indirectly to the establishment of his department of which we are so justly proud.

It was your student, McCallum, whose contributions to our knowledge of malaria have been referred to, by one of the most eminent students in this field, as the most brilliant since the discovery of the parasite.

Reed, Lazear and Carroll were all your pupils, and 'twas with you and your old student and co-worker, Sternberg, that Reed discussed and planned the greatest achievement of American medicine—the discovery of the transmission of yellow fever.

It is your student, assistant and colleague, Flexner, whose absence to-night we so deeply regret, who presides over that great institution in New York, which the world owes to the generosity of Mr. Rockefeller. What a contrast, Dr. Welch, between that magnificent institution and your little laboratory—its legitimate mother. But, then, although this little lady is sadly in need of a new dress to-day, who knows what ova of promise she may still contain!

It is your student, Flexner, whose discovery of a protective serum against cerebrospinal meningitis is saving so many precious lives to-day.

It is to your wisdom and initiative more than to any other influence that are due any successes of the medical world started under your guidance.

These may be some of the notable results of your teachings and your influence, but they represent a small part of that which we owe you. The wide extent of your learning, and the kindly interest which you have taken in every one have brought it about that you have become the fountain to which all repair for counsel and advice. But such wisdom, such charity and kindness, such powers of judgment could not, of course, long remain the property of your students and associates alone. In matters medical you have become the general adviser of all. From one end of the country to the other no new departure is taken, no new laboratory is opened, no new chair is filled without your wise advice. How much the American Medical Association owes to your sage counsel as a member of the Board of Trustees no one will ever know.

As chairman of the Board of Health you have directly and indirectly brought more credit to the State of Maryland than almost any other living citizen.

In the oft-renewed contest with the forces of ignorance and fanaticism, allied too often, alas—unwittingly, let us hope—with influences purely sordid and vicious, you have been the fearless and masterly leader of the army of truth and light.

Not only in matters medical, but also in affairs of city and state do we seek your assistance, and one of your associates on the Charter Commission has recently testified to your growing "insight into the morbid activity of *Bacillus municipalis*."

Among the various other ways in which your helpful influence has been felt, there is one on which special comment should be made. You have set us all a brilliant and beneficent example as the master of the art of exposition. This talent depends not only on your clearness of thought, but on a rare power of expression—a power which amounts almost to genius. No one can express a thought so simply and clearly as you.

The chief art of the true master of language lies in his simplicity.

Maeterlinck says somewhere: "The poet adds to every-day existence a something—I know not what—which is the secret of poets, and straightway it stands forth in its prodigious grandeur, in its submission to powers unknown, in its infinite relations and in its solemn misery. A chemist lets fall several mysterious drops into a vase which seems to contain only clear water, and all at once 'tis filled with a world of crystals which reveal to us that which was held in suspense in the vase where our imperfect eyes had seen nothing. So, in Philoctetus, the meager psychology of the three main characters forms but the walls of the vase which holds the clear water of every-day existence into which the poet is to let fall the revealing drops of his genius."

The beautiful symbol of the chemist and the poet has been brought to my mind more than once in listening to your words or reading your sentences. How often have the "revealing drops" of your genius brought out the crystalline kernel from involved discussion or ill-comprehended observation.

But, after all, your greatest work lies in the personal example which you have set to the hundreds of students who have passed under your care. You have taught us a religion of earnestness and simplicity and directness—a religion of charity and of self-restraint, a religion of work, not of words. You have helped us to love truth for truth's sake, and above all, you have spread far and wide that enthusiasm without which all effort is vain.

We honor you for your achievements! We respect you for your learning! We love you for yourself! And one and all, we greet you here to-night, lovingly, gratefully and happily, as master, teacher and friend.

## ADDRESS BY S. WEIR MITCHELL

*Mr. Chairman, Gentlemen, and You, my Friend, the Sacrificial Victim of the After-Dinner Hour:* Travel in strange lands is the more pleasant for knowledge of the language spoken, and it was the fact of my lack of tongues which made me doubt how fit I was to appear on this pleasant occasion, where, as I learned somewhat appalled, everybody was expected to talk *Welch*. To stumble bewildered an intellectual tenderfoot in the learned land of Johns Hopkins might certainly give any man pause, but in the court of wisdom there must be of necessity a fool, and so I accept the position of the provider of sentimental folly and make my little venture.

'Tis said that hovering near your infant couch
  The fairy forms of Art and Science flew
In generous counsel o'er the golden gifts
  They bade a joyous future pledge to you.

And if, they said, your life shall fail to give
  What Bacon called the "hostages to fate,"
Unnumbered friends shall challenge love with love,
  And ever through thy happy hours elate.

Fair Nature, coyest of all maids that hold
  Reluctant mysteries from their lovers dear,
Shall on victorious quests divinely smile
  And tell her secrets to thy listening ear.

Not yours shall be, companioned by the stars,
  To soar through space on thought's ambitous wings
To worlds unseen; nay, yours shall be to roam
  That wondrous other realm of little things.

There, half unread, the ever less and less
  Lost in the lessening less, eludes our sight
In space as sunless and more dark with fate
  Than are the baleful planets of the night.

There shall you stand upon the twilight verge,
  Where fades the sight of each material thing,
And baffled wonder, what an hundred years
  To other eyes than ours may haply bring.

A lilliputian world to thee we give,
  Where deadly swarm the grim bacterial blights,
With amboceptors strange malignant priests
  For demon marriage with satanic rites.

Here stegomyia and anopheles
  Are huge behemoths of this lesser sphere
Where gay spirilla wriggle lively tails
  And vexed erythrocytes grow pale with fear.

"Be these your friends," the flitting fairies cried,
  "But who is this that leads a pirate crew?
"Bacterium chronos! Get you gone from hence,
  "Or hungry leucocytes we'll set on you!"

A truce to folly. Long ago for you
  Has rung the fatal hour of Osler's jest:
Still young, the merry smile, the glowing mind,
  No least sad failure ever yet confessed.

Life's summer overflow reserves for you
  The golden days of lingering life's September,
October loitering waits for you, my friend,
  And summer-haunted glories of November.

Perhaps Johns Hopkins has some secret charm
  That lets professors very neatly swindle
The robber time and feel enfeebling days
  Toward youthful vigor quite reversely dwindle!

Alas, a most appalling doom awaits!—
  A pediatric clinic at the end—
Pertussis, measles, teeth to cut, and then
  The bottle—but which bottle? Ah! my friend,

We'll ask of Kelly, he will surely know
  When comes at last your latest, earliest year,
With all of physiology at fault
  How shall you ever gently disappear?

Far be the day for you. One grief I own,
  What science won my art has something cost
Since the clear mind and ever-ready smile
  Were to the bedside visit sadly lost.

Ave et vale! O, magister, take
  Greeting and blessing from our greatest soul!
The rippling sweetness of his echoing verse
  I seem to hear from that far century roll.

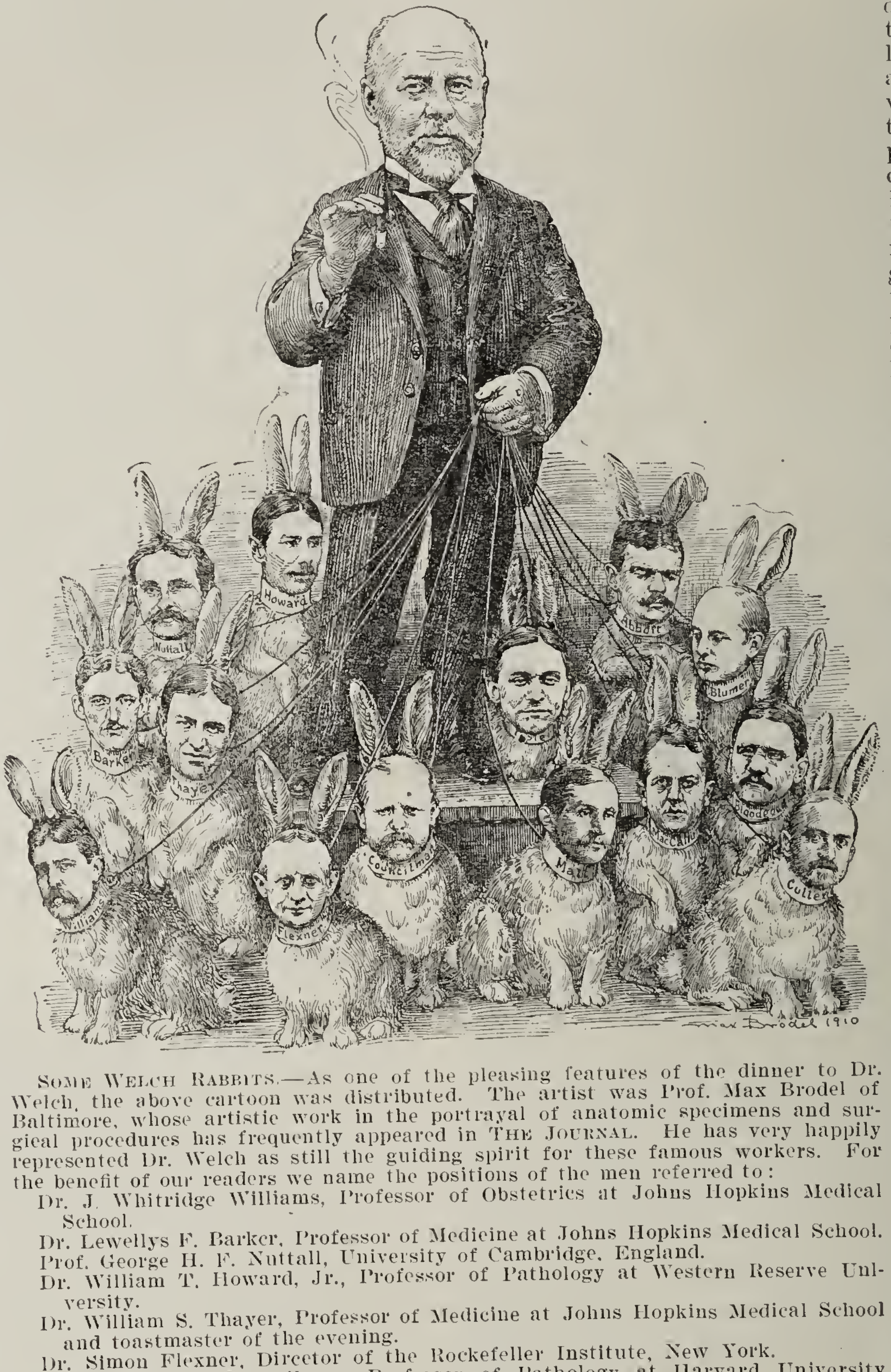
Too poor my rhyme to fitly entertain
  The stately splendor of the Latin line;
Ah! happy he to whom this greeting went—
  Thy spirit—kinsman, Harvey, makes it thine:

Vir doctissime!
Humanissime!
Mihi Carissime!
Vale mi' Amantissime!
Tuus ex anima.

### THE ADDRESS OF DR. JACOBI

Dr. Abraham Jacobi spoke as follows:

There are some inquisitive people in New York. One asked me what business I had in Baltimore. New York was good enough for such as I. "Business?" The dinner. "The dinner! What dinner?" The Welch dinner. "For what reason is there a Welch dinner just now?" What reason? William H. Welch. "I mean what occasion?" The occasion is William H. Welch. When I asked him the names of two among the greatest luxuries, I received no answer. Now, in my opinion, they are, firstly, to dine with a great man, particularly when a lot of others, such as you, are thrown in; and, secondly, to speak of him as he deserves—preferably in his absence. But nobody wants him absent just now. But, after all, why can't a fellow hear the fine things said about a fellow before the fellow is dead? I shall let him down easy perhaps by talking of myself a little.



Some Welch Rabbits.—As one of the pleasing features of the dinner to Dr. Welch, the above cartoon was distributed. The artist was Prof. Max Brodel of Baltimore, whose artistic work in the portrayal of anatomic specimens and surgical procedures has frequently appeared in The Journal. He has very happily represented Dr. Welch as still the guiding spirit for these famous workers. For the benefit of our readers we name the positions of the men referred to:

- Dr. J. Whitridge Williams, Professor of Obstetrics at Johns Hopkins Medical School.
- Dr. Lewellys F. Barker, Professor of Medicine at Johns Hopkins Medical School.
- Prof. George H. F. Nuttall, University of Cambridge, England.
- Dr. William T. Howard, Jr., Professor of Pathology at Western Reserve University.
- Dr. William S. Thayer, Professor of Medicine at Johns Hopkins Medical School and toastmaster of the evening.
- Dr. Simon Flexner, Director of the Rockefeller Institute, New York.
- Dr. William T. Councilman, Professor of Pathology at Harvard University Medical School.
- Dr. Eugene L. Opie, Associate at Rockefeller Institute.
- Dr. Franklin P. Mall, Professor of Anatomy at Johns Hopkins Medical School.
- Dr. William G. MacCallum, Professor of Pathology at Columbia University.
- Dr. Alexander C. Abbott, Professor of Hygiene at University of Pennsylvania.
- Dr. George Blumer, Professor of Medicine at Yale UniversityMedical School.
- Dr. Joseph C. Bloodgood, Associate Professor of Surgery at Johns Hopkins Medical School.
- Dr. Thomas S. Cullen, Associate Professor of Gynecology at Johns Hopkins Medical School.

I knew Dr. Welch thirty-five years ago; we worked together in Bellevue Hospital. Remember, I speak of him as he was then. I appreciated his pathology and clinical medicine; but he was full of all sorts of knowledge. He is modest—cannot help it—was made that way; never obtrusive, but he would teach. Because he had knowledge, he was modest and gentle; gentle even to me, though I was only his superior; and, what is better, gentle to the sick. I then felt certain that he would be a great physician or practitioner, whose make-up always requires, though it does not always furnish, head and heart. Then again I thought after a while I had been mistaken. He disappeared, went to foreign countries. Virchow and Cohnheim were still teaching us pathology—they do still, for that matter.

He returned more learned, but also more cosmopolitan; more of a medical man, but still more of a man.

Thirty years ago I delivered, before a foreign-born society in a foreign language, an address on what had just been founded as Johns Hopkins University. There was the first promise of a real university, with an actual university spirit, broad, wide horizon, warm, fertile and fertilizing, spiritual and moral. For that is the quintessence of the ideal of a university; understood or not, that was ever the ideal of a university; not as a modern teacher of the east proclaimed only last year, in a lecture room of the far west—a place where all sorts of specialties are taught. At that distant time I could say that so far as I, though only a practitioner but an adorer of the university idea and ideal, could see, the accession of William H. Welch would prove a solid foundation of a brilliant future for Johns Hopkins and an example for the future of American institutions. There are those whom our father Homer had in view when he said that not to all will the immortals appear. What he meant, and what he knew, was that they appear to some. Here is one of them. You know what he has been to Johns Hopkins, to its spirit, to its medicine, to all medicine, from the very beginning of his participation in Johns Hopkins labors. From the very beginning he was positive, but wise, learned but never pedantic, strong but prudent, keen and warm; the owner of many properties belonging to the young and strong, and to the old and wise. There are those qualities of the heart and brain which are attributed to advanced years only. But this man had and has his peculiarities. Indeed he does not believe, nor do I for that matter, that wisdom and ripeness must wait for the progressive stages of sclerotic arteries or overphosphated bones or a curved spine—at least he did not wait.

He never was a medical man only; a small part of medicine may nowadays fill the measure of many an alleged big man. Things were different one or two centuries ago. Then it was easy enough for a vast mind, endowed with sedentary habits and gluteal muscles, to carry a gold-headed cane, practice medicine according to the latest system and edit Greek or Latin incurables. A portentous doctor could be an erudite philologist and prove it. Nearer our times, Rush could sign our independence, and was, all by himself, an army surgeon, a busy practitioner, a prolific author and run mad over Brown. Cordell tells us that in the winter of 1789-90, George Buchanan taught in Baltimore the diseases of women and children and Brownianism: Wiesenthal anatomy, physiology, pathology, surgery, and the gravid uterus. They do not do that in Johns Hopkins any more. Their sins, if any, lie in different directions. But, cheer up, gentlemen, worse is to come. Holmes and Mitchell run off with Apollo to Parnassus and flirt, aye more than merely flirt, while we stand by applauding with a harem full of females, but they were nurses.

And Welch? Those who know him best, know what he has done for medicine. Medicine as a service, medicine as a part of biology and *vice versa*, and that he has worked assiduously—for life is but a song, and is wondrous long—effectually and accurately. But his accuracy was never a pharisaical fetish and no man ever lived who relied less extensively than he on the superstitious beatitude created by the actual or alleged single observation made by bending over a system of lenses only. What I always saw in him was of a different nature altogether.

When I was a boy Homer taught me that Podalirius and Machaon, the physicians of the besieging army were the most revered men, for a "healing man was to be esteemed as highly as a host of others;" by Xenophon that Socrates expected the welfare of the community to be safeguarded by doctors; later, by Descartes and Kant, that the refinement and culture of mankind must come from the teachings and practice of medicine; by our father Hippocrates, that where there is a love of medicine there is love of mankind. So I understand and applaud Welch. He is a great doctor, but a greater man. Medicine never was to him identical with one of the branches, or with the results of one or more surgical observations or revelations; not even the protection, valuable though it be, of an individual life. To him medicine has been the sum total of the physiologic knowledge of man and of the creation, and their history of the means of curing an individual accident; it is true, but more of preventing individual disease and morbidity and mortality, and those of the commonwealth, of guarding mankind against human waste by the prolongation of life, of making life in all ages, sexes, colors and stations bearable and enjoyable. That in view, he became a master in and presided over the Board of Health of Maryland; for that reason and for his universal fame whoever in these United States wants aid or counsel or direction, applies to Welch. That in view, he has created or caused to create a new charter for the administration of this big and warm-hearted city—he the learned pathologist, the great physician, the ripe statesman, the good citizen, *facillime princeps*, the dear good man.

### THE RESPONSE OF DR. WELCH

When Dr. Welch rose to reply to these hearty expressions, he received another ovation and his manner showed how deeply he was touched by the events of the evening.

After expressing his thanks and grateful appreciation for the honor bestowed by the large gathering of physicians and friends, for the medallion portrait and the tributes of the various speakers, Dr. Welch said, in part: "While I am only too conscious that in the speeches and messages to-night the value of such service as I have been able to render to American medicine has been overestimated, it is true that I have had large opportunities for such service. These opportunities I owe to the profession, and it is of my debt to the profession that I wish especially to speak on this occasion. Every man owes a duty to his profession, and I should have been ungrateful indeed and recreant to a high trust if I had not endeavored to repay within my abilities the confidence reposed in me.

"The presence of Dr. Delafield at my right hand recalls my teachers and the large debt of gratitude which I owe to them. Whatever the defects of medical education in those days such teachers as these inspired their pupils with zeal and enthusiasm and high ideals. To Dr. Delafield I owe my first introduction to pathologic anatomy and his summer course with practical demonstrations awakened a lively interest, which became a genuine enthusiasm during my internship at Bellevue Hospital, where I was so fortunate as to come also under the inspiration of Dr. Janeway. In the wards of Bellevue Hospital I learned from Dr. Jacobi something of the thoroughness and spirit of German science."

Dr. Welch also spoke of his debt to his teachers in Germany and of the close ties formed with the profession in New York during his six years of connection with the Bellevue Hospital Medical College, where he said his chief delight was then, as it has continued to be, the teaching of students in the laboratory.

Grateful acknowledgement was made of the cordial reception by the profession in Baltimore and of his debt to the Johns Hopkins University and Hospital, where opportunities, previously unequaled in this country, were offered for the advancement of medical education. He expressed his good fortune in his associates and assistants, such men as Councilman, Abbott, Flexner, Barker and MacCallum, and the share of his colleagues in developing the medical school. It had been a privilege to participate in civic life, and to assist in the public health work of Maryland. While he regretted the dissipation of energy in undertaking so much outside work, it had been a great satisfaction to take part in the organization and development of the Rockefeller Institute for Medical Research. He said: "I have been highly honored by election to the presidency of the American Medical Association, the representative organization of the entire profession of this country. During the past decade the results accomplished by this association in the organization of the profession for higher standards in varied fields of medical activity have been perhaps the most significant event in American medicine. The Association should receive the loyalty and active support and cooperation of all physicians who have at heart the best interests of the profession and the advancement of American medicine."

After speaking of the educational and scientific progress of medicine during the past quarter of a century, and of the work of the physician in the future, particularly in preventive medicine, Dr. Welch, in closing, said:

"The attractions of a career in life lie in the opportunities it offers, in the congenial character of the work involved and the rewards to be gained. The profession of medicine is unsurpassed in its opportunities for service to one's fellow men. The manifold fields of activity now opened to the medical man appeal to the most varied personal inclinations and aptitudes, be these practical or scientific. The rewards of success, even of the highest success, are not in money. They are the intellectual pleasure which the physician finds in his work, the consciousness of service in the relief of suffering and the cure and prevention of disease, or it may be that highest satisfaction, some contribution to the advancement of useful knowledge, knowledge perhaps directly applicable to the healing of the nations.

"A reward to be dearly prized, but which has been conspicuously lacking for some of the great geniuses of our profession, is the expression of the esteem and good will of one's contemporaries of the profession and of the community. This highly prized reward has come to me to-night through your kindness and recognition, over-generous though they be, in overflowing measure, and in a form inspiring and never to be forgotten by me, which has touched my heart with profound gratitude, and which, I trust, will animate me with stronger desire to show, if I may, some return by increased devotion to high ideals of efficiency and service in such work as may remain for me to do."

In conclusion, the band played "Auld Lang Syne," in which all joined, standing, and the way it was sung showed that auld acquaintance could not be forgot.

## BERLIN LETTER

(*From Our Regular Correspondent*)

Berlin, March 16, 1910.

### Bill for the Regulation of Social Insurance

The new bill for regulation of compulsory insurance which is to reform the social legislation of Germany and which has been awaited with great interest by the German medical profession has now appeared. As I mentioned in a previous letter, the provisions of the bill first proposed, which provided for regulating the relations between the Krankenkassen and their medical officers, designed to hinder the constant strife between these two parties, met with energetic opposition on the part of medical men. Especially after the unanimous declaration of the Lübeck session of the medical association that the German physicians would not cooperate in carrying out the social legislation unless various demands were met in the new law, it was to be hoped that the government would accede to the wishes of the medical profession, but the upper limit of an income of $500 for the insured has not been generally established; exceptions are made in the case of laborers, helpers, companions, apprentices and servants. These are included in the provision for free Krankenkassen treatment even if their annual wage exceeds the sum of 2,000 marks. Further, as provided in the first bill no physician may be prosecuted on account of infringement of medical ethics or of his duty to the medical profession, if he has made a contract with the Krankenkassen under conditions which conform to the statutes. With reference to the urgent demand for free choice of physicians by the insured the government gives regulations both for the free choice of physicians and also for making contracts with special insurance physicians. The formation of contract committees, which shall serve to prevent misunderstandings and to settle such as already have arisen is provided for in the bill, and this is really of no little importance. These committees will be so much the better fitted for their task as they consist of representatives from both parties in equal numbers selected by the societies and by the physicians immediately interested in their practice. There is no doubt that the German medical profession will not be content with the improvements found in the new bill, and it is to be expected that they will engage with the same energy against the faulty provisions still remaining in this second bill as they did against the first. Their efforts must now be directed to the other legislative body, the Reichstag.

### Pharmacists and Physicians

The medical council for West Prussia at a recent session resolved to ask the pharmacists' council of the province to require pharmacists not to give patients with the medicines prescribed by physicians any advertisements of other remedies.

Frequently paper containing advertisements, which is furnished to the pharmacists by the manufacturers free, is used for wrapping medicine bottles, boxes, etc. On the other hand, the pharmacists' council has requested the medical council that physicians abstain from indicating a preference for a particular pharmacist, which is forbidden by law, and it also requests that physicians should write their prescriptions plainly, and in large cities have their names printed on the prescription blanks, so as to prevent injury to the pharmacists.

## Pharmacology

### AMERICAN DRUGGISTS SYNDICATE

### The Capital Stock Is Increased and Physicians Are Invited to Come In

Since the last article[1] in THE JOURNAL dealing with the American Druggists Syndicate appeared, this cooperative "patent medicine" concern has increased its capital stock to $2,500,000. In the notice sent out by the A. D. S. calling for a special meeting of the stockholders to consider the question of increasing the stock, the statement was made that "it is our purpose to enlist the active cooperation of the honest physician, notwithstanding the opposition of the traitorous hypocrites editing certain medical journals." This last clause, we believe, has a personal element. The increase in capitalization having been accomplished and a vast amount of stock created, physicians are now being appealed to, through a small pamphlet, to purchase at $10 a share the common stock of the concern. Should the "Orangeine" or "Lydia Pinkham" people ask physicians to purchase their stock and participate in the unholy profits that accrue from the sale of these nostrums the protests from an indignant profession would be no more numerous and outspoken than those which have poured in on THE JOURNAL since this A. D. S. pamphlet has reached the physicians of the country. In the booklet, which is entitled "Millionaire-Makers for Others," the A. D. S. calls attention to the vast profits that have been created from the sale of Doan's Kidney Pills, Lydia Pinkham's Compound, Swamp Root, Laxative Bromo Quinin, and other nostrums, and urges physicians to purchase stock in the American Druggists Syndicate so that a competing line of nostrums may be marketed and the physician himself get some of the profits.

#### SUBSTITUTION THE KEY-NOTE

There is "only one way to eliminate the nostrum evil," says the A. D. S., and that is "to make the advertising of such products unprofitable to the manufacturer." How this is to be brought about is explained in a way that must make honest druggists blush. Substitution is the method. " . . . it is only necessary to give the druggist an opportunity to offer a safe and legitimate product [that is to say an A. D. S. substitute] whenever a product of the other kind is called for." If the A. D. S. is to be believed, substitution is a widespread accomplishment: "Leading druggists are authority for the statement that they can sell such legitimate products [A. D. S. preparations] to seven out of ten who otherwise might be induced to use dangerous ones." Of the ten, the three individuals who know what they want when they want it, can be finally landed in the A. D. S. net "through intelligent literature [whatever that may be] to be given them with the packages they insist on."

Resolved to simpler terms it means that the druggist who is a member of the A. D. S. should endeavor to get the customer who wants "Antiphlogistine" to take "A. D. S. Anti-Inflammatus;" he who desires "Paine's Celery Compound" to accept "A. D. S. Celery Compound;" he who feels the need of "Bromo-Seltzer" to be satisfied with "A. D. S. Effervescent Bromo Headache Salt;" he who pines for "California Syrup of Figs" to be content with "A. D. S. Fig Syrup Compound," and she who calls for "Lydia Pinkham's," to take instead "A. D. S. Pelvitone."

#### THE PHYSICIAN'S PART

And where does the physician come in? If he is a stockholder in the A. D. S. he is "given an opportunity to share equally with druggists in the profits derived from the sale of the legitimate [?] products offered by this organization." In other words the druggist is to substitute, the public is to dope itself, and the medical profession is to participate in the financial rewards that come from such a combination.

Should the physician wonder whether this self-drugging on the part of the public would not have a financially deleterious effect on his practice he is assured that the A. D. S. remedies include "only such medicinal articles as would be least likely to conflict with the interests of physicians." Nothing is said of the fact that practically the only A. D. S. preparations advertised are its rankest nostrums: Pelvitone; Kidney Remedy; Cold and Grippe Remedy; Rheumatic Remedy, and so on. Neither is it acknowledged that should the nostrum element be eliminated from the activities of the American Druggists Syndicate the whole structure would collapse.

And the ethics of it? Well, we are told that:

> "The physician or pharmacist who allows his conception of ethics to prevent him from providing for the material wants of his family and for their future welfare by a fear of being accused of commercialism is lacking in good judgment."
>
> "Old worn-out moth-eaten notions of ethics should not prevent honorable physicians and pharmacists from working in harmony for the increase of the legitimate profits of both professions."

#### DISPENSING PHYSICIANS, BEWARE!

An interesting sidelight, in that it contains a veiled threat, is to be found in this A. D. S. booklet. The dispensing physician is the text of the story. Such a physician, we are told, lived in a small town and, although there were two excellent drug stores, he would not write prescriptions. What happened? The druggists "held a conference and soon decided what they would do to teach the physician a lesson. They employed a bright and competent [nothing said about honor!] young physician to write free prescriptions and make free professional calls. It took only about three weeks to convince the first doctor on the ground that he would soon be starved out of the field if he did not make peace with the druggists." The physician, then, we are told, went to the druggists, acknowledged the error of his ways and promised to be good ever after. As the A. D. S. pamphlet adds: "This is intended only as an illustration of what could be done by pharmacists in extreme cases, if they found it necessary, as it was in this instance."

We presume the object of this story is to engender the same kindly feeling between physicians and druggists as must be developed between members and non-member druggists by those A. D. S. advertisements which, by inference, inform the public that the only way to be sure it is getting pure drugs is to patronize a member of the American Druggists Syndicate.

Altogether, the pamphlet, and its message to physicians, cannot be described in language more pertinent and fitting than that used by one of THE JOURNAL'S correspondents, who characterized it as "truly a monumental bit of impertinence."

## Correspondence

### Excretion of Hexamethylenamin

*To the Editor:*—In THE JOURNAL, March 12, there appeared an article by Dr. Barton on the excretion of the decomposition product of hexamethylenamin by the mucous membrane of the ear. After reading this article it occurred to me that if formaldehyde is excreted by the mucous membrane of the ear, possibly it is also excreted by the mucous membrane of the bronchi, and also perhaps in the alveoli of the lungs.

To test this, I administered the drug to a patient with chronic bronchitis who happened to have at the time mucopurulent expectoration; after three doses, the character of the expectoration changed from mucopurulent to mucoid, and after six doses the quantity was very much diminished. A portion of the sputum tested after three doses had been administered gave a positive reaction in a very short time. A specimen after the sixth dose also gave a positive reaction, but only after several hours.

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[1] Previous articles dealing with the A. D. S. have been reprinted in pamphlet form. This will be sent to those who want it. Enclose a stamped addressed envelope with request.

At my request, Dr. Percy Smith, the superintendent of the District of Columbia tuberculosis hospital, is testing it in advanced cases of tuberculosis, with the idea of checking the profuse purulent expectoration and, perhaps, of rendering it sterile. I feel that great results may possibly be obtained.

George H. Heitmuller, Washington, D. C.

### The Cutaneous Reaction to Tuberculin

*To the Editor:*—It has been the practice at the New Mexico Cottage Sanatorium to use the Detre differential test in all our patients on admission, our purpose being to acquire data as to the reliability of the test. In connection with the cutaneous test I have several times observed a curious phenomenon and have not noticed that it has been reported heretofore. If it has not I would like to take this opportunity to record it.

Months, and in one instance a year, after the performance of the test, a dose of tuberculin will be reached which will give rise to a very slight reaction and following the reaction, or coincident with it rather, there is at once a recrudescence of all the phenomena at the sight of the old skin test, acting very much as though the individual had had a second cutaneous application of tuberculin.

E. Bullock, M.D., Silver City, N. M.

## *Association News*

### THE ST. LOUIS SESSION

### Announcement of Reduced Railroad Rates Secured and Special Trains Arranged

The Committee on Transportation and Place of Session submits the following report concerning rates and trains to the St. Louis session in June:

RAILROAD RATES

The Central Passenger Association and the Western Passenger Association, which include all railway lines operating in the states of Ohio, Michigan, Indiana, Illinois, Iowa, Wisconsin, Minnesota, North and South Dakota and Missouri, will make a rate of one fare and a half for the round trip, tickets to be sold June 4 to 8, inclusive. The return limit is June 20, with provision for extension of the limit to July 20 if ticket is deposited with joint agent at St. Louis and deposit fee of $1 paid by the passenger.

The Trunk Line and New England associations, which include all lines operating in the states of Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, Pennsylvania, New Jersey, West Virginia, Delaware, Maryland and the District of Columbia, have authorized a round-trip rate of one fare and a half, tickets to be sold June 3 to 6, inclusive. The return limit is June 20, with provision for extension to July 20 by deposit of ticket and payment of deposit fee of $1.

The Trans-Continental Association has authorized a one-fare rate of $67.50 from all California points, tickets on sale June 3, 4 and 5; the return limit is three months. The same rate is to apply from North Pacific coast points in Oregon and Washington, tickets to be on sale June 2 only; the return limit is three months from date of sale.

So far, the Trans-Missouri Association, which includes lines operating in Kansas, Nebraska, Wyoming, Colorado and New Mexico, has made no reduced rates, nor have the South Western or South Eastern associations, except that the South Western has authorized a rate of a fare and a half from southern Missouri.

It is hoped that rates may yet be obtained from the territory embraced by these associations, and further announcement will be made by the committee concerning them later.

Considering the territory covered, these are the best rates which the Association has had since the two-cent laws went into effect.

SPECIAL TRAINS

The following special trains have been arranged:

A day train over the Chicago and Alton road will leave Chicago Monday, June 6 at 9 a. m., arriving at St. Louis about 5 p. m., in ample time for members to get located in their hotels for the night.

This train will be composed of reclining chair cars for those who do not wish to patronize the Pullman parlor cars, a library club car with buffet, dining car, Pullman parlor cars and observation car. This train will provide a beautiful ride through the state by daylight.

A night special will leave Chicago over the Chicago and Alton road at 11:30 p. m., arriving at St. Louis about 8 a. m. This train will consist of reclining chair cars (if desired) without extra charge, club cars with buffet and Pullman drawing-room sleeping cars.

These special trains from Chicago will stop at Joliet, Dwight, Pontiac, Chenoa, Bloomington, Atlanta, Lincoln, Springfield, Carlinville and Alton to pick up members and will make any other intermediate stops if previous notification is given that members wish to board the trains.

Members may leave Peoria at 12:20 p. m. on the Chicago and Alton, connecting with the special at Springfield.

Special trains will leave Kansas City over the Chicago and Alton road on Monday, June 6, at 9 a. m. and 11:30 p. m., the former making a day run through Missouri; arriving at St. Louis at 5 p. m., and the latter a night run, arriving at St. Louis at 8 a. m. In their makeup these trains will be the counterpart of the trains between Chicago and St. Louis and will stop at the following Missouri stations: Independence, Odessa, Higginsville, Marshall, Slater, Glasgow, Higbee, Centralia and Mexico and at intermediate points if previous notification is given that members wish to join the trains.

From Minneapolis and St. Paul a special train will be run over the Chicago, Milwaukee and St. Paul road to Chicago, and from Chicago to St. Louis over the Chicago and Alton.

A special train, or special drawing-room sleepers set aside for the exclusive use of members, will be run over the Toledo, St. Louis and Western (Clover Leaf line) leaving Toledo, Ohio, at 7:15 p. m. and arriving at St. Louis at 8 o'clock in the morning. This train will stop at Continental, Delphos and Ohio City, Ohio, and Decatur, Marion, Kokomo, Frankfort and Veedersburg, Ind., and Charleston, Ill. Stops will be made at other points if previous notification be given that members wish to take the train.

A special train, or cars as may be needed, has been arranged to run over the New York Central system, including the Boston and Albany from Boston. This train, which will stop at prominent intermediate points, will leave Boston and New York in time to reach St. Louis early Tuesday morning, June 7.

Arrangements have been made so that through tickets over the New York Central lines from Cleveland and all points east thereof may be exchanged in St. Louis at the city office of the Chicago and Alton for return trip by way of Chicago over the Chicago and Alton line, with stopover at Chicago. Likewise, tickets reading "by way of Chicago and Chicago and Alton" may be exchanged for return trip by direct route over New York Central lines.

Further information concerning reservations on any of these trains will appear in The Journal later.

M. L. Harris, Chairman,
Committee on Transportation and Place of Session.

### The Section Meeting Places

The St. Louis Committee on Arrangements sends the following announcements:

The section meeting places are located on Grand avenue and on streets intersecting Grand avenue. Those meeting places located on intersecting streets are not more than 300 feet distant from Grand avenue. This distance between the extremes of the district is about one-half mile, but all are in close proximity to other halls, and special attention was given to grouping correlated sections.

The only hall that is not in the Grand avenue district is the Coliseum, where the Registration Bureau, the Commercial and Scientific Exhibits, the Postoffice, etc., will be located.

No hall in the midst of the meeting places was large enough to accommodate these departments.

The street car facilities are most excellent, cars running at two and three minute intervals, and arrangements are being made for special service on occasions when the members will travel in large bodies at any particular hour. Taxicabs will also be at hand, and a special rate will be allowed for transporting the members from the Coliseum, where the Registration Bureau will be established, to the Grand avenue district.

The section and other meeting places are as follows:

Medicine: Third Baptist Church, Grand and Washington Aves.

Surgery: Odeon Theatre, Grand and Finney Aves.

Obstetrics and Diseases of Women: Y. M. C. A. Building—Association Hall, Grand and Franklin Aves.

Laryngology and Otology: Sodality Hall, Grand Ave., between Pine and Laclede.

Ophthalmology: Aschenbroedel Hall, 3535 Pine St.

Diseases of Children: Grand Avenue Presbyterian Church, Sunday School Room, Grand and Washington Aves.

Pharmacology and Therapeutics: Delmar Avenue Congregational Church, Delmar, west of Grand Ave.

Stomatology: Y. M. C. A. Building—Small Hall, Grand and Franklin Aves.

Nervous and Mental Diseases: St. Louis University Library, Grand Ave., head of East Pine.

Dermatology: Odeon Bldg—Recital Hall, Grand and Finney Aves.

Preventive Medicine and Public Health: Knights of Columbus Bldg., 3549 Olive St.

Pathology and Physiology: Y. M. C. A. Building—Lecture Hall, Grand and Franklin.

Scientific and Commercial Exhibits, Postoffice, Registration Office: Coliseum, Washington and Jefferson.

President's Reception: First Regiment Armory, Grand and Manchester Aves.

General Session: Odeon Theatre, Grand and Finney Aves.

House of Delegates: St. Louis Medical Society, 3524 Pine St.

The Committee on Section Meeting Places will endeavor to have all halls fully equipped with every needed appurtenance to facilitate the transaction of the work of the sections. Communications on this subject should be addressed to Dr. H. Tuholske, Chairman of the Committee on Section Meeting Places, 609 Metropolitan Building, St. Louis.

### Good Weather Probable

The Committee on Arrangements desires to assure the members that the weather in the early days of June is delightful. According to the records of the Weather Bureau the temperature for the first ten days in June varies from 70 to 80 degrees. There need be no fear of extreme heat in St. Louis during the period of the session. The Committee on Arrangements wishes this information widely disseminated.

E. J. Goodwin, Secretary,
Committee on Arrangements.

## NEW MEMBERS

List of new members of the American Medical Association for the month of March, 1910:

### ALABAMA

Banks, M. J., Jackson's Gap.
Foshee, R. A., Alexander City.
Henderson, H. H., Bolling.
Kimbrough, T. G., Thomaston.
McCown, W. S., Hazel Green.
Rudulph, C. M., Birmingham.

### ARKANSAS.

Brunson, Asa, Pine Bluff.
Dickson, Paul L., Paragould.
Harrison, A. G., Kensett.
Hartsell, W. L., Draughon.
Lunsford, C. B., Chickasawba.
Powell, J. W., Springfield.

### CALIFORNIA

Abrahamson, Milton, San Francisco.
Beyer, Herman, Occano.
Chadwick, F. C., San Francisco.
Cook, W. H., McKittrick.
Davis, F. J., Oroville.
Etcheverry, M. H., San Francisco.
Evans, T. J., Loma Linda.
Fellows, Alfred, Los Angeles.
Fielding, G. A., Sawtelle.
Hnnter, G. G., Los Angeles.
Joyce, Elizabeth F., Winters.
Julien, E. H., San Francisco.
Leech, C. R., Walnut Creek.
Lewitt, F. C., San Francisco.
Nichols, H. L., Sacramento.
Osborne, A. E., San Juan Bantista.
Taussig, Edward, San Francisco.

### COLORADO

Andrew, John, Longmont.
Burnett, A. L., Silverton.
Campbell, L. D., Denver.
Carey, J. D., Timnath.
Peabody, J. R., Colorado Springs.
Wiest, Roy, Estes Par

### CONNECTICUT

DeBonis, Domencio, Hartford.
Gilmore, J. L., West Haven.
Swett, P. P., Hartford.

### DISTRICT OF COLUMBIA

Garnett, A. G. P., Washington.
Strobel, Mary L., Washington.
Walter, W. F., Washington.

### FLORIDA

Campbell, E. T., Citra.
Kinsey, J. P., Pinetta.
Martinson, Elsie M., Tampa.
Mitchell, L. B., Tampa.
Panl, L. H., Caryville.

### GEORGIA

Abercrombie, T. F., Dallas.
Adams, H. P., Savannah.
Collins, Katharine R., Atlanta.
Fincher, E. F., East Atlanta.
Scott, A. R., McDonongh.
White, T. E., Fitzgerald.

### IDAHO

Allen, C. S., Atlanta.

### ILLINOIS

Aiton, Mary H., Summer Hill.
Aschauer, H. A., Springfield.
Barnsback, R. S., Edwardsville.
Baxter, A. C., Springfield.
Bernard, E. L., Springfield.
Bullard, R. I., Springfield.
Caldwell, J. C., East St. Louis.
Compton, C. W., Springfield.
Corr, Lucinda H., Carlinville.
Crain, C. H., Chicago.
Deichmann, O. H., Springfield.
Doane, G. H., O'Fallon.
Doerann, A. F., Chicago.
DuMars, E. C., Peoria.
Fishman, C. J., Chicago.
Franz, C. H., Aurora.
Gammage, A. E., Chicago.
Gibson, E. P., Louisville.
Gill, P. W., Chicago.
Hall, T. H., Gillespie.
Harlan, L. C., Madison.
Haskell, W. A., Alton.
Hayes, R. H., Chicago.
Hoover, F. B., Chicago.
James, A. C., Springfield.
Jenkins, H. E., Forest Park.
Joyce, W. M., Chicago.
Kerchner, F. W.,Glen Carbon.
King, C. D., Gillespie.
Luzader, Katherine B., Greenville.
Mansfield, W. A., Washington.
Matthew, J. B., Blue Mound.
Mautz, G. J., Springfield.
Maxon, O. F., Springfield.
May, L. J., Cobden.
McQnillan, A. B., E. St. Louis.
Menoher, J. A., Speer.
Millard, J. L., Grand Ridge.
Milligan, C. W., Springfield.
Morgan, T. W., Virden.
Nelson, C. S., Springfield.
Oliver, A. H., Edwardsville.
Page, T. H., Peoria.
Parks, Jennie W., Cuba.
Reis, Jr., Henry, Belleville.
Renner, C. P., Belleville.
Roberson, W. H., Mt. Carmel.
Stanton, F. W., Joliet.
Stanton, R. F., E. St. Louis.
Tnrner, J. A., Waukegan.
Wagner, T. H., Joliet.
Wallace, J. W., Aledo.
Weil, Albert, Peoria.
Willard, F. W., Chicago.
Wolfe, J. A., Chicago.
Wright, H. G., DeKalb.

### INDIANA

Anderson, J. C., Indianapolis.
Baker, R. E., Orleans.
Bonn, H. K., Indianapolis.
Burris, E. W., Indianapolis.
Dnnham, W. F., Kempton.
Elliott, J. C., Guilford.
Goodale, A. W., Orland.
Gordon, E. R., Hobart.
Green, W. L., Pekin.
Greenwald, W. C. E., Indiana Harbor.
Hollis, W. A., Hartford City.
Lakin, A. N., State Line.
Levi, W. D., Jeffersonville.
Mathys, Alfred, Mauckport.
Null, L. S., New Haven.
Pell, G. M., Carbon.
Peters, D. C., Greentown.
Province, O. A., Franklin.
Rozelle, C. C., LaGrange.
Tilson, S. M., Indianapolis.
Vigus, C. B., Point Isabel.
Winans, H. M., Muncie.
Worster, W. W., LaFayette.
Wright, U. A., Coatesville.

### IOWA

Bowie, L. L., Moorhead.
Houston, Bush, Montezuma.
Lovett, I. M., Lineville.
Parsons, I. U., Malvern.
Powell, V. E., Red Oak.
Stalford, G. A., Radcliffe.
Stoakes, C. S., Battle Creek.
Throckmorton, R. F., Derby.

### KANSAS

Clarkson, W. H., Manhattan.
Duncan, F. W., Coffeyville.
Kenner, J. J., Lawrence.
Knowles, H. P., Mound City.
Mahan, R. S., West Mineral.
Newkirk, Jessie Slavens, Kansas City.
Nichols, W. J., Pittsburg.
Tanquary, E. D., Little River.
Wallace, F. E., Chase.
Whitfield, R. J., Ft. Scott.

### KENTUCKY

Brandon, R. W., LaFayette.
Brnce, E. T., Louisville.
Carnm, J. R., Ashbyburg.
Duvall, C. H., Warsaw.
Godbey, D. M., Perryville.
Greenleaf, P. E., Louisville.
Henderson, E. L., Louisville.
Hohnstedt, J. H., Ft. Thomas.
Kelly, Harris, Louisville.
Lewis, R. H., Wildie.
Little, W. T., Calvert City.
Marshall, T. J., Bardwell.
Overall, A. C., Mt. Washington.
Phillips, H. J., Louisville.
Ramey, W. G., Carter.
Reynolds, B. F., Carlisle.
Sparks, J. C., Willard.
Warren, J. P., Lexington.
White, G. W., Oakland.
Wiliams, D. J., Ford.
Williams, R. H., New Hope.
Williams, W. H., Franklin.
Young, I. C., Lowes.

### LOUISIANA

Bahn, C. A., New Orleans.
Brahic, P. E., Moreauville.
Brosnan, D. S., New Orleans.
Brown, F. T., New Orleans.
Engelbach, Theodore, Grand Isle.
Gillaspie, W. A., New Orleans.
Gonaux, F. T., Lockport.
Kahle, P. J., New Orleans.
Lowe, V. F., New Orleans.
Murdock, L. A., St. Joseph.
Qnirk, W. A., Evergreen.
Sheppard, J. K., New Orleans.
Tusson, Walter, New Orleans.

### MAINE

Files, E. W., Portland.
Gage, I. B., Warren.
Head, O. B., New Sharon.
Nash, A. W., Jefferson.
Poore, L. H., Webb's Mills.
Wheeler, L. H., South Brewer.
York, A. I., Wilton.

### MARYLAND

Bird, J. W., Sandy Spring.
Byrne, B. J., Ellicott City.
Conradi, F. A., Baltimore.
Griffith, W. A., Upper Marlboro.
Kalbaugh, A. B., Westernport.
King, I. N., Barstow.
McMillan, S. M., Riverdale.
Moseley, Jr., W. E., Baltimore.
O Mara, J. T., Baltimore.
Vest, W. E., Baltimore.
Willey, W. T., Baltimore.

### MASSACHUSETTS

Atchison, C. M., New Bedford.
Boos, W. F., Jamaica Plain.
Collins, O. W., So. Framingham.
Dubois, E. C., Springfield.
Flagg, H. H., Charlestown.
Holmes, A. B., Kingston.
Lane, C. G., Wobnrn.
Lesses, Max, Salem.
Mellus, Edward, West Newton.
Mann, W. O., Boston.
Miller, G. F., Boston.
Mixter, W. J., Boston.
Morrison, R. F., Holyoke.
Mysel, H. A., Haverhill.
Perry, H. B., Northampton.
Quest, J. F., Adams.
Sanborn, Byron, Topsfield.
Sandler, Samuel, Fall River.
Senesac, A. N., New Bedford.
Siskind, A. L., Lawrence.
Spooner, L. H., Boston.
Swift, M. B., Fall River.
Wilcox, H. H., Springfield.

### MICHIGAN

Barnard, J. H., Tustin.
Bland, J. P., Adrian.
Campbell, W. T., Brown City.
Hoag, R. B., Wayne.
Howlett, E. V., Pontiac.
Huntley, V. F., Manton.
Kaven, G. H., Unionville.
Kremer, John, Grand Rapids.

Martin, E. L., Maple Rapids.
McManus, E. A., Sherman.
Seager, G. B. M., Adrian.
Staines, Carrie S., Fenwick.
Townsend, Wesley, Salt Ste Marie.
Vollmer, Maud J., Battle Creek.

### MINNESOTA

Aune, Martin, Minneapolis.
Hart, M. J., LeRoy.
Hoegh, Knut, Minneapolis.
Knight, R. R., Minneapolis.
Oberg, Emanuel, Minneapolis.
Roadman, I. M., Onamia.
Shulean, Nellie S., Cambridge.

### MISSISSIPPI

Criss, R. J., Youngs.
Durley, B. H., Aberdeen.
Furr, J. M., Aberdeen.
Givhan, J. E., Pontococ.
Harris, J. A., Webb.
Hood, B. S., Bond.
LeBaron, Chas., Gulfport.
McNeill, J. H., Olive Branch.
McRee, F. V., Brookhaven.
Mohler, D. G., Gulfport.
Murry, W. M., Dumas.
Perry, J. A., Shuqulak.
Powell, H. B., Ocean Springs.
Rowan, W. H., Wiggins.
Tnrner, R. L., Meridian.
Whitaker, Jos., Natchez.

### MISSOURI

Ameiss, F. C., St. Louis.
Bates, S. L., Adrian.
Bleyer, A. S., St. Louis.
Boislinere, L. C., St. Louis.
Bosse, E. H., St. Louis.
Bostick, Will, St. Louis.
Drescher, F. B., St. Louis.
Dunigan, J. P., Sullivan.
Engelbrecht, John, Starryhill.
Engelmann, O. R., St. Lonis.
Faris, J. C., Caruthersville.
Frazer, H. S., St. Louis.
Gentle, Doke, New Franklin.
Graves, Spencer, St. Louis.
Hagerty, M. E., St. Louis.
Meinhard, J., St. Louis.
Miller, H. E., St. Louis.
Miller, T. D., Anrora.
North, E. P., St. Louis.
Schaub, C. W., St. Louis.
Schuchat, W. L., St. Lonis.
Songer, H. E., Jamesport.
Stephenson, J. T., Tina.
Sturgis, W. E., Kennett.
Tainter, P. R., Calloo.
Thompson, A. W., Galt.
Thompson, R. L., St. Louis.
Timberman, J. H., Marston.
Ude, Waldemar, St. Louis.
Vores, C. P., Unionville.
Vosburgh, C. A., St. Louis.
Whiteside, E. E., River Aux Vases.
Yonng, A. O., St. Louis.
Yonngman, J. A., St. Louis.

### MONTANA

Cram, R. L., Park City.

### NEBRASKA

Bleick, L. C., Bloomfield.
Evans, E. B., Cody.
Langrall, C. D. D. M. M. S., Minatare.
Panter, R. C., Dorchester.
Sher, Philip, Omaha.
Smith, J. G., Wahoo.
Slagle, C. E., Alliance.
Snell, C., Tecumsch.

### NEVADA

Belanger, G. L., Ft. Dermitt.
Heppner, A. H., Reno.

### NEW HAMPSHIRE

Rogers, F. N., Manchester.
Varney, A. H., Newfields.

### NEW JERSEY

Anthony, W. H., Plainfield.
Bailey, F. R., Elizabeth.
Bennett, R. S., Asbury Park.
Foulks, Sara E., Trenton.
Gelbach, R. W., Hoboken.
Hunter, James, Jr., Westville.
MacDonald, Jr., Jos., East Orange.
McNamara, T. C., Hoboken.
Neal, C. B., Millville.
Plume, C. A., New Brunswick.
Randolph, J. M., Rahway.
Read, C. H., Trenton.
Stack, J. F. X., Hoboken.
Wadler, F. C., Newark.
Wilkinson, G. H., Moorestown.

### NEW MEXICO

Davis, Augustus, Texico.
Dillon, F. A., Laguna.
Slack, J. C., Clayton.
Worley, Preston, Clovis.

### NEW YORK

Asch, J. J., New York City.
Brill, A. A., New York City.
Cooley, H. E., Angelica.
Cross, J. B., Buffalo.
Crowe, J. M., Watertown.
Cudmore, J. H., New York City.
Dederer, Carleton, New York City.
Gibson, E. D., Buffalo.
Hancock, E. G., New York City.
McLaren, W. A., Brooklyn.
Moore, S. A., Buffalo.
Pfetschinger, F., New York City.
Rossano, A. T., New York City.
Spann, J. H., New York City.
Spence, H. D. L., Utica.
Swift, H. F., New York City.
Taylor, E. C., Central Islip.
Warren, John, New York City.
Weber, W. E., New York City.
Weil, Henry, New York City.
Wise, L. D., New York City.

### NORTH CAROLINA

McBrayer, L. B., Asheville.
Nicholson, J. L., Richlands.
Reed, C. E., Banner Elk.
Sloop, E. H., Plumtree.

### NORTH DAKOTA

Arnold, E. W., Medford.
Wilder, K. W., Wyndmere.

### OHIO

Breyfogle, E. W., Chillicothe.
Dudley, Harlan, Macedonia.
Harper, W. H., Columbns.
Hobson, A. B., Salem.
Johnston, C. E., Sidney.
Kuhn, E. T., Columbus.
Lawrence, E. J., Nottingham.
Weaver, Elizabeth M., Akron.

### OKLAHOMA

Chapman, T. S., McAlester.
Evans, W. G., Stuart.
Fulkerson, W. C., Marshall.
Gay, J. P., McAlester.
Graydon, A. S., Idobel.
Griffith, Alfred, McAlester.
Holbrook, R. W., Perkins.
Long, T. J., Atoka.
Miller, D. W., Blackwell.
Mills, F. A., Foss.
Moore, M. O., Braden.
Risser, A. S., Blackwell.
Smith, I. T., Fay.
Watkins, J. C., Hallett.

### PENNSYLVANIA

Brown, L. M., Woodville.
Chase, T. L., Philadelphia.
Dunn, H. A., Erie.
Gilland, J. C., Greencastle.
Hall, A. B., Philadelphia.
Reisert, Wm., Philadelphia.
Simmonds, H. T., Shamokin.
Washabaugh, W. B., Erie.
Widdowson, F. R., Clymer.
Woods, R. F., Philadelphia.

### SOUTH CAROLINA

Edwards, J. E., Spartanbnrg.
Hill, J. C., Abbeville.
Holman, F. K., Snmter.
Ilderton, Wm., Florence.
Kershaw, T. G., Walterboro.
Walker, C. M., Westminster.

### SOUTH DAKOTA

Moore, L. S., Terraville.

### TENNESSEE

Elam, K. P., Tate Springs.
Gallaher, R. L., Caryville.
Ruble, W. G., Morristown.
Shields, J. A. P., Norma.

### TEXAS

Boothe, S. P., Cheapside.
Hanna, J. J., Qnanah.
Henschen, G. E., Georgetown.
Herzog, Sofie, Brazonia.
Mathews, W. J., Naples.
McCloud, B. L., Bryson.
Smith, A. A., Goolesboro.
Smith, W. H., D'Hanis.
Steck, O. E., Bellville.

### UTAH

Ries, Anna F., Ogden.
Robinson, A. A., Ogden.

### VERMONT

Adams, B. D., Burlington.
Hanson, L. W., Montpelier.

### VIRGINIA

Burnham, M. P., Harrisonburg.
Sycle, M. C., Richmond.

### WASHINGTON

Dietz, Wm., Spangle.
Mertz, E. F., Concrete.

### WEST VIRGINIA

Cracraft, L. K., Elm Grove.

### WISCONSIN

Christensen, F. C., Racine.
Comee, W. C., Cecil.
Cunningham, R. B., Cadott.
Freeman, D. R., Colby.
Haigh, Edith S., Madison.
Hinrichsen, J. A., Larsen.
Hopkins, J. W., Madison.
Knutson, Oscar, Prairie Farm.
Ludden, H. D., Mineral Point.
Provost, A. J., Oshkosh.
Shaykett, F. E., Brandon.

### WYOMING

Magahy, C. A., Lusk.
Smith, C. K., Fort Washakie.

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# *Medical Education and State Boards of Registration*

## COMING EXAMINATIONS

DISTRICT OF COLUMBIA: Washington, April 12-15. Sec., Dr. George C. Ober, 125 B St., S. E.

ILLINOIS: Chicago, April 14-16. Sec., Dr. J. A. Egan, Springfield.

NEW MEXICO: Santa Fe, April 11-12. Sec., Dr. J. A. Massie.

OKLAHOMA: Ione Hotel, Guthrie, April 12. Sec., Dr. Frank P. Davis, Enid.

WEST VIRGINIA: Wheeling, April 12-14. Sec., Dr. H. A. Barbee, Point Pleasant.

## New Buildings at McGill University

The new buildings to be occupied by the Medical Faculty of McGill University which are being erected to replace those destroyed by fire in 1907 are rapidly nearing completion. They will cost $750,000 and are located near the old medical buildings on a site which was given to the university by Lord Strathcona, the chancellor of McGill University, who has contributed more than half of the cost of the new buildings. An interesting program has been arranged for the ceremonies with which the buildings are to be inaugurated, June 6 and 7, at which the Governor General of Canada will officiate.

It has been determined to mark the occupation of the new buildings by a reunion of as many as possible of the physicians who have graduated from McGill. Communications from representatives of each of the 45 classes indicate there will be a unique gathering of McGill graduates from all parts of the world in Montreal, June 6 and 7.

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# *The Public Service*

## Medical Department of the Army

Changes for the week ended April 2, 1910:

Banister, William B., lieut. col., will, in addition to his present duties at Fort Snelling, take charge of the office of chief surgeon, St. Paul, Minn., making not to exceed three trips per week to St. Paul and return to Fort Snelling, Minn.

Glennan, James D., lieut. col.; Ashburn, Percy M., major, appointed members of an Army retiring board to meet at San Francisco.

Birmingham, H. P., lieut. col.; McCaw, Walter D., lieut. col.; Darnall, Carl R., major, appointed members of a board to meet at the Army Medical Museum Bldg., this city, for the physical examination of candidates for appointment and Second Lieutenants.

Mills, R. H., dental surgeon, reported for temporary duty, Plattsburg Barracks, N. Y.

Whitcomb, C. C., capt., relieved from duty at Fort Wingate, N. Mex., and ordered to duty at Medical Supply Depot, New York City.

Whitmore, Eugene R., major, the detail of, on temporary duty in the Bureau of Science, Department of the Interior, P. I., is further extended to Aug. 15, 1910.

Casaday, George H., dental surgeon, returned to Presidio of Monterey, Cal., from leave of absence.

Flynn, Thomas J., 1st lieut., M. R. C., ordered to proceed from Fort Ethan Allen, Vt., to Madison Barracks, N. Y., for temporary duty.

Scott, Minot E., dental surgeon, ordered to proceed from Vancouver Barracks, Wash., to Fort Stevens, Ore., and Fort Columbia, Wash., for temporary duty.

Johnson, Charles W., 1st lieut., M. R. C., honorably discharged from the service of the United States.

Ashburn, James K., 1st lieut., M. R. C., honorably discharged from the service of the United States, to take effect April 4, 1910.

Rutherford, Henry H., major; Jones, Percy L., capt.; Metcalfe, Raymond F., capt.; Farrow, Edgar J., 1st lieut., M. R. C.; Tetrault, Charles A., 1st lieut., M. R. C., relieved from duty in Philippines Division, and will proceed on transport to sail from Manila, P. I., July 15, to San Francisco, and on arrival to report by telegraph to the Adjutant General of the Army, for further orders.

Bierbower, Henry C., 1st lieut., M. R. C., granted 3 months' leave on arrival at station in the United States.

Maynard, Edward B., 1st lieut., M. R. C., recently appointed, ordered to Fort Snelling, Minn., for duty.

Ingalls, R. E., dental surgeon, reported for duty at Fort Douglas, Utah.

Hull, Alva R., 1st lieut., M. R. C., relieved from duty at Fort Sam Houston, Texas, to take effect about April 12, 1910, and will then proceed to his home. Lieutenant Hull is relieved from active duty in the Medical Reserve Corps, on his arrival at his home.

Holland, Josiah H., 1st lieut., M. R. C., relieved from duty at Fort Barrancas, Fla., and ordered to Fort Douglas, Utah, for duty.

McCown, Thomas B., 1st lieut., M. R. C., relieved from duty at Fort Douglas, Utah, and ordered to Fort Barrancas, Fla., for duty.

Coffey, A. McD., 1st lieut., M. R. C., ordered to accompany Co. I, Signal Corps, from Sam Houston, Texas, to San Francisco, and on completion of this duty to proceed to his home.

Smith, Allen M., major, ordered to accompany the 9th Infantry from Sam Houston, Texas, to San Francisco, and on completion of this duty to return to his home.

McAndrew, P. H., major, granted 5 days' leave of absence.

McDonald, R. C., 1st lieut., M. R. C., recently appointed, is ordered to Fort Sam Houston, Texas, for duty.

## Medical Corps of the Navy

Changes ordered March 21, 1910:

Diehl, O., med. inspector, detached duty as fleet surgeon, Asiatic Fleet, on *Charleston*, and continue other duties.

Shipp, E. M., surgeon, detached duty Naval Hospital, Philadelphia; to duty Navy Recruiting Station, New York.

Wilson, G. B., surgeon, detached duty *Wabash*, Navy Yard, Boston; to duty as fleet surgeon, U. S. Asiatic Fleet, on *New York*.

Ryder, C. E., P. A. surgeon, detached duty New York Nautical Training Ship *Newport*, to Naval Medical School, Washington, D. C., for instruction.

Dunn, H. A., P. A. surgeon, detached duty Naval Proving Ground, Indian Head, Md.; to Naval Medical School, Washington, D. C., for instruction.

Payne, J. H., P. A. surgeon, detached duty Naval Hospital, New York; to Naval Medical School, Washington, D. C., for instruction.

Seaman, W., P. A. surgeon, detached duty Naval Recruiting Station, New York; to Naval Medical School, Washington, D. C., for instruction.

Fauntleroy, A. M., P. A. surgeon, detached duty *New York* and *Indiana*; to duty Naval Hospital, Naval Home, Philadelphia.

Stepp, J., P. A. surgeon, detached duty *Franklin*, Navy Yard, Norfolk, Va.; to duty Naval Medical School, Washington, D. C., for instruction.

Tolfree, H. M., P. A. surgeon, detached duty Naval Magazine, Iona Island, N. Y.; to duty Naval Medical School, Washington, D. C., for instruction.

Cather, D. C., P. A. surgeon, detached duty Navy Recruiting Station, Kansas City, Mo.; to home and granted leave 1 month.

Warner, R. A., P. A. surgeon, detached duty Naval Hospital, Norfolk, Va.; to duty New York Nautical Training Ship *Newport*.

Hayden, R., asst.-surgeon, to duty Naval Proving Ground, Indian Head, Md.

Kerr, W. M., asst.-surgeon, detached duty Naval Training Station, Newport, R. I.; to duty Naval Station, Guam, M. I.

Lawrence, H. F., asst.-surgeon, detached duty Naval Station, Tutuila, Samoa; to home and wait orders.

Valz, E. V., asst.-surgeon, detached duty *Mississippi*; to examination for promotion, Washington, D. C., and on completion wait orders.

Stibbens, F. H., asst.-surgeon, detached duty *Pennsylvania*; to examination for promotion, Washington, D. C., and on completion wait orders.

Rhoades, G. C., asst.-surgeon, detached duty *Scorpion*; to home and wait orders.

The following are detached from duty at Naval Medical School, Washington, D. C., and ordered as follows:

Connor, W. H., acting asst.-surgeon, to duty Naval Station, Tutuila, Samoa.

Camerer, C. B., acting asst.-surgeon, to duty Naval Hospital, Norfolk, Va.

Riddick, W. J., acting asst.-surgeon, to duty Naval Medical School Hospital, Washington, D. C.

Phillips, E. W., acting asst.-surgeon, to duty Naval Hospital, New York.

Thompson, F. W., acting asst.-surgeon, to duty Navy Recruiting Station, Kansas City, Mo.

McMullin, J. J. A., acting asst.-surgeon, to duty Naval Magazine, Iona Island, N. Y.

French, G. R. W., acting asst.-surgeon, to duty Naval Hospital, Mare Island, Cal.

Irvine, W. L., acting asst.-surgeon, to duty Naval Training Station, Narragansett Bay, R. I.

Davidson, A. B., acting asst.-surgeon, to duty Naval Hospital, Mare Island, Cal.

Jenkins, H. E., acting asst.-surgeon, to duty *Franklin*, Navy Yard, Norfolk, Va.

Robbins, I. W., acting asst.-surgeon, to duty *Pennsylvania*.

Walton, D. C., acting asst.-surgeon, to duty *Scorpion*.

Thomas, G. E., acting asst.-surgeon, to duty *Wabash*, Navy Yard, Boston, Mass.

Bass, J. A., acting asst.-surgeon, to duty *New York*.

Robertson, G. E., acting asst.-surgeon, to duty *Mississippi*.

Changes for the week ended March 26, 1910:

Von Wedekind, L. L., surgeon, detached from the Naval Recruiting Station, Chicago, and ordered to command Naval Hospital, Annapolis; Md.

Grieve, C. C., P. A. surgeon, detached from the Naval Hospital, Norfolk, Va., and ordered to the Naval Recruiting Station, Chicago.

Kuder, W. S., P. A. surgeon, resignation accepted, to take effect April 1, 1910.

Whitmore, G. B., asst.-surgeon, detached from the *Wisconsin* and ordered to duty in connection with fitting out the *Delaware*, and to duty on board that vessel when placed in commission.

Dodge, A. H., asst.-surgeon, detached from the Naval Hospital, Las Animas, Colo., and ordered to the *California*.

Bloerdorn, W. A., acting asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the Naval Hospital, Las Animas, Colo.

Hart, S. D., acting asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the Asiatic Station.

Cecil, A. B., acting asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the *Wisconsin*.

## Public Health and Marine-Hospital Service

Changes for the week ended March 30, 1910:

Mead, F. W., surgeon, directed to proceed to Tampa and Port Tampa City, Fla., on special temporary duty.

Carter, H. R., surgeon, leave of absence for 1 month from March 11, 1910, on account of sickness, amended to read 9 days from March 11, 1910, on account of sickness.

Wasdin, Eugene, surgeon, granted 2 months' leave of absence from March 22, 1910.

White, J. H., surgeon, granted 14 days' leave of absence from April 1, 1910.

Lavinder, C. H., P. A. surgeon, granted 4 days' leave of absence en route to Germany.

Lumsden, L. L., P. A. surgeon, directed to proceed to Omaha, Neb., on special temporary duty.

Anderson, John F., P. A. surgeon, directed to proceed to Charlottsville, Va., on special temporary duty.

Fricks, L. D., P. A. surgeon, relieved from duty at Fort Stanton, N. Mex., and directed to proceed to Mobile Quarantine Station, Ala., and assume command.

Korn, W. A., P. A. surgeon, on being relieved by Passed Assistant Surgeon Charles W. Vogel, directed to proceed to Stapleton, N. Y., and report to the medical officer in command for duty and assignment to quarters.

Vogel, Charles W., P. A. surgeon, relieved from duty at Stapleton, N. Y., and directed to proceed to Reedy Island Quarantine Station, Del., and assume command.

de Valin, Hugh, P. A. surgeon, relieved from command of Mobile Quarantine Station, Ala., and from temporary duty at the Hygienic Laboratory, and directed to proceed to Havana, Cuba, for duty in the office of the Consul-General.

Hasseltine, H. E., asst.-surgeon, relieved from duty at Buffalo, N. Y., and directed to proceed to Seattle, Wash., and report to the commanding officer Revenue-Cutter *Rush* for duty.

Leake, James P., asst.-surgeon, granted 4 days' leave of absence from March 18, 1910, on account of sickness.

Knight, Carlisle P., asst.-surgeon, directed to proceed to Buffalo, N. Y., and report to the medical officer in command for duty.

Flinn, Thomas, W. P., acting asst.-surgeon, granted 20 days' leave of absence from April 1, 1910.

Hamilton, H. J., acting asst.-surgeon, granted 2 days' leave of absence from March 23, 1910.

Knight, Carlisle P., commissioned Assistant-Surgeon March 16, 1910.

# *Queries and Minor Notes*

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

### THE WASSERMANN REACTION

*To the Editor:*—Please give me a complete list of articles on the Wassermann reaction. R. A. Weston, M.D., Des Moines, Iowa.

Answer.—As hundreds of articles have appeared on this subject, it is impossible to give a complete list here. Practically all these articles were listed, as they appeared, in The Journal's department of Current Medical Literature, and in the Index to Subjects which is published in The Journal every six months, in the last number of the volume. The following are some of the more valuable and recent ones taken from the Index. Most of those published in The Journal have full bibliographies in the footnotes:

Schaudinn and Hoffman: Arb. a. d. k. Gsndhtsamte, 1905, xxii, 835.

Wassermann: *Berl. klin. Wchnschr.*, 1907, xliv, 12.

Nonne: Clinical Diagnosis of the Syphilogenous Diseases of the Nervous System, The Journal, July 24, 1909, p. 289.

Sachs: The Wassermann Reaction in Relation to Diseases of the Nervous System, The Journal, Sept. 18, 1909, p. 929.

Noguchi: Serodiagnosis of Syphilis, The Journal, Sept. 18, 1909, p. 935.

Castelli: The Wassermann Reaction, The Journal, Sept. 18, 1909, p. 936.

Noguchi: A Rational and Simple System of Serodiagnosis of Syphilis, The Journal, Nov. 6, 1909, p. 1532.

Wieder and L'Engle: Studies of the Precipitin Tests for Syphilis, The Journal, Nov. 6, 1909, p. 1535.

Litterer: Serodiagnosis of Syphilis, The Journal, Nov. 6, 1909, p. 1537.

Harris and Corbus: Clinical Value of the Spirochæta Pallida in Diagnosis and Treatment of Syphilis, The Journal, Dec. 5, 1908, p. 1928.

Neilsen: *Monatsh. f. pract. Dermat.*, xlviii, No. 2, p. 5.

Fleischmann and Butler: Serum Diagnosis of Syphilis, The Journal, Sept. 14, 1907, p. 934.

Plaut, Fornet and Schereschewsky: Serodiagnosis of Syphilis, Tabes and paralysis, *München. med. Wchnschr.*, July 23, 1907; abstr. in The Journal, Sept. 28, 1907, p. 1154.

Citron: Serodiagnosis of Syphilis. *Berl. klin. Wchnschr.*, Oct. 28, 1907; abstr. in The Journal, Dec. 7, 1907, p. 1962.

Butler: Serum Diagnosis of Syphilis, *New York Med. Jour.*, Nov. 30, 1907; abstr. in The Journal, Dec. 14, 1907, p. 2037.

Harris and Corbus: Parasitology of Syphilis, The Journal, Sept. 4, 1909, p. 757.

Glaser and Wolfsohn: Serodiagnosis of Syphilis Controlled by Autopsy Findings, *Med. Klin.*, Nov. 14, 1909.

Stopczanski: Serodiagnosis of Syphilis. *Wien klin. Wchnschr.*, Nov. 25, 1909; abstr. in The Journal, Jan. 8, 1910, p. 170.

Chirivino: Diagnosis of Syphilis by Staining Reaction, *Riforma Med.*, Feb. 14, 1910; abstr. in The Journal, March 26, 1910, p. 1098.

Ehrmann and Stern: Wassermann Reaction in Syphilis, *Berl. klin. Wchnschr.*, Feb. 7, 1910.

Kiralyfi: Connection Between Wassermann Reaction and Antisyphilitic Treatment, *Wien klin. Wchnschr.*, Feb. 3, 1910.

Butler: The Serum and Precipitate Reactions for Syphil's and their Clinical Value, The Journal, April 2, 1910, p. 1116.

# *Society Proceedings*

## COMING MEETINGS

Alabama, Medical Association of State of, Mobile, April 19-22.
Amer. Assn. of Genito-Urinary Surgeons, Washington, D. C., May 3-4.
Amer. Assn. of Pathologists and Bacteriologists, Washington, May 3-5.
American Climatological Association, Washington, D. C., May 3-5.
American Dermatological Association, Washington, D. C., May 3-5.
American Gynecological Society, Washington, D. C., May 3-5.
American Laryngological Association, Washington, D. C., May 3-5.
Am. Laryn., Rhin. and Otol. Society, Washington, D. C., April 28-30.
Amer. Medico-Psychological Association, Washington, D. C., May 3-5.
American Neurological Association, Washington, D. C., May 3-5.
American Ophthalmological Society, Washington, D. C., May 3-4.
American Orthopedic Association, Washington, D. C., May 3-5.
American Otological Society, Washington, D. C., May 3-5.
American Pediatric Society, Washington, D. C., May 3-5.
American Surgical Association, Washington, D. C., May 3-5.
American Therapeutic Society, Washington, D. C., May 5-7.
Arizona, Medical Association of, Phoenix, April 20-21.
Association of American Physicians, Washington, D. C., May 3-5.
California, Medical Society of State of, Sacramento, April 19-21.
Conf. State and Prov. Bds. of Health, Washington, April 28-29.
Congress of Amer. Phys. and Surg., Washington, D. C., May 3-5.
Connecticut State Medical Society, New Haven, May 25-26.
District of Columbia, Medical Association of, Washington, April 26.
Georgia, Medical Association of, Athens, April 20-23.
Illinois State Medical Society, Danville, May 17-19.
Iowa State Medical Society, Des Moines, May 20-21.
Kansas Medical Society, Topeka, May 4-6.
Louisiana State Medical Society, New Orleans, May 3-5.
Maryland, Med. and Chirurgical Faculty of, Baltimore, April 26-28.
Mississippi State Medical Association, Oxford, April 12.
Missouri State Medical Association, Hannibal, May 3-5.
Montana State Medical Association, Hunter's Hot Springs, May 11.
Nebraska State Medical Association, Lincoln, May 10-12.
New Hampshire Medical Society, Concord, May 12-13.
North Dakota State Medical Association, Grand Forks, May 10-11.
Ohio State Medical Association, Toledo, May 11-13.
Oklahoma State Medical Association, Tulsa, May 10-12.
South Carolina Medical Association, Laurens, April 19-21.
Tennessee State Medical Association, Memphis, April 12-14.
Texas, State Medical Association of, Dallas, May 10-12.

## ASSOCIATION OF AMERICAN MEDICAL COLLEGES

*Twentieth Annual Meeting, held at Baltimore, March 21-22, 1910*
*(Continued from page 1158)*

### Report of Judicial Council

In connection with the several reports recently made on the standing of medical colleges, the council recommended that it be given authority to order an investigation of the colleges in membership that were reported on adversely by other organizations, and to investigate any other colleges in membership that may be subject to like criticism; further, that these investigations be made by two persons selected by the council, that the expense of such investigation be borne by the college inspected, and that other educational bodies interested in examining colleges be invited to participate in such inspection and examination. The council recommended the acceptance of the applications of the Tulane University Medical Department, and Harvard University Medical Department. Application for membership was made by the Medical Departments of the University of Vermont and Syracuse University, but inasmuch as these applications were received during the session, too late for inspection of these colleges, no action could be taken.

### Report of Committee on Medical Education

The committee endorsed the present system of matriculation record blanks and urged a faithful compliance with the present entrance standards on the part of all the colleges in membership. The committee also recommended that the present entrance standard be increased as soon as practicable, and urged that the state medical examining boards and the various state educational bodies make an earnest effort to raise the standard in their respective states, so that these will be at least the equal of the association standards. The committee emphasized the importance of recognition of the standard public high school and asked that the colleges in membership lend their influence and support to a high school educational basis. The combined baccalaureate and medical course now given by many universities was endorsed. The committee also recommended that there be submitted at the next annual meeting a curriculum for the five-year medical course. The concentration plan of teaching was recommended as a correct pedagogic principle, and the association was urged to place itself on record as favoring this plan and to instruct the committee to arrange an outline for a curriculum based on the concentration plan of teaching.

### Report of Committee on Medical Research

The committee called attention to the rules recommended by a committee of the American Medical Association, and urged that this association concur in the recommendations of the American Medical Association committee, and that these rules be posted in all laboratories where animal experimentation is carried on and also that individuals performing animal experimentation should comply not only with the letter but the spirit of these rules.

### Report of Committee on Equipment

The Committee on Equipment did not amend the report made in 1909, but urged that the colleges adhere as closely as possible to the equipment standard prepared by the secretary and adopted by the association in 1908.

### Report of Committee on Curriculum

This committee recommended a four-thousand-hour schedule without any allowable diminution; the number of scheduled hours to represent the actual number of hours scheduled for each student. While the distribution of time between didactic and laboratory instruction in the laboratory subjects was recommended, the committee did not regard it as possible to distribute the time in the clinical subjects among the various kinds of exercises. Such distribution was left to the good judgment of the college authorities, to be arranged to suit their individual conditions. The committee recommended, however, that not more than one-half the time devoted to any subject should be devoted to clinical and didactic work, and that at least one-half of the time should be devoted to section or individual work. The schedule recommended by the committee is based on a course extending over thirty-two weeks, of which thirty weeks shall consist of actual teaching, and two weeks be allotted to examinations. The hours assigned are not to be considered "credit" hours. The committee considered it unwise to regulate courses too much in detail, and submitted the following curriculum for consideration as a constitutional amendment at the next annual meeting:

REPORT OF COMMITTEE OF CURRICULUM, ADOPTED MARCH 22, 1910

Division I. Anatomy—720 Hours (18 Per Cent.)

| | Total Hours. | Lect. Rec. Dem. | Lab. Work. |
|---|---|---|---|
| (a) Gross Anatomy (including Applied Anatomy) | 510 | 120 | 390 |
| (b) Histology and Mic. Anatomy | 135 | 30 | 105 |
| (c) Embryology | 75 | 30 | 45 |

Division II. Physiology and Chemistry—600 Hours (15 Per Cent.):

| | Total Hours. | Lect. Rec. Dem. | Lab. Work. |
|---|---|---|---|
| (a) Inorganic Chemistry | 180 | 60 | 120 |
| (b) Organic Chemistry | 75 | 30 | 45 |
| (c) Physiologic Chemistry | 105 | 30 | 75 |
| (d) Physiology | 240 | 165 | 75 |

Division III. Pathology, Bacteriology and Hygiene—450 Hours (11.25 Per Cent.):

| | Total Hours. | Lect. Rec. Dem. | Lab. Work. |
|---|---|---|---|
| (a) Bacteriology | 135 | 30 | 105 |
| (b) Hygiene and General Diet | 45 | 45 | ... |
| (c) Pathology | 270 | 60 | 210 |

| | | | |
|---|---|---|---|
| Division IV. Pharmacology, Materia Medica and Therapeutics—240 Hours (6 Per Cent.): | | | |
| (a) Pharmacology | 105 | 40 | 65 |
| (b) Materia Medica and Pharmacology | 80 | ... | ... |
| (c) Therapeutics | 55 | ... | ... |
| Division V. Medicine and Medical Specialties—970 Hours (24.25 Per Cent.): | | | |
| (a) General Medicine (including Clinical Microscopy) | 640 | ... | ... |
| (b) Pediatrics | 150 | ... | ... |
| (c) Nervous and Mental Diseases | 105 | ... | ... |
| (d) Jurisprudence, Ethics and Economics | 30 | ... | ... |
| (e) Dermatology and Syphilis | 45 | ... | ... |
| Division VI. Surgery and Specialties—720 Hours (18 Per Cent.): | | | |
| (a) General Surgery | 510 | ... | ... |
| (b) Orthopedics | 45 | ... | ... |
| (c) Genitourinary Diseases | 45 | ... | ... |
| (d) Eye | 60 | ... | ... |
| (e) Nose, Ear, Throat | 60 | ... | ... |
| Division VII. Obstetrics and Gynecology—300 Hours (7.5 Per Cent.): | | | |
| (a) Obstetrics | 195 | ... | ... |
| (b) Gynecology (including some Abdominal Surgery) | 105 | ... | ... |

Fifteen of the 640 hours in medicine are designed for the teaching of dietetics as applied to diseased conditions—practical dietetics. Fifteen of the 45 hours allotted to hygiene are to be devoted to the consideration of the more fundamental principles of dietetics. The allowance for pediatrics is intended to include instruction in the exanthemata. The surgery peculiar to children may be given from the chair of pediatrics or from the chair of surgery. Instruction in surgery should be confined to what the general practitioner needs. More special work should be provided for by advanced or postgraduate courses. The time allotted to obstetrics does not include the time spent in the care of confinement cases. The committee recommended that each student should personally manage at least five cases. The relations of gynecology and surgery were considered, but the committee did not attempt the solution of the problem. In case gynecology does not include any abdominal surgery, or very little of it, the committee recommended that the whole or a part of sixty hours should be transferred to surgery. The committee recommended that more attention be paid to the teaching of economics.

### Advancement of Medical Education

**Dr. G. Milton Linthicum**, Medical and Chirurgical Faculty of Maryland: The highest ideals of modern medicine are not being striven for in a practical way. The science of eugenics does not receive the attention it deserves. The physician is in a better position to understand the causes and factors which produce departure from the normal than is any other trained scientist. The large medical schools, with equipment and means, associated with large and diverse hospital advantages, must investigate moot questions and the application of newer scientific theories in the treatment of disease. Progress and evolution in medicine must be met by adequate provision by teaching institutions. The segregated, independent, and unendowed institutions cannot meet the conditions which are essential. Medical training has grown more expensive with a correspondingly diminishing income from students, and to meet expenses money must be derived from other sources. The lengthening of the medical course has, in my opinion, reached the point beyond which it is unsafe to go; it is contrary to the economics of human life to lengthen the time for medical training beyond four years. I can see no reason why the vacation period should not be shortened and thus the time of instruction increased in each of the four years. I do not regard the college degree as an essential requirement for admission, as it may carry with it only literary training, which in itself is doubtless of value and yet is not commensurate with the value of time spent in obtaining it. Teachers find that the high-school graduate grasps details and observes with more precision than the student who has spent several years in a purely literary pursuit. If the professional course must be lengthened, it should be backward into the college course. The teaching of anatomy, biology, chemistry, physiology and botany should be a part of the college preparatory course, and should be dealt with in the medical school only in relation to research and clinical application. This would relieve the curriculum without lengthening the medical course. The other alternative is to teach such subjects in the first year of the medical course, increasing the course to five years.

### Concentration Plan of Teaching

**Dr. Henry A. Christian**, Harvard Medical School: Concentration is employed in two portions of the medical curriculum at Harvard; each differs somewhat from the other and concerns divergent subjects. The first group includes the subjects of the first year and a half; anatomy, histology, embryology, physiology, biologic chemistry, bacteriology and pathology (including neuropathology and surgical pathology). These subjects are so arranged that the student studies only two of them in a given period of time. The student occupies his forenoons with one subject and his afternoons with another, with the exception of one month of the first year, in which the entire day is devoted to anatomy, and two months of the second year in which the entire day is devoted to pathology. Each group of two subjects is completed and the examination held before new subjects are begun. Anatomy, histology and embryology are taught during the first half of the first year; physiology and biologic chemistry are taught during the second half of the first year; bacteriology and pathology are taught during the first half of the second year. The second portion of the curriculum to which the concentration plan is applied at Harvard includes all the subjects of the fourth year. This work is entirely elective, while all work up to that time is prescribed. Each elective course consists of one month's work, occupying a minimum of 125 hours. Usually but a single subject is studied in a given month and not more than two subjects may be studied at one time. The student elects which plan he will pursue. The concentration plan is not used during the second half of the second year, nor during any part of the third year. That portion of the curriculum is devoted to the preliminary and more general study of medicine, surgery, obstetrics, pharmacology, therapeutics, and the specialties. The concentration plan for the first year and a half has been in operation practically unmodified for ten years, and the fourth year elective system for five years.

For the occasional student this system is manifestly an advantage. The regular student has the opportunity to choose his own instructor, which is an advantage, as the student gets much from the personality of the teacher, and when the teacher is personally agreeable, this is accentuated. Again, it allows the student to balance up his work. The expression of opinion from the teachers is very strongly in favor of the fourth year electives as a general plan. As a result of experience, the Harvard faculty is in favor of the concentration plan throughout, and of the elective plan in the fourth year. A too rigid application of concentration teaching is not believed to be best suited to the medical student of to-day. More modification of the plan in application to anatomy seems desirable than for other subjects, as there is less satisfaction expressed with the present concentration teaching of anatomy than with the other subjects. I regard the concentration plan with favor as a system, but believe it should be modified slightly to increase its elasticitiy and particularly that in applying the concentration plan of study a course should not end abruptly, but certain correlated exercises should be continued after the main facts of a subject have been acquired by concentration study. The amount of modification made should vary with the different subjects of study, and should be adapted to the local conditions of each institution.

#### DISCUSSION

**Dr. F. M. Briggs**, Tufts College Medical School: The concentration plan has been tried at Tufts, and found very successful. We carry it through the entire second year, teaching pharmacology, materia medica, therapeutics and physiologic chemistry in the second semester of the second year. The fourth year is only partly elective, which we think a much better way. We require clinical medicine and clinical surgery of all third and fourth year students, so that they will have had the experience which every general practitioner should have. The elective subjects are given at the end of the fourth year.

### The College Association Standard

Mr. Abraham Flexner, Carnegie Foundation for Advancement of Teaching: The rules of the association very properly state that the entrance standing shall be the minimum requirement for admission to the medical course. An admission standard is required in order to insure a minimum degree of maturity and fitness prior to the student's beginning his medical education. The medical curriculum is constructed in content and arrangement on the supposition that students who undertake to master it have enjoyed the education in question, and therefore enter the medical school with a preliminary equipment in knowledge and power. The educational question, whatever it may be, must have been received prior to the beginning of the medical course. It is the manifest intention that a four-year high school standard should be upheld by the colleges. At best, it is not altogether satisfactory. A number of the colleges in membership are operating on a standard in advance of the minimum requirement of the association. Unfortunately, colleges that are on a high school basis do not, as a rule, enforce this standard, because they permit admission with conditions amounting to not more than six points. Such a concession is unwise, because the first year in a medical school is an extremely arduous one. Add to this the necessity of removing conditions to the extent of six points, and the result is apparent. Students not infrequently are allowed to remove these conditions some time during the college course. In New York state a uniform four-year high school matriculation basis is assured, but the actual standard of any institution is the minimum basis on which it is willing to admit students. The words "accredited" or "approved" high school differ in meaning in different parts of the country. Ordinarily, it means a high school that has been officially recognized by some competent educational authority. In New England this authority is the New England College Entrance Certificate Board. In the middle west it is the North Central Association of High Schools and Secondary Schools. In the various states the state university authorities determine the high school standing. No high school that is not mentioned in one of these lists is accredited or approved, and members of this association cannot, without violating the constitution, accept the diploma of a high school that is not on one of these lists. In many states the state board of examiners, the state superintendent of public instruction or his deputy, or an examiner selected by the college pass on the entrance credentials in rather a perfunctory manner, with the result that students are admitted in some instances with no more than a two-year high-school education. A teacher connected with a local preparatory school may be the examiner and, if the student is deficient, this teacher will act as his tutor. The weakest showing is made by the certificates from reputable instructors, accepted in lieu of some board examination. The registration offices of every well-conducted academic institution have at hand all the data necessary to pass intelligently on any set of credentials. It seems to me that this association would do well to throw the entire question into the hands of such institutions without prejudice to the interests of any medical school that actually wishes to enforce the standard. In many states, the state university could properly perform this duty; elsewhere, an equally suitable arrangement could be made with an endowed institution. A state that desires to enforce a four-year high-school requirement could specify as satisfying its requirements a certificate of admission to a state university requiring a four-year high-school education, a certificate of admission to any institution that is a member of the Association of American Universities, or an institution on the accepted list of the Carnegie Foundation for the Advancement of Teaching, a certificate of the Regents of the University of the State of New York, or a certificate by the College Entrance Examination Board for fourteen points. Personally, I am persuaded that just now the association would be unwise to raise its standards, although particular institutions may do as they please. They deserve to be encouraged to go ahead. The general situation now needs order, organization, real values more than anything else. There must be secured an actual four-year high-school standard.

(*To be continued*)

## Marriages

Overton Brooks, M.D., to Miss Emilgene Wortsman, both of Chicago, recently.

Eugene S. Talbot, M.D., Jr., to Miss Della Boardman, both of Chicago, March 29.

Daniel S. Hager, M.D., to Miss Mary Nicholas, both of Downers Grove, Ill., March 28.

Leopold Kaffie, M.D., Natchitoches, La., to Miss Jeannette Weil of Corpus Christi, Texas, March 15.

Halvor Larson Harley, M.D., Williamstown, N. J., to Miss Alice Robison of Milesburg, Pa., March 28.

Winfield H. Ammarell, M.D., Pittsburg, Pa., to Miss Anna E. Wicklein of Gibraltar, Pa., March 21.

William Otto Pauli, M.D. Cincinnati, Ohio, to Miss Winifred Helen Weeks of Toronto, Ont., March 29.

Frederick William Valkenaar, M.D., to Miss Reka L. Hofmeister, both of Chancellor, S. D., March 2.

## Deaths

**Jonathan Edwards Tefft, M.D.** Medical College of Ohio, Cincinnati, 1865; acting assistant surgeon, U. S. Army in 1862, and later assistant surgeon of the First Arkansas Volunteer Cavalry during the Civil War; a member of the American Medical Association; president of the Missouri State Medical Association in 1871; president of the Southwest Missouri Medical Society in 1880, and of the Springfield Society in 1886; a member of the Mississippi Valley Medical Association; a member of the board of education of Springfield from 1871-1874, and president of the board for two years; lecturer on genitourinary surgery in the University of Missouri, Columbia, from 1878-1886; senior surgeon to St. John's Hospital, Springfield, since 1890; division surgeon to the Kansas City, Fort Scott and Memphis Railroad since 1881, and consulting surgeon to the Frisco System since 1890; surgeon to the Children's Home; one of the most widely known practitioners of southwest Missouri; died at his home in Springfield, March 25, from cerebral hemorrhage, aged 73.

**Oscar C. DeWolf, M.D.** New York Medical College, New York City, 1858; Medical Department of the University of France, Paris, 1860; from 1877-1889, health commissioner of Chicago; of national prominence in sanitary matters; the first commissioner of health to cause warning cards to be placed on houses where contagious disease existed; during whose administration house-to-house vaccination was first thoroughly enforced; assistant surgeon of the First Massachusetts Cavalry and surgeon of the Second Massachusetts Cavalry and the Reserve Brigade during the Civil War; formerly a member of the many learned societies; professor of surgical pathology in the Medical School of the University of Ohio, and later professor of state medicine and public hygiene in the Northwestern University Medical School; died at his home in Chester Center, Mass., March 28, from cerebral hemorrhage, aged 74.

**David McComb Devendorf, M.D.** College of Physicians and Surgeons, New York City, 1861; formerly a member of the Medical Society of the State of New York; and president of the Herkimer County Medical Society; for several months a surgeon in the U. S. Army General Hospital, Washington, D. C., during the Civil War; at various times, president, health officer, village trustee, and member of the municipal commission of Herkimer, N. Y.; died at the Fort Dalas Hotel, Miami, Fla., March 22, from paralysis, aged 73.

**Montgomery Bottom, M.D.** Hampden Sydney Medical College, Richmond, Va., 1849; for nearly half a century a practitioner at Breckenridge, Mo.; formerly a member of the American Medical Association; president of Caldwell County Medical Society and Grand River District Medical Society; president of the Breckenridge Board of Education from 1868-1888; a member of the Virginia legislature in 1853; died at his home in Breckenridge, March 20, from nephritis, aged 81.

**James Wray Bailey, M.D.** Atlanta (Ga.) Medical College, 1860; vice-president of the American Medical Association in 1888; a member of the Medical Association of Georgia; formerly president of the State Board of Medical Examiners and of the Hall County Medical Society; a surgeon in the Confederate Service during the Civil War; for many years vice-president of the State Banking Company, Gainesville; died at his home in that city, March 24, aged 71.

**Ella Louisa Dexter, M.D.** Woman's Medical College of Pennsylvania, 1881; a member of the Massachusetts Medical Society; the New England Ophthalmological Society; New England Hospital Medical Society; ophthalmologist to the New England Hospital for Women and Children, Boston, and to the Pope Dispensary; died at her home in Chestnut Hill, Boston, February 3, from rheumatic arthritis, aged 52.

**Francis W. Patterson, M.D.** Medical College of Ohio, Cincinnati, 1859; University of Maryland, Baltimore, 1889; a member of the Medical and Chirurgical Faculty of Maryland; and a surgeon in the Confederate service during the Civil War; for a time United States Inspector of contagious diseases of animals; died at his home in Catonsville, Baltimore, March 22, from senile debility, aged 74.

**Alfred Nelson Beach, M.D.** Bellevue Hospital Medical College, 1870; of Cooperstown, N. Y.; for several years surgeon on steamships running between San Francisco and China; at one time a member of the general assembly of New York, and for two years police surgeon of New York City; died in Thanksgiving Hospital, Cooperstown, N. Y., March 10, from general breakdown, aged 61.

**Henry J. Beyerle, M.D.** Philadelphia College of Medicine and Surgery, 1851; in 1862 a member of the Indiana legislature; for 45 years a resident of Goshen, Ind.; for more than 30 years editor and proprietor of the *Goshen Times;* for 4 years a member of the city council and for two terms a member of the school board; died at his home, March 24, from senile debility, aged 86.

**James Mitchell Blackford, M.D.** Starling Medical College, Columbus, Ohio, 1865; a member of the Ohio State Medical Association; mayor of Martins Ferry, Ohio, in 1906; a member of the local school board for nine years; charter member of the Martins Ferry Hospital Association, and a director of the institution; died at his home, March 26, from senile debility, aged 72.

**George M. Bazemore, M.D.** University of Nashville, Tenn., 1861; Bellevue Hospital Medical College, 1874; a member of the Tennessee State Medical Association; for many years local surgeon at Cleveland for the Southern Railway; chairman of the Cleveland Board of Health; died at his home, March 24, from heart disease, aged 76.

**Jefferson L. Thorpe, M.D.** Washington University, St. Louis, 1886; a member of the American Medical Association; local surgeon at Jefferson City for the Missouri Pacific, Missouri, Kansas and Texas, and Chicago and Alton railroads; a member of the Cole County Board of Health; died at his home, March 22, from uremia, aged 47.

**Gardner Perry Pond, M.D.** University of California, San Francisco, 1893; a specialist on diseases of the eye, ear, nose and throat of San Francisco for several years, and later a resident of Los Angeles county; formerly a member of the American Medical Association; died at his home in Pasadena, March 19, aged 41.

**Hector H. Goodman, M.D.** University of Maryland, 1881; for three years surgeon to the Baltimore Police Department; and for 25 years medical director of the Baltimore Life Insurance Company; died in the Hebrew Hospital in that city, March 20, from cerebral meningitis, following an operation on the nose, aged 60.

**George M. Bell, M.D.** University of Michigan, Ann Arbor, 1870; Chicago Medical College, 1871; Bellevue Hospital Medical College, 1875; for more than 40 years a practitioner of Benton Harbor, Mich.; died March 27, at the University Hospital, Chicago, from cancer of the spleen, aged 61.

**Henry A. C. Poppenhusen, M.D.** University of Pennsylvania, Philadelphia, 1894; formerly city physician of Washington, Mo., and coroner of Franklin county; died at his home in Hermann, March 14, from the effects of carbolic acid, believed to have been taken with suicidal intent, aged 41.

**George W. Carroll, M.D.** Kentucky School of Medicine, Louisville, 1868; of Smithsonia, Ala.; a member of the Medical Association of the State of Alabama and a Confederate veteran; fell from a train near Barton, Ala., March 26, and died from his injuries a short time later, aged 70.

**Roland C. Irving, M.D.** Bellevue Hospital Medical College, 1877; a member of the Broome County Medical Society and Binghamton Academy of Medicine; first lieutenant and assistant surgeon, First Infantry, N. G., N. Y.; died at the home of a friend in Binghamton, March 17, aged 50.

**Elisha Fenn, M.D.** Bellevue Hospital Medical College, 1887; of New York City; a member of the Medical Society of the State of New York; for several years a member of the Seventh Regiment; died in Roosevelt Hospital, New York City, March 26, from pneumonia, aged 57.

**Thomas J. Norris, M.D.** College of Physicians and Surgeons, Keokuk, Iowa, 1874; a member of the American Medical Association, and organizer of the first medical society in Macon county, Mo.; a Confederate veteran; died at his home in Macon, March 23, aged 72.

**Albert V. Ellershaw, M.D.** Jefferson Medical College, 1891; a member of the Medical Society of the State of Pennsylvania; and formerly a practitioner of Norristown and Bridgeport, Pa.; died at the home of his father in Blackpool, England, recently.

**Leslie Teasdale Pease, M.D.** College of Physicians and Surgeons, Keokuk, Iowa, 1878; a member of the Illinois State Medical Society; a member of the council of Cisco; and a member of the school board for many years; died at his home, March 15, aged 57.

**Harry Ellis Clemson, M.D.** University of Maryland, Baltimore, 1894; a member of the American Medical Association; medical director of the Silver Cross Home for Epileptics, Port Deposit, Md.; died at his home, March 21, from heart disease, aged 37.

**William Wallace Cole, M.D.** Jefferson Medical College, 1869; a member of the Medical Society of the State of Pennsylvania; a veteran of the Civil War; assistant city physician of Pittsburg; died at his home, March 25, from heart disease, aged 67.

**Samuel Jay Holliday, M.D.** Northwestern Medical College, St. Joseph, Mo., 1882; a member of the American Medical Association; formerly of Pollock, Mo.; died at his home in Pennville, Mo., March 2, from lobar pneumonia, aged 53.

**Joseph Dawson, M.D.** Rush Medical College, 1885; Hahnemann Medical College of the Pacific, San Francisco, 1892; three years surgeon to the State Penitentiary, Joliet, Ill.; died at his home in Wauconda, Ill., March 24, aged 63.

**John Blaine Laidley, M.D.** Long Island College Hospital, Brooklyn, 1883; of Conway, Mass.; manager of the local interurban railway; died in the Franklin County Hospital, Greenfield, Mass., March 18, from influenza, aged 51.

**William Henry Harrison Sharp, M.D.** University of Pennsylvania, 1868; Bellevue Hospital Medical College, 1870; a veteran of the Civil War; died at his home in Muhlenberg, Pa., January 6, from diabetes mellitus, aged 69.

**David H. Reed** (license, years of practice, Ohio, 1896); for fifty-five years a practitioner of North Fairfield, Ohio; for two terms a member of the state legislature; died at his home in that place, March 21, from pneumonia, aged 78.

**Welton O'Bannon, M.D.** Washington University, St. Louis, 1875; a member of the Missouri State Medical Association; mayor of New Madrid, Mo., for sixteen years; died in St. Louis, March 16, from nephritis, aged 56.

**Eli Perry Rainwater, M.D.** University of Louisville, 1891; (license, Tenn., examination, 1889); a member of the Tennessee State Medical Association; died at his home in Trion, March 26, from heart disease, aged 55.

**Frank Worman Myrick, M.D.** College of Physicians and Surgeons, New York City, 1899; a member of the Medical Society of the State of New York; died at his home in Binghamton, March 21, from pneumonia, aged 34.

**Edward Sutton, M.D.** College of Physicians and Surgeons, New York City, 1888; a member of the Medical Society of New Jersey; died at his home in German Valley, January 5, from cirrhosis of the liver, aged 43.

**Walter John Smith, M.D.** Yale University, New Haven, 1878; for three years an apothecary in the United States Navy; died at his home in Olneyville, Providence, March 13, from heart disease, aged 53.

**George Fame Gaines, M.D.** Louisville Medical College, 1877; of Madison, Ind.; died in the Central Indiana Hospital for the Insane, Indianapolis, February 21, from the effects of an overdose of morphin, aged 54.

**Perry E. Tayer, M.D.** Detroit College of Medicine, 1907; of Adrian, Mich.; a member of the Michigan State Medical Society; died in the Adrian Hospital, March 25, from pneumonia, aged 27.

**Joseph Howard Mansur, M.D.** Medical School of Maine, Brunswick, 1890; a member of the American Medical Association; died at his home on Orr's Island, Maine, Dec. 27, 1909, aged 44.

**James Harvey O'Rear, M.D.** Rush Medical College, 1873; at one time a member of the American Medical Association; died at his home in Medford, Okla., March 13, from chronic nephritis, aged 73.

**William Moore Riddick, M.D.** University of Pennsylvania, Philadelphia, 1856; a member of the Medical Society of the State of North Carolina; died at his home in Hartford, March 16, aged 79.

**Thomas Benton Cable, M.D.** Miami Medical College, Cincinnati, 1886; a member of the Ohio State Medical Association; died at his home in Pemberton, March 20, from nephritis, aged 53.

**William S. Ruthrauff, M.D.** University of Wooster, Cleveland, Ohio, 1876; formerly of Mountaindale, Pa.; died at his home in Coffeyville, Kan., March 22, from intestinal disease, aged 61.

**William Hillswell Long. Jr., M.D.** Jefferson Medical College, 1902; a member of the American Medical Association; died at his home in Philadelphia, March 25, from pneumonia, aged 48.

**Alexander C. Sabin, M.D.** Bennett Medical College, Chicago, 1882; formerly of Beatrice, Neb.; died at his home in Fairfield, Neb., March 20, from cerebral hemorrhage, aged 71.

**Thomas Clay Nelson, M.D.** New York Homeopathic Medical College, New York City, 1867; of Augusta, Ga.; a Confederate veteran; died at his home in Augusta, March 21, aged 66.

**Susan Kendall Daggett Whitford, M.D.** Bennett Medical College, Chicago, 1870; a pioneer woman practitioner of Elgin, Ill.; died at her winter home in Ozona, Fla., March 16, aged 73.

**Petrus Nelson, M.D.** Hahnemann Medical College, Chicago, 1872; said to have been the first specialist in ophthalmology in Minnesota; died at his home in St. Paul, March 21.

**Isaac H. Dix, M.D.** Cleveland University of Medicine and Surgery, 1869; of Pratt, Kan.; died at the home of his daughter in Salina, Kan., March 20, from influenza, aged 63.

**Ralph Marcus Cole, M.D.** Harvard Medical School, 1883; a member of the Massachusetts Medical Society; died at his home in Boston, March 12, from erysipelas, aged 50.

**Henry Lisle, M.D.** Medical College of Ohio, Cincinnati; who retired from practice in 1874; died at his home in Chetopa, Kan., March 1, from senile debility, aged 89.

**Wesley Newell, M.D.** McGill University, Montreal, 1884; Trinity Medical College, Toronto, 1887; died at his home in Sarnia, Ont., February 11, from nephritis.

**Grafton W. Seaton, M.D.** Louisville Medical College, 1870; a veteran of the Civil War; died at his home in Indianapolis, March 25, from heart disease, aged 63.

**George Washington Matteson, M.D.** University of Buffalo, 1855; died at his home in Middleville, Mich., February 24, from senile debility, aged 88.

**Henry D. Rosenberger, M.D.** Hahnemann Medical College, Philadelphia, 1875; died at his home in Manheim, Pa., March 17, from cerebral hemorrhage.

**Elijah Zimmerlee, M.D.** Fort Wayne (Ind.) College of Medicine, 1891; died at his home in Markle, Ind., March 28, from pernicious anemia, aged 67.

**Charles Alfred Hudson, M.D.** Rush Medical College, Chicago, 1871; died at his home in Kenton, Tenn., March 18, from catarrhal cystitis, aged 64.

**Oscar Sneed, M.D.** University of Tennessee, Nashville, 1881; died at his home in McKenzie, Tenn., March 21, from disease of the stomach, aged 69.

**John A. Meadows, M.D.** University of Nashville, Tenn., 1872; died at his home in Bethel, Tenn., March 22, from pneumonia, aged 65.

**Herman Mitchell Sorin, M.D.** Jefferson Medical College, 1902; died at his home in Camden, N. J., March 22, from pneumonia, aged 30.

**Louis Drucklieb, M.D.** College of Physicians and Surgeons, New York City, 1886; died at his home in New York City, March 23, aged 54.

**James Shadwick Spiller, M.D.** University of Maryland, Baltimore, 1870; died at his home in King William, Va., March 12, aged 61.

**Thomas J. Poole, M.D.** Southern Medical College, Atlanta, Ga., 1898; died at his home in Jakin, Ga., from typhoid fever, aged 38.

**James M. Watkins, M.D.** Rush Medical College, Chicago, 1864; died at his home in Green Valley, Ill., March 22, aged 79.

**Wallace Steward, M.D.** Eclectic Medical Institute, Cincinnati, 1872; died at his home in East Clarendon, Vt., March 20.

**William R. Pearce, M.D.** University of Nashville, Tenn., 1876; died at his home in Como Depot, March 25.

# Book Notices

Nutrition and Dietetics. A Manual for Students of Medicine, for Trained Nurses, and for Dietitians in Hospitals and other Institutions. By Winfield S. Hall, M.D., Professor of Physiology, Northwestern University Medical School. Cloth. Price, $2. Pp. 315, with Illustrations. New York: D. Appleton & Co., 1910.

In the present-day tendency to reduce the treatment of disease to rational and more nearly physiologic forms, the question of diet of course assumes an important rôle. Practical works covering the whole field of nutrition and dietetics are not numerous. With this idea in view the present work has been prepared for the use of nurses, students and general practitioners. Though for the most part elementary in character, as it must necessarily be to meet the requirements of its purpose, yet it contains a mass of valuable information for the general practitioner who is sometimes not well posted in the matter of diet for his patients. The arrangement of the book is admirable. Part 1 describes foods and their different classes, their preservation and preparation. Part 2, on the use of foods in the body, without entering into the anatomy of the digestive tract, with which it assumes the reader is acquainted, enters pretty thoroughly into the physiology of digestion, absorption and assimilation of foods, and the getting rid of waste material, stating well the present views on these subjects. Parts 3 and 4 on diet in health and disease go into these matters in a practical way, treating of the measure of fuel values, the relation of fuel values to diet, giving average requirements under different conditions, and constructing daily menus for the child, the adolescent, the athlete, the person of sedentary occupation, etc. The chapters on infant feeding under normal and abnormal conditions by Dr. Brennemann are complete and practical and would add value to any work on pediatrics. The suggestions as to diet in the infectious diseases and diseases of the digestive and other systems are valuable, though the directions for feeding in the febrile stage of typhoid fever are not very definite or complete; but more attention is given to the feeding during convalescence, and full directions are given for feeding tuberculous patients. The book contains two appendices. One gives a classification of diets, the object of which is not apparent, and also a collection of recipes for preparing articles not usually given in the household cook book, which is of greater value. The other appendix, giving experimental tests in the chemistry of foodstuffs and in the experimental chemistry of digestion, is so brief that its value perhaps is not great. The book on the whole, is a valuable practical addition to the subject of nutrition and dietetics and will fill a distinct place in the physician's library.

Gulick Hygiene Series. Book One: Good Health. By Frances Gulick Jewett. Cloth. Price, 40 cents. Pp. 172, with illustrations. Book Two: Emergencies. By Charlotte Vetter Gulick. Cloth. Price, 40 cents. Pp. 173, with illustrations. Book Three: Town and City. By Frances Gulick Jewett. Cloth. Price, 50 cents. Pp. 271, with illustrations. Book Four: The Body at Work. By Frances Gulick Jewett. Cloth. Price, 50 cents. Pp. 247, with illustrations. Book Five: Control of Body and Mind. By Frances Gulick Jewett. Cloth. Price, 50 cents. Pp. 269, with illustrations. Boston: Ginn & Co., 1910.

This is a series of five text-books, for elementary school use, on physiology and hygiene of body and mind. The contents of each are indicated by the titles given above. The various volumes are graded in the matter to adapt them to the intelligence of the pupils, beginning with those of the fourth grade. A narrative style is adopted and the matter is presented in such a way as to hold the interest of the pupil. The object kept in view throughout the series is to aid in the establishment of hygienic habits in the young and to inculcate the avoidance of everything inimical to the health of body and mind of the individual. Facts are given on which assertions rest, particularly as they relate to the pupil's own life and environment. Many examples and accounts of the work of physiologists are given in investigating various questions, such as the effects of alcohol, tobacco, work, play, sleep, bad air, etc. The plan of the series is original and the information is obtained from authoritative sources. Examples are given of actual work done in sanitation, etc., in various cities, and the work is freely illustrated. While some criticism might be offered that the volume on "Emergencies" goes a little too far into the medical treatment of too many things, and that the volume on "Control of the Body and Mind" enters too deeply into the physiology of the brain and nervous system for a work of this class, yet these are minor objections. On the whole the latter subject is very clearly presented and the emphasis laid on the care and cultivation of the special senses and the relation of health to efficiency and success in life is of great value in inspiring loyalty to the laws of health. The teaching of physiology and hygiene according to the plan followed in these books will be far more interesting and of much greater practical value to the pupil than the plan of the ordinary text-book of the schools, which follows a logical rather than a pedagogical plan for the presentation of the subject and attempts to inculcate hygienic habits by dogmatic statements.

Practical Points in the Use of *X*-Ray and High-Frequency Currents. By Aspinwall Judd, M.D., Adj. Professor of Surgery of Post-Graduate Medical School and Hospital. Cloth. Pp. 189, with illustrations. Price, $1.50. New York: Rebman Co.

The author states that his work is intended to be an elementary and simple statement of the therapeutic and diagnostic use of *x*-rays and high-frequency currents for the practitioner who has bought the apparatus for these methods and knows nothing about them or electricity. This intention has resulted in a very elementary and confessedly inaccurate statement which, to our mind, is only a fairly successful attempt at making the subject simple. The first part (107 pages), which is taken up with the description of apparatus and the methods of use, is more satisfactory than the second part (approximately 80 pages), which is taken up with the practical applications to therapeutics, and consists of a bald statement of the application of *x*-rays and high-frequency currents in various diseases. On the basis of the knowledge which it contains, the practitioner could use these methods of treatment only in the most superficial and empirical way. The author, we think, has undertaken to simplify the subject too much, with the result that one could get at most only a rule-of-thumb knowledge of the subjects treated from the work. Too many persons are unsuccessfully trying to do the work on that meager basis already.

Pulmonary Tuberculosis: Its Symptomatology; Its Clinical Forms; Its Diagnosis; and Its Prognosis. By M. Piéry, former Chief of the Clinic of the Faculty of Medicine of Lyons. Pp. 836, with 59 illustrations. Price, 9 francs. Paris: Octave Doin & Sons.

This book is one of twenty-five volumes by French physicians which is being brought out under the general heading of "A Library on Tuberculosis." In addition to this volume two others have appeared, one on tuberculosis of the bones and another on tuberculous rheumatism. Two more volumes are in press, namely, one on tuberculous pleurisies and one on tuberculosis of the joints and tuberculosis of the serous and synovial membranes. The entire library is published under the general editorial direction of Drs. A. Chantemesse, A Poncet and F. J. Collet.

Piéry's book is well prepared for the use of medical men and is fairly well up to date. As is so often the case with French books, it displays incomplete knowledge of American medicine, although an attempt has been made to bring it up to date. In this regard it is an improvement on French medical literature and it is not difficult to trace this improvement to the International Congress on Tuberculosis in Washington as most of the American literature with which the author is familiar either appears in the transactions of the congress or has appeared in current literature since the congress.

Surgical Anesthesia. By H. Bellamy Gardner, M.R.C.S., Anesthetist at St. Mark's Hospital for Fistula, the National Orthopedic Hospital and the Male Lock Hospital. Cloth. Pp. 240, with 35 illustrations. Price, $2.25 net. New York: William Wood & Co., 1909.

This book possesses features common to all of the newer works on anesthesia. Considerable space is devoted to the requirements of dental surgery because the author is convinced that "it is probable that more work of this kind will fall to the practitioner as the serious sequelæ of oral sepsis become more clearly recognized." Nitrous oxid, chloroform, ether, chloroform and ether mixtures, and ethyl chlorid are the only anesthetics considered. The indications for their use, the after-treatment, prevention and treatment of surgical shock, are discussed, but nothing new is presented. The book is well illustrated.

# Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

## CONFERENCE OF COUNTY SECRETARIES IN PENNSYLVANIA

**By William Rowland Davies, M.D.**
Chairman of the Conference of the Secretaries, Medical Society of the State of Pennsylvania
SCRANTON, PA.

Pennsylvania has within the confines of its State Medical Society a body meeting at the same time and place as the state society, but conducting its affairs independently. This is the Conference of the Secretaries, composed of the secretaries of the various county medical societies, which are component parts of the state society.

This organization has been meeting for some years during the progress of the state convention, to enable the secretaries to confer concerning the work that they were expected to perform. This was necessary, as the state secretary was continually hindered in his work by failure of the county secretaries to comply properly and promptly with the needs and requirements of the state secretary's office. Every county secretary was a law unto himself and carried on the business of his office to suit himself, usually to the detriment of the business of the superior organization. The idea of having the secretary's work in each county carried out along uniform lines was long considered by the state secretary, Dr. Cyrus L. Stevens, who suffered most by the dereliction of the county secretaries. On account of frequent changes in the office of county secretary the influence that he exerted lost its value with the advent of each new secretary. The business methods in vogue in the state office could not readily be changed to suit the varying ideas and methods of sixty-six secretaries throughout the state, and so these men were invited to meet with the state secretary at the time of the annual session of the state society and there discuss matters germane to the work of the county and state societies.

The conference now meets yearly and has for one of its attractions a banquet, during and after which the business of the session is transacted. No scientific or technical subjects are considered, for this is the meeting of the field business men of the organization, and they talk business. The ideas and aims of the conference have gradually broadened until it is now originating methods and initiating efforts which are expected to bring results that will be of decided value to the county societies, and consequently to the state and national societies.

The county secretary soon after his election discovers that the success or the failure of his society depends on him. If he is a conscientious man he soon finds himself absorbed in a work the extent of which no one but he can realize; and for the accomplishment of which he will receive no particular reward, except the feeling of having done as well as he could the work that he found waiting for him. If he can find time, once a year, to associate for a few hours with the men who occupy similar positions in other counties throughout the state, he will learn quickly many of the things that the other men are doing that will be of benefit to him, and in return will give of his own experience to the others. It is an admirable scheme and is productive of the best results.

The work planned at the last conference, to be carried on during the current year, is of a decidedly progressive character. In addition to the usual discussion, it was decided that the county secretaries should urge their societies to add to their numbers as many as possible of the non-affiliated physicians of their counties. This is more readily accomplished this year because of the recent issue of the new directory of the American Medical Association, which contains the names of those who are society members, as well as those who are not. This work is now well under way in many sections of the state. Secretaries were also urged to bend every effort toward creating interest in society work by providing attractive educational programs. The result of this recommendation is shown by the programs received from the various county societies which are full of interest and show a strong tendency toward better educational methods in our societies.

It was also decided that every means possible should be used to present the programs and announcements to members in an attractive form, preferably in the shape of a periodical, issued as often as the affairs of the society would demand. We now have a number of county medical society papers called variously, *Reporter*, *Bulletin*, *Notes*, and *News*, published weekly, monthly or quarterly. These are exchanged between the various counties of the state and have in a short time been of the greatest value imaginable in closing the gaps between the various county organizations. Every little editor of us is pounding away for dear life, endeavoring to have a society above the average, and to edit a sheet that will be at least as good as the other fellow's, and to have in it material that will make his readers "sit up and take notice."

These Pennsylvania county secretaries also resolved that they would be good and prompt business men in the conduct of their affairs and would do all in their power to make the life of the state secretary a little easier. Further realizing that they were the agents of the state society all through the year, they felt that it was rather odd that their services could be dispensed with at the time of the annual session, and so, in their last conference they endorsed a resolution to amend the ordinances and by-laws of the state society so as to make the county secretary a member of the House of Delegates by reason of his office, as the county president is now. This amendment will be voted on at the next session of the society at Pittsburg.

The members of this conference are a forceful set of men, who are determined to boom their local organizations and to secure better organization of the medical profession generally, so as to improve the many conditions that make practice difficult or unpleasant. Marked developments and numerous innovations may be expected from this class of men and their organization.

## POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
Bowling Green, Kentucky

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

### Eighth Month—Fourth Weekly Meeting

The Council on Pharmacy and Chemistry of the American Medical Association

History: Reasons for the creation of the Council; the U. S. P., the pharmacist, the practitioner of medicine, the manufacturing pharmacist, the ethical proprietary preparation, the nostrum.

Organization of the Council: The personnel of the Council, the professional standing of the members, what they have done in this particular field of work.

Objects: An inquiry into the composition and status of preparations offered to physicians, which are not found in the U. S. P., or standard text-books. The annual, "New and Nonofficial Remedies."

Rules Governing the Admission of Articles: Requirements as to formula, purity of ingredients, chemical tests, methods of advertising, claims of manufacturer as to ingredients, therapeutic properties, etc., name of article, etc. Admission of an article not an approval of it. Physician must decide as to therapeutic claims. Classification of articles examined and admitted. Reasons for rejections.

Results of the Work of the Council to Date: What may the practitioner do to aid the Council in this work? How may the county society help in this work? The relations existing between the members of this society and the local druggists. The practitioner and the detail man. The testimonial writer.

Publications of the A. M. A.: "New and Nonofficial Remedies," "The Pharmacopeia and the Physician," "Physicians' Manual of the U. S. P. and the National Formulary," "The Propaganda for Reform in Proprietary Medicine," various pamphlets.

### Monthly Meeting

The Reasons for a More Exact Knowledge of Pharmacology on the Part of the Practitioner of Medicine.

The Difference Between the Ethical Proprietary and the Nostrum.

What the Practitioner and the County Society May Do to Aid the Council on Pharmacy and Chemistry.

# Medicolegal

### Sufficiency and Construction of Statute Authorizing Board to Revoke Licenses

The Supreme Court of Minnesota says that the complaint of the plaintiff in the case of Wolf vs. State Board of Medical Examiners (123 N. W. R. 1074) set forth that the board had caused a notice to be served on him to appear before it at a time and place stated and show cause why he should not have his license to practice medicine revoked. The ground stated in the notice was that he had been guilty of unprofessional conduct in that at divers times he had entered into business relations with a certain medical institute and had aided and abetted it in carrying on a questionable medical practice. The board, it was alleged, had not the capacity, qualification, or power to properly examine, pass on, or ascertain the facts as to whether the plaintiff had been guilty of immoral, dishonorable, or unprofessional conduct, or to summon, administer oaths, or compel the production of documentary evidence; "the ethics of the medical profession are vague and shadowy; there are a variety of medical schools represented on said board, all differing in their theory of ethics as well as on their medical theories; . . . they do not act under oath, and their action is wholly unrestrained, either by judgment, law, or conscience;" the board had fully determined in advance to revoke the license of the plaintiff without regard to the facts.

Section 2296 of the Revised Laws of Minnesota of 1905 provides in part that "the board may refuse to grant a license to, or may revoke the license of, any person guilty of immoral, dishonorable, or unprofessional conduct, but subject to the right of the applicant to appeal to the governor." It is obvious that this section is incomplete in itself. It is equally certain that the section must be construed together with other sections of the Revised Laws and general principles of law which are applicable. It is not true, as the complaint set forth, that the board is not required to take oath. The subscription of an oath is expressly required by section 2677. It is true that no notice nor form of notice is prescribed by section 2296. The gist of the power to revoke necessarily implies, however, the ability on the part of the board to prescribe legal forms. This section does not expressly confer on the board power of administering an oath. The deficiency, however, is fully supplied by section 2682. The nature and necessary construction of that statute confers that power. It is immaterial that its exercise is limited to questions of fact. No witness could properly swear to matters of law. While it is true that this section provides that such a board "shall have the power to administer such oaths as they may deem necessary to the proper discharge of their duties," it does not provide that they must. It was objected that the administration of an oath is therefore discretionary. If an instance were presented in which, as a matter of fact, the conclusion of the board rested on unsworn testimony, the question involved in that argument would be presented. No such state of facts was before the court in this case. The objection that the board has not the power to compel the production of documentary evidence is equally untenable. Section 4655 expressly confers the authority.

Objection was made to the form of notice served on the plaintiff by the board. That notice recited that it had been made to appear to said board that he had been guilty of unprofessional conduct. This he said demonstrated the prejudgement by the board of the merits of the case. Of this notice the trial court said: "From a lawyer's standpoint, the language employed (in the notice) might be improved, but it is simply a citation to answer before the board certain charges touching the professional and possibly the moral conduct of the plaintiff." This the supreme court thinks was the logical and proper construction. The notice was infelicitous, but not legally ineffective.

The constitutionality of the statute was attacked. This proceeding was commenced under the statute as it existed prior to the amendment thereof by chapter 474 of the General Laws of 1909; but it is clear that subsequent proceedings must conform to the statute as thus amended. The principal objection to the old statute was that it failed to provide a physician proceeded against for removal with an opportunity to review a possible removal before some tribunal authorized to hear and protect his rights, and hence deprived him of his liberty and property without due process of law. The new statute expressly provides for an appeal to the district court of the proper county on questions of law and fact, and thus answers every requirement of due process of law. It was intended to obviate the constitutional objection of the old statute. As it will govern further proceedings herein, it is unnecessary to determine the validity of the old statute. It is to be noted that the definition of the offense against professional propriety is in no wise altered. The change is one of procedure alone, and secures to the person proceeded against all his constitutional rights. The ability of the legislature to effect such change is beyond question. If the plaintiff should be removed, he would then have the right to review all proper questions on appeal. No adequate reason appears for granting him an injunction enjoining the board from proceeding further in the matter.

### Physician Administering Anesthetic Not Liable from Not Protesting Against Operation Not Favored

The Supreme Court of Vermont says that the case of Lawson vs. Crane & Hall (74 Atl. R. 641) purported to be against the defendants as surgeons for not properly setting and caring for the plaintiff's broken leg. It appeared that at the plaintiff's house, some time after his injury, a Dr. Warren, assisted by a Dr. Burbank, broke over and set the plantiff's leg; Dr. Crane administering the anesthetic, but taking no other part in the operation. The plaintiff, in the opening of his case, called Dr. Crane as a witness, and asked him if he did not consider Dr. Warren's operation proper, and he said that he did not as it was performed, and in the place it was performed. He was then asked whether he made any objection to it or protest against it in the time of it. and he said that he did not. To this the defendants excepted, and the court holds that it was error, under the circumstances of the case, to admit the testimony objected to.

It appeared that a few days before that operation, the court goes on to say, that the defendants and Dr. Warren, who had been called for the purpose, met at the plaintiff's house and conferred as to whether anything or what further should be done to his leg. Dr. Crane advised that it be put into a plaster cast for a while, and then, if any further operation was to be performed, that the plaintiff be taken to some hospital where he could have expert care and attention. But it was finally determined at that conference to cut into the leg, break over the bone, and wire the parts together; and it was arranged that Dr. Warren should perform the operation, Dr. Crane consenting to administer the anesthetic, and in a few days the operation was performed accordingly, as before stated. Dr. Warren had exclusive charge of the case at the time of this operation, and directed everything done, and the charge of the case was with him ever after. There was no evidence tending to show that Dr. Crane was ever employed to have general charge of the case, but all the evidence tended to show that his employment was confined to the several occasions when he was called to assist.

Under such circumstances, it was error to admit the testimony objected to. Dr. Crane had already advised against any operation at the time and in the place it was performed; but his advice had been disregarded, and the operation was being performed contrary thereto, and was not subject to his control. Therefore he was not called on to object to, nor to protest against it, and hence no inference of approval of it could be drawn against him from his silence in that respect.

The plaintiff obtained a judgment in the lower court, but that is reversed and his petition dismissed, with costs.

# Current Medical Literature

## AMERICAN

Titles marked with an asterisk (*) are abstracted below.

### New York Medical Journal

*March 26*

1 *Cerebrospinal Meningitis in An Infant Two Months Old. L. Fischer, New York.
2 *Some Dermatologic "Manias and Phobias." W. S. Gottheil, New York.
3 Surgical Hemostasis. H. G. Wetherill, Denver, Colo.
4 Typhoid Carriers. R. C. Rosenberger, Philadelphia.
5 A Further Suggestion Concerning the Relation of Life-Insurance Companies to the Longevity of their Policy Holders. B. Foster, St. Paul.
6 Surgical Procedures in the Military Service. F. T. Woodbury, Fort Assinniboine, Mont.
7 The Serodiagnosis of Syphilis. H. F. Swift, New York.
8 *A New Theory of the Origin of Papillitis (Choked Disc). J. Windbiel, Amsterdam, N. Y.
9 *Operation for Correction of Hammer-Toe. R. E. Soule, New York.

1. **Serotherapy of Cerebrospinal Meningitis.**—Fischer reports a case of meningitis in an infant two months old, in which the diagnosis was made by tapping the lateral ventricle, and calls attention to the fact that the intraventricular method of injection has not proved successful in cases previously reported. The disease had commenced with vomiting, anorexia and gastric discomfort. These symptoms were relieved by a laxative, but two days later the mother noticed twitching of the arms, stiffening of the neck muscles, rolling of the eyeball, restlessness and insomnia, and at times a sudden piercing cry as though the child were in pain. On the following day the child was admitted to the hospital and the diagnosis not being positive, expectant treatment was carried out for a few days. Lumbar puncture was done and 1 c.c. of turbid blood-tinged fluid was withdrawn. The fluid was examined microscopically for meningococci with negative results. Three other lumbar punctures resulted in dry taps, and as the symptoms of rigidity opisthotonos, fever, and twitching were marked it was decided to tap the lateral ventricles. Fifteen c.c. of turbid fluid containing pus were withdrawn from the right ventricle, smears from which showed intracellular Gram-negative cocci. The ventricles were then irrigated with normal saline solution at 105 F. The excess of fluid was allowed to drain out through the needle and 2.5 c.c. of serum were injected slowly into the ventricles. During the injection of serum the infant's color changed from a waxy pallor to a uniform red flush all over the body. One-half hour after the injection the infant remained flushed, perspired profusely, and frothed slightly at the mouth; otherwise the condition was good. The next day the ventricles were again irrigated with 40 c.c. of saline solution and 20 c.c. of serum injected. On the next day the general condition was poor, opisthotonos was marked, arms rigidly extended, and palms everted outward. Occasionally the child flexed the arms and legs at elbows and knees. It lay quietly although not asleep; when a strong light was held in front of the face the dilated pupils contracted. Perspiration was free. Even a light touch with a pencil caused a spasm of muscular contractions involving all the limbs, and later these contractions occurred every few minutes without outward irritation. The pulse was 140, but regular and of good tension. On the next day lumbar puncture in the fourth interspace resulted in dry tap. A second needle was then inserted in the third interspace, and 15 c.c. of serum were injected, about 3 c.c. of which returned through the first needle. Then 15 c.c. were injected through the first needle, 5 c.c. of which returned through the second; in all, the infant retained from 20 to 25 c.c. of serum. Better results on the whole were obtained from the intraventricular injections. Two days later, 15 c.c. were injected into the ventricles, although no ventricular fluid could be withdrawn. The infant gradually improved during the next month, and was discharged 2½ months after admittance in normal condition. The eyes were examined by two ophthalmologists and both reports showed no evidence of blindness, nor is there evidence of deafness. Throughout its illness the child was breast-fed.

2. **Leprosy.**—Gottheil reports cases to prove the correctness of the assertions that under the conditions here prevalent at least, the lepra infection, while intractable and progressive, is very feeble; that with ordinary non-ulcerative cases, at least

the danger to others is very small; that many of the patients can pass along for years of practically good health and capacity for work after they are infected; and that leprosy is probably not hereditary, though, of course, the children living with leprous parents are especially exposed to the contagion. In advanced cases, of course, the patients belong in the hospital; in milder ones a home which the patients could voluntarily seek should be provided; but to practically incarcerate patients in the early stages and make a public charge of them is required neither for the protection of the community nor by the patients' needs.

8. **Origin of Papillitis.**—This theory, first propounded by Schieck, is based on the pathologic and anatomic examination of fresh bases of papillitis in which the posterior bulb section including the opticus was examined through serial cuts or sections, thereby showing that the inflammatory theory (Leber-Deutschmann) cannot possibly be right. All fresh specimens showed signs of edema at the distal end of the optic nerve, but not the least evidence of an inflammation either in the optic nerve iself or in its sheaths. Neither can the Schmidtman lymph space theory solve the causation of choked disc, because the fluid in the vaginal space was found to be of too small amount to cause pressure on the nerve and strangulation of the blood vessels. Much less credibility has Deyl's theory of the compression of the central vein within the intervaginal space. And also that of Knapp with regard to compression of the vein in its course through the edematous dural sheath, since at both points the vein was found wide open. On the other hand, a very noticeable widening of the perivascular lymph channels in the axial strand was found in every case.

9. **Operation for Correction of Hammer-Toe.**—After the usual preparation of the foot for operation and after the Esmarch bandage has been applied, a skin incision, one and one-quarter inches long, is made at the outer aspect of the plantar surface of the toe, the center of which incision is at the flexed joint. The skin flaps are dissected laterally, sufficiently to expose the underlying structures. The incision is continued through the subcutaneous structures, being careful to expose the digital branch of the artery and the nerve and to prevent their injury while continuing the dissection down to the joint. The sheath containing the flexor tendons is then dissected free from the joint and held aside sufficiently to allow of the removal of the articulating joint surfaces with the chisel, observing due care to have sufficient flat surface at right angles to the shafts of the contiguous bones as a result of the arthrodesis. No bone suture is necessary. The subcutaneous structures are then allowed to fall back in place and are held by a few fine buried catgut sutures. The skin is closed with interrupted chromic gut and dressings applied. A plaster of Paris bandage, fixing the toes in hyperextension, making the flexor tendons tense, thus holding the bony surfaces of the phalanges operated on in close apposition and in straight line, is finally applied. After ten days, the plaster of Paris is split and the dressings are removed sufficiently to expose the field of operation. Then the dressings are restored and maintained in the original position for six weeks. The patient is allowed up on crutches after the first dressing.

### Boston Medical and Surgical Journal

*March 24*

10 *The Present Status of Vaccine Therapy. W. Tileston, New Haven.
11 Local Anesthesia (Neumann) in Ear Surgery. J. J. Hurley, Boston.
12 *Tuberculosis of the Shoulder in Children. J. W. Sever, Boston.
13 The Hospital Dietitian. W. F. Boos, Boston.

10. **Present Status of Vaccine Therapy.**—According to Tileston in certain localized infections, particularly those due to the staphylococcus and tubercle bacillus, vaccine therapy has clearly proved its worth and stands on firm ground. In the general infections it has not so far shown results which are distinctly better than those with other forms of treatment.

12. **Tuberculosis of Shoulder in Children.**—In Sever's series there were 11 children who developed abscesses which required operations. There were 8 who needed one operation, 5 who had two, 1 who had three, and in 5 cases resection, partial or complete, was necessary of the head of the humerus. As is natural in these cases which required frequent operations, there was the greatest amount of bone destruction and they generally required excision of the head of the bone. The results are not encouraging, even with the best treatment. An ankylosed joint is usually the ultimate result. When the case involves much bone and cartilage, ankylosis always occurs, but when the type is synovial there may be some motion. Eleven cases showed no motion in the joint. In four of these there had been resection of the head of the humerus, 1 child had a moderate amount of motion following resection, and 6 who had not had resection showed motion varying from a very slight amount to about one-half normal.

### Kentucky Medical Journal, Bowling Green

*March 1*

14 Organization's "Firing Line." V. E. Simpson, Louisville.
15 The Importance of the Secretary of the County Medical Society. W. W. Richmond, Clinton.
16 The Duties of the County Secretary. J. J. Rodman, Owensboro.
17 Medical Aspect of Gastric Ulcer. U. V. Williams, Frankfort.
18 Measles (Morbilli). T. A. Frazer, Marion.
19 The Tonsils During Childhood. A. O. Pfingst, Louisville.
20 Arteriosclerosis. J. W. Botts, Owenton.
21 Value of the Tuberculin Test in the Dairy. G. P. Sprague, Lexington.
22 Indications, Contraindications and Dangers of Forceps in Obstetrical Work. O. B. Damaree, Frankfort.
23 Anemia. J. F. Garvey, Pleasureville.
24 The Antrum, Frontal and Mastoid Sinuses. V. E. Smith, Brooksville.
25 What the Medical Examiner Needs and How to Provide it. W. E. Grant, Louisville.
26 The Medical Examiner's Report. D. C. Morton, Louisville.
27 Extrauterine Pregnancy. J. Barnhill, Owensboro.
28 Diuretics. S. P. Anderson, Russelville.

*March 15*

29 Abortion. C. Farmer, Louisville.
30 *The Balsam-Oil Dressing in Surgery. A. L. Parsons, Louisville.
31 Woman as a Life-Insurance Risk. H. J. Farbach and J. G. Cecil, Louisville.
32 Indicanuria. F. C. Askenstedt, Louisville.

30. **Balsam-Oil Dressing in Surgery.**—The advantages of the balsam-oil dressing are stated by Parsons to be as follows: (1) There is continuous drainage of the wound surface; (2) wound secretions are not retained under an impervious scab, and the absorption of toxins is thus avoided; (3) bacteria are killed and eliminated from the field; (4) epithelium grows and is not rudely torn off at each dressing; (5) dressings are almost painless; (6) granulations are encouraged but do not become spongy; (7) irrigation is unnecessary; and (8) the wound does not require redressing oftener than at intervals of from 48 to 72 hours.

### Medical Fortnightly, St. Louis

*March 10*

33 Touring the Lands Where Medical Science Evolved. R. G. Eccles, Brooklyn.
34 The Indeterminate Stage. W. F. Waugh, Chicago.
35 Rupture of Membrana Tympani While Using a Telephone. A. F. Koetter, St. Louis.

### Virginia Medical Semi-Monthly, Richmond

*March 11*

36 Cure of Uterine Prolapse. H. A. Royster, Raleigh, N. C.
37 Treatment of Certain Conditions Secondary to Lost Compensation. J. G. Nelson, Richmond.
38 *Effect of Pregnancy on Laryngeal Tuberculosis. C. R. Dufour, Washington, D. C.
39 Two Cases of Pellagra. J. L. Early, Saltville.
40 *Invagination of the Small Intestine into the Colon: Operation; Death. J. T. Kelly, Washington, D. C.
41 Hookworm in Virginia—Its Prevalence in Certain Piedmont Sections. J. A. Waddell, University.
42 Importance of Diet in Nasopharyngeal Troubles. A. C. Palmer, Urbanna, Va.
43 A Case of Diphtheria. C. S. Webb, Bowling Green.

38. **Effect of Pregnancy on Laryngeal Tuberculosis.**—Laryngeal tuberculosis whether present at the time or developing during gestation, is increased very much during pregnancy. This development of the disease renders suffocation imminent, from the edema which often accompanies it. Tracheotomy is the only means for relieving the suffocation, and as it cannot always be done in time to save life, this fact has led to the acceptance of laryngeal tuberculosis as a positive indication for the artificial interruption of pregnancy.

40. **Invagination of Small Intestine Into Colon.**—On opening the abdomen in a case of intussusception, Kelly found that the small intestine had inserted itself into the colon from the ileocecal valve to within an inch and a half of the anus. This was pulled out, but the part above the cecum was so necrosed and gangrenous that the head of the cecum and about four inches of the ileum had to be resected. This was done very quickly the child being removed from the table in as good condition as when he was placed there. His bowels moved soon after he had reached the bed. In spite of stimulation, he died the same night. The point of chief interest in the case is that the patient lived seven days after the intussusception occurred, and also to note with what ease an operation might have been done had the diagnosis been made earlier.

### New York State Journal of Medicine, New York

*March*

44 *When to Operate in Appendicitis. J. A. Blake, New York.
45 *Appendicitis in Children. C. N. Dowd, New York.
46 *Masked Appendicitis. G. E. Brewer, New York.
47 Analysis of 1,411 Operations on the Appendix. C. A. McWilliams, New York.
48 *Conditions Simulating Appendicitis. A. B. Johnson, New York.
49 Interpretation of a Differential Leucocyte Count. T. H. Dexter, New York.
50 *Heredotuberculosis. J. L. Archambault, Cohoes.
51 Remote Symptoms from Intestinal Irritation in Infants and Children. C. A. Frost, Utica, N. Y.

44, 45, 46, 48. Abstracted in The Journal, Feb. 26, 1910, pp. 735, 736.

50. A similar article on this subject by the same author appeared in *Albany Medical Annals*, January, 1910.

### American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

*March*

52 *Intramural Abscess of the Puerperal Uterus. J. A. Sampson, Albany.
53 Operative Technic in its Relation to Shock. C. M. Rakestraw, Savannah, Ga.
54 Treatment of Septic Abortion. E. W. Pinkham, New York.
55 Treatment of Inevitable and Incomplete Abortion. W. P. Pool, Brooklyn.
56 Legal Status of Criminal Abortion. A. C. Vandiver, New York.
57 *The Use of Chloroform in Treatment of Eclampsia. W. Ward, New York.
58 *Twenty-seven Cases of Latero-Lateral Anastomosis of the Ileum to the Sigmoid Flexure for Mucous Colitis. G. H. Noble, Atlanta, Ga.
59 *Suppuration of a Uterine Fibroid with Unusual Manifestations. E. A. Schumann, Philadelphia.
60 A Double Uterus with Laceration of the Cervices. G. E. Shoemaker, Philadelphia.
61 Fibroid Tumors Complicating Pregnancy and the Puerperium. W. Krusen, Philadelphia.
62 Primary Adenocarcinoma of the Body of the Uterus: Special Reference to An Early Diagnosis. C. N. Ballard, Oklahoma City, Okla.
63 Case of Pseudo "Viable Abdominal Pregnancy." S. C. Carson, Greensboro, Ala.
64 Ectro-Hemimelia of the Right Upper Extremity. J. F. Arteaga, Havana, Cuba.
65 Gastric Ulcer in Childhood. L. M. Bowes, Chicago.
66 Vaginitis. W. B. Meister, Brooklyn.
67 Pertussis. K. MacEvitt, Brooklyn.

52. **Intramural Abscess in the Puerperal Uterus.**—The reported authentic cases of intramural abscess of the puerperal uterus, according to Sampson, are few in number, probably not over 25, and, as many of them are briefly described, he does not feel warranted in drawing definite conclusions concerning the various phases of the subject. Nevertheless a general summary is not out of place. There are two distinct groups of cases: 1. Those in which the uterine abscess or abscesses are the only results of the puerperal infection present in the case, or if not, they are the most important ones and the principal cause of the patient's illness, as in the first two cases reported. The condition in this group exists as a distinct clinical entity. 2. Those in which the uterine condition is secondary in pathologic importance to others which may result from puerperal infection. There may be multiple abscesses in the organs and structures of the pelvis including the uterus, or the abscesses in the uterus may be overshadowed by some such condition as purulent peritonitis or thrombophlebitis, as in the last two cases reported. The uterine condition in this group loses its entity on account of the greater importance of the other conditions present. These cases are very rare, and are one of the results of puerperal infection. The number, size and distribution of these abscesses resemble closely those of uterine myomata. The patient gives a history of puerperal infection following labor or abortion, which has not cleared up, *i. e.*, has become chronic. The subjective symptoms may be slight. On the other hand, the general symptoms of infection and the local ones of pelvic inflammation may be severe. The general signs of infection are present; they vary in severity, but may be of a low grade. Diagnosis is not always possible, and it must be by exclusion. The following possible terminations of this condition present themselves and all have clinical confirmation: (1) rupture into the uterine cavity; (2) rupture into the peritoneal cavity; (3) extension into the retroperitoneal tissues; (4) rupture into the intestine; (5) rupture into the bladder; and (6) rupture of a cervical abscess into the vagina. The condition should be treated by surgical interference.

57. **Chloroform in Treatment of Eclampsia.**—The usual plan at the Sloane Maternity, New York, is to deliver as soon as possible, consistent with the mother's soft parts, after the occurrence of the first convulsion, if not before. If the cervix is soft and dilatable, an immediate *accouchement forcé* is done. If the surface is rigid and undilatable, preliminary softening by the Voorhees bag is used, the patient meanwhile being put on active anti-eclampsia treatment. There are here one or two periods when an anesthetic is required, and until last year chloroform was invariably used at the Sloane Maternity. The amount of the drug used varied with the individual case. For the introduction of the bag little is necessary, but the average patient is not easily controlled, her apparent strength is remarkable, and in some cases at least considerable chloroform is likely to be used. The records show that the average duration of the anesthesia for each of 15 patients was 43 minutes, even including in the average, several post-partum cases in which, with normal deliveries, but from one to five minims of chloroform was used for the control of the head and delivery over the perineum. To one patient chloroform was administered for 120 minutes, to another for 107, to another for 68, and so on. The charts also show that the patients who were in the worst condition on admission were those who required the longest anesthesia. Naturally these patients did not all receive chloroform to the surgical degree throughout the entire time, obstetrical anesthesia being all that was desired for at least a part of the time, but even so, it is evident that the anesthesia was prolonged and the amount of the drug used considerable. A further use of chloroform, as commonly used in the treatment of eclampsia, is for the control of the convulsions. Since March 15, 1909, there have been at the Sloane Maternity 12 cases of eclampsia in a series of 1,261 confinements. Any patient showing any symptoms of a toxemia, no matter how slight, has been treated without chloroform. Ward feels that by this method they have undoubtedly cut down the number of patients showing actual convulsions, *i. e.*, eclampsia. In these 1,261 women Ward has used no chloroform whatever in toxemic or eclamptic cases except in two patients early in the series. Neither of these patients was very toxic, as these cases go, and only small amounts were used for delivery. There have been no maternal deaths. A small series such as this means little, and similar results have been obtained under the chloroform treatment in a larger series of cases. Ether has been used for actual delivery or for any manipulations when an anesthetic has been required. These patients take ether as well as chloroform, and there is no difficulty in its use. Aside from the control of the convulsions, Ward uses the regular accepted treatment of the condition—emptying of the uterus as soon as consistent with the mothers' soft parts; veratrum viride, chloral, nitroglycerin, hot packs or hot-air baths, colon irrigations, forced fluids, etc. Looking at the convulsions as purely a symptom he makes no effort to control them on their own account, except as they are controlled by the general treatment which is designed partly to keep them in check, and at the same time, to stimulate as much as possible the eliminations.

58. **Latero-Lateral Anastomosis of the Ileum.**—All the cases observed by Noble on which this report is based were bad ones, and the patients were willing to submit to anything

holding out the least encouragement. With few exceptions, they were poorly nourished, anemic, neurasthenic subjects, often suffering from atonic dilatation of stomach, achylia, pyloric insufficiency, enteroptosis, and various pelvic lesions. They were in a state of invalidism, some having been confined to bed for from a few months to as long as two years, and were selected for the operation because they had been subjected to thorough trials of medical treatment and diet without material mitigation of symptoms.

Of the total number, 27, 18 now have evacuations of bowels from one to three times daily without laxatives. Of the remaining 9, 3 take laxatives, 2 use injections of either water or oil, 2 control motions by regulating their diet, of 1 no record has been received, and there is 1 other case too recent to record. About 75 per cent. of the patients are relieved of constipation sufficiently to avoid the use of medicines; 2 reported constipation; and 2 who acquired the habit of using injections before the operation have not allowed themselves an opportunity to see how the bowels will move without them. The relief of colicky pains has been remarkable; some individuals recovered in a few weeks and others gradually improved. Tenderness and soreness also disappeared after the effects of the operation cleared up. One of the most noticeable effects was the relief of gaseous distentions, some enormously distended abdomens, requiring anodynes to relieve pain almost daily, being promptly and effectually relieved by the operation. Only a few of the recent patients report any discomfort from this cause. Twelve patients pass no mucus at all, 10 very little, at times, 4 recent patients reported mucus much decreased, and 1 patient has not been heard from directly; 22 have been cured; 1 case is not reported. All have gained more or less in weight and strength. In 2 cases the appendix had previously been removed without affecting the colitis. In about half the remaining cases, appendectomy was done at the time of anastomosing intestines, but none of them showed any advantage or improvement over those in which the organ was left intact. The operation is based on the principle that mucous colitis is largely caused by constipation and putrefactive decomposition. The direct object of the anastomosis is to drain the most intensely infected section of the ileum, preventing its discharges into the cecum; for the amount of decomposition, irritation and absorption of toxins is in proportion to the quantity and character of material entering the colon. In the technic of the operation, the suture method is preferred, and the anastomosis is made as low down on the ileum and sigmoid as the two portions of the intestinal canal can be approximated without tension.

59. **Suppuration of a Uterine Fibroid.**—The point emphasized in this case by Schumann is that the constitutional disturbance and inflammatory reaction were due to a relatively minute focus of suppuration but one in which the pus was under high tension. A routine examination of the tumor and uterine appendages gave no hint of the cause of the disturbance, which was only made manifest by the opening of the small abscess cavity about the root of the polyp.

### St. Paul Medical Journal

*March*

68 Occurrence of Deformity in Joint Disease. Its Importance in Perpetuating Latent Lesions and the Necessities for their Correction. C. F. Painter, Boston.
69 Laboratory Examination of Stomach Contents. T. W. Stumm, St. Paul.
70 Infant Feeding. R. N. Andrews, Mankato, Minn.
71 Technic of Appendectomy. W. E. Ground and H. T. Ground, Superior, Wis.

### American Journal of Surgery, New York

*March*

72 Hemolytic Action of the Serum in Renal Disease: Is the Hemolysis of Prognostic Importance? V. Pleth, and V. W. Pleth, Seguin, Tex.
73 Pathologic Variations and Complications of Appendicitis. C. H. Goodrich, Brooklyn.
74 *Ionic Surgery in Cancer of the Mouth and Nose. G. B. Massey, Philadelphia.
75 Compound Posterior Dislocation of the Head of the Ulna. H. Neuhof, New York.
76 Operation for Fracture of the Femur. C. F. Barber, Brooklyn.

74. **Ionic Surgery in Cancer.**—Between 1893 and January, 1905, Massey employed ionic surgery in 14 cases of malignant growths within the mouth, 2 of which were operable in the ordinary sense and 12 inoperable, most of them hopelessly inoperable. Of these 4 patients were cured, including the 2 operable patients, and are well 5, 8, 9 and 12 years after treatment. Three died during or shortly after the operation, 2 were relieved for a long period of time, but finally relapsed, and 5 operations were failures to arrest the disease for any length of time.

### New Mexico Medical Journal, Las Vegas

*February*

77 Hay Fever. J. W. Tinder, Roswell.
78 Milk-Sickness (Trembles, Slows or Alkali Poisoning). C. F. Montgomery, Roswell.
79 Treatment of Ileocolitis with Saline Transfusion. C. F. Beeson, Roswell.

### Journal Experimental Medicine, New York

*March*

80 *Influence of Various Organs on the Catalytic Activity of the Blood. M. C. Winternitz and J. P. Pratt, Baltimore.
81 The Depressor Substance of Dog's Urine and its Disappearance in Certain Forms of Experimental Acute Nephritis. R. M. Pearce, New York.
82 *Peritoneal Patching of the Aorta. A. Carrel, New York.
83 *Remote Results of Replantation of the Kidney and the Spleen. A. Carrel, New York.
84 Physiology of the Immediate Reaction of Anaphylaxis in the Guinea-Pig. J. Auer and P. A. Lewis, New York.
85 An Attenuated Surra of Mauritius with Immunity Tests after Recovery. B. T. Terry, New York.
86 Pleomorphism and Pleobiosis of *Bacillus Bifidus Communis.* H. Noguchi, New York.
87 *Experimental Acute Nephritis: The Vascular Reactions and the Elimination of Nitrogen. R. M. Pearce, M. C. Hill and A. B. Eisenbrey, New York.
88 *Experimental Epidemic Poliomyelitis in Monkeys. S. Flexner and P. A. Lewis, New York.

80. **Influence of Organs on the Catalytic Action of the Blood.**—The conclusion of Batelli and Stern that catalase is not found in a single tissue but is produced by various tissues which support each other in preserving high catalytic activity of the blood is verified. After destruction of the function of the thyroid the catalytic action of the blood declines and after destruction of the function of the kidneys the catalytic action of the blood and the tissues declines. The thyroid is intimately concerned in preserving the high activity of the blood and this is of interest because of the influence of this gland on physical and mental activity.

82. **Peritoneal Patching of the Aorta.**—Carrel found that by using a patch of peritoneum the aortic wall can regenerate itself so perfectly as to become absolutely normal, even though the new wall is composed of tissues different from the normal tissues of the aorta, yet the morphology was not greatly modified.

83. **Remote Results of the Replantation of the Kidney and Spleen.**—Carrel is now able to replant (in the same animal) the kidney or spleen on the renal or splenic vessels easily and safely. After the operation the animals remain generally in good health. Thus the left kidney of a dog was removed and perfused with Lockes' solution and replanted, the circulation being reestablished after an interruption of 50 minutes. Fifteen days afterward the right kidney was removed and the animal has remained in perfect health up to the time of this report, that is to say 23 months; hence the operation does not interfere with the function of the organs, at least within the time specified. In 4 other experiments three successful results were obtained. In one case the spleen disappeared. In the other 3 experiments the anatomic conditions of the replanted kidney or spleen were found entirely normal, when removed a long time after the operation. Several dogs, whose left kidneys were replaced some months by the left kidneys from other dogs are now living and in good health. Some time later it is proposed to endeavor to determine, if possible, the value of the transplantation of organs.

87. **Experimental Acute Nephritis.**—By the study of experimental nephritis with physiologic and anatomic methods, types in which either tubular or vascular changes predominate may be distinguished. Potassium chromate, uranium nitrate and corrosive sublimate cause extensive tubular injury without evidence of vascular injury, while arsenic and cantharadin produce but little injury to the tubules but cause

anuria. Physiologically, these two types represent tubular and vascular nephritis. In the tubular form the output of nitrogen is considerably diminished. In the vascular nephritis the nitrogen elimination is greatly increased.

88. **Experimental Epidemic Poliomyelitis.**—In this article Flexner and Lewis give a connected and detailed statement of their work on experimental poliomyelitis in monkeys. Most of the results obtained have been reported in a preliminary way from time to time in The Journal (1909, lii, 1639, 1913, 2095; 1910, liv, 45, 535). This study has yielded a large number of important facts bearing on the disease in man. The filterable character of the virus has been discovered and many of its properties have been ascertained. Some observations in regard to immunity have been made, as well as in regard to the clinical and pathologic peculiarities of the disease. A basis has been secured for the development of preventive measures.

### Maryland Medical Journal, Baltimore

*March*

89 The Ebb and Flow of Hypnotism. H. A. Kelly, Baltimore.
90 The Freund-Wertheim Operation for Complete Prolapse of the Uterus. J. M. Hundley, Baltimore.
91 Commercial Value of an Early and Correct Diagnosis. W. J. Todd, Mt. Washington, Md.
92 Jenner (1749-1823). H. M. Cohen, Baltimore.

### Cleveland Medical Journal

*March*

93 Use of the Hydrostatic Dilator in Obstetrics. A. J. Skeel, Cleveland.
94 Clinical Application of the Tonics. R. Pollock, Cleveland.
95 Ankylostomiasis. M. Coplan, Cleveland.
96 *Traumatic Neuroses from the Legal Point of View. G. A. Boone, Cleveland.
97 Ovarian Cyst Weighing 62 Pounds Removed from a Patient aged 80: Recovery. E. C. Brush, Zanesville, Ohio.
98 Microphthalmus: Exhibition of Specimen. E. G. Rust, Cleveland.
99 *Mercurial Treatment of Pulmonary Tuberculosis. J. Placak, Cleveland.
100 *Analysis of the Principal Causes of the Infant Mortality of Cleveland, 1908 and 1909. A. F. Furrer, Cleveland.

96. **The Traumatic Neuroses.**—Boone's observations covering nearly 17 years, have been in connection with the claim and legal departments of liability insurance companies, street and steam railroads, and in the cases in which traumatic nervous disorders furnished the basis of claims, he estimates that at least 95 per cent. of the claimants fully recovered within a reasonable time after their claims have been disposed of.

99. **Mercury in Pulmonary Tuberculosis.**—Placak's experience with the succinimid of mercury has been limited to about 20 cases, yet this number has been sufficient to convince him that mercury will fall by the wayside as many so-called specifics in tuberculosis have done in times gone by. Many of the patients after a length of time claimed they received no benefit and on account of the pain refused to take the injections.

100. **Infant Mortality of Cleveland.**—The infant mortality in Cleveland, according to Furrer, is approximately 25 per cent. of the total death-rate (1907, 1908, 1909). The so-called severe infectious diseases play such a small part in the causation of this mortality that they are comparatively unimportant, scarlet fever, whooping cough, diphtheria and tuberculosis, together causing but 50 deaths out of 1,800. Diarrhea and enteritis, convulsions and "early infancy," or in other words the gastrointestinal diseases, were directly or indirectly responsible for about 1,200 deaths, which represent two-thirds of our total infant mortality. Furrer urges that the present classification of diseases pertaining to infants as reported in city mortality statistics should be revised.

### Louisville Monthly Journal of Medicine and Surgery

*March*

101 Gastroenterostomy. L. Frank, Louisville.
102 Prophylaxis of Pellagra. C. H. Lavinder, Washington, D. C.
103 Picrotoxin. H. H. Redfield, Chicago.

### American Journal of Physiology, Boston

*March*

105 *Decompression of the Ammonia-Destroying Power of the Liver After Complete Thyroidectomy. A. J. Carlson and C. Jacobsen, Chicago.
106 Action of the Proteins of Blood on the Isolated Mammalian Heart. L. W. Gorham and A. W. Morrison, Baltimore.
107 Blood-Pressure of the Sheep. M. Dresbach, Ithaca, N. Y.
108 *Influence of the Removal of Fragments of the Intestinal Tract on the Character of Nitrogen Metabolism. II. Removal of Small Intestine. A. Carrel, G. M. Meyer and P. A. Levene, New York.

105. **Ammonia-Destroying Power of the Liver.**—Carlson and Jacobson experimented on thyroidectomized cats and foxes to determine the influence of removing the thyroid and parathyroids on the metabolism of ammonia by the liver cells. In animals treated in this way when symptoms of excitation and depression are exhibited, the blood contains more ammonia than that of normal animals and the livers show a marked depression in the ammonia-destroying power as compared to the liver of the normal animals. In animals which show no symptoms these changes do not appear. The increase in the ammonia content of the urine and blood after complete thyroidectomy, is due, at least in part, to liver depression rather than to acidosis independent of the liver. The authors suggest that the detoxication function of the parathyroid is probably due to influence on the liver and other organs rather than to neutralization processes in the glands themselves.

108. **Removal of Fragments of the Intestinal Tract.**—Carrel, Meyer and Levene continued their experiments to determine the functions of the different segments of the digestive tract by removing the small intestine. They found that there was a diminution of the absorption of ingested proteins and of leucin, but there seemed to be no disturbance of the power of assimilation and retention of the absorbed protein. They conclude, therefore, that the stomach and not the intestines is the organ principally concerned in the function of protein assimilation.

### American Journal of Orthopedic Surgery, Philadelphia

*February*

109 Malformations. A. Thorndike, Boston.
110 Multiple Hand and Foot Deformities in the Third, Fourth, Seventh and Ninth Children of the Same Family, the others Being Normal and the Parents Normal. DeF. Willard and B. L. Singer, Philadelphia.
111 Some Myogenous Types of Rigid Spine. G. R. Elliott, New York.
112 *Etiology of Hallux Valgus or the Intermetatarseum J. K. Young, Philadelphia.
113 Subluxation of the Third Cervical Vertebra. E. W. Ryerson, Chicago.
114 Traumatic Lesions of the Atlas and Axis. S. J. Mixter and R. B. Osgood, Boston.
115 *Relation of Posture to Human Efficiency and the Influence of Poise on the Support and Function of the Viscera. J. E. Goldthwait, Boston.

112. Abstracted in The Journal, Aug. 7, 1909, p. 479.

115. Published in the *Boston Medical and Surgical Journal*, Dec. 9, 1909, and abstracted in The Journal, Dec. 25, 1909, p. 2177.

### Texas State Journal of Medicine, Fort Worth

*March*

116 The Public School and the Prevention of Tuberculosis. J. S. Lankford, San Antonio.
117 Causes of Psychoneurosis. J. S. Turner, Dallas.
118 Optical Iridectomy: Special Reference to Leucoma. E. L. Burton, McKinney.
119 *Amber-Tinted Lenses for the Relief of Asthenopia. H. L. Hilgartner, Austin.
120 *Surgical Relief of Bright's Disease. W. Cantrell, Greenville.
121 Sanitation. W. H. Blythe, Mount Pleasant.

119. **Amber-Tinted Lenses for Asthenopia.**—The use of amber-tinted lenses in ten cases, by Hilgartner, has been satisfactory, with one exception, a case of extreme hysteria.

. 120. **Surgical Relief of Nephritis.**—Cantrell has faith in surgical effort for the relief of Bright's disease based on some little work. He mentions 19 patients, including a number who were operated on for floating kidney, and who presented tube casts and epithelium. He has lost only one of his patients and this loss occurred nearly two years after the first operation. In this case he was induced to make a second attempt, hoping that he might be able to relieve the distressing symptoms. The patient did not die immediately after the operation, but several weeks later. Cantrell's entire list of living patients is greatly improved. They are all well pleased with the effort, and while Cantrell cannot claim that any one of them is cured, he is convinced beyond a doubt that they are all greatly relieved, and this relief, he says, is well worth the effort which has been made.

## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### British Medical Journal, London

*March 12*

1 *Causes and Treatment of Functional Dyspepsia. D. Drummond.
2 *Reflex Pain in Diseases of the Abdominal Viscera. A. E. Maylard.
3 How to Operate for Appendicitis. R. P. Rowlands.
4 *The Effect of Abdominal Compression in a Case of Very Rapid Heart. W. Gordon.
5 *A Red Line on the Gums. G. A. Stephens.
6 The Cerebellum and its Diseases. J. S. R. Russell.

1. **Causes and Treatment of Functional Dyspepsia.**—Drummond is so convinced of the practical importance of hunting out the inducing cause in each case of indigestion with a view to its removal, that he regards investigation of the secretory activity of the stomach, followed by prescription of appropriate diet or acid and antacid remedies, as being valuable, no doubt, for giving relief, but only too often insufficient for a cure. Foremost among perplexing and often highly elusive causes of gastric dyspepsia stand mental and nervous disturbances, he says. Practice among all classes of society furnishes many examples which belong to this group, and the fact will at once occur that one of the most useful of therapeutic measures in stomach cases is rest in bed.

2. **Reflex Pain in Disease of Abdominal Viscera.**—Without attempting to differentiate clinically between the lesions causing pain in the same spot, Maylard gives a sort of classified list of the diseases which may be expected to cause reflex pain in certain definite areas. Thus, (1) perforation of gastric or duodenal ulcer, rupture of gall-bladder and acute hemorrhagic pancreatitis cause acute pain to be felt in the epigastrium; (2) perforation of the appendix or of the small intestine, ruptures, strangulations and obstruction from various causes, embolism or thrombus of the mesenteric vessels, etc., cause acute pain to be felt in the region of the umbilicus; and (3) rupture in tubal affections including extrauterine pregnancy, causes acute pain to be felt in the hypogastrium. He emphasizes the fact that while diseases of the abdominal viscera may give rise to reflex pain located in one or other of the anatomic regions into which the abdomen is artificially divided all reflex pains experienced in these particular regions do not necessarily signify diseases of the abdominal viscera.

4. **Abdominal Compression in Tachycardia.**—Abdominal compression is a recognized method of treatment in paroxysmal tachycardia and in cases cited by Gordon it appeared to have been the chief means of saving life. April 3, a man, aged 68, was thrown down by a large motor car which backed on to him. A certain amount of general shock was sustained. The man was not neurotic. His pulse on the day of the accident was 100, and between April 3 and 10 it varied between 100 and 80. Two days after the accident he complained of severe abdominal pain and vomited three times. On April 9 he began to complain of an aching pain over the heart, with a good deal of flatulence and abdominal distention, and his pulse became rather weak, intermittent and irregular. The heart was apparently of normal size, free from murmur, but with rather feeble sounds. There was slight pulmonary emphysema, but no other lung trouble. The urine was normal. A mixture containing bismuth, a sodium salt, carbolic acid, and nux vomica was ordered and a simple aperient. The pulse was then very small, irregular and intermittent, running about 100, and the patient was pale and perspiring. There was no dyspnea, no distention of the veins in the neck, no sign of cardiac dilatation. There was no murmur or friction to be heard, only rather feeble sounds. He still complained of aching over the heart.

Under treatment the pulse improved somewhat, remaining, however, very intermittent. Next day it rose further in frequency, and at 2 p. m. was running at 144. On April 13, the right saphenous vein became thrombosed. The pulse was then counted at 180. Next morning it was counted at 74. Cheyne-Stokes breathing was very marked on April 14, and occurred occasionally for several days. From this time until April 21, a very serious condition was maintained, the rate of the pulse varying greatly from time to time, but being usually excessive, and often very rapid. At no time was there dyspnea, cardiac dilatation or murmurs, distention of veins or edema, except in the thrombosed leg. During full inspiration the feeble rapid pulse became absolutely obliterated. Gordon then decided to try the effect of abdominal compression, and a stout flannel binder was tightly applied over the entire abdomen at 11:40 a. m. No other change was made in the treatment. The pulse returned to an ordinary rate, 72. The effect of the binder, Gordon thinks, can best be explained by its effect on the overcharged splanchnic circulation.

5. **Red Line on Gums.**—The typical lead line, according to Stephens, is seen to be just under the surface of the edge of the gum, and situated in the papillæ, and under a magnifying glass presents an interrupted appearance. These papillæ in some cases become enlarged almost to the extent of rupture. About two years ago, when examining the men at a factory in his district where lead ore is handled, Stephens was particularly struck with the fact that a large percentage of their gums showed a distinctly red line. This red line is, in his opinion, due to an enlargement of the papillæ at the edge of the gum, and peculiarly enough, was seen in lads who had been only from 14 to 28 days at the works, as well as in the outside men, such as masons, whose contact with fumes occurred only when the latter were diluted. The conclusion that Stephens arrives at from such fact is that the so-called lead line is no proof of lead in the system, but that it appears in workers whose gums have been irritated by particles other than lead.

### Lancet, London

*March 12*

7 *Angina Pectoris. W. Osler.
8 The Medical Examiner in Life Assurance. H. W. G. MacKenzie.
9 *Clinical Significance of Gastric Hypersecretion and its Connection with Latent Diseases of the Appendix. W. S. Fenwick.
10 *Appendicular Gastralgia. H. J. Paterson.
11 The Commoner Forms of Chronic Rheumatism (Fibrositis) and their Treatment. A. P. Luff.
12 Enteric Intussusception with Henoch's Purpura. F. W. Collinson.
13 *Treatment of Vomiting. J. Snowman.
14 Reform of Medical Poor-Law Relief. C. T. Parsons.
15 Maison Barlier. H. Mac-Naughton-Jones.

7. **Angina Pectoris.**—Osler has notes of 268 cases in all—231 men, 37 women. If we recognize a mild neurotic or pseudoneurotic, and a grave organic or true form, there were of the former 225, and of the latter, 43. Osler has not counted *les formes frustes* unless a patient had subsequent severe attacks. Of the severer form of 225 cases, there were only 14 women. On the other hand, of the minor type, of 43 cases there were 23 women. The age incidence is late, the largest number of cases occurring in persons over 50. Of the 612 deaths in England and Wales, only 36 occurred between the ages of 35 and 45; while between 45 and 65 there were 291 deaths. In Osler's list the age was much the same. There were under 30 years of age, 9; between 30 and 40, 41; between 40 and 50, 59; between 50 and 60, 81; between 60 and 70, 62; between 70 and 80, 13; and above 80, 3. In women the age incidence is, on the whole, a little lower than in men.

A point that stands out prominently in Osler's experience is the frequency of angina pectoris in physicians. Thirty-three of his patients were physicians, a larger number than all the other professions put together. Only 7 were above 60 years of age, one a man of 80, with aortic valve disease. The only comparatively young man in the list, 35, was seen nearly 20 years ago in an attack of the greatest severity. Worry and tobacco seem to have been the cause. He has had no attack now for years. Two cases were in the fourth decade, 13 in the fifth, and 11 in the sixth. Neither alcohol nor syphilis was a factor in any case; of the 26 patients under 60, 18 had pronounced arteriosclerosis, and 5 had valvular disease. In a group of 20 men, every one of whom Osler knew personally, the outstanding feature was the incessant treadmill of practice, and yet, every one of these men had an added factor, worry.

So far as symptoms are concerned, Osler's cases fall into three groups (1) *les formes frustes;* (2) mild; and (3) severe.

1. The mildest form "*les formes frustes*" of the French, with substernal tension, uneasiness, distress, rising gradually to positive pain, is a not infrequent complaint, one, indeed, from which few escape, is associated with three conditions. Emotion is the most common and the least serious cause.

2. Under the mild form, angina minor, come 43 cases. Osler has grouped under these, the neurotic, vasomotor and toxic forms, the varieties which we formerly spoke of as false or pseudoangina. The special features of this variety are: the greater frequency in women, the milder character of the attacks, and the hopeful outlook.

3. Severe angina, angina major, is represented by 225 cases, of which 211 were in men. Two special features here are, existence in a large proportion of all cases of organic change in the arteries and liability to sudden death.

9. **Clinical Significance of Gastric Hypersecretion.**—Hypersecretion of gastric juice, according to Fenwick, invariably depends on an organic lesion, which usually takes the form of a chronic ulcer of the stomach or duodenum, calculus in the gall-bladder, or latent disease of the appendix, although it is probable that future investigations will prove that pancreatic calculus, tubercle of the cecum, and carcinoma of the appendix are also capable of producing it. Of the last named, one case has already come under his observation. This disorder of secretion is merely the physiologic expression of a reflex irritation of the gastric glands, and is therefore not entitled to be regarded as a disease. The continuous flow of hyperacid gastric juice, whatever be its cause, always excites severe inflammation of the stomach, and is liable to be followed by ulceration of that viscus or the duodenum. This secondary ulceration is at first superficial in character and may not be demonstrable on examination of the exterior of the stomach. Minute hemorrhagic erosions capable of producing alarming hematemesis and melena are usually associated with and caused by this abnormality of the gastric secretion. Latent disease of the appendix as a result of former acute inflammation is accompanied by a peculiar form of digestive disturbance. In this condition, subacidity of the gastric juice with an absence of free hydrochloric acid is the rule.

With the exception of hemorrhage, all the symptoms that are regarded as pathognomonic of duodenal ulcer are in reality due to the gastric hypersecretion that always accompanies this lesion. It follows, therefore, that a severe example of hypersecretion may, as a rule, be safely diagnosed as a case of duodenal ulcer. Contrary to the usual belief, carcinoma of the pylorus is sometimes accompanied by extremely well-marked hypersecretion. In such cases the morbid growth develops with extreme rapidity and violent hemorrhages, due, possibly, to digestion of the tumor, are exceptionally frequent.

10. **Appendicular Gastralgia.**—Paterson holds that appendicular disease may give rise to symptoms which closely mimic the supposed symptoms of gastric and duodenal ulcer. The prominent symptom is epigastric pain or severe discomfort after food; in many cases there are sour eructations, vomiting, and even hematemesis and melena. The radiation of epigastric pain to the lower abdomen is suggestive of appendicular trouble. Gastric analysis reveals, in some cases, hyperchlorhydria, in others a normal amount of free hydrochloric acid, in others a marked diminution or absence of free hydrochloric acid. As a rule, there is an increase of the volatile acids, and in some cases evidence of hypersecretion. Some cases of hypersecretion or acid dyspepsia and many cases of supposed gastric or duodenal ulcer are due to latent appendicular disease.

The evidence that the gastric symptoms are due to appendicular disease is threefold: (a) the majority of patients are cured by appendectomy; (b) the influence which appendectomy has on the gastric contents; and (c) the frequency of a previous history of gastric symptoms in those who have an attack of acute appendicitis. The symptoms are probably the result of intestinal toxemia due to intestinal stasis. The effect of gastric secretion is, in the early stages, possibly due to pyloric spasm, but more probably to some influence of the appendix on gastric secretion. Appendicular gastralgia is apparently more common in women than in men.

The important lessons to be learned from these cases are as follows, Paterson states:

1. No operation should be performed on the stomach except when a definite organic lesion of the stomach or duodenum exists. Gastrojejunostomy will not cure appendicitis.

2. In all operations for supposed gastric or duodenal ulcer, the conditions of the appendix should be carefully investigated.

13. **Treatment of Vomiting.**—In the treatment of vomiting Snowman says that the first point to determine is whether it is an incidental symptom of an acute illness or a cardinal feature of some chronic disease. The ordinary therapeutic measures available for treatment of vomiting are numerous and somewhat conflicting in their variety, a testimony to the failure which so often attends their administration. Nausea may be relieved occasionally either by sips of extremely hot water or by sucking fragments of ice. This contrast is still further seen in the circumstance that sometimes a tight abdominal binder will stop nausea, whereas at other times this very unpleasant sensation yields when the clothing around the abdomen is loosened. Perfect recumbency in the horizontal position should be maintained, and such local applications to the epigastrium as sinapisms, blisters or leeches are frequently very useful. The washing out of the stomach with weak boric lotion or alkaline solutions is an excellent method of treating the persistent vomiting in gastric dilatation or the gastric catarrh of infants.

Snowman in discussing the treatment says that the favorite drug for vomiting is bismuth in one of its various forms. Cerium oxalate probably acts in the same way as bismuth but nothing definite is known of its pharmacology. It has acquired a reputation in the treatment of vomiting of pregnancy, but clinical experience generally fails to confirm it. Creosote, iodin and carbolic acid may be grouped together as a series of drugs which allay vomiting when suitably employed. Aconite has some vogue in the treatment of vomiting, but it must be given in large doses. Chloretone, he believes, is an effective remedy when some painful local disease such as cancer of the stomach, is responsible for the vomiting. One-third of a grain of cocain will occasionally put a stop to a bout of vomiting, and is one of the most effective remedies available for seasickness. Hydrocyanic acid is another drug with a reputation in gastric vomiting, but if it acts it does so forthwith, and if it proves to be unsuccessful at first it is merely a waste of time to persist with it. Opium, he declares, is the most valuable remedy for vomiting which is persistent and exhausting, and then it must be given in the form of a hypodermic injection of morphin.

### Medical Press and Circular, London

*March 2*

16 Conditions of the Prostate Associated with Urinary Obstruction. W. S. Handley.
17 The Negro and Negroid Races. A. Keith.
18 Technic of the Operative Treatment of Fractures of the Femur. R. L. Joynt.
19 Effects of Neglected Constipation in School Girls. F. Hernaman-Johnson.
20 Influence of the Addition of Calcium Salts on the Coagulability of the Blood *in Vitro.* B. J. Collingwood.

### Clinical Journal, London

*March 2*

21 The Manifestations of Eyestrain. E. Clarke.
22 Dysphagia. L. B. Rawling.
23 Practical Hints for Consumptives. M. Paterson and F. C. Shrubsall.

### Journal of Tropical Medicine and Hygiene, London

*March 1*

24 The Guinea-Worm in Domesticated Animals. R. T. Leiper.
25 Diseases Encountered During Ten Years' Medical Work on the Shores of Lake Nyasa. R. Howard.
26 Native Sanitation in Sierra Leone. H. E. Arbuckle.

### Archives des Maladies du Cœur, etc., Paris

*February, III, No. 2, pp. 65-144*

27 *Edema of the Lungs with Paroxysmal Increase in the Blood-Pressure. (Remarques sur l'œdème aigu du poumon avec hypertension artérielle paroxystique.) K. Petren and G. Bergmark.
28 *The Arterial Pressure and the Suprarenal Glands in the Tuberculous. A. Sézary.
29 *Paroxysmal Tachycardia and Treatment by Induced Vomiting. (Tachycardie paroxystique et médication vomitive.) P. Savy.
30 Exosmosis of Salts in Blood Corpuscles and Hemolysis. (La diffusion des sels globulaires et l'hémolyse.) J. Troisier.

27. A similar article by the same authors was abstracted in THE JOURNAL, Feb. 5, 1910, page 500.

28. **Arterial Pressure and the Suprarenal Glands in the Tuberculous.**—Sézary has been examining the condition of the suprarenals in tuberculous patients whose arterial tension had been systematically recorded during life. His findings fail to sustain the assumption that the lower blood pressure is always the result of lesions in the suprarenals. The low tension at first is probably due to the diffusible toxins of the tubercle bacilli; and it is not until later that the suprarenals become incompetent. In three cases he found a relatively high blood pressure, although autopsy showed complete destruction of the suprarenals. A concomitant nephritis in all these cases was probably responsible for the high arterial tension, but the tension was lower in these patients than in the non-tuberculous who had the same kind of kidney lesions, and there was thus relative hypotension.

29. **Induction of Vomiting in Treatment of Paroxysmal Tachycardia.**—Savy refers to a few cases on record in which an attack of paroxysmal tachycardia was arrested by accidental vomiting after which the patients learned to induce vomiting systematically to arrest the attack. The pulse in one case dropped in thirty seconds after the vomiting from 200 to 94, from 209 to 96, and from 200 to 80. The means used to induce vomiting seemed to be immaterial—tepid water, tickling the throat, ipecac, etc.—but ipecac generally proved most convenient, two or three tablespoonfuls of syrup of ipecac always answering the purpose. Laache's patient was able to arrest the milder attacks by holding his breath or applying heat to the precordial region. Apert's patient was also able occasionally to arrest an attack by holding his breath. Others have reported the effectual action of a fright, of prolonged inspiration, of an automobile accident, compression or faradization of the pneumogastric nerves—all acting in the same way by direct or indirect excitation of the pneumogastric nerve or its centers. The effect of emetics probably belongs in this category, but their action is much more reliable and effectual than any of the other measures, while they can be more systematically applied in treatment. He has been unable to find any cases on record in which the attack was arrested by vomiting occurring spontaneously.

### Presse Médicale, Paris

*February 26, XVIII, No. 17, pp. 145-152*

31 Case of Exstrophy of the Female Bladder; Five Operations before Age of 25. G. Marion.
32 Technic for Operative Treatment of Anal Fistula. (Extirpation large des fistules à l'anus.) L. Chevrier.
33 Cysts in the Prostate. F. Legueu and H. Verliac.

*March 2, No. 18, pp. 153-160*

34 *Proper Diet in Kidney Disease. (Régime alimentaire dans les affections du rein.) G. Linossier and G. H. Lemoine.
35 Radium Treatment of Cancer of the Tongue. (Radiumthérapie du cancer de la langue.) Fominici and D. Martel.

*March 5, No. 19, pp. 161-168*

36 Vaccine Treatment of Gonococcus Infections. C. Jarvis.
37 Suprarenal Treatment. (Emploi de l'adrénaline en thérapeutique.) O. Josué.

34. **Injurious Effect on the Kidney of Imperfectly Cooked Albuminous Food.**—In the experiments on rabbits and guinea-pigs reported the animals were injected subcutaneously with a maceration of meat in one-half part water, or with meat juice, egg albumin or milk, the aim being to determine the effect on the kidneys of albumin of animal origin. The effect was estimated by the albuminuria which almost invariably followed, its promptness, intensity and duration paralleling the congestion and other evidences of injury of the kidneys found on dissection of the animals. By this technic the influence of the digestive apparatus was eliminated. The results seem to demonstrate that raw animal albumin has always a decidedly injurious action on the kidneys, but this injurious action is nullified if the albumin has previously been in sufficient contact with the gastric juice. When the albumin is cooked, the gastric juice has to act on it for some time before it can be absorbed, and thus it is rendered non-toxic for the kidneys; raw albumin is absorbed too rapidly for it to feel the action of the gastric juice. The practical conclusions of the research are that uncooked albuminoid foods should never be taken by persons with kidney trouble, especially rare meats, raw milk and eggs with the white still transparent. Even raw milk, the authors state, may do more harm than well-cooked meats. The research also demonstrated, they add, that the organism seems to become accustomed to the nephrotoxic action of the albuminoids in time, and consequently it is best to keep up a regular ration rather than to permit great fluctuations, as for instance, ingestion of meat by a vegetarian. The fact that the same signs of an injurious influence were evident in the liver as well as in the kidneys in this research indicates, they think, that the conclusions probably apply to persons with liver derangement as well as to those with nephritis. The ability of the stomach to digest albuminoids is thus an important factor in nephritis as insufficient gastric digestion allows them to be absorbed in full toxic intensity.

### Semaine Médicale, Paris

*March 9, XXX, No. 10, pp. 109-120*

38 *Gastric Amyxia: Lack of Gastric Mucus. (L'amyxie gastrique.) L. Cheinisse.

38. **Lack of Secretion of Mucus in the Stomach.**—During the last four years several articles have appeared on the pathologic absence of secretion of mucus in the stomach. The term "amyxorrhea" has generally been applied to the condition but Cheinisse comments on the absurdity of this term and proposes calling the condition "amyxia." The lack of the protective coating for the stomach walls afforded by the layer of mucus, explains a number of morbid conditions, especially in hyperchlorhydria. Schalij reported last year some cases in which the symptoms were those of hyperacidity, but one hour after the test meal the acidity was scarcely above normal while the lack of the protecting mucus explained the disturbances. Kaufmann found that silver nitrate relieved such patients, which fact he explains as due to the action of this drug in stimulating the production of mucus. Schalij found that oil seems to replace the missing mucus and cover the stomach mucosa with a bland protecting coating. The oil has to be ingested before eating; otherwise it only floats on the surface of the stomach content and does not come in contact with the mucosa. He has his patients take from 1 to 5 c.c. of olive or almond oil before meals, increasing the dose to 10 or 15 c.c. at need. Cheinisse remarks that gelatin or any similar substance might be used in the same way to advantage as a substitute for the oil. The benefit from bismuth may be due to its stimulating action on the secretion of mucus. Recent experimental research by Dubus seems to have established this; the bismuth not only promotes the secretion of mucus but the mucus in turn causes the bismuth to adhere to the walls of the stomach. All the data at present on hand in regard to gastric amyxia, Cheinisse adds, harmonize with what Turck has published in respect to the factors concerned in the healing of peptic ulcer.

### Berliner klinische Wochenschrift

*February 21, XLVII, No. 8, pp. 325-372*

39 Gastrotomy for Removal of 103 Nails, etc. M. Borchardt.
40 Technic for Resection of Large Intestine. (Zur Methode der Dickdarmresektion.) A. Tietze.
41 Modifications of Technic for the Wassermann Test. (Verschiedene Modifikationen der Wassermannschen Reaktion.) F. Hoehne. (Id. mit chlorsaurem Kali nach Brieger und Renz.) C. Lange.
42 The New Methods of Staining the Tubercle Bacillus. (Tuberkelbacillenfärbung.) P. Eisenberg.

*February 28, No. 9, pp. 373-420*

43 *Senile Pulmonary Tuberculosis. (Altersphthise.) R. Staehelin.
44 *Deceptive Area of Dulness over the Apex of the Right Lung. (Falsche Dämpfung in der rechten Lungenspitze.) H. J. Bing.
45 *Frequency of Tuberculosis in Children. (Häufigkeit der Tuberkulose im Kindesalter.) H. Nothmann.
46 The So-called Miliary Aneurisms in the Brain. (Die sogen. miliaren Aneurysmen der Hirngefässe.) L. Pick. Commenced in No. 8.
47 Experimental Research on Fat Tissue Necrosis. (Zur Kenntnis der Fettgewebsnekrose.) C. Frugoni and G. Stradiotti.
48 Roentgen-Ray Pictures of the Stomach during the Act of Vomiting. (Ueber den Brechakt im Röntgenbilde.) Levy-Dorn and S. Mühlfelder.
49 Treatment of Hypertrophied Prostate. (Behandlung der Prostatahypertrophie.) W. Hirt.
50 Action of Tincture of Iodin in Surgical Sterilization. (Wirkung der Jodtinktur bei der Hautdesinfektion.) K. H. Kutscher.
51 Recent Research on the Hypophysis Cerebri. A. Münzer.

43. **Senile Phthisis.**—Staehelin refers to the cachexia sometimes encountered in the elderly and possibly ascribed to

lurking cancer but autopsy discloses no tendency to malignant degeneration but only an active process of tuberculosis in the lungs. In other cases the diagnosis may be merely heart disturbances and pulmonary emphysema but a tuberculous process is found installed in the emphysematous lung. These mistakes in diagnosis are so common because the tuberculous process in the aged induces a different syndrome from that observed earlier in life. The possibility of tuberculosis should always be borne in mind when an elderly person has a subfebrile temperature or a low temperature of abnormal type, when one-half of the thorax does not expand symmetrically with the other half, even if the difference is very slight. Gilbert regards this retraction and immovability of one-half of the chest as the most important sign of this latent phthisis differentiating it from a purely emphysematous affection. In percussing the stroke should be very light. During auscultation, the patient should breathe deeply and cough hard, to reveal possible râles. Skiagraphs are often instructive in the elderly. In a recent case the patient a man of 60, with emaciation, cardiac insufficiency, some edema and congestive catarrh, the Roentgen rays disclosed a tuberculous process in the lungs although the physical findings were more than doubtful and there was scarcely a trace of dulness and the sputum was free from tubercle bacilli. The bacilli are harder to find than in the sputum from younger patients. The advantage of correct differentiation is that the annoying search for other causes for the cachexia can then be abandoned and also that the family can be warned of the danger from contamination by the sputum, although it may not be necessary to inform the patient himself of the true diagnosis.

44. This article was abstracted in The Journal, April 2, page 1180.

45. **Frequency of Tuberculosis among Children.**—Nothmann reports the tuberculin cutaneous and subcutaneous tests applied to 263 children of the poor at Düsseldorf with positive findings in 47 per cent. of the children between 3 and 5 years of age; in 56 per cent. of 25 between 6 and 7; in 70.7 per cent. of 41 between 8 and 9, and in 81.5 per cent. of 54 between 10 and 11; in 84.5 per cent. of 97 between 12 and 14, and in 100 per cent. of 12 between 15 and 17. Von Pirquet found 90 per cent. affected among the children 14 years old examined at Vienna, and Moro found 60 per cent. in those between 10 and 14 examined at Munich. Schlossmann, on the other hand, has found only 5 per cent. reacting positively in his private practice in Düsseldorf. These findings, Nothmann declares, emphasize anew the importance of prophylaxis of tuberculosis among the children of the poor as the most important phase of the antituberculosis campaign.

### Correspondenz-Blatt für Schweizer Aerzte, Basel

*February 20, XL, No. 6, pp. 145-176*

52 Tuberculous Processes in Bronchial Glands and Lung Disease. (Bronchialdrüsentuberkulose und Lungenerkrankungen.) Huguenin. Commenced in No. 4.

*March 1, No. 7, pp. 177-208*

53 *Early Diagnosis of Exophthalmic Goiter. (Zur Frühdiagnose der Basedow'schen Krankheit.) T. Kocher.
54 *Diagnosis and Treatment of Neurasthenia and Neuroses. (Psychoneurosen und Psychoanalyse.) J. A. Haslebacher.

53. **Early Diagnosis of Exophthalmic Goiter.**—Kocher's article is the substance of his address on receiving the Nobel prize. He states that the disease may occur without one or all of the three cardinal symptoms, the goiter, the exophthalmos and tachycardia. The condition may be recognized by the tremor and by symptoms in the eyelids before there is any protrusion of the eyeball. If the patient gazes at some object there may be slight retraction of the upper lids; this does not invariably occur, but this momentary morbid retraction of the upper lids almost inevitably follows if the object gazed at is moved rapidly up and down. This means of inducing the momentary spasm may give positive findings, he asserts, long before any other Basedow symptoms are apparent. This lid symptom is thus extremely instructive for differentiation when signs of hyperfunctioning of the thyroid suggest a suspicion of approaching exophthalmic goiter. He ascribes the lid symptom to the muscle which Landström has recently demonstrated in the upper lid, innervated by sympathetic fibers. The toxic substances generated by the thyroid in excess probably act most intensely on the sympathetic nerves or ganglia, which explains the symptoms in this disease, especially the tachycardia without objective changes in the heart. The lack of influence on the disturbances from the ordinary heart tonics, especially digitalis, is another argument in favor of this assumption. He warns not to overlook incipient exophthalmic goiter when consulted by patients for supposed heart disease, especially when there are palpitations. The Basedow taint should be suspected, the purer the tachycardia and the less the objective changes in the heart. The differentiation is rendered certain by this eyelid symptom; another important sign is tenderness of the thyroid, also a vascular murmur in the form of a systolic blowing heard over the thyroid arteries. The consistency of the thyroid or some part of it may also be suspicious. Kocher called attention two years ago to the importance of changes in the blood as an early sign of exophthalmic goiter; the leucocytes are only half as numerous as usual, the neutrophiles being much reduced, while the lymphocytes are twice the normal figure. Kottmann has also called attention to a reduction in the coagulating power of the blood in this disease in contrast to what is observed in myxedema; with cachexia thyreopriva coagulation is accelerated. The absence of anemia in the Basedow syndrome is in itself a striking finding. Kocher regards the disturbance in the blood picture as so constant and regular that he refuses to operate in its absence, but otherwise he advocates operative treatment now as the best means for rapid and complete cure. His experience includes a number of cases in which he declined to operate as the symptoms were scarcely serious enough for this, but later had cause to regret his refusal as the most favorable moment for the operation was thus allowed to pass.

54. **Psychoneuroses.**—Haslebacher gives an instructive summary of Freud's views in regard to neurasthenia and psychoneuroses in general and their effectual treatment by psychoanalysis and advice based thereon.

### Deutsche medizinische Wochenschrift, Berlin

*March 3, XXXVI, No. 9, pp. 393-440*

55 Epidemic of Infantile Paralysis. (Auftreten der spinalen Kinderlähmung [Heine-Medinsche Krankheit] in Vorpommern.) E. Peiper.
56 Interesting Bacteriologic Findings in Three Cases of Typhoid. L. Bitter.
57 Recovery from Diabetes with no Signs of Recurrence during 10 Years to Date. (Ein nachweislich 10 Jahre lang geheilt gebliebener Fall von Diabetes mellitus.) Teschemacher.
58 Changes in Retina in Scorbutus. (Zur Kenntnis der Netzhautveränderungen beim Skorbut.) S. Kitamura.
59 Revision of a Classical Case of Diverticulum in the Esophagus. C. D. Spivak (Denver).
60 Scopolamin with General Inhalation Anesthesia. (Weitere Erfahrungen über Skopolamin-Mischnarkose.) P. Sick.
61 *The Disturbances Induced by Non-Eruption of Teeth. (Das Krankheitsbild der Zahnretention.) A. Pfister.
62 Aseptically Prepared Catgut. (Steril-Katgut [Kuhn] in der Praxis.) H. la Roche.
63 Roentgen-Ray and Operative Treatment of Myomas. Schindler.
64 Dosage of Roentgen Rays by Photographic Technic in Daylight. (Dosierung der Röntgenstrahlen auf photographischem Wege ohne Anwendung einer Dunkelkammer.) A. Strauss.

61. **Syndrome from Non-Eruption of Teeth.**—Pfister reports three cases to show the disturbances liable to follow when the molar teeth are not normally erupted. The jaw is generally swollen and this swelling may persist for years, and there may be pain for which the patient is liable to consult the neurologist rather than the dentist. The symptoms may simulate a cancerous growth, but a radical operation is not required; resection of the outer wall of the cyst and tamponing for a few days or opening a passage through the bone for the tooth generally prove sufficient. As a rule the disturbances develop between the fifteenth and thirtieth years; the diagnosis is rendered certain by Roentgen-ray examination.

### Fortschritte der Medizin, Leipsic

*February 17, XXVIII, No. 7, pp. 193-224*

65 *Abdominal Massage in Treatment of Whooping Cough and Tracheobronchial Catarrh. (Behandlung des Keuchhustens und anderer Luftröhrenkatarrhe durch die Bauchmassage.) E. Hönck. Concluded in No. 8.

65. **Abdominal Massage in Treatment of Whooping Cough and Tracheobronchial Catarrh.**—Hönck called attention three years ago to the catarrh which develops in the upper air passages from disturbances in the circulation on account of irritation of the sympathetic nerves during appendicitis. The

tracheobronchial glands may be stimulated to increased secretion and the mucosa may swell preventing expulsion of the mucus. If infection occurs, catarrh is installed, he declares. This connection between the abdomen and the tracheobronchial mucosa explains the benefit of abdominal massage in treatment of such conditions, and he has found it almost a specific in many cases of whooping cough free from febrile complications; mild fever is in itself no contraindication. He relates the details of seven cases to show the benefit derived from cautious massage especially of the back on both sides of the spine. In one case of pneumococcus infection with cough, night sweats, cold feet, bad appetite and emaciation, conditions improved at once and with 5 sittings the patient was practically cured. In a case of pertussis in a woman of 35 all symptoms subsided except a slight cough under massage daily for four days. The patients most effectually benefited are those who have some sensations in the depths of the abdomen or in the walls. In a number of cases children with pertussis were well again in three weeks at most under the abdominal massage; when he stopped the massage after a week the attacks became more frequent and violent and he was requested to continue the massage further. Cough from a tickling sensation in the throat, he says, is also controlled by this method of treatment.

### Medizinische Klinik, Berlin

*February 27, VI, No. 9, pp. 331-370 and Supplement*

66 Examination of the Cardiovascular System for Balneologic Purposes. (Untersuchungemethoden des Kreislaufs, welche für die Balneologie von Interesse sind.) F. Kraus.
67 Importance of Examination of Infants' Stools. (Die Bedeutung der Stuhluntersuchung im Säuglingsalter.) A. F. Hecht.
68 Cause of Myopia. (Die Entstehung der Kurzsichtigkeit.) G. Levinsohn.
69 Combination Treatment of Lupus. (Aus der Praxis der Lupusbekämpfung.) P. F. Becker. Commenced in No. 8.
70 Modern Clothing and Skin Diseases. E. Saalfeld.
71 Relations between Paralysis of Oculomotor Nerve and Lesions in the Nose and Sphenoidal Sinus. (Beziehungen der Lähmung des Nervus oculomotorius zu Krankheiten der Nase beziehungsweise der Keilbeinhöhle.) Ziem.
72 Algebraic Formula to Express Resistances in the Circulatory System. (Ueber Widerstände im Zirkulationssystem und ihre Rolle in einer "Zirkulationsformel.") Sperling.
73 Digestion and Energy-Producing Action of Foods. (Verdauungsarbeit und spezifisch-dynamische Wirkung der Nahrungsmittel.) N. Zuntz. Commenced in No. 8.
74 Comparative Physical and Roentgen-Ray Examination in 120 Cases of Pulmonary Tuberculosis. J. Jacobi.

### Therapie der Gegenwart, Berlin

*March, LI, No. 3, pp. 97-144*

75 *Determination of Intensity of Acidosis in Diabetes as Guide to Treatment. (Zur therapeutischen Bewertung der diabetischen Azidose in der Praxis.) L. Blum.
76 *Salt-Poor Diet in Treatment of Tuberculous Ascites. (Kochsalzarme Diät zur Beseitigung des Ascites tuberculosus.) W. Alwens.
77 Serotherapy of Acute Articular Rheumatism. H. Ratzeburg.
78 Operative Treatment of Surgical Tuberculosis. I. W. Kausch.
79 Treatment of Gonorrhea and Its Complications. A. Nathan.
80 Indications and Contraindications for Vegetable Diet in Treatment of Obesity. (Vegetarische Entfettungsdiät.) B. Latz and A. Albu.

75. **Easy Method of Estimation of Acidosis in Diabetes as Guide to Treatment.**—Blum's communication issues from the university medical clinic at Strasburg, in charge of Moritz; he emphasizes the importance of estimating the degree of acidosis as the only guide for proper treatment. It can be readily determined by gaging the amount of sodium bicarbonate which the patient must take in order to render the urine alkaline. By this simple means it is possible to obtain an instructive insight into the intensity of the acidosis, and thus to regulate the diet accordingly. He gives the tabulated findings in a few typical cases, with the amount of sodium bicarbonate on which the urine changed from an acid to an alkaline reaction. In one case, for instance, with 1.42 gm. acetone and 7.8 total oxybutyric acid, only 10 gm. of sodium bicarbonate was required to keep the urine alkaline, while in another case with the identical figures for the acetone and the oxybutyric acid, 25 gm. of the bicarbonate was necessary to produce the same effect. Another patient with 9.5 gm. sugar, 3.19 acetone, 24 butyric acid and 29.8 total oxybutyric acid, required 30 gm. of the bicarbonate. In another, a most remarkable case, the patient with 7,800 c.c. of urine, 22.27 gm. nitrogen, 180.9 sugar, 16.809 acetone, 30.24 acetone as oxybutyric acid, 96.36 oxybutyric acid, 126.6 total oxybutyric acid and 5.34 ammonia, required 150 gm. sodium bicarbonate before the urine gave a neutral reaction. With 110 gm. the next day the urine became slightly alkaline, and with 80 on the third day the alkalinity became more pronounced. The urine continued alkaline as the amount of the bicarbonate was gradually reduced to 30 gm. in the course of a week. In health, from 5 to 10 gm. of the bicarbonate induces a distinct alkaline reaction, but in mild diabetes 20 gm. is necessary, in the moderately severe 20 or 30, and the serious cases 50 gm. and over. In the severest cases and in diabetic coma it is impossible to obtain an alkaline reaction. Blum warns that the carbohydrates should not be entirely withdrawn until the urine has been rendered alkaline. The method convinces the most skeptical, he says, as to the large amounts of sodium bicarbonate that may be needed in individual cases and also as to the successful results when the proper dosage is reached.

76. **Salt-Poor Diet in Treatment of Tuberculous Ascites.**—Alwens states that at the university medical clinic at Tübingen in charge of Romberg, no benefit was derived from diuretics and local applications in 8 out of 14 recent cases of tuberculous ascites; in 5 cases by the end of three and a half weeks of treatment extremely slight improvement was manifest, and in only one of the cases had the ascites almost entirely disappeared by the end of the fifth week. On the other hand, in another group of 10 patients given only a salt-poor diet, the ascites had entirely vanished by the end of five or seven weeks in all but 2 of the cases. The food consisted of oatmeal, rice, cooked fruits, eggs, milk and unsalted butter, the total intake of salt being from 2 to 3 gm. a day instead of the usual ration of 13 gm. on the ordinary mixed diet. An occasional day of mixed diet was interposed to keep up the patients' appetite. On the salt-poor diet the amount of salt eliminated markedly surpassed the intake. It seems to be evident that the blood in seeking to maintain its osmotic balance during the salt-poor period takes up salt out of the tissues and preeminently out of the ascitic fluid. As the salt is taken up into the blood, it is accompanied by water to keep it in solution, and this excess of water in the blood is rapidly worked off through the kidneys.

### Wiener klinische Wochenschrift, Vienna

*March 3, XXIII, No. 9, pp. 309-346*

81 *Research on the Exposed Overhanging Brain. (Operationen am überhängenden Gehirn.) J. P. Karplus and A. Kreidl.
82 *Operative Treatment of Round Gastric Ulcer. (Zur operativen Behandlung des runden Magengeschwüres.) E. Payr.
83 Dependence of Duration of Incubation on Size of Dose of Infectious Germs. (Inkubationszeit.) O. Grüner and F. Hamburger.
84 *Leg Sign of Tetany. (Bisher unbekanntes Symptom bei Tetanie: Beinphänomen.) H. Schlesinger.
85 Importance of Bacteriologic Examination of Minute Amount of Blood for Clinical Diagnosis of Typhoid and Paratyphoid. F. Schweinburg.
86 Experimental Research on Acute Anterior Poliomyelitis. III. C. Leiner and R. v. Wiesner.

81. **Method of Exposing Base of Brain.**—Karplus and Kreidl relate that an astonishing oversight over hitherto inaccessible regions is afforded by exposing one hemisphere of the brain and allowing its own weight to drag it away from its normal bed, and expose its hitherto hidden under surface. In their experiments on animals they found it possible in this way to open up the space between the brain and the base of the skull thus permitting a number of operations in this region and some interesting physiologic discoveries. Among the latter they mention the finding of a sympathetic center in the hypothalamus thus rendered accessible for electric and other tests. The experiments with the overhanging brain, as they call their technic, caused scarcely any disturbances in the monkeys and other animals. A large window was made in the side of the skull of the anesthetized animal; the animal was then turned on its back, the dura slit and wads of cotton were worked in between the brain and the base of the skull. As soon as the brain had sunk down enough, spatulas were introduced and the hemisphere pushed still farther down, finally exposing the base of the skull to the median line. They were able by this means to separate the hypophysis from the infundibulum. The excised plate of bone was then replaced and sutured; the animals showed no trace of disturbance thereafter, especially no impairment of vision. Experiments on the cadaver have confirmed the facility of this mode of access to the base of the skull, conditions being found approx-

imately the same in the cadaver as in the monkeys. If the human brain should prove as tolerant as the monkey brain, surgical procedures in this region will be much facilitated by this technic.

82. **Operative Treatment of Gastric Ulcer.**—Payr insists that operative measures for gastric ulcer should be strictly individualized for the character and location of the tumor. He believes in more general resort to resection rather than the routine gastroenterostomy. The latter is by no means always successful in curing all disturbances. The main argument in favor of resection, however, is his discovery of signs of a malignant tendency in the assumed benign gastric ulcer. In more than 25 per cent. of his cases of callous and other gastric tumors the microscope revealed carcinoma cells somewhere in the resected patch. Transverse resection leaves conditions quite different from those after excision; patients scarcely ever vomit after the former with the axial coaptation of the stumps, far less often than after a gastroenterostomy or excision.

84. **Leg Sign of Tetany.**—Schlesinger has discovered a phenomenon which he thinks is destined to prove an instructive sign of tetany in the intervals between the attacks. It is connected with flexing the hip-joint; as the patient reclines, if the stretched legs are passively lifted the knees show a tonic muscular spasm of extension while the foot assumes a position of extreme supination or extreme pronation. The phenomenon is also elicited spontaneously if the patient sits up in bed or, when standing, bends forward at the hips. The tonic spasm is preceded by paresthesia in the limb. On the other hand, pressure on the nerve trunks or kneading massage of folds of the skin has no effect in eliciting the sign. It parallels Trousseau's phenomenon, occurring likewise between attacks and on the same side. The leg phenomenon had been found pronounced in four cases of tetany at date of writing, both in children and adults. In one case mentioned the patient had no spontaneous contractions in the legs otherwise.

### Zentralblatt für Chirurgie, Leipsic

*March 5, XXXVII, No. 10, pp. 353-400*

87 *Intravenous Infusion of Epinephrin. (Berichtigung über die Verwendung von Adrenalin.) L. Heidenhain.
88 Intravenous Anesthesia. (Zur Frage der intravenösen Narkose.) L. Burkhardt.
89 *Retention Stomach-Tube in After-Treatment of Severe Peritonitis. (Anwendung des Dauermagenhebers bei der Nachbehandlung schwerer Peritonitisfälle.) C. W. J. Westerman.
90 Pathogenesis of Retrograde Incarceration of the Intestine. (Zur Pathogenie der "Hernie en W" bzw. der "retrograden Darminkarzeration.") F. De Beule.

87. **Intravenous Injection of Epinephrin.**—Heidenhain has found subcutaneous injection of suprarenal preparation in salt solution entirely useless. He has never tried giving it by rectal infusion, but he recommends intravenous infusion as a valuable and entirely harmless method of improving conditions in the circulation as a preliminary to an operation when there is reason to anticipate cardiovascular trouble.

89. **Retention Stomach-Tube in After-Treatment of Peritonitis.**—Westerman comments on the prompt relief that follows lavage of the stomach in case of the local paralysis of the intestine, so frequent with severe peritonitis. The same effect can be obtained with high jejunostomy; vomiting ceases when the distended intestines are emptied of their contents and recovery may ensue in the most desperate cases. The aim is to combat the autointoxication which results from inhibition of the normal intestinal peristalsis. The lecithin in milk, eggs, etc., putrefying in the intestine is split into neurin and cholin with production of other injurious substances. He recently obviated all trouble from this source, he asserts, by introducing a 7-foot rubber tube, about one-fourth of an inch in diameter, through the nose into the stomach, the outer end lying in a pail on the floor. Every half hour the tube was examined to see if the siphon action was continuing properly. In one case over 4 liters of fluid intestinal contents were thus siphoned out of the stomach and large amounts of intestinal gases escaped through the tube. Two days later, the stomach fluid was only slightly tinged with bile and the tube was removed, although the patient protested against its removal for fear of return of the former distress. He has applied this retention stomach tube in 16 cases. If the pharyngeal reflex is lively, the mucosa in the throat is anesthetized beforehand; the tube is introduced through the nose to a depth of about 18 inches and fastened with a string to the head. The patient is allowed to drink freely, which is an additional relief, even although the larger part is evacuated at once, rendering necessary administration of water by other means. The walls of the tube must not be too thin, and it should have two openings in the side below to prevent obstruction by protruding gastric mucosa.

### Zentralblatt für Gynäkologie, Leipsic

*March 5, XXXIV, No. 10, pp. 339-368*

91 Case of Extramembranous Pregnancy. (Graviditas extramembranosa.) B. Nolle.
92 *Diagnosis and Treatment of Uterine Sarcomas. N. Kakuschkin.

92. **Diagnosis and Treatment of Uterine Sarcoma.**—Kakuschkin reports a case in a woman of 39, 8 years after her fifth childbirth. During this interval she had abnormally frequent menses, slight pain in the stomach occasionally, and anemia. A large polyp was found in the vagina and cervix, and was removed by cutting out the base of the pedicle. There was nothing to suggest malignant growth but casual microscopic examination revealed that the polyp was a sarcoma, although the pedicle seemed free from malignant characteristics. There has been no recurrence during the 9 years since. He curetted the uterine cavity after excision of the tumor, painting it afterward with tincture of iodin and draining with iodoform gauze. The case teaches the importance of microscopic examination in even the most benign cases, and also that hysterectomy is not necessary if the pedicle is not involved in the cancer. If hysterectomy is done it may be advisable to make two operations of it.

### Zentralblatt für innere Medizin, Leipsic

*March 5, XXXI, No. 10, pp. 249-272*

93 Stasis Cyanosis in the Head. (Beitrag, betreffend die Stauungblutungen am Kopfe.) Focke.

### Riforma Medica, Naples

*February 21, XXVI, No. 8, pp. 197-224*

94 *Topical Temperature Reaction in Pulmonary Tuberculosis. (Alcuni rilievi topotermometrici nella tubercolosi polmonare.) C. Frugoni and F. Leidi.
95 Incarcerated Femoral Hernia Containing Tube and Bladder. (Ernia crurale destra strozzata contenente la tromba uterina e la vescica.) M. Dardanelli.

*February 28, No. 9, pp. 225-252*

96 Histologic Research on Glycogen in Kidneys and Liver After Injections of Adrenalin. F. Addari.
97 Seroreaction in Malta Fever. A. Cantani.
98 *Advantages of Enterostomy in Peritonitis. G. Volterrani. Commenced in No. 8.

94. **Topical Temperature Reaction in Pulmonary Tuberculosis.**—Frugoni states that after a tuberculin test the changes in the organs beneath under the influence of the tuberculin are revealed by the regional modification in the temperature. He measures it with a special clinical thermometer with a long horizontal spiral bulb of very thin glass, covered with a bell of thick glass. The thermometer is applied in turn at symmetrical points for from 25 to 40 minutes at a time at each point. As the tuberculous process flares up under the influence of the tuberculin, the temperature shows an increase of from three-tenths to seven-tenths or more of a Centigrade degree over the temperature of the same spot taken before the tuberculin was injected. Even when there is no general reaction to the tuberculin or it is so slight as to be scarcely perceptible, there may be a topical rise in temperature of a Fahrenheit degree or more. He adds that it is possible that extremely careful comparative measurements of the temperature in symmetrical regions may reveal latent foci in incipient tuberculosis.

98. **Enterostomy in Peritonitis.**—Volterrani gives the details of eight cases from the experiences at the Pisa surgical clinic and reviews the literature on the subject, his conclusions all emphasizing the importance and benefit that may be derived from an opening made into the intestine in severe peritonitis even when the condition is too serious to permit a laparotomy. General anesthesia is not required for it, and the practitioner should not hesitate, he declares, to do this simple and harmless operation at need.

# *The Automobile*

## FOR THE PHYSICIAN

### As a part of his Professional Equipment and as a means of Pleasure and Recreation

### THE AUTOMOBILE IN PRACTICE

COULD the practitioner segregate his practice and confine it within certain limits, the condition would seem ideal; but the harder he works and the more skill he acquires, the wider becomes his circuit. The exigencies of practice in a large city, therefore, necessitate some other means than the horse and carriage for him to reach his patrons. Although I had driven horses for twenty-five years, I turned to the automobile in 1902.

#### EARLY EXPERIENCES

My first venture was a single-cylinder machine (109*). The trials I had cranking it in both warm and cold weather make me unhappy now when I think of it. Three weeks after I had become its owner I became ambitious and started with my wife for a tour expecting to go to Buffalo. It began to rain shortly after we started and we ploughed through mud and water some twenty miles until, on a railroad bridge, I thought I had a favorable place to oil up. I stopped the machinery but, despite all my efforts, I could not make it go again. Our auto journey ended by our being towed to Trenton, some six miles away, behind a coal wagon. I shipped the car to Cleveland and took the remaining portion of the trip on the less exciting but more reliable train.

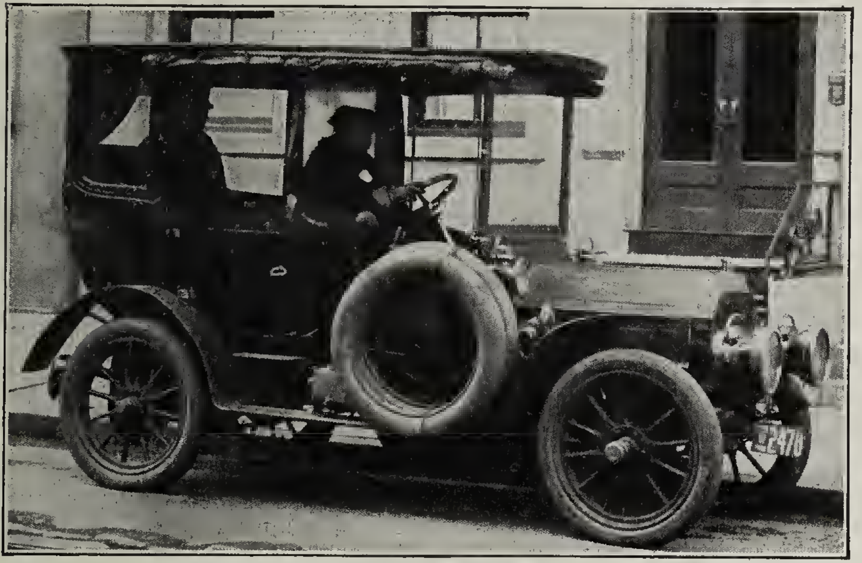

Fig. 1.—Demilimousine (114) of Dr. E. E. Montgomery, Philadelphia.

Reaching Cleveland and ascertaining that the machine was in good order, we started again, this time in central Ohio through clouds of dust. After a ride of 70 miles the wheel of the water pump was broken off and again we had to ship the car back to Cleveland and take to the train. The vagaries of this machine were so numerous and trying that I finally disposed of it. It made so much noise that I never had any difficulty in letting my patients know that I was coming.

My next two ventures were runabouts (110*), two-cylinder machines. As I made a contract with the person from whom I purchased the machine that he was to take care of it, make sure that it was in order and if not get me another in its place for a certain sum each month, I had less trouble with this car. It was rather light weight, however, and as I was pretty heavy, occasionally an axle would break.

I then went to an electric (111*), which rode beautifully, was ever ready to go, was noiseless, but very limited in its speed and still more so if the batteries had run a little while, so that I found myself following rather than leading—an unsatisfactory position for an ambitious man. I therefore disposed of the electric and secured a touring car (112*). This car proved more satisfactory, in that it enabled me to afford my family and friends pleasure while I was traveling about the city for business. With this machine the tire problem was the greatest, owing, I am now convinced, to the want of care on the part of the chauffeur. On one journey of 20 miles we blew out four inner tubes and finally ran for a time with the tire collapsed. While going at a pretty fair speed my companion gave an exclamation as he saw the shoe which had come off running ahead of us and he was certain the entire wheel was gone.

#### TRIES A STEAMER

In order to leave no variety of machine untried, my next venture was a steam machine (113). Until I became acquainted with this I had so many unusual and unpleasant experiences that my family rather looked for me to undergo premature cremation, especially as I attempted to ignite the pilot light without raising the hood, and the accumulated gasoline exploded in my face, taking off most of what little hair I had left. I found out, however, that such an occurrence was unnecessary and due only to my stupidity. The machine did me more service than any other of the same class I have ever had. It rides beautifully, climbs the steepest hills without the slightest difficulty, and as it is entirely controlled by the throttle, it is capable of moving from a speed of two to one of fifty miles an hour by the motion of the handle governing the latter. The driver of a steam machine must keep his mind on what he is doing; he cannot go wool-gathering, as he must constantly remember that there must be water in the boiler and not too much of it, and that there must be satisfactory steam pressure and sufficient pressure on the gas. To watch all of the many gauges, as well as the road over which one travels, to say nothing of the vehicles and other travelers, certainly suffices to keep the driver wide awake.

#### PROTECTION AFFORDED BY CLOSED CAR

After recurrent attacks of grip, two of pneumonia, middle-ear disease and a mastoid operation, I began to realize that the human machine I possessed needed more protection, so my next venture was the machine (114) a picture of which accompanies this article. This is a rebuilt 1906 machine. It had seen considerable service before I got it, but it has traveled over 10,000 miles since with scarcely any trouble except that incident to tires.

The weight of the machine, being a metal body, necessarily makes tire wear great, but I do not know that the cost of its up-keep is any greater than that of much less reliable machines. It is a satisfaction to know that one has a machine that is ready for work and is almost sure to take one to one's destination and home again.

#### GRATIFYING ADVANTAGES

The automobile adds greatly to the comfort and pleasure of the physician; it enables him to extend his practice greatly and to afford pleasure and gratification to the members of his family which are utterly impossible by any other means of locomotion.

E. E. MONTGOMERY, M.D., Philadelphia.

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* For names of machines, see explanation in Editorial Department.

## FRICTION DRIVE

After reading each of the automobile numbers and nearly enough catalogues to make up the deficit in the post-office department, I decided to buy—as much through the influence of last year's Automobile Number as anything. Also having heard so many owners of small cars say, "When you buy, buy a good one," I decided to buy a friction-driven touring car (149). I ordered my car in March, but did not get it till June, which perhaps was a good thing for the car, as the roads were fine at that time. The agent came and helped unload the car and in two hours took the train for home. So much for training. I wrote to the company for their instruction book and the instructions were to wait, as the book was not out. The last time I wrote, in August or September, it was not out, and I am still waiting. So much for instructions—but the experience! Say! The experience was here to stay and a new issue each day. I suppose my experience was very similar to what all new owners have had with the exception of (or maybe better say addition of) the friction-drive. So I shall confine myself to the friction-drive.

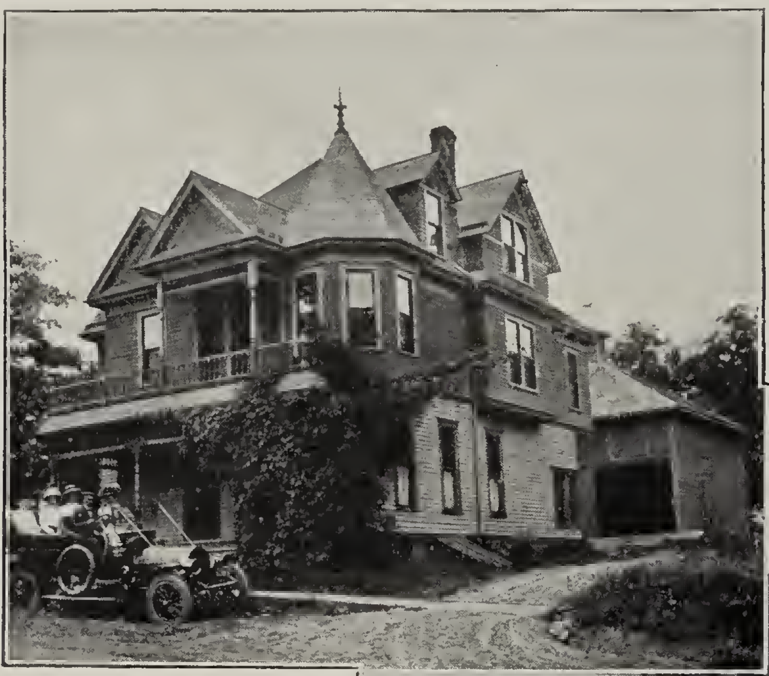

Fig. 2.—Automobile (149) and residence of Dr. E. A. Cantonwine, Parkersburg, Ia.

To start with, the most of my troubles could have been avoided if I had received some instructions with the machine. There was more friction than drive to start with, but, like everything else about the drive, this was simple when you knew how to remedy it. There is a certain amount of wear on the friction-rim at all times due to the outer and inner sides of the rim having to travel a different distance on the disc. This tends to heat the disc and, with a little slip, enough heat is developed for an automatic foot-warmer, that is, a warmer of mind and body.

I had a new catch made for the speed lever so that it gives me more speeds and wears the disc surface even, which will save trouble by preventing ridges. The expense of the drive has been the welding of one brace-rod. The fiber rim will soon have to be replaced, which will cost about $3. The disc is as good as new. The friction drive is all right, but I believe it requires more attention than a shaft drive. It makes up for this by the saving on the rest of the machinery. There is no jerk in stopping and starting, the speed can be increased gradually and the driver can set his speed according to the road. Sands and hills and mud, of which this part of Iowa has its share, have never stalled me so far. If they ever do I don't believe it will be due to the friction drive.

E. A. CANTONWINE, M.D., Parkersburg, Ia.

## BASEMENT AN IDEAL GARAGE

Any physician, almost, can buy a machine but there are few who can afford to pay the constant repair expense charged by the average garage. The basement garage has proved to me to be the most convenient arrangement for the busy physician. The basement garage is accessible without leaving the house and any physician can slip on a mechanic's suit, go down and in a few minutes repair something which he would otherwise be obliged to bring into the shop and pay perhaps more than he had earned that day.

With this scheme the machine never freezes, is easily washed, the oil lubricates better and any insurance company will allow a machine to be kept in a basement if the gasoline is kept in an underground tank or in the machine. A runabout kept in such a garage is now in its fourth year of constant use with promises of many years of service to come. The accompanying illustration shows the advantages of such an arrangement.

J. B. MCNERTHNEY, M.D., Tacoma, Wash.

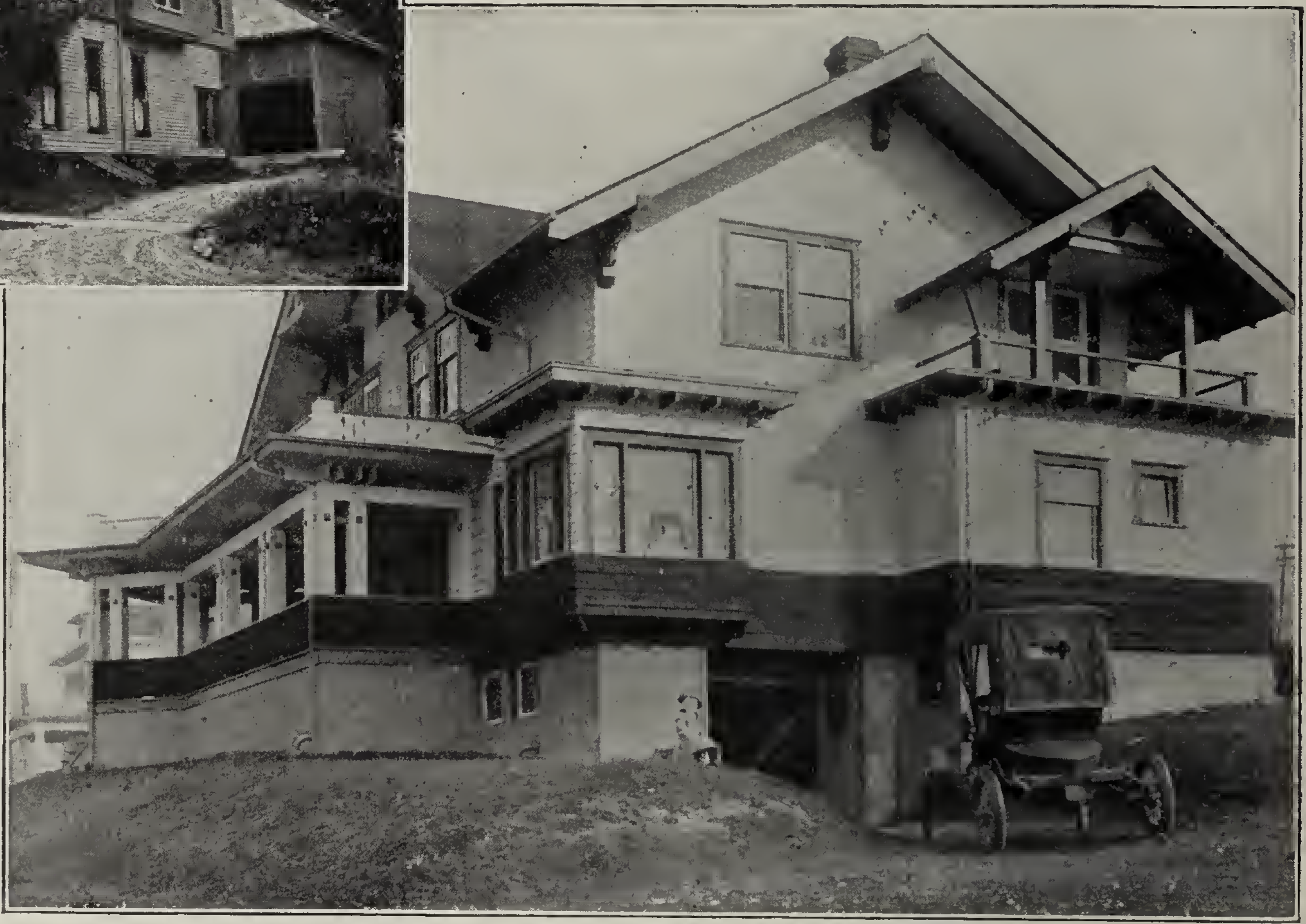

Fig. 3.—The car (161) and residence of Dr. J. B. McNerthney, Tacoma, Wash., showing his neat provision for a garage in his basement.

## A HIGH-WHEELER FOR WINTER AND A PNEUMATIC FOR GOOD WEATHER

Previous to April 1, 1907, I used, in my practice, two horses valued at about $500. Then I bought a 10 h. p., air-cooled, two-cylinder machine (122) with hard rubber tires. I kept accurate account of expenses for two years.

### A CAREFULLY KEPT EXPENSE ACCOUNT

The total expense was $293.29, which averages $146.64½ for one year, about $12.23, for one month, and $2.82 for every seven days. This is cheaper than shoeing and feeding one horse and keeping buggies in repair. In this total expense I included $58.48 for gasoline; two pairs automobile gloves; two rubber-plush blankets; twice retiring the wheels; all the lubricating oil necessary; replacing two motor-shafts, which were $20 each—said to have broken from "crystallization," but in my opinion, from a flaw in the steel; replacing two sets of worn out gear sprocket-chains; also batteries, carbid, licenses, tags, etc.; in fact, everything necessary to run the machine for two years. In these expenses the driver is not included because I have the same man I had when I drove the horses.

In the winter of 1907-8 I could not use the machine for four weeks on account of snow and sleighing. In the winter of 1908-9 I used horses three weeks in sleighing. With these exceptions I used the machine to do all my work. I am sure that I did my work in one-third the time it would have taken with two horses.

In my experience of two years with the car I found I had a very serviceable machine; but, like all automobile enthusiasts, I wanted more speed, so, on May 14, 1909, I bought another car (123), a 20 h. p., water-cooled, four-cylinder car. I used this machine until about the middle of December, 1909, when I put it in storage. I had the motor dissected and examined and cleaned and found it in perfect order, except that the connecting rods were slightly loose. At this time my speedometer registered 3,129 miles. In these seven months my total expenses were $128, which averages $18.29 a month, or, per mile, about .041 cent, not including tolls, which in Pennsylvania are an outrage to the automobilist. On several long trips I used 5 gallons of gasoline to each 100 miles traveled. In this period I had five punctures, each caused by a nail or tack. One tire still holds the air that was pumped in when I purchased the car.

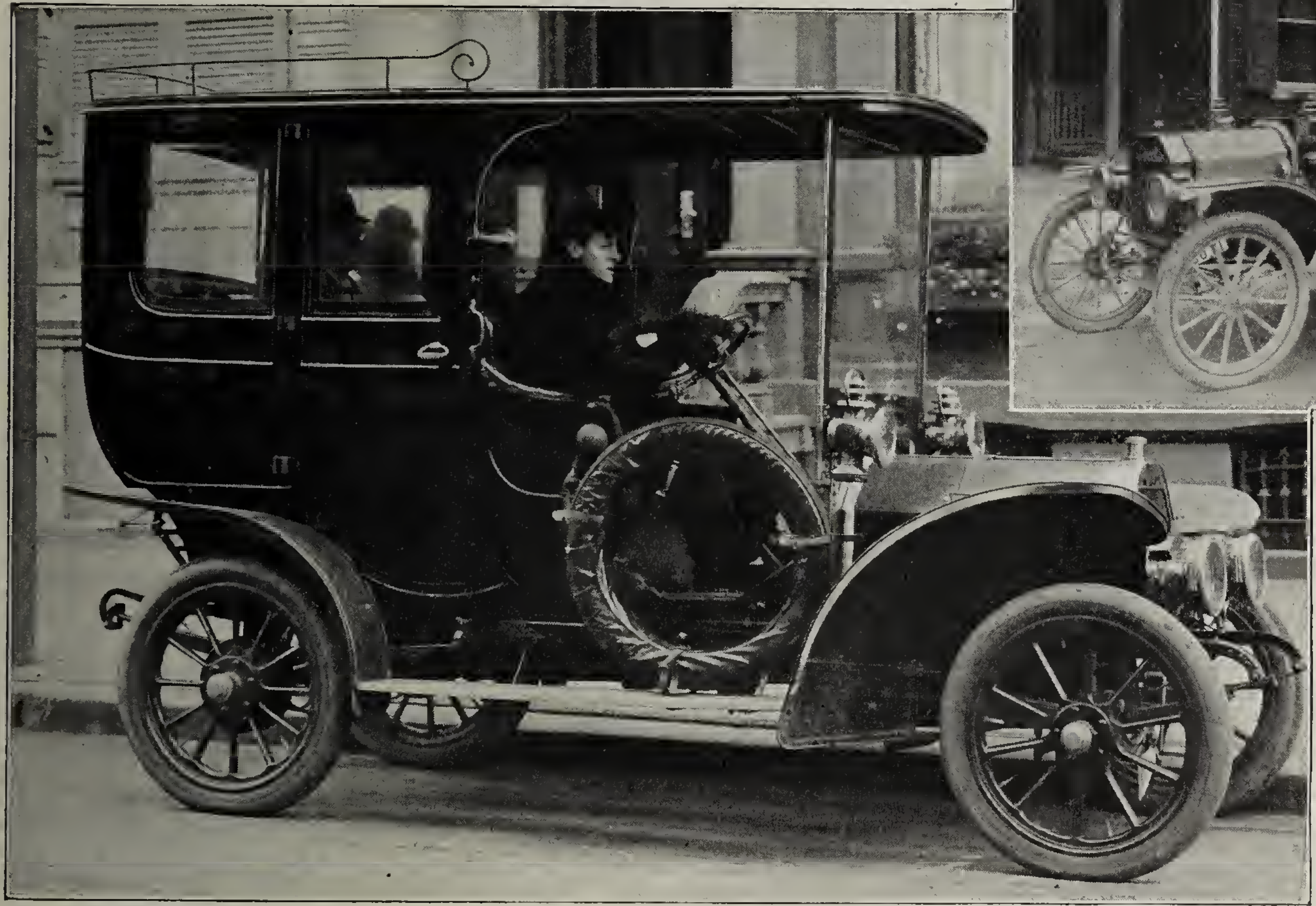

Fig. 4.—Car (117) used by Dr. James M. Anders since April, 1907, until the present. On the whole, the car has been quite satisfactory, although the body is perhaps too heavy for the chassis—a combination of conditions that is a bit hard on tires.

### USES HIGH-WHEELER FOR WINTER WORK

At a cost of $7.35 I changed the single rumble seat to a double rumble by having the middle of the back sawed apart and a piece of board joined to the sawed ends, retaining the curve, and a new cushion placed on the seat and back on a new board.

With this car I have climbed, in high gear, steeper hills than the majority of the forty different cars owned in this place of about 10,000 inhabitants. One unnecessary expense was a top that I used the first day. Since I stored this car (123) I am using the old one (122) again, and will continue to do so until pleasant weather. I have discovered that there is less money invested in these two low-priced cars, for all the years' service and pleasure, than the same amount put in one high-priced car. The cost of upkeep is likewise less per mile in both than in a higher-priced car. A. C. Wentz, Hanover, Pa.

## THE STEAM AND THE GASOLINE CAR FOR THE PHYSICIAN'S USE

Having lost my horse, and declaring that I would never own another one, in March, 1904, I bought a steam runabout (126 *). For seven months I did all my work and drove to neighboring cities when I pleased, covering, on an estimate, 5,000 to 6,000 miles, at a cost of $1 day. In other words, the expense was the same as that of the horse. As I understood my car thoroughly, I had no trouble whatever outside of occasional tire troubles.

The next two years I used the car, but kept less accurate account of expense. I think that a dollar a day would cover all. The car, being older, required more repairing, but as I didn't run nearly as many miles I kept down the expense.

The three seasons that I used my steamer taught me that for a physician's use steam was not entirely satisfactory. A steam car has to be kept alive all the time it is in use; so that, when making calls, the pilot light, which must burn all the time, gets badly on one's nerves; and as the car gets older, and the pilot light more cranky, I would often start on calls without the car rather than put up with the worry about the pilot while making the call. I understand that in later models of this make of car this trouble of the pilot light has been done away with.

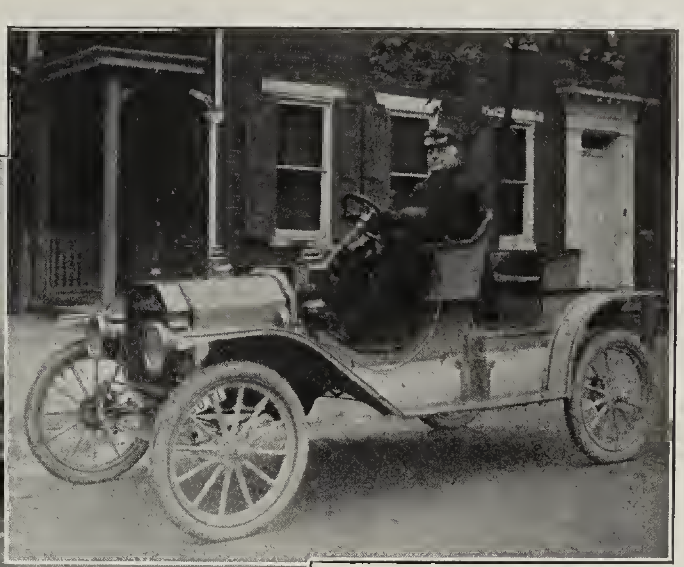

Fig. 5.—Dr. A. C. Wentz, Hanover, Pa., in his runabout (123 *).

Another trouble with a steam car is that unless it can be kept in a warm garage it is practically out of commission as soon as freezing weather comes. As I kept my car in a small shed that I built for the purpose, I had to use great care to draw out all the water at night, even disconnecting the steam-gauge, as water gets trapped in it and freezing ruins it.

Because of these troubles, in the spring of 1907, I purchased a two-cylinder 12-horse-power gasoline runabout (127 *), and I must admit that this car has been more practical for my work. To be sure, it has given more trouble than the steamer and has twice been towed home (which never happened to the steamer). But on the whole I prefer the gasoline car for a physician.

Last spring I had the misfortune to break the crank-shaft, and it was over four months before I could persuade the makers to send me a new one. Why makers should be so loath to supply one with new parts when the old become broken or useless is more than I can understand; here is a good argument in favor of buying an automobile that is made near one's home.

Herbert W. Manahan, M.D., Lawrence, Mass.

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* For names of machines, see explanation in Editorial Department

# THE CHOICE AND CARE OF AN AUTOMOBILE

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**Address Delivered by William E. Sharp, General Superintendent of the Armour Car Lines, Before the Englewood Branch of the Chicago Medical Society, at its Automobile Clinic,* held in Chicago, Feb. 1, 1910**

WHAT I shall say will consist of reminiscences from my five years' experience driving a pleasure car (104) beginning with a "one lunger" (103)—and at the outset I have to say that I do not agree with the physicians in all cases, because when you get a "one lunger" you send him away to the mountains, while it was my experience that it was better to stay on a level road.

About a year ago I was appointed a member of a committee to investigate the subject of automobile trucks for commercial use, and through this investigation I acquired what little knowledge I have on the subject of designing an automobile. During our investigation we visited the most reputable manufactories of automobiles in this country, as well as some of those that have not, and will not have, a reputation.

At the Paris Exposition in 1900 France had the best exhibit of gas engines for automobile use, and the ingenuity displayed in design was a surprise to gas engine manufacturers; but during the last ten years the American automobile manufacturers have made wonderful progress, and to-day there can be no doubt that the American-made automobile is second to none; in fact, there is no need to go abroad to buy a car of the highest type and with the best appointments.

### HOW TO SELECT A CAR

It does not follow, however, that anything in the shape of a gasoline tank mounted on wheels, making a hideous noise and giving forth an offensive smell, should properly be considered an automobile. Therefore, the first thing we will consider, as laymen, is the selection of a car. It is, of course, understood that it must be a good one. But how shall the average layman, who is not familiar with the automobile, knows nothing of its design or construction, answer this question? To which we reply: by purchasing from a reputable maker, one who is a manufacturer and not an assembler; one who has worked out all of the problems for himself, instead of copying from what others have done; one who is reliable, and who has a reputation and investment which make reasonably sure that he will still be in the business when your car gets old and becomes worn, needs repairs and an occasional new part; also, one who maintains his own branch houses, where you can deal directly with the manufacturer of your car; whose motto is, "A square deal, even in the automobile business."

Fig. 6.—Dr. Adam H. Wright, Toronto, Canada, President of the Canadian Medical Association and Professor of Obstetrics in the University of Toronto. This photograph, taken Feb. 14, 1910, shows the car (107) in front of the house and office. It is a four-cylinder, thirty horse power car. There has been an unusual amount of snow in Toronto this season, there being on an average over one foot on the ground when this picture was taken. The car was not out of commission on account of snow for five minutes during the winter. The chauffeur was accustomed to horses all his life, and was a coachman in England for fifteen years. He came to Canada about three years ago because automobiles had become so common in England. He was Dr. Wright's coachman for about two years. When the horse was discharged and the car came, last September, he reluctantly took charge, soon learned to run it, has pretty well learned its mechanism, and now would not go back to horses on any account.

Too often the average layman going out to buy a car looks only for the rated horse power, the wheel base, and the maximum speed that the car will make per hour, and completely ignores, or does not understand, the important points on which he should base his selection, which, in the first place, depend very much on the particular service to which the car will be put.

The car with the long wheel base makes the most desirable car for a country road, particularly rough roads. On the other hand, it is more difficult to maneuver in a crowded street. A heavy car is by all means the easiest riding car, and not much, if any, harder on the tires, providing, of course, that the tires have been proportioned to the weight of the car. On the other hand, a heavy car does not respond to the moves of the throttle as quickly, and it can hardly be expected that an engine, unless of size out of all proportion to the car, is going to accelerate a heavy mass as quickly as a light one. Again, the heavy car is not affected by small obstacles; it moves over the road more smoothly, and with uniform speed, and it is of itself a fly-wheel.

While it is fair to assume that the cost per running mile is greater for the heavy load than for the light one, this statement is subject to qualification, for with a given wind resistance the heavy car, when under motion moves along with nearly the same power as the light one. This applies, of course, to level roads. Climbing hills the lighter car has somewhat the advantage; but also the disadvantage of being unable to stand the rack and strain of service. The very thing that gives the car weight also gives it strength.

### ACCESSIBILITY OF ENGINE

Perhaps the most important point to be considered in selecting a car is accessibility of all parts, or, in other words, the ability to remove any one part of the car without disturbing all others. On this point the average salesman will disagree with you, having you understand that his particular make of car never needs to be dissembled, that nothing wears out, that no accident can possibly happen—a consummation devoutly to be wished, but one which can ne'er be hoped for.

One must be able to get into the crank case without disturbing the other parts, for the bearings will eventually wear and require adjustment. One must be able to dismount the magneto, or the circulating water pump, without being required to remove the radiator. The oiler must not be in the way of any of these operations. Not that the oiler is in itself complicated, but it has a great many attachments in the way of small pipes, which should always be tight and shipshape to insure perfect results. The transmission as a whole should be demountable without the necessity of disturbing any of the rest of the assembling, for transmissions are subject to accidents, and more often to flagrant abuse. The manner in which the gears are shifted may subject them to strains far beyond the endurance of any metal, hence the transmission should be located so that it is easy of access and may be entirely removed without disturbing any other parts.

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* A general discussion on the subject followed the reading of this paper and an abstract of this is presented at the end of the article.

The time required for the clutch to slow down after the release, so that the two gears about to be engaged are of the same speed, varies with different cars—not only different makes, but individual cars of the same make. All this must be learned by the driver. With a little experience, and having once learned it, there is no excuse for the slamming method of shifting gears, which attracts attention from the sidewalk, encourages profanity, and is a fruitful source of expense.

One of the first questions usually asked, and least understood, is, "What is the rated horse power of your car?" The answer is "30" or "40," or whatever may be the rated horse power of the car, and 40 seems to be a familiar term; but your question has not been answered. It is not so much a question of the size of the cylinders, or how much gas you explode, or with what force the explosion takes place. Power can be determined only by the amount of force delivered at the rear wheels, and let it be understood that in testing the power of an engine only the full capacity at any given speed is considered, it being obvious that under the throttle it is not a truth-teller, its performance in this instance not being in any way an index of its possibilities; hence, as an automobile is used but a fraction of its time to its full capacity, it is not expected that a testing load shall be the daily stunt of any car, for more than ninety per cent. of the time the car calls for less than half the rated power of its engine, and so for that ninety per cent. of the time one engine is about as good as another. But within the ten per cent. of the time remaining, the car undergoes difficulties which call for Herculean efforts, and unless successfully surmounted the other ninety per cent. is of little value.

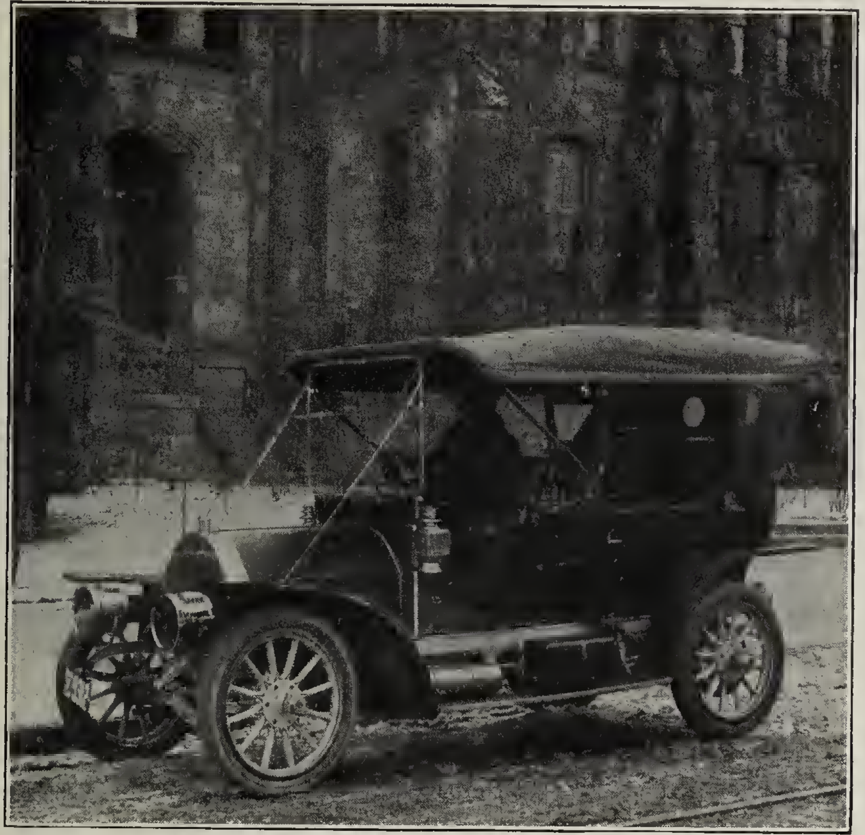

Fig. 7.—Forty horse-power machine (174) used by Dr. John G. Clark, Philadelphia, Professor of Gynecology in the University of Pennsylvania. The picture was taken in front of the main entrance of the University Hospital.

All physicians know the immense reserve of the human power plant, seldom used, but necessary for its preservation in time of trial, and the good designer, ever responsive to the hints which Nature gives him, builds his car along liberal lines, with plenty of power, with weight enough to carry it, and so distributed that it will not be topheavy. To get plenty of power without increasing the dimensions of the engine beyond a reasonable limit, the good engineer takes into account these days of stress and trial, and makes the conditions under which the engine operates the basis for his work, and except in rare instances, when the car is run at its highest possible speed, which also calls for power, the times when its engine is running at its hardest load is when it is running also at its slowest speed. Therefore, those factors which fix the power of an engine at high speed are not the most important, but those which restrict its output at low speed and heavy explosions become of paramount importance.

The high speed engines are of necessity high compression engines, and their performance is not so good at low speed. I have in mind an engine developing 34 h. p. at 1,600 revolutions per minute, and 12 h. p. at 300 revolutions per minute. By raising the compression ten pounds, the h. p. at 1,600 is raised to 36½ or 37, but drops some 4 h. p. at 300. It is the part of a good engineer so to design his engine and his car that it will perform well when under its hardest load, which is in low speed.

The friction of the cylinder walls, then, is a larger factor than the inertia of the reciprocating parts, and any method of construction which will diminish this wall friction in a large degree is preferable. Also, the friction of the main bearings is a large factor under heavy explosions, a much larger factor than under the more rapidly recurring blows of the lighter explosions due to high speed. Hence, any design which lessens this friction is preferable.

### POINTS ABOUT ENGINE CONSTRUCTION

It has been the belief of some engineers, and the fixed conviction of the layman, that rapid flame propagation is good for the development of power, a truth which, stated without qualification, may lead to great error, for if this were a truth unqualified, an instantaneous flame propagation would, of course, be better than one which was dragged out. Ergo, a spark plug in the head near the center of the charge, where the flame would be propagated but a short distance, would be the desirable construction. Well, it is desirable construction for high speeds, but at high speeds most any construction would be satisfactory, while at low speeds we have radically different conditions.

The time required to propagate a flame throughout the mass of gas in an ordinary automobile cylinder varies from 1/600 to 1/300 part of a second; during only 1/300 part of a second the crank has traveled when the car is doing its heavy work at speeds less than 20 miles an hour, about 15 degrees. If the propagation of the flame is shortened to 1/600 part of a second, the crank under the same circumstances has traveled approximately seven or eight degrees, and the full force of the explosion is expended on the crank at a time when it has almost no turning moment, and if the sides of the cylinder are not sufficiently cool to permit of proper lubrication the gas loses its pressure before the crank has reached that portion of the stroke where the piston pressure is most effective. If, however, there is a continued rise in the pressure up to the time the crank has passed 15 to 20 degrees of movement, the piston is then traveling at a good rate of speed, and the contracting effect, due to the cool cylinder walls, is much lessened, and we have a large value of turning moment. By setting the spark plug in a port to one side of the cylinder, and proportioning the distance so that under these hard loads the flame is propagated to reach its maximum when the crank has traveled through about 25 degrees, we have a much more sustained pressure on the piston and a more nearly continuous torque on the crank.

Now, then, if the cylinder is set tangent to a circle concentric with the crank shaft and of such diameter that the connecting rod is parallel with its axis, at the time the explosion has reached its highest value, then we have at that time no friction in the cylinder due to side thrust, whereas if the cylinder is radical to the crank shaft the friction on the cylinder walls reaches considerable value when the crank has passed through 25 degrees.

Furthermore, if the torque or turning moment of a crank is the product of the total pressure on the piston head multiplied by the sine of the angle of the crank and connecting rod and multiplied by the cosine of the angle of the connecting rod and piston, then the cylinder set tangent, or, as it is termed, the offset crank, will provide larger multiplying factors at nearly all points of the travel of the crank during the explosion stroke, and therefore provide a greater mechanical advantage.

The foregoing facts are admitted by all, but as a counter argument the increased angle of connecting rod to piston during the compression stroke is offered as a loss to compensate the mechanical advantages of the explosion stroke, all of which is admitted if the mean pressures on explosion and compression were the same, but they are not. If they were, the engine would not run. As a matter of fact, the explosion side has a value nearly 400 per cent. greater than that of the compression side, and if advantages and disadvantages preserve the same proportion, there remains a net gain due solely to mechanical advantage, and when it is considered that the friction due to side thrust is diminished about 50 per cent., the advantages of offset or tangent cylinders become apparent.

A standard diagram of the pressure in a cylinder will show for a radical cylinder of 4¼ to 5 inches diameter about 800 pounds side thrust as a maximum on one side, and about 75 pounds side thrust as a maximum on the other; but when the cylinder is set tangent or offset, putting the circle of the radius half of the length of the crank, the values on each side reach a maximum of about 200 pounds, increasing the compression side by approximately 200 per cent., and reducing the explosion side about 75 per cent.

It is a mistake to assume that, because a cylinder is offset or set tangent, the effect of centers is eliminated. The explosions occur with relation to the centers in just exactly the same manner that they do with a radial cylinder, but by setting tangent one is enabled to prolong his flame propagation to a mechanical advantage, and also to the lessening of the friction, and at the same time utilize the advantage of the heat effect as with a radial cylinder with a more rapid flame propagation, and by delaying the flame propagation until the highest explosion value is reached after the crank has passed considerably over the center, the friction of the cylinders is not only reduced, but the impact on the bearings is very materially reduced.

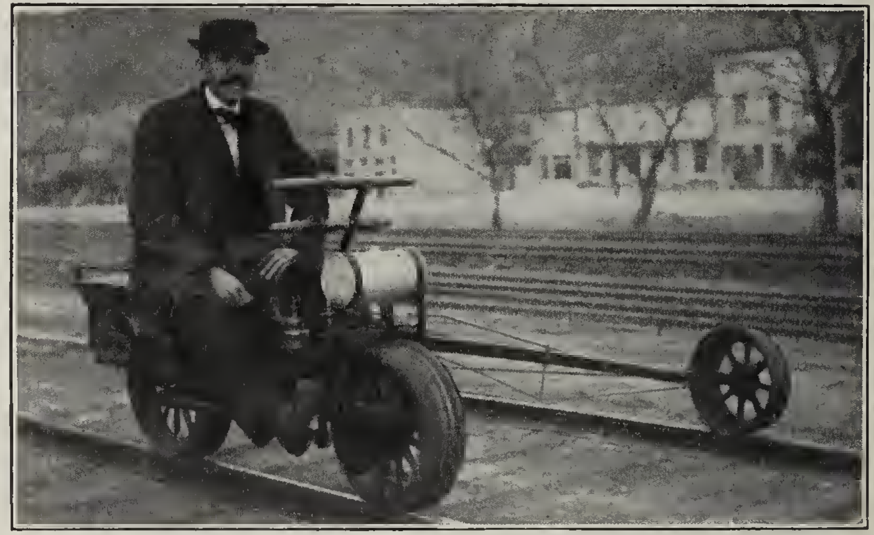

Fig. 8.—So far as roads go Dr. Philip Stephens of Caliente, Nev., has the advantage of us all. His road is perfectly hard and smooth and free from mud. He is district surgeon for a railroad in a valley one hundred miles long. He can reach practically all towns and ranches on the little car here shown. He uses it both for railroad and private work and can make thirty miles an hour.

The *reductio ad absurdum* can be applied to offsetting, as it can to everything else in engineering (a system, at the best, of compromises). A small offset is of no value; an offset too great increases the compression losses too much. There is a point for the most advantageous offset, which depends somewhat on the compression space, the explosion value, the normal speed of the engine, etc., but is approximately one-half the length of the crank.

### CARE AND MAINTENANCE

The automobile, like any other piece of machinery, should be kept reasonably clean and fairly well lubricated. The successful operator will form the habit of entering the garage in the morning as he would enter an invalid room in the hospital. First, he takes in the whole situation at a glance, and then he sets about to make a careful and minute examination of all the working parts; beginning at the forward end of the car, he looks in his radiator to see that it is filled with water; next he should examine the gasoline storage tank to see that he has a full supply of gas. He should also examine his oiler to see that it is properly filled. Fortunately, the manufacturer, mindful of the frailty of humanity, has provided for automatic lubricating devices, which perform their work very satisfactorily, providing they are kept in perfect condition and you supply them with oil. With oil can and wrench in hand he next passes around the car, carefully looking over all of the working parts, dropping oil on the bearings that are not automatically lubricated, and seeing that the tires are properly inflated.

A few moments spent in this way in the garage each day will oftentimes prevent a breakdown or serious delay on the road.

### TIRE TREATMENT

The reputable rubber manufacturers furnish a weight schedule which shows the weight to be carried on each tire. I have found in my experience that if these schedules of weights are carefully observed, and in case of doubt a heavier tire is applied than the manufacturer recommends, it is cheaper in the long run. Most of the manufacturers will guarantee their tires for five thousand miles, if made in one season, and in case of failure they will replace the tire, simply charging you for the mileage, but by buying tires of the proper size, in proportion to the weight of your car, you are reasonably certain of seven to ten thousand miles perfect service, without any tire trouble.

I do not favor applying smaller tires to the front wheel. I think it is better practice to buy the heavier tires and change them; that is, to buy new tires for the rear wheels and to move the old ones to the front wheels for the second year's service. In this way you always have new tires on your rear wheels, where there is the stress of traction.

Again, one should form the habit of keeping his tires clean, and the wise man will examine them each morning and remove the tacks, pins and pieces of wire that he has picked up during the previous day, which if not removed will sooner or later cause trouble.

Vulcanizing small cuts in the tires is rather a tedious job for the ordinary layman, and the rubber manufacturers will furnish a sponge rubber, with full directions, that can be used to seal up cuts in the outer covering, which expose the fabric. An hour's time once a week will keep your tires in perfect condition and insure the best of service.

Tires should be removed at least once a year and staybolts carefully examined, and the rims kept perfectly free from rust.

## DISCUSSION[*]

**Dr. H. R. Boettcher**: I am not driving a gas car. I have eliminated all that trouble by purchasing an electric (160). I listened with a great deal of interest to Mr. Sharp's discussion and highly appreciate every bit of it, but I would like to know what physician who is going out to make a call late at night, will stop to look over his car, or clean it, examine the tires and all that sort of thing. He is going to turn it over and get away as quickly as possible. I have had quite a bit of experience with automobiles myself. I started in six years ago. I have owned three. I had a two-cylinder (162) and got to know that fairly well. I had a four-cylinder (163) that I thought gave me a great deal better service than the two-cylinder car, but after about four years of driving I purchased an electric car (160) and I think for a doctor an electric car is the only car. It is much easier to look after; you do not have to look after oil; you do not have to watch the gasoline and you have no spark trouble. I run the car into the barn, shove the plug in and it fills itself full. The only objection I have is that I have about the same trouble with the tires that I had with the gasoline cars. You cannot do away with the tire trouble. It is the biggest item in the automobile expense. If it has tires that will stand up all the time, the average car will go all the time. We aim to keep our cars well oiled. Of course, if we do not take care of our cars, that is our own fault. The car that will give the best service—the nice car, the clean car—is the electric car, and I am quite sure that all my friends who are using gas cars now will within a few years be driving electrics. You get into your car and start right off; you do not break your arms; you do not have to crank; it is a very simple matter to start it. It is easy to keep clean and is charged easily. I can drive sixty miles on a charge, and I do not believe there are many men who will drive more than sixty miles on the average trip. I have been driving through the snow banks, on rough roads and where it is hard to drive a car. It uses up a good deal of electricity, but so far as I am concerned I would not trade my electric for all the gas cars made, for city work. It costs about three cents per mile for electricity.

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[*] This discussion took place following the reading of Mr. Sharp's paper at the meeting of the Englewood branch of Chicago Medical Society, at Englewood Hospital, February 1. Dr. M. W. Bacon presided and the secretary was Dr. C. Hubart Lovewell.

**Dr. E. C. Morton:** I have not missed a day this winter in my automobile (164). I do not have very long trips to make but find that I can get to a good many more places and even find time to take my friend, Dr. Boettcher out when his electric refuses to run. In the summer time I can make my calls and then go out to the club, which is four miles from town. I could not do this if I had to use horses. I am now on my third year with an automobile and if I had to go back to horses I think I would give up practicing medicine. The first years I practiced I kept three horses, and the expense of my car figured about the same for the first year as did the expense of two horses. At this time of year a horse tires quickly and I would rather take a street car than a horse. I always examine my machine to see whether it is all right, and I have yet to fall down on the road. I have always made my call and got back. You cannot bang a car around and have it work all right. If you are running on a rough road, look out for the bumps. You cannot cross a bad place at forty miles an hour. Keep your tires hard. A tire ought to be kept up to sixty-five. If the tire is kept up to seventy it will stand a great deal more wear.

**Dr. Carl Langer:** If anybody was afraid of an automobile I was that fellow. In fact, I was so afraid of a machine that I hung on to my old pair of horses until one of them actually lay down in the shafts. My friend, Dr. Bohart, after talking the matter over, finally said: "What you need is a fool-proof machine," so I did what everyone else advised me not to do and bought a second-hand one lunger (125). I want to tell you, gentlemen, that no money I have ever expended has given me so much pleasure and satisfaction as that has. I have owned the car now some eleven months, and during that time it has been out of commission but one day. During all of this winter the machine has never failed to respond and has been on the road from morning until night. The up-keep is no larger than the maintenance of the two horses, and the comfort is infinitely greater. I can do the same amount of work that I did with the team and still have two hours a day left in which to enjoy myself in any way that I see fit.

**Dr. W. H. Bohart:** I have had some experience with the automobile, and to get that experience I have spent about all I could make. I started out two years ago with a two-cylinder car (165) and later bought another one of the same make. They were good little cars, but not large enough for my expanding views. Then I bought a large four-cylinder car (166) and that has turned out to be the saddest day of my life, so far as the automobile is concerned. I now have two cars, a four-cylinder (167) and a single-cylinder (168), and for real worth and reliability the single-cylinder car is ahead of anything that runs on four wheels, and I have run the gauntlet of the whole automobile business.

For my work, I prefer the little car to the big one. I consider the small engine and the small car the best for the physician. My small car has run about 50,000 miles. I cannot remember a time that the car did not go. It costs me practically nothing to run it, compared with the larger car. I can get 18 miles on one gallon of gasoline in the city, and on the road considerably more. Out on the road the big cars run past me all right, but it has been my experience that I generally catch up with them before the end of the journey. You cannot get the speed out of a small car, of course, that you can out of a four-cylinder car of high power. When I had my first big car, it used to be my delight to see how fast I could go. Now when I drive 18 miles an hour I think I am going pretty fast. I think that the tendency with automobile owners is to drive too fast, but I notice that after a man has driven several years, he usually cuts down his speed 60 or 70 per cent. Fast driving is one reason for the rapid wear of tires, and in regard to the tire question, I think it is the most important one for solution, and the one great fault with the automobile. The puncture is the bane of the physician's automobile existence. I like to ride in my big car and to take my family out in it, but for the physician's practical use, I think that the small car is far superior to the large car, being so much easier to handle, so much more economical, practical, and inexpensive, that there is no comparison at all.

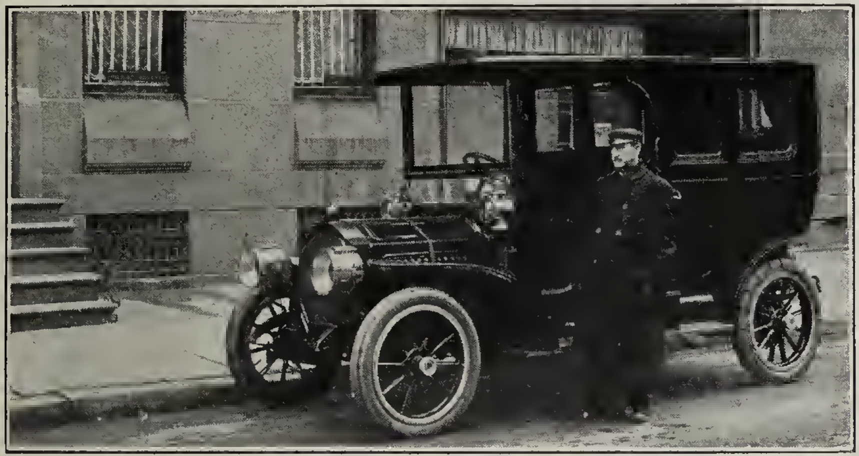
Fig. 9.—Car (116) owned by Dr. D. Braden Kyle, of Philadelphia, in front of his residence. This car has rendered excellent service, has been driven over 40,000 miles and has never been in a repair shop.

**Dr. M. T. Naughton:** I have driven one car (169) for four years for about 60,000 miles. It is a four cylinder car with a 30 horse power engine. This car has never been in the machine shop. I have never had a man overhaul my engine. I have always repaired it myself. It has a 100 inch wheel base, is a five passenger car, and weighs 2,400 pounds.

As to the cost of up-keep, I get 7,000 miles out of a set of tires, which are 32x4. I keep my car in a private garage. It costs $4.50 garage rent, and 10 cents a gallon for gasoline. I get 13 miles out of a gallon, making short stops in the city. On long runs in a warm day I get from 6 to 18 miles. Lubricating oil costs 40 cents a gallon. I use 3 quarts for 100 miles; $1 worth of hard grease lasts a season. I have the car washed twice a week. The expenses for new parts, exclusive of tires, in four years, has been $70.

I am now starting on the fifth year with this car and think as well of it as I ever did. During the warm months I tour the surrounding country, on Sundays averaging from 125 to 150 miles on each trip. I have not yet had any trouble that I could not easily remedy. If a man is going to drive a motor car, the sooner he becomes master of the mechanical details of the situation the better he is off. If he does not understand the mechanism of his car it is liable to cause him lots of money and all kinds of annoyances. A good man on a medium-priced car will get more mileage and fun than a poor operator will on the highest priced car made. Having a family and not feeling that I can afford a runabout and a touring car at the same time, if I were going to buy a new car I would get the same size and make as my present one.

**Dr. Charles Hadden Parker:** A man who owns a machine should be something of a mechanic and should have a little repair shop. I take care of my car (170) myself and I can get out of trouble without assistance. One should have a little shop with a little lathe and when a casting or some part is broken be able to fix it up.

Dr. Charles Henderson Miller: From what I can learn it would be mere folly to argue against the use of an automobile for a doctor's work. I do not hear any of the men who have driven machines say they would care to go back to horses. My advice to a man thinking of using an automobile would be to buy one as quickly as he can afford to pay $1,000 for a machine but get a good one. If he has a family, I advise that he get one large enough to carry more than two passengers. It would be a good plan to get one that he can use as a coupé in the winter time, if he wishes, and convert into a tonneau in the summer time. Every doctor should have a book telling him how to take care of his car. Excessive power is neither desirable nor necessary. A maximum of 20 h. p. is sufficient if the weight of the car is not too great, and the greater the horse power the greater the weight of the machine. It is just as available on the road for hills and otherwise with the lighter power. The gasoline engine of this car should always be in front—never under the seat. It is a constant source of concern and requires a good deal of attention. I am not positively decided as to the best quality of oil to use. There are a number of different makes and grades. I am using oil that costs about 20 cents a gallon. The cost of gasoline is practically nothing. A car of this kind will save at least 50 per cent. of the time of the physician using it, in other words, he will have half of his time for leisure and yet do the same amount of work.

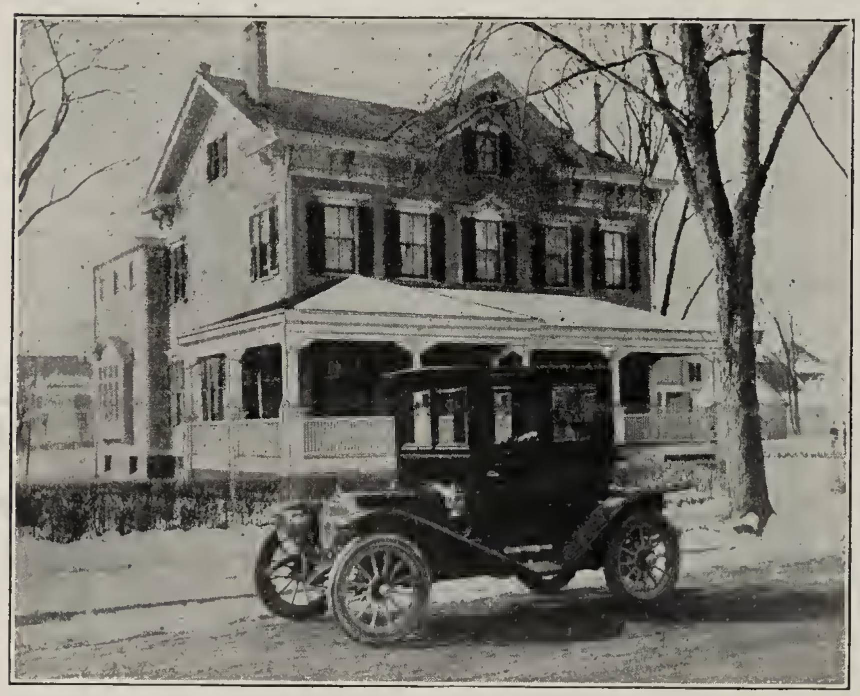

Fig. 10.—Runabout (124), office and residence of Dr. F. C. Ard, Plainfield, N. J. The coupé body was added to the car for protection from bad weather in winter. It does away with the necessity for fur coats and heavy clothing. It is removable for summer use, when the open body is replaced.

There is a great deal to be said about the way a car is cared for to eliminate trouble. The first thing is to have the car properly tired. Good tires are money-saving investments. It is well to have a vulcanizing equipment so that when you see a hole working into the tire you can seal it up. The tires on my car have run seven thousand miles and I think they are good for several thousand miles more. I take care of the car myself. Regarding the maximum speed one should travel, I think there is a constant tendency to want to go faster than is necessary or safe; and the life of the car is shortened by fast driving. I am exceedingly well satisfied with my automobile (171), although I paid the price of learning how to run it in three years' use and misuse of this car's immediate predecessor.

Dr. C. H. Lovewell, Sr.: I do not own an auto and perhaps never will own one. I know a machine is a very fine thing, but you pay for it each month. I have owned in all six horses. In my first year in Chicago (1875) I kept my horse in the livery stable when business was fair, and when business was slack I put the rig in the coal shed, to go back again to the livery when business warranted. After a time I drove two horses and enjoyed driving them as well as any of you doctors enjoy your autos. The expense for the team was about $35 per month plus $20 per month for a stable man. I have owned no horse now for several years.

Now, I know just what it costs me to make a visit. I can make one call by trolley car at any time for ten cents in this section of the city. Sometimes I can make two or three calls for ten cents, and I am ready to start at any time during the twenty-four hours in fifteen minutes. I doubt whether there is a physician in Chicago who can make a visit for less than twenty-five cents in an automobile.

Mr. W. E. Sharp: As to the relative merits of the assembled car and the car sold by the manufacturer, it is a well-known fact that the majority of the automobiles offered for sale are assembled cars, but it is a better business proposition to purchase direct from the manufacturer, as he has the benefit of experience in the various stages of development. If he is a reputable manufacturer you have his guarantee back of the car you purchase, and it is fair to assume that he has some pride in his business, and you are, therefore, assured of his cooperation and assistance in all of your troubles and in the repairs and up-keep. It is true that one of the best gas engines on the market, until very recently, was not owned or controlled by the automobile company, but was sold and used in various types of cars, but it does not follow that this would make a satisfactory car. All other parts as well as the engine have to be correctly proportioned, and for that reason I can not agree that you can get an assembled car that will give the service as well as the one you purchase direct from the manufacturer. I spent some time visiting the manufacturing plants of the automobile companies, and besides the quality of the material used, and the character of the work done, I was impressed with the importance of the organizations for inspecting and thoroughly testing all parts separately and collectively. I also visited manufacturing plants where only parts were being made, and it did not seem to me that the same care was used in inspecting and testing, possibly for the reason that they were made to sell.

As to the quality of material used in the cheap or moderate-priced car, as compared with the higher-priced machine, it is possible that the same grade of material is used, but it is just as important to have the proper quantity as it is to have the proper quality, and it seems reasonable that you would get a better material in the high-priced car, for the reason that the cost of labor for manufacturing and assembling would be no more than it would be for a lighter car, the same amount of labor being involved in each case, and there is less liability to crystallization of parts where they are made reasonably heavy.

The best oil is none too good. It should be used in the proper quantities—better too much than not enough, although the excessive use of oil will cause trouble. All manufacturers have tested oils to find which will give the best service with his particular type of engine, and that is about the best indicator.

The electric car, of course, is only supposed to be a boulevard car, but it seems to me it would answer the requirements of the physician in his daily round of calls, and he would have the comforts of the automobile without the care that it required in driving the gasoline car. It is a fact well known to all that a gasoline power plant requires attention, and the preparing of the car for its day's work is necessarily dirty work, in which hands become soiled—and it is otherwise objectionable. All of these features, of course, are removed when a man employs a chauffeur.

As to the advisability of purchasing a cheap or light car, it is a fact that there are several light cars on the market that would give considerable service on the boulevards, but it does not follow that a man is going to buy an automobile and stay on the boulevards. He will venture on the country roads, in the majority of cases with his car overloaded, and while he will possibly have satisfactory results with a light car at the beginning, the car is not built to stand any such service, and for that reason it seems to me inadvisable to buy a cheap, light touring car, and that it would be better and cheaper in the long run to buy a car designed and built for general purposes.

# THE ADVANTAGES OF THE MOTOR-CYCLE

## THE MOTOR-CYCLE IS THE KING OF THE ROAD

GETTING there and back again—in this the motor-cycle has the laugh at them all. My patients telephone me from the country, "Can't you come on your flying-machine, Doctor?" and, behold, I am at the bedside of the patient before the telephone receiver is hung up. That is the trouble with the motor-cycle; one gets the speed mania. On a dry ordinary dirt road, not too stony or uneven, one can travel at the rate of 30 to 40 miles an hour. This can't be said of the auto.

Look at the picture: I am called to see a patient in the neighboring village ten miles away. She had her first pain. I'll be there before she has the second one. When I come to the house of my patient I remove that duster, coat, cap and gloves and I'm presentable at any court. I left the dust behind me. Take notice of my scheme of combining the medicine-case, instrument case and sterilizer into one. It is made of copper and curved to fit the small of the back, where it rides most comfortably. It is fastened to the body with a leather strap which is easily detached from the case. It is 15 inches long, 3 inches wide, and 6 inches deep and if I need more room I can make use of the pockets of that coat.

### MOTOR-CYCLE VS. AUTOMOBILE

| | Motor-Cycle. | Automobile. |
|---|---|---|
| Classification. | Light weight, biped monorailer, great saver of power, wear and tear. | Heavy, clumsy, quadruped white elephant, 4 feet at 4 ever-changing levels, great loss of power, wear and tear. |
| Life. | Long-lived. | Subject to general debility early. |
| Vital organs. | Little predisposed to grave disorders. | Predisposed to expensive major operations at the machine shop hospital. |
| Heart. | In case of heart failure, disconnect engine, turn on foot power. | Call ambulance, chains and ropes; "dig up" and get the laugh. |
| Metabolism. | Normal absorption of oil and gasoline. | Deranged, fever high and drinks like a fish. |
| Feet (tires). | Long-lived, tetanus occasionally, use antitoxin early, prognosis good, $25 per pair. | Short-lived, susceptible to perforating ulcers and cancers; prognosis bad; $200 per set, price advancing. |
| First cost. | Sane. | Insane. |
| Second cost. | Normal. | An octopus monster. |
| Investment and Economy. | Good. | Poor. |

Don't shy of the motor-cycle because it is a biped monorailer; that is the up-to-date feature and that is what makes the motor-cycle the king of the road. On a motor-cycle, your eyes are watching the road and your hands and feet are in constant relation with the mechanism of control and balance.

That is why you never lose presence of mind. That is what makes the motor-cycle safer than other vehicles. Being a monorailer, it gives you better choice and control of the road and better command of yourself and machine than can be enjoyed on any other vehicle that travels on terra firma. Then, too, this monorailer stirs up an enthusiasm that can be equaled only by flying in an aëroplane. It is enthusiasm that we all need. A good motor-cycle is no burden, and when it gets seriously sick on the road it can be wheeled or pedaled along as easily as a bicycle after the engine is disconnected. You need not call for a team of horses; you need no hydraulic jacks, no wrecking-crew. The ride on a motor-cycle is not to be compared to the rough, laborious and dusty ride on a bicycle.

My experience with a motor-cycle as a business proposition and recreation has been extremely satisfactory. It has proved a good investment, a money- and time-saver, and not until the automobile does away with its expensive tires and troubles, its complicated machinery, its great weight and its short life can it be a good investment for the country doctor.

I ride a twin-cylinder 6-horse-power chain-drive (159) in a hilly country with sand in the low places. The fine workmanship, the leverless grip control, the pneumatic ball-bearing spring fork, the economy of space and symmetry of design on this machine are superfine, and I have yet to find sand deep enough and a hill steep enough to kill the engine on my cycle.

Doctor, if you are not too old and crippled with rheumatism, buy a good motor-cycle and enjoy your trips into the country in a way you never dreamed of. Keep the horse for muddy roads and snow-drifts. F. C. DOLDER, M.D., St. Charles, Minn.

## THE MOTOR-CYCLE

BEING disgusted with the trouble and expense incident to keeping horses, in the spring of 1909 I sold my teams and buggies and purchased a three-and-a-half horse-power single-cylinder motor-cycle (118) and used it entirely in my practice. During 1909 I drove it over 2,000 miles at about one cent per mile with a repair bill of only $1.85.

To say that I am pleased with the machine is expressing it very mildly. Calls that used to be hard work are now pleasure trips and there is a fascination and recreation about the riding of a motor-cycle that I never found in any other sport. I can make my trips much quicker than with a team and I have more time in the office. I can go anywhere that there is a path at all, and, in case of emergency, can cross the prairie at a pace of 18 to 20 miles an hour, while on good roads I can easily run 30 to 40 miles an hour.

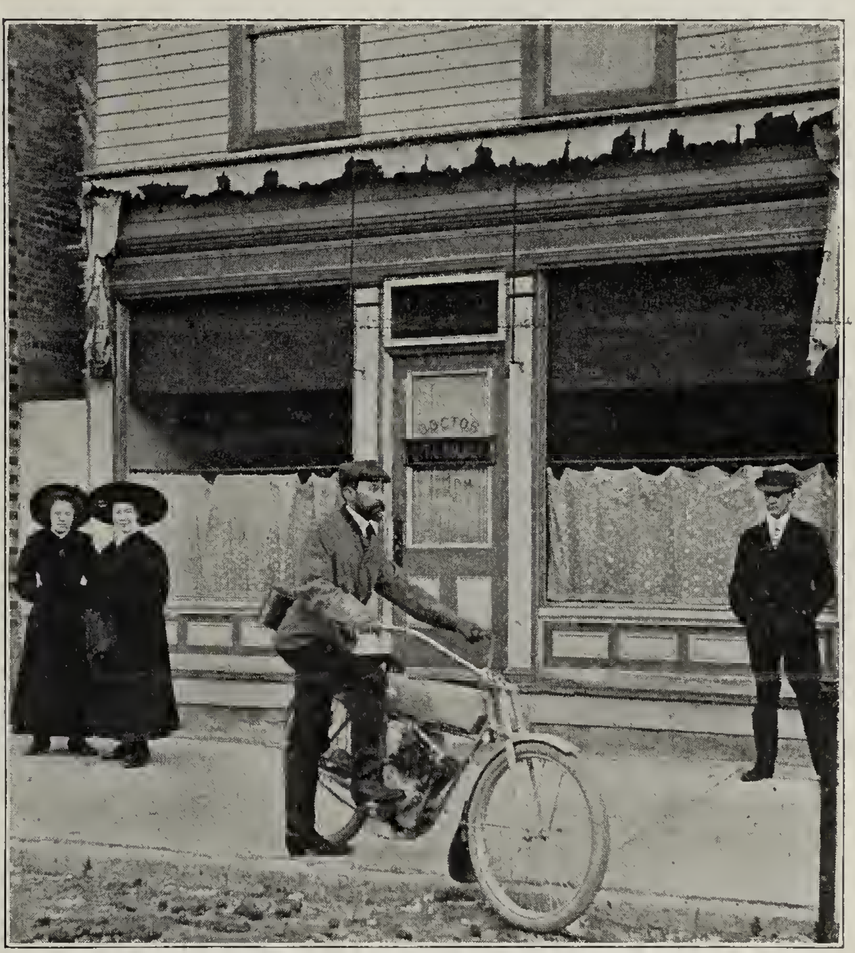

Fig. 11.—Called to see a patient ten miles away. Dr. F. C. Dolder, St. Charles, Minn., and his motor-cycle (159).

I always take entire care of my machine; I find it far less work, and work that I like better than caring for horses. When weather prevents the running of the motor-cycle I, of course, have to hire a team, but find that even so the cost the year around of using the motor-cycle and hiring horses when necessary is far less than keeping a team of my own and on the whole is many times more satisfactory.

I believe the wheel I have is as good as there is on the market, especially for a beginner, as it is very simple of construction and will stand a lot of abuse and hard use. For the coming year, though, I expect to exchange it for a four-cylinder (119) on account of the many improvements in it, and the desire for more power that becomes a craze with all motorists.

F. T. RUCKER, Mott, N. Dak.

# AUTOMOBILE AMBULANCE SERVICE

## AMBULANCE SERVICE AND ARRANGEMENTS FOR EMERGENCY WORK

SHORTLY after the new Jefferson Hospital was opened it became evident that we must supplant horse ambulances by power-driven vehicles. The location of the institution was such as to render stable facilities inconvenient, and the cost of contiguous ground for such purposes prohibitive. Manifestly it was impracticable to keep horses in any structure constituting a part of the hospital. As the cost of a garage outside the hospital would be the same as for a stable, it was deemed necessary to provide for housing the vehicle contiguous to or in the building. It was, therefore, decided to construct an ambulance marquise immediately contiguous to the sleeping-quarters of the intern on accident duty, and structurally a part of the receiving ward. The accompanying plan (Fig. 12) shows how provision for housing the ambulance has been made. The top of the marquise and the sides extending downward from the top to a distance eight feet above the ground are of wire-glass set in a copper frame. The side and the end, extending from the glass to the ground, consist of heavy duck curtains weighted at the bottom and readily pulled upward by cords (Fig. 13).

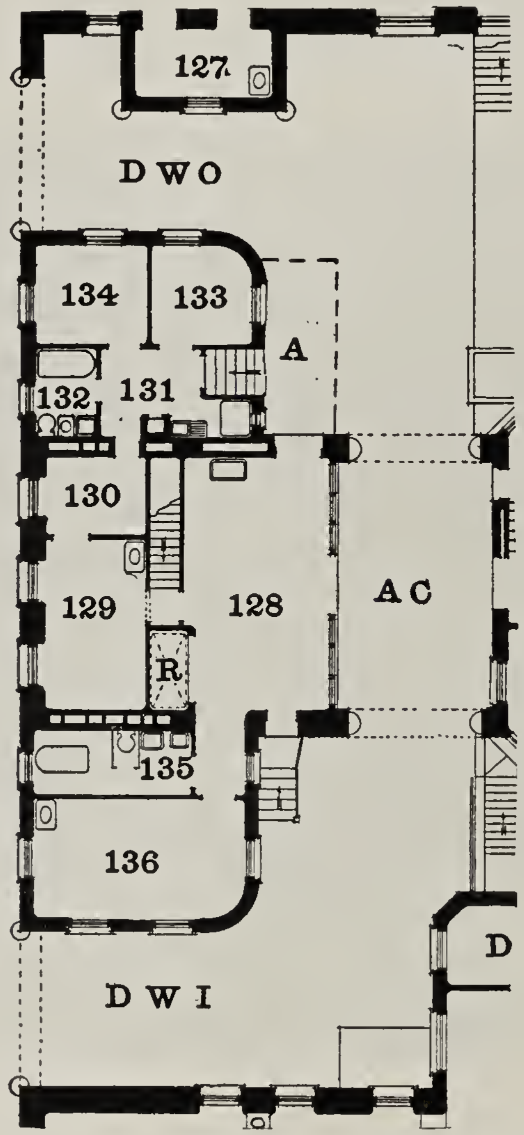

Fig. 12.—Floor plan of Emergency Department of the Jefferson Hospital, showing arrangement of rooms and accessibility of ambulance. Ambulance calls should be responded to in less than two minutes, day or night. D W I, driveway in; D W O, driveway out; A, ambulance enclosure; A C, ambulance court; 128, receiving-room into which all accident cases are primarily brought; 129, accident operating-room; 130, recovery room; 131, vestibule; 132, bath and toilet room for emergency intern; 133, sleeping-room for emergency intern; 134, sleeping-room for ambulance driver and emergency department orderly; 135, toilet and service room; 136, ward for the temporary detention of patients; R, elevator.

On one wall of the building is arranged a charging panel so that the ambulance may be charged at any time that it is not in service.

### CHOICE OF MOTIVE POWER

Having provided suitable quarters for the ambulance ideally located for promptness of service, it was then necessary to decide what type of power-driven vehicle would be best adapted to our purposes. Gasoline and steam-driven machines possess many advantages, most conspicuous among which is speed and quite as important, endurance in long runs. The hospital, however, is situated in the central portion of the city, so that the ambulance rarely covers more than two or three miles at one trip, and only exceptionally calls for patients at any considerable distance from the hospital. In machines having gasoline either as the immediate or the productive source of power this inflammable and explosive substance must be kept conveniently stored, and the vehicle should constantly contain a charge sufficient for immediate service. The hospital is as fire-proof as human ingenuity could make such a structure, but the danger of fire in an ambulance court, while not in any way involving the building, was such that after mature deliberation it was decided that no vehicle the operation of which involved this danger could be purchased. There were two other objections to any gasoline-driven machine; one, trifling and negligible, was the expense of maintaining satisfactory drivers, without which it could not be operated properly. The other objection was tire trouble. We were unfamiliar with any gasoline or steam machine working satisfactorily on solid tires. Pneumatic tires seem to be absolutely essential, and these are expensive; an ambulance cannot stop to make repairs, to change rims and tires, and consequently runs must be completed on deflated tires which insures destruction to inner tubes and frequently irreparable damage to shoes. On investigating electric ambulances it was found that solid tires were unobjectionable, although not possessing as easy riding qualities. The electric vehicle can be run by individuals totally unqualified for running gasoline machines. Although it is possible to obtain an electric ambulance so geared as to afford a speed exceeding fifteen miles an hour, the machine which was selected is so constructed that this speed cannot be exceeded. This action was based on the conviction that in the crowded section of the city, where 90 per cent. of our work is done, fifteen miles is as rapid as an ambulance should run.

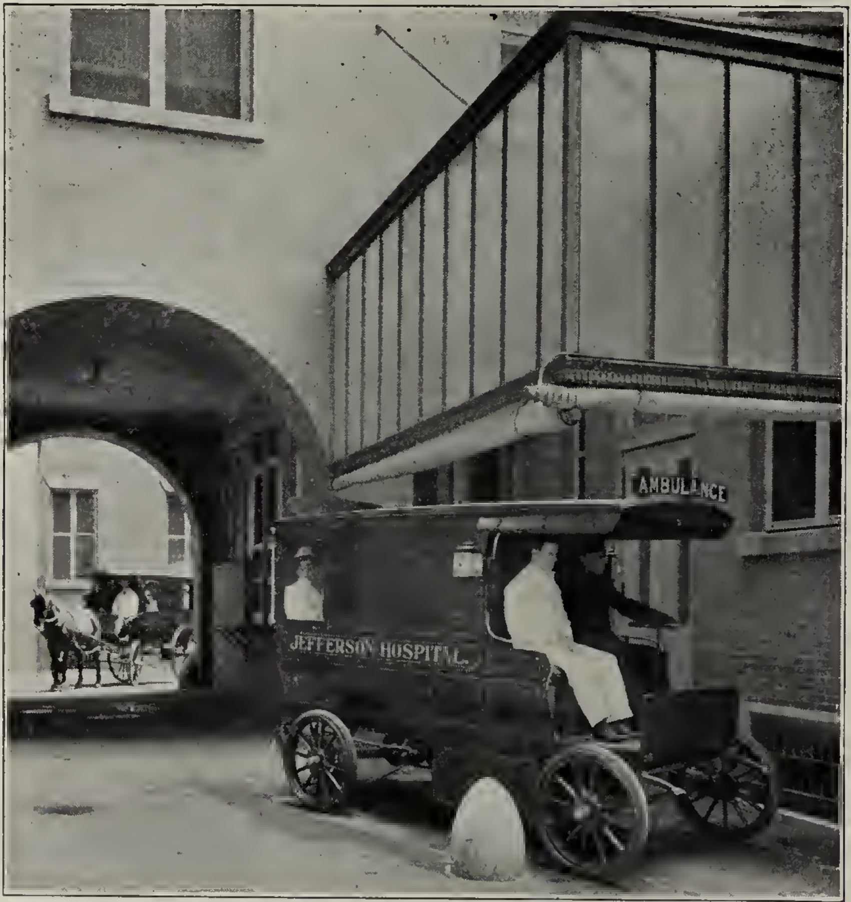

Fig. 13.—Ambulance court, showing marquise with curtains, for housing electric ambulance.

The ambulance on which are based the statistics presented has now been in service over two years. Part of this time a horse ambulance did considerable of the work.

The wheel base is 100 inches, which is too short; 10 or even 20 inches longer would be better. The springs on the first vehicle are not satisfactory; those on the second have proved more acceptable.

### COST OF RUNNING AMBULANCE

The first ambulance was placed in service Jan. 1, 1908. During the first year there were no repairs, and the total cost of the current for charging the storage battery was $29.92 approximately, or $2.50 per month. This made the operation of the vehicle a little less than one-tenth the cost of the horse ambulance during the same period. The next year, however, as a result of increased work and battery deterioration (the latter factor applying to part of the year only) the expense of charging was $45.60, or approximately $3.60 per month. In this year, however, were added several large items properly chargeable to maintenance. These include glass, $11.50; tires, $86.07; new battery, $452.38; and repairs $31, making a total of $580.95. The battery charge includes a new battery, and overhauling and restoring the old battery so that at the close of the second year a practically new battery, out of which should be obtained fifteen to eighteen months' usage, was available; the old battery had been cleaned, some new plates supplied and placed in such condition as to render it reasonable to suppose that it it good for at least six months. This makes the expense for the two years approximately $27.50 per month, which is, I judge, about the same as that of an ambulance using one horse; if there is any difference the expense of an electric vehicle is probably a little less than that of the horse ambulance. The tires which were used have splendid wearing qualities but are less resilient and consequently do not ride as well as some other makes.

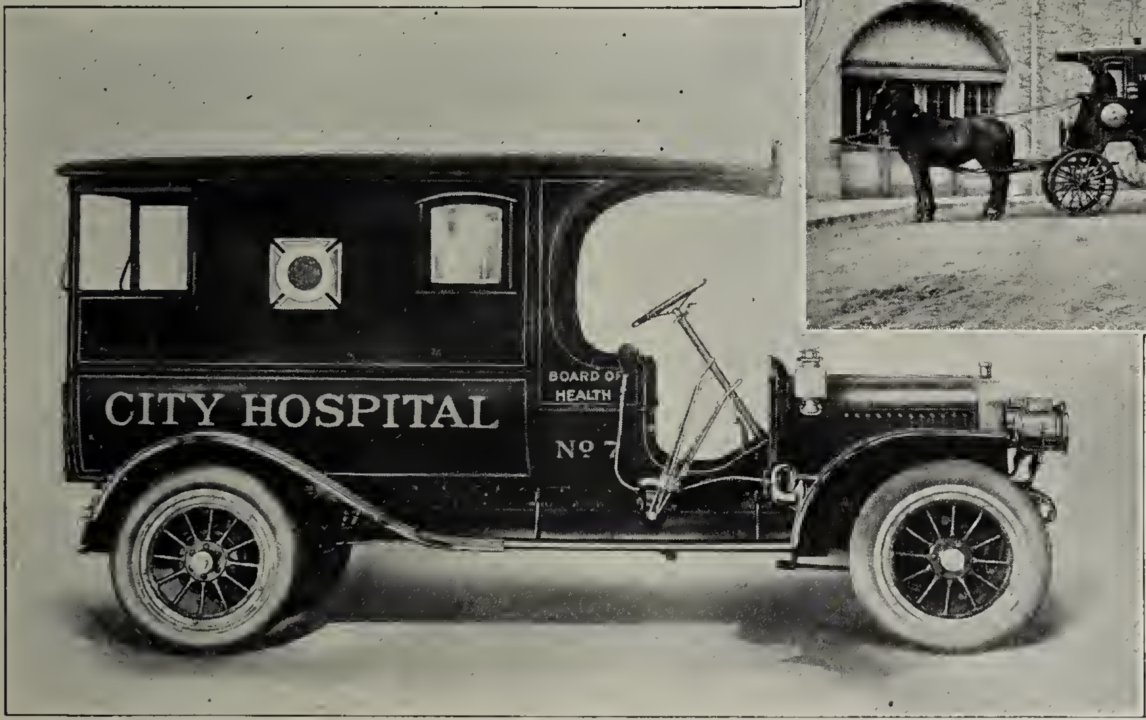

Fig. 14.—Automobile ambulance (177) recently built for the City of Newark, N. J.

### IMPROVEMENTS

The ambulance could be improved on, and in the new vehicle which has been in operation for several weeks, some improvements have been incorporated. The chain drive was a little noisy, but the main difficulty was that occasionally the chains ran off the sprockets, owing, of course, to imperfect adjustment. The windows were of glass; these we shall replace with celluloid. The new ambulance is shaft-driven and the clearance between battery-box and ground has been materially increased, an improvement which we regard as highly essential. The new ambulance possesses a longer wheel base. In the old vehicle the battery-box is so located as to prevent the wheels cutting under sufficiently to permit short turns; the new one is slightly better but still deficient in this respect. The old ambulance was guaranteed to make a thirty-five-mile run on average city streets; it came up to the guarantee. The manufacturers of the new vehicle guaranteed a run of fifty miles on a single battery charge; we think they promised too much. In the last five hundred runs I know of four instances in which the ambulance had to be towed in. One of these was an unusually long run (approximately 40 miles) over very hilly roads. In another instance the driver foolishly ran into a narrow alley in fairly heavy snow-drifts and used all the power in turning the wheels on a pavement so slippery that adequate friction could not be obtained. On still another occasion the front wheel was driven against an obstruction, the power kept on until eventually a short circuit occurred in the motor which consequently was burned out.

We have no desire to go back to horse-driven ambulances. I shall be glad to answer inquiries from those desiring information on the subject of automobile ambulances.

W. M. L. COPLIN, M.D., Philadelphia,
Medical Director of Jefferson Medical College Hospital.

## AUTOMOBILE AMBULANCES

AUTOMOBILE ambulances are coming into general use. The city of Philadelphia uses several. The Philadelphia Bureau of Health has two automobile ambulances, one a gasoline car which between Sept. 24, 1909, and Dec. 31, 1909, responded to 397 calls, covering a distance of 3,667 miles; the other, an electric ambulance, between June 1, 1909, and Dec. 31, 1909, responded to 395 calls, covering a distance of 3,654 miles. The Philadelphia General Hospital has a steam automobile ambulance (Fig. 15).

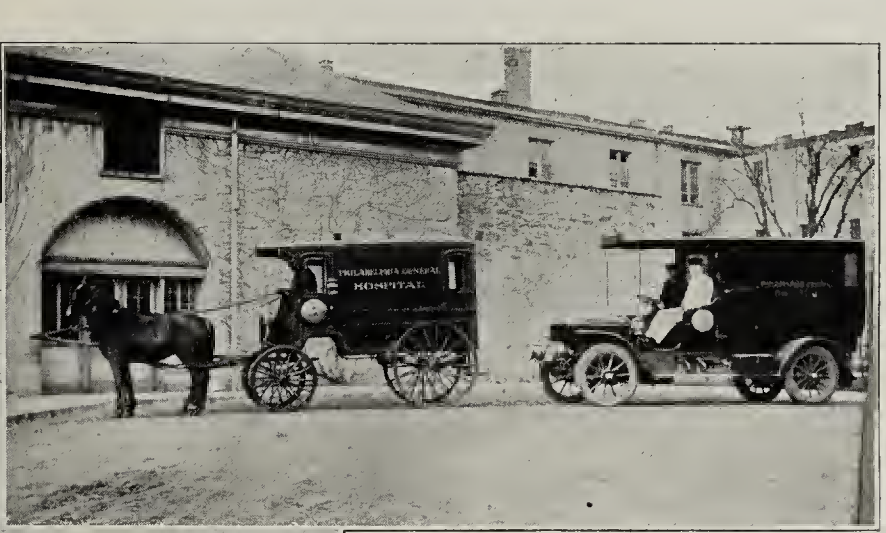

Fig. 15.—Steam automobile ambulance used by the Philadelphia General Hospital.

The Philadelphia Bureau of Charities has one 18 horse-power steamer ambulance, put in commission in 1906, and one 30 horse-power steamer, put in commission in 1908. These two machines answered 1,595 calls during the year 1909, covering a distance of 15,950 miles.

The Board of Health of the City of Newark, N. J., has used an automobile ambulance for a year, and a new machine (177, Fig. 14) recently received shows a number of interesting details. The wheel-base is 127 inches and the length of the body 6 feet 7 inches inside from front partition to tail gate. The width of the body is 40 inches at the bottom and 44¾ inches at the top. The bed for the patient is 6 feet 4 inches by 3 feet 2 inches and is made up on an ash frame 4¾ inches deep, upholstered in black leather, the inside of the bed being padded up to a point 18½ inches from the floor and the pads themselves being removable, for easier cleaning. Convenient use of the bed is procured by having it run on tracks.

Besides the physician's seat, which extends across the rear of the body, there is an emergency seat on the left rear side and a mahogany medicine case at the front partition. Easy riding is secured by pneumatic tires (179) and shock-absorbers, while quick repairs are provided for by demountable rims (180).

# THE KIND OF A MOTOR-CAR TO CHOOSE

## MERITS OF THE SINGLE-CYLINDER CAR

SINCE Dec. 1, 1908, I have been operating a single-cylinder, four-cycle, double side-chain drive runabout (142 *) with the cylinder set vertically under the hood. In this car the number of working parts has been reduced to the fewest possible necessary to run a machine, which means few parts to get out of order. My car has been used every day, summer and winter, except during my vacation, and has never been in the shop for repairs over a few hours. The cost of keeping the car going has been at least $10 a month less than the cost of keeping a horse and the service a great deal better. For general physician's work, every day in the year, I believe the single-cylinder is by far the most practical car.

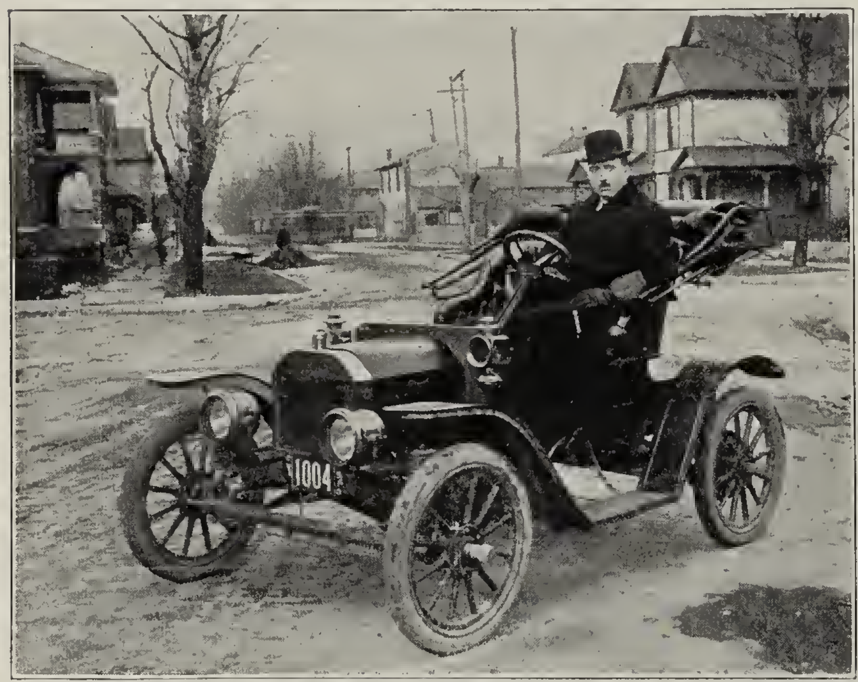

Fig. 16.—Dr. George P. Dale, Dayton, O., and his car (142).. The tires (143*) look like pneumatics, but are not, and do not puncture.

I could not write of the success and low operating cost of the single-cylinder runabout without giving due credit to the tires I have been using. I am still using the original set of tires (143 *), having covered between 12,000 and 15,000 miles, and they appear to be good for as many more miles. A physician cannot afford, for many reasons, to bother with the delays and vexations of pneumatic tires. With the tire which I use I do not know that there is such a thing as "tire trouble," as I have never experienced it. These tires look like pneumatic tires and are not solid, as they have air-spaces within them that give the resiliency of pneumatic tires.

With a single-cylinder engine and such tires, the physician can ask nothing better for an every-day, always ready automobile. George P. Dale, M.D., Dayton, Ohio.

## THE LOW-PRICED MACHINE

PERMIT me to suggest that more attention should be given to low-priced machines. There appear to be many physicians who are yet waiting for the advent of a durable and reliable low-priced car. The status of the higher-priced cars is sufficiently well established, but the existence of an automobile costing from $500 to $800 which fills the requirements just mentioned seems to be in doubt.

Again, it is not so much the first cost or up-keep of a motor car that deters physicians of moderate incomes from investing as the apparent fact of their short life. A first-class driving outfit can be purchased for $500 or less and with ordinary care will do good service from five to ten years; but very few owners of machines will run one longer than a season or two, either selling or trading the old one in on a new car. Therefore, it appears that automobiling is still too expensive a game for the average physician. Is there an automobile on the market now costing from $500 to $800 which is both reliable and durable? Let us hope that the Automobile Number will answer the question. A. W. Clouse, Geneva, Pa.

## DO NOT BUY A CHEAP CAR

SINCE 1902 I have owned and driven autos, including a one-cylinder 12 horse-power car (192), two two-cylinder 22 horse-power cars (193, 194), and a four-cylinder 30 horse-power machine (195). Before I bought my first car I kept two horses; after that I only have had one, which I felt I needed for the winter season when the snow is too deep and it is injurious to run an auto.

I have run my four-cylinder 30 horse-power car 7,000 miles since the time of purchase, May, 1909. I am pleased to say that my repair bill was $9.50, and this was for grinding valves and cleaning the carbon from the pistons and cylinder-heads. I had this done as a prophylactic more than a necessity, thereby avoiding future trouble from overheating and premature ignition, which is sure to come later and in many cars before they reach the 7,000 mile mark.

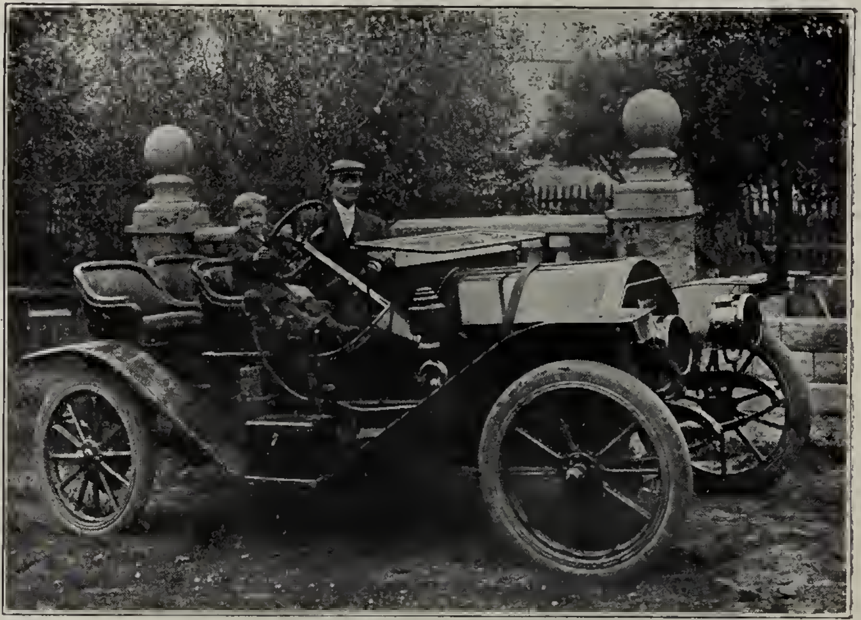

Fig. 17.—Dr. C. H. Eidam, Lawrence, Mass., and his son, in his thirty horse-power car (195).

I believe strongly in purchasing a four-cylinder car with plenty of horse-power with an arrangement to detach the rear seats when the machine is used for making calls. When I wish to take my family or some friends for a ride I can attach the rear seats in a few minutes and go for a pleasure trip.

I believe, however, that to receive the greatest value and pleasure out of a car one should buy a good one, that is, one built by a reliable manufacturer. One must be willing to pay a fair price (I should say between $1,500 and $1,800). I advise a four-cylinder car; then one should use plenty of gasoline, oil and water, keep the machine clean after going through the mud and let the rest alone; it is not well to tinker with one's car. The expense of running an auto is not more than that of a horse and carriage for the same number of miles traveled; in fact, I believe it is less. The pleasure derived from the auto, however, tempts one to go to the different beaches, mountains and other places 50 or 100 miles from home, and thus the auto naturally becomes the more expensive; but I believe it will keep anyone ten years younger, in better health and more able and willing to attend to his work, which well repays him for every dollar spent.

It is very important after purchasing a machine to have some one to explain the whole mechanism thoroughly; one must learn all its workings, and why one makes the different moves in throwing in and out the clutch and in changing speeds. Thus one will be better able to know when something goes wrong and where to locate it and possibly be able to adjust it before greater damage is done and save time and unpleasant annoyance.

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* For names of machines, see explanation in Editorial Department.

C. H. EIDAM, M.D., Lawrence, Mass.

## CHOOSE A MODERATELY HEAVY CAR WITH A LONG WHEEL-BASE AND BIG WHEELS

MY OBSERVATION of automobiles began with their first appearance on Cleveland streets many years ago, but personal experience dates back about five years, when I bought a two-cylinder 18 h. p. touring car (175). My experience with that car I will not relate, because five years ago in motoring is ancient history, and because that machine was no more like the one I now drive than the Bungtown Accommodation resembles the Twentieth Century Limited.

### GOING SLOWLY ON HIGH GEAR.

Last April I bought a 35 h. p. four-cylinder car (175) with baby tonneau or short coupled body. It is called a four-passenger car, but carries five comfortably, and can carry as many as will pile on. It has shaft drive, and selection type of transmission. It is said to be capable of a speed of 55 miles an hour. I never tried its speed limit but have driven it at forty miles an hour with five passengers up, which is fast enough for travel on any public highway by any one supposed to have regard for people's lives. This machine has three speeds forward and one reverse. While on the high speed one can slow down and creep along at the pace of a pedestrian, and thus, without changing gear, can pick his way through congested streets. It is claimed that this flexibility is due to an offset crankshaft and a straight line drive. I don't know why it does so, but it does it. In my daily round this machine plays with 20 to 40 miles of Cleveland's badly paved streets. Some days, with country trips, two or three times this mileage must be covered in short hours.

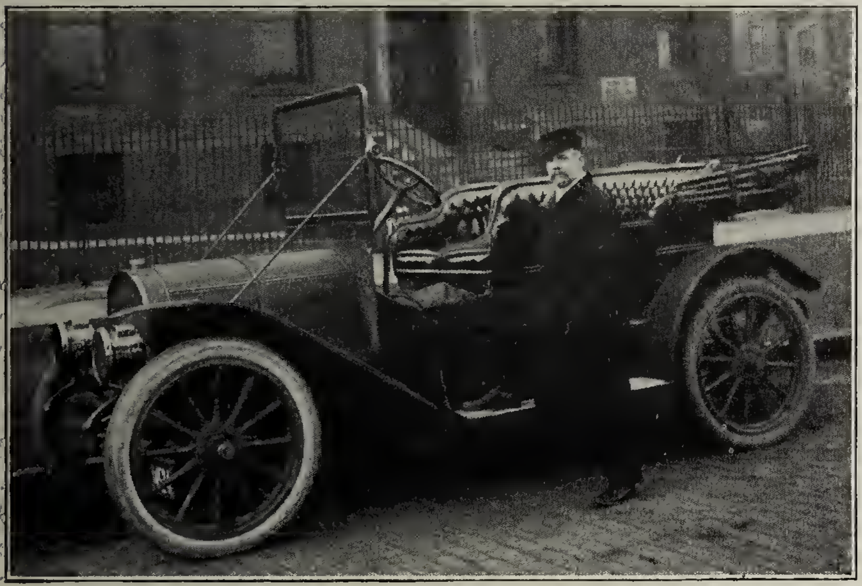

Fig. 18.—Dr. S. W. Kelley of Cleveland, Ohio, and his car (175).

### ADVANTAGES OF LONG WHEEL-BASE

This machine has a wheel-base of 112 inches, and its pneumatic tires are 36 by 4 inches. I like this long wheel-base and the big wheels; and I like the short body, bringing the rear passengers forward of the rear wheels. I would not buy a short chassis or smaller wheels. Nor would I buy a light car. If I needed vibratory stimulation I would take it in some moderate and better regulated way than by riding daily in a light car. Nor do I think there is much, if anything, saved in tires by a light car that bobs about all over the road. I have driven this car more than six thousand miles on all but one of the original tires (176) and they appear good for more yet.

### A GOOD WINTER CAR

This is a well-balanced car and will stick to the road and obey the wheel. I have driven it through the worst snow and ice of this wintry winter without skidding. Properly handled, these big wheels (which also insure plenty of clearance) and long wheel-base, will cross car tracks and turn at all angles on any street without skidding. The engine has run smoothly, quietly and powerfully.

SAMUEL W. KELLEY, M.D., Cleveland, Ohio.

## THE DESIDERATA FOR A PRACTICAL CAR

MY ORIGINAL idea was to purchase a low-priced car to use until I could satisfy myself that an automobile would be practicable for me in particular. I obtained considerable service from my first car, a one-cylinder, 7 horse-power runabout (132). After using this car a year the main ideas in my mind were that I would never again purchase a chain-driven machine; that the body of the car should have protection by ample mud-guards, and a pan sufficiently large to keep the engine and transmission dry and clean. The car was not large enough to create a good appearance, and seemed overloaded with more than one passenger. My principal difficulties came from the transmission, owing to a poor design of high-speed clutch. The vibration of the single cylinder, though not hard on the occupant, was hard on the car, for lamps, mud-guards, bolts, screws, etc., were gradually shaken loose.

The cooling of the engine was effected by the thermo-siphon system, which I feared might give me much annoyance by a winter freeze-up. A 50 per cent. solution of denatured alcohol entirely obviated this danger.

My second purchase was a second-hand, 20 horse-power, two-cylinder, two-cycle runabout (133), taken with something to boot, in exchange for my first car. The two-cycle engine has given almost no trouble, but consumes too much gasoline, in spite of careful regulation of the carburetor. The one great trouble I have had has been a slipping of the high-speed clutch—an intolerable nuisance. In other respects my troubles have been few, and easily remedied. If a man is to care for his own car he had best buy early certain accessories, such as a set of extension wrenches, files, soldering irons, vice, etc., for making small repairs. In case of serious trouble I have had the best results by taking the defective mechanism apart and referring the difficulty directly to the maker. On the road an extra shoe and a couple of extra tubes and spark-plugs seem almost indispensable. To me it is the delay when one ought to be riding, and clean, rather than the preparation and care at the garage where one can afford to be unhurried and dirty that make one dissatisfied with a car. I believe that the auto is practicable for the physician, and that it will become more so, for the great demand and the result of experience must produce a machine of greater and greater perfection. If I were buying again to-day I should select a shaft-driven car of medium grade and standard make, the main features of which had been tried out by a couple of years' use. I should want tires amply large, and lay very special stress on the accessibility of motor and transmission, and adjustability of wearing parts.

Fig. 19.—Dr. L. G. Beeley, Lawrence, Mass., in his second machine (133) described in his article.

L. G. BEELEY, M.D., Lawrence, Mass.

# A CLUB OF PHYSICIAN AUTOMOBILISTS

## THE PHYSICIANS' MOTOR CLUB OF PHILADELPHIA

PERHAPS the first organization of its kind in the country is the Physicians' Motor Club of Philadelphia, in whose organization I had an active part. I happen to be one of the two original physician motorists (172) of Philadelphia, having been through the process of evolution of the automobile since 1898, during which year I organized the Pennsylvania Automobile Club and conducted the first regular run ever held between Philadelphia and Atlantic City. At that time the participants numbered fourteen, almost the entire motoring community of Philadelphia and vicinity. Dr. J. Sylvester Deehan has been my co-worker since the inception of the organization, six months ago.

The purposes of the club are as follows: It seeks to influence sane legislation for automobilists in general and physicians in particular. The club has no desire to seek undue privileges for the members as drivers but to have privileges which should be extended to medical men when in the performance of their duty to the community. In many states, of which Pennsylvania is one, it is only by police indulgence that the fire-engine has the right of way to save property, and the patrol and ambulance the right of way to save life. Now the sum total of emergency work done by practicing physicians in a large city in twenty-four hours is far in excess of the emergency work done by ambulances in the same city during the same time. Of what service is the ambulance which rushes to pick up a patient to transport him to a hospital when the medical or surgical chief, on his way to administer the real service to the patient, is held up by an officer at a number of intersecting streets to allow a coal-cart or an ash-cart to pass? It is the intention of the Physicians' Motor Club of Philadelphia to have each member of the organization carry insignia on his car only when in use by the physician and to remove it or turn it at all other times. Each doctor is pledged not to exceed the legal speed limit when in the usual performance of his daily routine work. Each member of the club is to act as a committee of one to report a member who might be guilty of a constant infraction of the present law. When a name is handed in by a club member or when a member is repeatedly brought to the attention of the police department, he is requested to appear before the committee on law and ordinance who have the disposition of his case. By these stringent regulations, it is evident that any tendency to speed mania will soon succumb to active treatment.

Fig. 20.—Dr. F. O. Wright, Wilmington, Ohio, and his machine (158), with his house and office in the background.

There is a time-honored custom giving the doctor the courtesy of the road, and it is the firm belief of this organization that after there has been a sufficient demonstration of good faith on the part of the members, this custom may be made a law.

The social side of the club is also taken care of and runs are being arranged for during the coming season. These runs will have the effect of letting the men get acquainted with each other and with their machines. Many medical men have the desire to enjoy the country with its relaxing influence but are timid about venturing out alone—a characteristic of all medical men.

The commercial problem is being taken care of and each member has an opportunity afforded him to learn to run a car on an economical basis if he is the driver; or if he employs a chauffeur, he can buy supplies without the help of this "trusty."

Lectures are given by mechanical men from time to time on the "A B C" of the motor car. The etiology, clinical course and treatment of all acute motor and gear diseases are discussed. The preventive treatment of mechanical and tire troubles are thrashed out; and in every way the member is placed in a position which makes him master of the motor car which has become part of his business outfit.

The club, as an organization, takes no part in the buying of supplies or sundries, but arrangements have been perfected by which a member can buy all the necessaries for a motor car at the regular wholesale figure. He is also taken care of when purchasing a new car.

It is the purpose of the club to encourage the formation of similar organizations throughout the country with the ultimate purpose of an affiliation of the separate club; for "in union there is strength." A series of horn signals to be used by moving motor vehicles is being compiled, the purpose being to have them used in a manner similar to those used by vessels, in this way giving notice to pedestrians and to other vehicles, which will minimize the number of accidents and prevent many collisions.

S. LEON GANS, M.D., Philadelphia.

## A LIGHT MACHINE WITH PLENTY OF POWER

FROM my experience I find a light machine with lots of power is what is needed. I have bought a 20 horsepower car (208) with pneumatic tires; it has 4 cylinders and weighs 1,100 pounds. The main objection to the solid-tire machine is the slowness. A busy man cannot spare the time which the solid-tire car requires; and a pneumatic will go when any machine ought to go. I find that my car does not consume half as much gasoline and oil as did the other machine. My work is all in the country and I find it more convenient and profitable to hire a team when the automobile cannot make the trip. I would advise a prospective buyer to get a good machine, the best his pocketbook will allow. I made a mistake in getting the high wheeler and cannot recommend it for a physician's use.

C. O. NELMS, M.D., Herscher, Ill.

## THE MOTOR CAR BOTH A LUXURY AND A NECESSITY

MY MACHINE (158), purchased last April, has been both a luxury and a necessity. It can easily do the work of three horses, and its use has enabled me to take pleasure trips that would have otherwise been impossible. Comparisons are no longer odious, given a good machine, the owner familiar with its mechanism, and willing to soil his hands occasionally, to make needed adjustments and repairs. Any one who listens to the agent's story that his particular machine is "fool-proof" will be sorely disappointed.

The physician's machine should have 32 by 3½ inch wheels, base 100 inches, water-cooled four-cylinder *en bloc*, not less than 20 horse-power with the elimination of all unnecessary weight. Avoidance of "speed-mania" will add years to the life of the machine. F. O. WRIGHT, M.D., Wilmington, O.

# AUTOS IN EVERY PART OF THE COUNTRY

## AUTOMOBILES IN WYOMING

From 1902 to 1906 I practiced medicine in the Carolinas. On account of the nature of the territory, I confined myself entirely to horses, for automobiles had not then reached their present stage of efficiency. Even now, I doubt whether a machine would be practicable there. Certainly it could not be used exclusively, for off from the few main thoroughfares that have been macadamized, the frequent rains combine with the red clay soil to form a sticky mud, hub-deep for a third of the year.

Early in 1907 I sought health for my family in the "golden west." We traveled for some months in several of the Western states, but chiefly in Colorado. In that state we used an automobile to a considerable extent, and found the roads excellent, and an automobile entirely satisfactory.

In Wyoming we found climatic conditions ideal for our purposes. I found a suitable location in Wheatland, a town of 1,500, the center of a large territory. The radius of my practice is about a hundred miles, so that the question of a method of transportation quickly became paramount. In the early part of 1908 I was using six horses to do my work. It was then that I decided to try an automobile.

My knowledge of automobiles was exceedingly limited, but I have a liking for mechanics and some skill along that line. In Denver I purchased a car which a chauffeur ran with me through the country to Wheatland, but even his skill could not hide its two main defects, lack of road clearance and deficient horse-power.

For the summer I disposed of my horses and during that time my troubles were legion. I cannot remember that I ever ran my machine for one whole week without having enough trouble to last a man six months. Presently I was forced to purchase two horses, as my livery bills were enormous. I used the machine about town and on selected trips, when it seemed to be in the notion of running (I say "notion," for that auto appeared as animate and perverse as a balky horse). Something was always going wrong, and the machine has cost me $50 a month since I have used it. During the winter I have abandoned it entirely, going back to horses, and have been more comfortable in my mind if not in body. I have not given up using an automobile, however, for since making a thorough investigation, I have decided that hitherto I have owned a junk wagon and not an automobile.

I recently purchased in Denver a four-cylinder, 35 horse-power car (137), equipped with roadster body; and I am satisfied that this one will do what the other one did not. Still, in this territory there are certain trips that it is useless to undertake with the auto. Very often the road for 50 miles will be admirable, and then one comes to an unbridged stream, a gulch or a sand-draw that is impassable, and the nearest ranch-house may be from 10 to 30 miles away. In this connection, let me say that I would not recommend an automobile to any man in this country who was not himself something of a mechanic. Often, my troubles have occurred when I was twenty miles from help, and I would have been in an embarrassing predicament, could I not have done my own repairing.

I do not see that a machine has greatly increased my income or that it is in itself much of a saving. At least two horses are a necessity all the time, and during the three bitterest winter months horses alone can be depended on. Still, during the summer, it saves the busy man much valuable time, and one machine can do the work of six horses. Moreover, in this country, where help is scarce, the busy physician is saved time in his farmyard as well as on the road. Where a hostler is not to be had it takes a good deal of one man's time to look after six horses and their road equipment. Also it is a satisfaction to patients as well as to oneself to have the doctor within easy reach in case of emergency. The rest and relaxation, too, in driving a machine, is not a factor to be despised by a busy man. Nothing so quickly brushes from your mind the worry of your cases as the ribbon of road before you and the rush of wind in your face.

For a year my machine was the only one in town, but now there are twelve. Of these, only four have stood the test of our rather peculiar conditions: three 35 horse-power cars (138) and one 45 horse-power (139). The high-wheeled machines have not proved themselves here, nor has anything except a low-wheeled gasoline car. From my experience I would advise a medium-priced, medium-weight roadster, with particular attention given to road-clearance and hill-climbing ability, and with power enough to plow through deep sand and face the heavy winds of our breezy springs.

F. W. Phifer, M.D., Wheatland, Wyo.

## THE AUTOMOBILE IN THE MOUNTAINS

Before deciding what kind of a motor car he is going to buy, the physician should take into consideration the condition of the roads in his neighborhood and whether he intends to use the machine all the year round or only during good weather. I have had five years of experience with the automobile and so far as I know am the only physician in central West Virginia who uses one in his practice. Our roads in this part of the state are very poor, even at their best, and during the winter months they got almost impassible for all wheeled vehicles. Until last September I used a low-wheeled runabout (183) which made good only during the summer season. I had much trouble with the pneumatic tire.

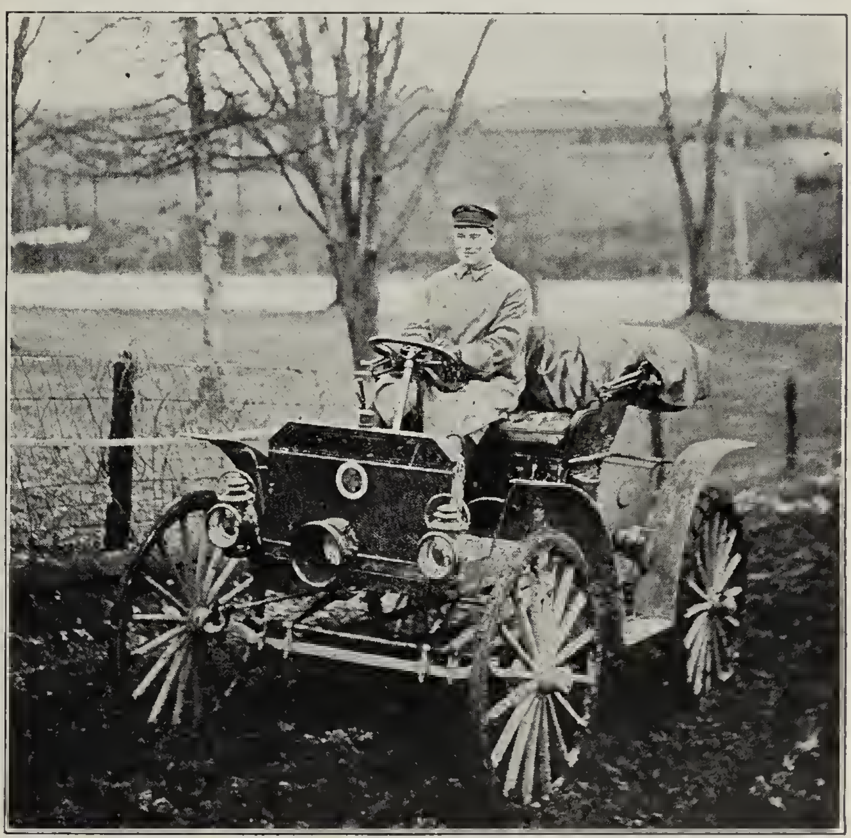

Fig. 21.—Dr. Beer climbing a "stiff" grade through West Virginia mud in his motor buggy (184).

The first of last September I bought a 20-horse-power friction-drive motor-buggy (184), which has 74-inch wheel-base and 38-inch wheels shod with 1⅜ solid tires, and is solidly built throughout. It has given me good satisfaction. I have run it every day since that time and it has not failed to go over the roads, no matter how steep the hills nor how deep the mud or snow. My expense has been about 3 cents per mile, counting everything. In my opinion there is no automobile made that can beat a good motor buggy for all-the-year-round hard usage such as vehicles receive in this part of the country. My machine rides as easy or easier than any low-wheeled pneumatic. It makes some noise, it is true, but that is nothing compared with the noise made by the owner of a pneumatic when he has a puncture some dark rainy night on a muddy road with a case of renal colic waiting at the other end of the road.

Oscar B. Beer, M.D., Buckhannon, W. Va.

## THE AUTO IN NORTH DAKOTA

In the language of our Methodist friends, my faith in the auto "hath the gift of continuance." Thirteen years ago my horses went into the discard and I have depended on the auto for transportation since then with yearly improvement in results. For the past three years, summer and winter, night or day, rain or snow, my auto has done my work within the city without fail. In fact, its limitations are becoming more and more narrowed yearly. It has now reached such a stage of development that it has long since ceased to be a toy or even a luxury, but has taken its place among the necessities. All standard makes of autos are now built to run and any one of these will give satisfactory service. In accordance with my intention expressed in last year's article, early in the spring of 1909 I purchased a two-cylinder roadster (185) with 32-inch wheels and regard it as a model car for service such as ours. This winter I have installed a coupé top and am now quite independent of the elements. The cold weather starting device before reported (The Journal, March 6, 1910, lii, 830) continues to be a success. My car stood out the other day several hours with a temperature 27 below and it was off at the first full turn of the crank. My longest single run in answer to a professional call during the year was 108 miles, made in four and three-quarter hours. While I find the auto so necessary in business that I would not be without one for many times its cost, it is in the way of recreation that I value it most. Two years ago I purchased a two-cylinder five-passenger touring car (185) and can say that it has been a never-ending source of pleasure. Its up-keep for the two years aside from tire troubles has been just $1 and it has been in constant commission. In summer when the roads are in good condition on Sunday afternoons this car is almost invariably driven from 50 to 100 miles and our delightful long summer evenings generally utilized in the same manner. On returning from a long and satisfying ride I am apt to think it will suffice for a day or two at least, but the next evening my hands itch for the wheel and my ears long for the purr of the motor and the car affords relief. Possibly I am overdoing the matter, but I enjoy it.

H. M. Wheeler, Grand Forks, N. Dak.

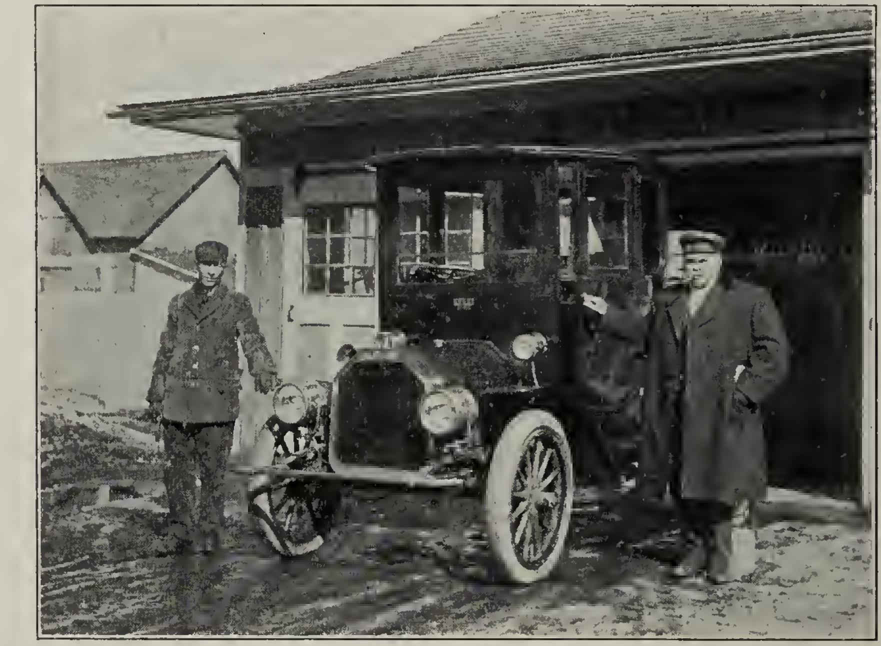

Fig. 22.—A North Dakota physician's car. Dr. H. M. Wheeler and his roadster (185).

## A GOOD BUSINESS PROPOSITION IN MASSACHUSETTS

When I desired to buy an automobile I determined to make as small an outlay as possible, and yet have the car good enough to make the experiment of value in determining whether the pleasure derived and time saved by the use of the automobile justified the cost. I expected to be my own chauffeur and to keep the car in my barn. In June, 1908, I purchased a four-cylinder roadster (134). I have used it ever since, chiefly over city streets in poor repair, and have been abundantly satisfied with the result. Like many another, I dislike to think of driving a horse.

It has been possible to use the car regularly about nine months in the year and at intervals during the remaining three months; fresh, deep snow being the only serious obstacle to operation.

Though no accurate account has been kept, I am satisfied that in running expense it has actually cost somewhat more than the keep of one horse ($25 per month at livery stable), yet considerably less than would be required for two horses; also that, mileage considered, the car was little, if at all, more expensive than one horse and carriage.

Comparative freedom from trouble has been accomplished by treating the car decently in driving it and by abstaining from experimenting with the mechanism in any, even the slightest degree. At first the car was looked over by a competent mechanic every two or three weeks, to see whether all was in order. After that when anything wrong appeared the same mechanic made the adjustment—my part being simply to put in gasoline, oil and water. Practically the only embarrassments were due to tires, and these were not frequent or serious.

Judging from my own experience, and considering a car as a business proposition simply, i. e., for use in professional work, it is my belief that cars of this type are the most practical for the average physician, on account of low first cost, low cost of maintenance, ease of management, and ready salability if a change is desired. For touring, a larger car would be preferred.

With this in mind I have this year exchanged my car for a demi-tonneau detachable (135). If this car in its somewhat larger field gives as much in return for the money as did my little last year's car I shall be perfectly satisfied.

F. D. McAllister, M.D., Lawrence, Mass.

## ON THE SANDY ROADS OF SOUTH CAROLINA

For ten years I have owned an automobile, driving first a one-cylinder steam machine (128), then a two-cylinder machine (129), and now I am the owner of a four-cylinder (130). My two-cylinder car (129) I have used for four years and about four months. In that time I traveled in that one car over 30,000 miles. It cost me on an average not more than $15 a month. I have the sandy roads of South Carolina to travel on; also I have to cross the branches (or brooks as they are known in the North), which are hard on the tires and in rainy weather get in the way of the carburetor.

I was never towed home in this car; my distances have been as far as 60 miles, and only once when I got into a deep brook did I ever require any artificial help to move my automobile, and I have never had any driver other than myself.

Of course, I have my man clean my car and fill the tanks, but he never puts his hands on any part of the machinery to adjust it without my presence.

It would be impossible for me, after these years, to do without a machine. After trying all the tires, I believe, made, there is no tire, in my opinion, can compare with the tire which I now use (131). A doctor wants a light weight car; the principle of my last machine is the right principle to give light weight.

One should never economize in oil or the quality of oil; it is cheapest to buy the highest-priced and the most efficient and use it always in excess. No matter what other people say, an excess of oil will save the machinery. That is the only reason that I have had such a low cost and so little trouble.

The original cost to me of this machine was $1,100, and on sale in the fifth year I was allowed $350. No horse or set of horses, in the extreme heat in which I went on my trips, could have equaled the amount of work, for this expenditure of money.

Walter Cheyne, Sumter, S. C.

# SOMETHING ABOUT GARAGES

## THE GARAGE PROBLEM

My garage had to be fitted into an angle of my residence at the rear. This gave me a space of 12 by 10 feet and made the side of the house even with the front of the garage. This, of course, does not give me much space except for the car (101); yet on one side, under the windows, I have a small work-stand with drawers.

The floor is covered with cement, and, as the sewer happened to be under that part, I had a drain installed at small cost. This makes it always easy to wash the car and get rid of the water, as the floor is slightly inclined toward the drain; thus no oil or grease will accumulate on the floor.

My residence forms practically two sides of the garage except for the door leading out from the garage onto the step into the entry. There are two full-sized windows on the east side, giving plenty of light. The roof is slanting and the heat comes from the furnace, while a hole in the foundation allows the cold air to escape into the cellar.

The temperature has been about 50 all winter and the car is always ready to make a trip, night or day. The night work alone makes a car kept at one's residence a fine thing, as one can often make a night visit while one might otherwise be still waiting for a horse from a livery stable. This extra sleep helps out on the next day's work.

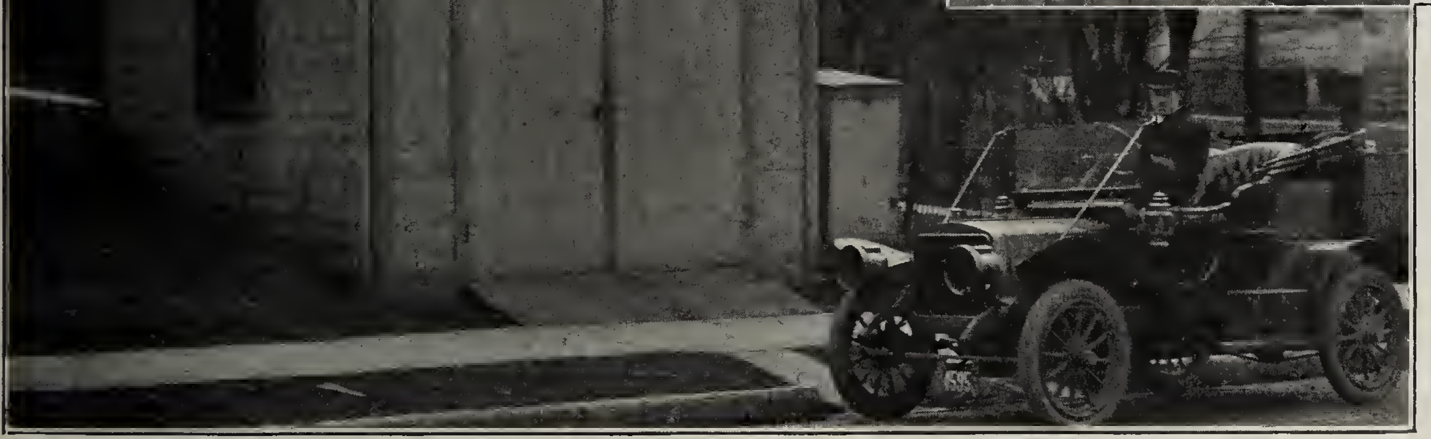

Fig. 23.—Garage and runabout (141) of Dr. Moses Salzer, Cincinnati.

During my first year I experimented with a 60-gallon gasoline tank, kept in a small shed on the edge of my lot, but one unpleasant experience persuaded me to buy gasoline from the dealer. My caretaker tried to fill the car at night by lantern light, with the usual result—a fire.

I have also tried patent acetylene generators. They froze up in the winter, or the water did not feed properly when needed. I am now using a gas tank, but my next car will be fitted with electric lights, which I believe is the solution of the light problem.

A. P. Overgaard, M.D., Fremont, Neb.

## THE ACTUAL COST OF RUNNING AN AUTO

When in the fall of 1908 I was considering the purchase of a machine I was astounded at the ignorance on the part of physicians and others in regard to the cost of running a machine. No one could give me any accurate figures; all was guesswork. The "guesses" varied from $10 to $150 per month. Some based their conclusions on accurate accounts which they had kept for at least two months; others, on their check-books and receipt-files, etc., but no one had kept an accurate record extending over the period of a year or more. It was therefore with a great deal of misgiving that in November, 1908, I purchased a second-hand runabout (141), which was almost new, having been used only three months.

### CATALOGUE WEIGHTS NOT RELIABLE

The machine is rated as a 20-horse-power car, although its cylinders, of which there are four, measure 4 by 4. The car is catalogued as weighing 1,600 pounds, but its actual weight is 2,300 pounds. This fact and also the comparatively small tires (30 by 3½) may account for the large tire expense. I would advise prospective purchasers not to rely too much on catalogue weight or other statements.

From the very first day I have kept an accurate record of what it has cost me to run my machine. For the first five months I kept it in a public garage at a cost of $12.50 per month. Since then I have kept it in my own garage, which has reduced my operating expenses somewhat.

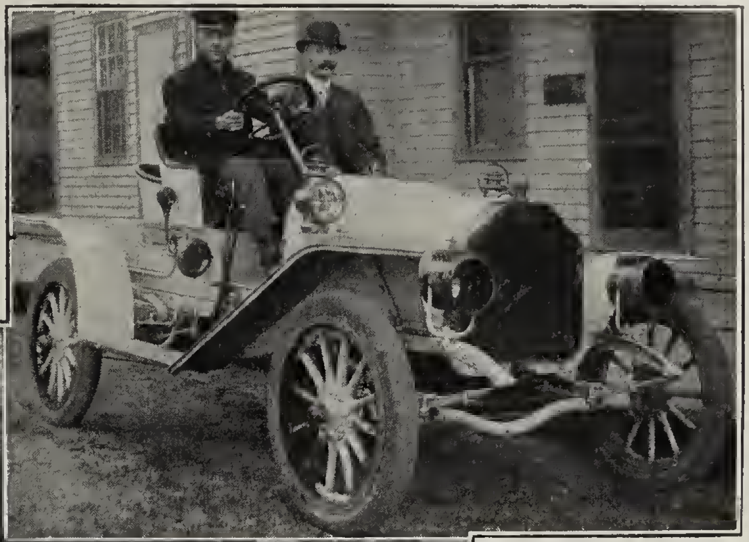

Fig. 24.—The car (120) driven by Dr. H. A. Schneider, Jordan, Minn., in front of his office.

### GARAGE A GOOD ECONOMY

The garage (see illustration), built for me by an architect of this city, has a framework of wood covered with sheet metal, making it almost fireproof. The floor is of wood with a drain running down the center so constructed that water and oil drain off immediately. It measures 12 by 14 feet by 10 feet high at its highest point and is portable, in that it can be jacked up, rolled onto a truck and moved as a whole. The cost of this garage (which has already paid for itself), the machine and its equipment, has not been charged to operating expenses but to original investment.

OPERATING EXPENSES FOR ONE YEAR—NOVEMBER 1908, TO NOVEMBER, 1909

| | Yearly. | Monthly. |
|---|---|---|
| Tires | $219.79 | $18.32 |
| Gasoline and lubricants | 103.71 | 8.64 |
| Ignition system (batteries) | 13.04 | 1.08 |
| Repairs | 61.44 | 5.12 |
| Storage and cleaning | 75.08 | 6.26 |
| Sundries | 57.58 | 4.80 |
| Total | $530.64 | $44.22 |

Average cost per mile, .073

As to the actual operating expenses, I am tabulating above, under various subdivisions, what it cost me to run my machine the first year. In this connection I wish to state that no one but myself has run my machine and that all minor repairs I have made myself.

No comment on these figures is necessary except to state that Cincinnati, on account of its many hills and poor streets, is hard on automobiles. Of course, strictly speaking, the depreciation in value of the machine and its equipment ought to be charged up to operating expenses, but no one can tell as yet what is the life of a modern machine. I know, in the case of my own machine, that it is working as well and to all appearances is as good as the day I bought it, fifteen months ago.

To show how fallacious are estimates based on a few months' operating expenses, my accounts show that during June, July and August, 1909, I spent a total of $64.14, or about $21.50 a month, which is less than one-half of the average monthly expense based on one year's total.

Moses Salzer, M.D., Cincinnati.

## ECONOMY IN THE USE OF THE AUTOMOBILE

FOR EIGHT years I used a team in my practice at an average cost of about $20 per month. June 2, 1909, I disposed of my team and purchased a 4-cylinder 22-horsepower runabout (120) and used it continuously until December 1. Since that time we have had exceptionally deep snow, making country roads impassable for a machine and so I have to depend on livery teams for country trips. During the six months I used my car I found it very satisfactory, exceeding all my expectations. I never had to be towed into town, although I had to get a farmer with a team to pull me out of mud-holes twice owing to my own neglect to put on the mud-chains before getting into the mud-holes. A few figures will tell the story.

The cost of the car and equipment was $1,076.95. I drove my car about 5,200 miles, used 287 gallons of gasoline, running 15 to 25 miles on 1 gallon, depending on the condition of the road and load carried. The total expense was $107.75, or $18 per month, less than 3 cents per mile. I had only two tire punctures, which were easily repaired and with little delay. After one of them I came home, 7 miles, in thirty minutes "on the rim;" but that is poor policy, as it is very likely to cause dents and irregularities in the rim, making it difficult to remove or replace the tires. Compared with a team a car like mine has the following advantages:

1. It saves time by its greater speed; it is not necessary to tie or blanket it or to stop for feed or rest, as the machine can be fed sufficient gasoline and oil in five minutes to run 100 miles or more.
2. The machine gives more pleasure. Arduous country work is changed into pleasant "joy rides."
3. It is safer, if one drives carefully, as a machine is "not afraid of the cars" and will not shy at dogs or pigs.
4. It gives cheaper running expenses, as there are no expenses when not in use.

The disadvantages are, first, that the first cost is greater for a good, serviceable car, and, second, that about three to four months in the year in our territory it cannot be used on account of the poor roads.

I should advise a prospective purchaser to select a car with a three-speed transmission, as it is very convenient to drop to the intermediate speed on steep hills, in mud, and on very rough stretches of road. The first speed is too slow and also easily overheats the engine when used continuously for a long distance.

It is best to buy from one's home dealer, as he will be more likely to look after one's best interests in the line of supplies, extras, etc., and it is also convenient to have some one near in case one should wish to register a kick.

Study your car carefully and you will soon be able to diagnose its ailments readily (for it certainly will have a few), and, as in the practice of medicine, once a correct diagnosis is made the treatment is easily and satisfactorily applied. Subscribe for a practical auto journal; you will find it useful and interesting.

H. A. Schneider, M.D., Jordan, Minn.

## AN AMATEUR'S EXPERIENCE

I BOUGHT my car, of standard make, early in July, 1909, and was proud of her beauty, finish and subtle strength. After a couple of weeks of practice I found that there was something wrong with her pulsation. There seemed to be a sort of accentuation of her second sound, and wise ones told me I had a "knock." I knew that the knock did not belong there or the agency would have charged me full price for it under the head of "accessories," so I telephoned the agent and he kindly sent over a man (at my expense), who greatly to my admiration, immediately located it in the timer, took the offending member out and did things to it, put it back, ran her around town and said, "Knock's gone," and took the train for home.

### A DIFFICULT DIAGNOSIS

The knock was not gone, however, and a wise friend said that it was due to the valves; that they needed grinding. So we ground the valves. Another said, "Carbon on the cylinders." The agent again said it was in the timer and put in a new one. In fact, one after another of the wise ones laid it to everything in, on or under the machine, but the tires and the top. The company was courteous and fair—pay freight and ship it to them, and they would put it in first-class shape. In the meantime a machinist and myself had taken her engine out, inspected every bearing, tried every nut, bolt, bar, pin, key and connection on her, without result. There was no play in cylinder, piston, rings, main-shaft, cam-shaft or anywhere else. She had been kept well oiled, was clean, and was made like a watch. We put her together again and I took her 105 miles to the nearest subagency, and found out that the timing gear was loose, but they did not have time to attend to the matter then. When I drove home and again personally inspected it, I found the timer beautifully made and keyed on with such strength that I looked for it to wear longer than any other part of the machine. I wrote the company and they suggested taking her down to the subagency again and leaving her there until they could thoroughly overhaul her. This I did, and after eight days I was notified that my car was now in first-class condition—"Call and get it." This was done without expense to me beyond that of driving her down and back and paying for some small new parts.

### COMPLICATIONS

But that trip back! On the smooth pavements she ran well, but I thought a trifle stiff. At the first hill beyond the pavements I was surprised to find that I had to go into low gear, but thought, "She is stiff and will soon limber up;" but she did not seem to limber up as I went on and soon one of my soot-proof spark plugs began to foul, and then things were worse—no speed, no power and finally she came to a dead stop. Inspection showed every cupped recess around the spark-plugs full of oil, which had leaked up the threads, every porcelain covered with an oil film, drops of oil coming from some of the cap screws, and the fan belt off. All the plugs and three very loose sleeves or bushings of the plugs had to be tightened, and several of the cap-screws holding on the cylinder head likewise. It seems wonderful that I had power enough to run on the level. My sooted plug was not giving much trouble, and I concluded to run on a few miles before changing to a clean one. After a few miles there came suddenly from under the hood a din, which I knew must be a loose fan. My fan bracket was so loose that the fan blades were striking the radiator fins.

### CURED

The boys had put it on to me good and hard, though I thought I had been fairly liberal. I had been nearly two hours going twenty miles, and though it was bitter cold, I was warm—hot—but my repairs were finished. I was 85 miles from home, and it was nearly one o'clock, yet in spite of stops, bad roads, and getting off the road a couple of times, I drew into my yard at 5 o'clock, and there was no knock. Where was it? Not even the machinists ever found out.

This was a good car of good material; the makers were fair and willing to do anything reasonable, and I would not hesitate to buy the same make again, but should a knock occur, I would ship it to the makers for them to make good.

W. W. Dees, Ellenville, N. Y.

# SOME CAREFUL ANALYSES OF COST

## COST OF MAINTAINING AN AUTOMOBILE

FREQUENTLY I am consulted on the possible cost of up-keep of a car as compared to a horse. A comparison of cost is rather a complex subject, as the conditions of the two methods of locomotion are so different. Any physician can drive a horse even though he possess no horse knowledge; and, when the driver is tired out and falls asleep on his way home, the chances for accident are slight, as the animal usually takes up the trail, but up to the present time no manufacturer of motor cars has designed a craft with anything but mechanical features, all of which must be guided by a watchful eye and a careful hand. Of course, the use of a car will bring the doctor home at a more wakeful hour, even doing the same amount of work.

In order to reach a fair comparison of up-keep between a car and a horse, the physician must either learn to take care of his car or have some one who will do it for him. This same obligation applies to a horse. The wage of a man to care for a car has a graduated scale of limitations; so has the wage-scale of a hostler; the extremes for both are practically the same. The motor car will cost just so much a mile for usage. The horse will cost so much a month, whether in or out of service. The weather has more limitations to the driving of a horse than to the driving of a car. Exceptionally high snow-drifts will create a condition in which a horse may travel better than a motor car, but these conditions in the temperate climates are rare. A very hot day or a very slippery one may cost the price of a horse either as a result of heat stroke or a broken leg. With a horse this condition means, "shoot it." With an automobile a similar break-down means, "fix it."

The average man buys a machine for business purposes, and uses it so successfully for that purpose that he has time to spare which he never knew of before. After returning home he very properly takes the family out for a little recreation. Now, would this same man expect to use a receipt for dues to a medical society as an admission card to a theater? Here is the point of comparison. He buys an article to be used as a part of his business which we will say takes him over an area of 50 miles a day—and this is a very liberal mileage allowance; and then he will add another 50 or 60 miles for pleasure and charge it up to business. Here is where a fairness of comparison is hard to compute. As one of the first physician motor drivers in America, I have reached conclusions which I embody in the following advice:

### CONCLUSIONS

Buy the proper type of a motor car.

Use it in a sane manner.

Give it the proper grade and the proper amount of oil.

Keep all nuts and bolts tight.

Leave adjustments and the original design of the car as the maker made it.

You may know much more about his car after you have owned it for two months than he did when he built it, but you will find that it will run better with his crude construction than with your profound and scientific suggestions added. Remember that oil and grease are cheaper than bearings and easier to apply. Every factory will turn out now and then what is called in common parlance "a lemon:" Don't rebuild it. Buy from a responsible concern and let them do the rebuilding.

### DO'S AND DONT'S

In surgery we all learn "do's" and "dont's." In motoring there are more "don'ts" than "do's." Don't, for the purpose of exercise or recreation, monkey with adjustments or nuts and bolts with which you are not familiar. Running the car through beautiful country is more exhilarating and beneficial.

### TIRE SYMPTOMS AND TREATMENT

Probably the greatest annoyance and expense relative to operating a motor car is the tire problem, but with intelligent care even this can be minimized. Solid tires will not puncture or blow out, but their use will multiply all mechanical troubles, particularly to rear constructions; the absence of resiliency will eliminate ease of riding. A pneumatic tire which is kept properly inflated will, barring accidents, give satisfaction. Be sure that the tire is sufficiently large in diameter for the weight of the car and that it is always inflated when the car is under load. Look on all incisions, abrasions, and tumors as surgical conditions demanding immediate treatment. A tumor may be of a benign type but may at short notice become malignant.

### SELECTION OF CAR

In selecting a car, we should be guided by the amount of money to be expended and the use to which the car should be put. Do not try to get a great big touring-car for the price of a small runabout. A second-hand car purchased from a reliable manufacturer with his guarantee will often give far better service than a new piece of cheap junk.

The geographic conditions of the country in which the car is to be operated is also to be taken into serious consideration. Ample power is most essential under all circumstances. Select a car delivering maximum horse-power to the back wheels regardless of bore and stroke of the motor, the weight of the car being as light as is consistent with strength. The smaller and lighter the car, all things being equal, the less the up-keep. A four-cylinder motor has all the advantages without any of the disadvantages of other types of motors. A quiet planetary system, one that does not simulate a thrashing-machine, is ideal for use in the city and in rolling country. It is easy to operate, especially in a place of emergency where it is necessary to come in reverse on the instant. It is economical. In a mountainous country a three-speed forward and reverse selective gear is the practical transmission. The intermediate gear saves motor trouble. Chain-drive cars are fast becoming obsolete for mechanical reasons.

These points should be sought for in a car made and sold by a manufacturer of financial responsibility who takes good care of his products and customers. The oily tongue of the smooth-talking salesman makes a poor repair outfit for a broken crank-shaft.

The above conclusions are based on several years of experience and the clinical notes taken on my sixteen different cars (172).

My present car (115) has been driven 11,290 miles, about 3,200 of which was over the mountainous country of Pennsylvania. The repairs have been the grinding in of exhaust valves on two occasions and the relining of the service brake plus the proper and generous lubrication of all parts at all times and still the car is in daily service showing original power and speed. S. Leon Gans, M.D., Philadelphia.

## COMPARISON OF HORSE AND AUTOMOBILE NOT LOGICAL

DURING the past twelve months, since Feb. 27, 1909, I have used a runabout (144) weighing less than 1,300 pounds. The total cost to date, faithfully itemized, is $173.45—less than $15 per month. During that time I have hired a horse but once (in September), have driven the car practically every day, covering a total of over 5,000 miles, in all kinds of weather conditions including rain, snow, and zero weather.

One of the worst days of the season, a trip was made through a heavy snow-storm with four inches of snow on the unbeaten track, over roads that were far from level, on high speed over all grades but one, eight miles and back in an hour and fifty-five minutes; no thought of making quick time was in mind.

Comparison of the automobile with the horse and buggy is not altogether logical; no horse can do what the machine does. During the year 1908 my livery bill was $255; I hired a horse as a rule only when absolutely necessary, and covered a mileage amounting perhaps to one-sixth or one-eighth of that covered by the car this past year. Using a car strictly for business, I am sure that the cost of up-keep could be reduced by two-thirds, since the cost per month for the past four months, when no touring has been done, is $4.

The total cost per mile during the life of the car I have estimated at seven or eight cents; this includes first cost and up-keep; a rather high figure at first thought; it is not a difficult thing, however, to establish the fact that a horse in most cases will exceed this, taking into account first cost and maintenance.

From the standpoint of economy, therefore, the argument is decidedly against the horse, and I should regret very much to go back to that agent. Aside from the economy in dollars and cents, the wear and tear physically and time saved are not unimportant considerations; a night-visit is no longer a nightmare.

### THE BEST MEANS OF RECREATION

To those to whom the automobile appeals, nothing surpasses it as a means of pleasure and recreation; there is a fascination in driving a car; one forgets cares and worries; it affords opportunity to explore new roads, enjoy new scenes, and experience a variety of pleasures, and if difficulties are met and emergencies arise now and then, they merely serve as part of one's motor education.

During the summer months the week always found us planning a trip for Sunday afternoon, and during the vacation period we went for all-day drives on Sunday, eating our lunch by the roadside, under the shade of a tree, unconscious of the existence of doorbell or telephone. Longer trips took us into other states; the most enjoyable one was through central Kentucky, where we visited Frankfort, Lexington, Georgetown and Paris, driving over the most delightful roads in the world, made of rolled stone and in many instances oiled for miles.

Fig. 25.—A winter scene in Indiana. Compare this with the picture on the opposite page. This car (144) is driven by Dr. C. R. Bird, Greensburg, Ind.

### CLEANING CAR WITH WASTE INSTEAD OF WASHING

I have cared for my car for the most part myself. The sooner the owner acquaints himself with the mechanism of his car, the more certainly will he be able quickly to diagnose troubles, which is often necessarily done by process of exclusion. He should therefore keep in mind the most frequent sources of trouble. The necessity of frequently washing the car may be obviated by using waste, saturated with kerosene, being careful not to mar the paint; I know of one man who always has a clean, neat-looking car which has been washed but once in two years.

My car at first was not equipped with a magneto. I soon found the necessity of installing one, at a total cost of $62 (this is included in equipment, not up-keep). Most 1910 cars are equipped with this important adjunct; it is a *sine qua non,* and eliminates one of the most frequent sources of trouble. Late models are also equipped with improved oiling devices controlling the oil supply, thus obviating trouble from this source. The best remedy for carbonized motor is to close the valves on the two front cylinders, and when cool, to fill through priming-cups or plug-caps, with wood alcohol; then to close cups, and after four hours draw off with a grease gun, which has a slightly curved nozzle, and in the same way to fill the back cylinders, using the same alcohol, allowing motor to run idle after drawing off.

On one occasion, when I was at least one hundred miles from home, my motor began to knock when on level, in which case I used four ounces of wood alcohol in each cylinder, turned the crank over a few times, and after three-quarters of an hour proceeded. Whisky would answer and could be procured from most farmhouses. A small leak in the radiator may be temporarily stopped with a handful of corn-meal or flax-seed meal. The cylinders should be primed only with gasoline. The better way to start the motor in cold weather is to pour a tea-kettle of boiling water over the carburetor and intake-pipe. The most satisfactory oil (145) sells at 41 cents a gallon. Thirty by 3 tire chains may be made at home at a cost of $3.75, and require 23 feet of galvanized triumph chain, and 20 feet No. 3 German coil chain, six dozen "S" links, and four wire snaps.

### THE CAR TO BUY

In purchasing a car give preference to four-cylinder motor 32-inch wheel, long wheel-base, sliding gear transmission and cone clutch. By all means specify a magneto, high tension type which eliminates vibrating coils. See also that there is improved oiling device.

There are one and two cylinder low-priced cars on the market which give fairly good service in good weather and on good roads. It is better to pay a little more, however, and get a car with more power than is actually needed. At $750 there are two cars in particular which I have in mind (146 and 147), which for every-day runabouts answer all practical requirements. Up to $1,050 one may have choice of a variety of cars which will give satisfactory service, and outclass the $3,000 car of six years ago.

Automobiles now are well standardized, and improvements are largely in refinements rather than in principle. Some one has said, "But, after all else has been said, one significant fact towers above all others—that at no time in the history of this wonderful industry has there been so much similarity between cars regardless of the price."

Eternal vigilance is the price of an ever-ready, perfect-running car.

CHARLES R. BIRD, M.D.,
Greensburg, Ind.

## SIX YEARS' PRACTICE IN A LIGHT CAR

JUST how long an automobile will last under careful driving and proper handling has yet to be determined, for the worn-out parts can be replaced like the parts of a jackknife as they give way and one can go right on using the original form indefinitely if one so chooses. After a certain time, however, the machine will be in the shop more than usual from old age, and parts will become crystalized and dangerous to use.

### HOW LONG WILL IT LAST?

The life of an automobile is largely determined by the power of its engine. An engine of power too high for the machinery is like a hypertrophic heart; it cuts short the life of its carrier. The speed craze on the part of the driver, if indulged on our American roads, will in a very short time wreck the best of cars. Nothing can be more disgusting than to see a physician afflicted with the speed craze. A good test for sanity would be this: Do you enjoy riding in an automobile faster or slower than twenty miles an hour?

### UP-KEEP OF HEAVY VERSUS LIGHT CAR

As to cost of up-keep, no one with experience in running cars will doubt for a moment, I think, the advantage of the light car over the heavy one. Tires still continue to be the chief item of expense, and a heavy automobile will wear out its heavy tire long before a light car will wear out its light tire, and there is the extra cost of replacing the heavier tire besides. A physician does not need a heavy car for his work. If he wants it for other purposes, well and good.

In the summer of 1903 I purchased a curve-dash one-cylinder runabout (181) and used it constantly in my practice for six years. Last summer I sold the car and purchased a two-cylinder runabout (182), largely because my first one was out of style. My present car is rated at 12 horse-power and weighs about 1,200 pounds. It is somewhat heavier now, for I have had a canopy top put on it. This top changes the appearance of the car from that seen in the illustration to an automobile of the heavy type. The wind curtain in front protects me from the cutting breeze and side and back curtains with their celluloid windows will give a coupé effect and warm quarters. My engine drives the added top against our heaviest winds easily enough. I run my car now very much like an electric, which I consider the ideal pace for an automobile.

A large item in expense is saved by the owner diagnosing himself any trouble his car may have and requiring of the mechanic simply his time for the treatment. Any one who has a mechanical turn of mind will enjoy overlooking his car for any trouble that may be impending, and he will do this often; and he will enjoy driving his own car as well. He is not covered with the germs or odors of the horse when he uses an automobile in his practice.

### EXPENSE LESS THAN BOARD OF HORSE

I kept an accurate account of my expenses for six years and found when I kept my car at home they were, all told, less than the mere board of a single horse in the livery stable, while the car would do the work of two horses. The day of the automobile for physicians is at hand and his car is the light one.

M. W. Ward, M.D.,
Woodland, Cal.

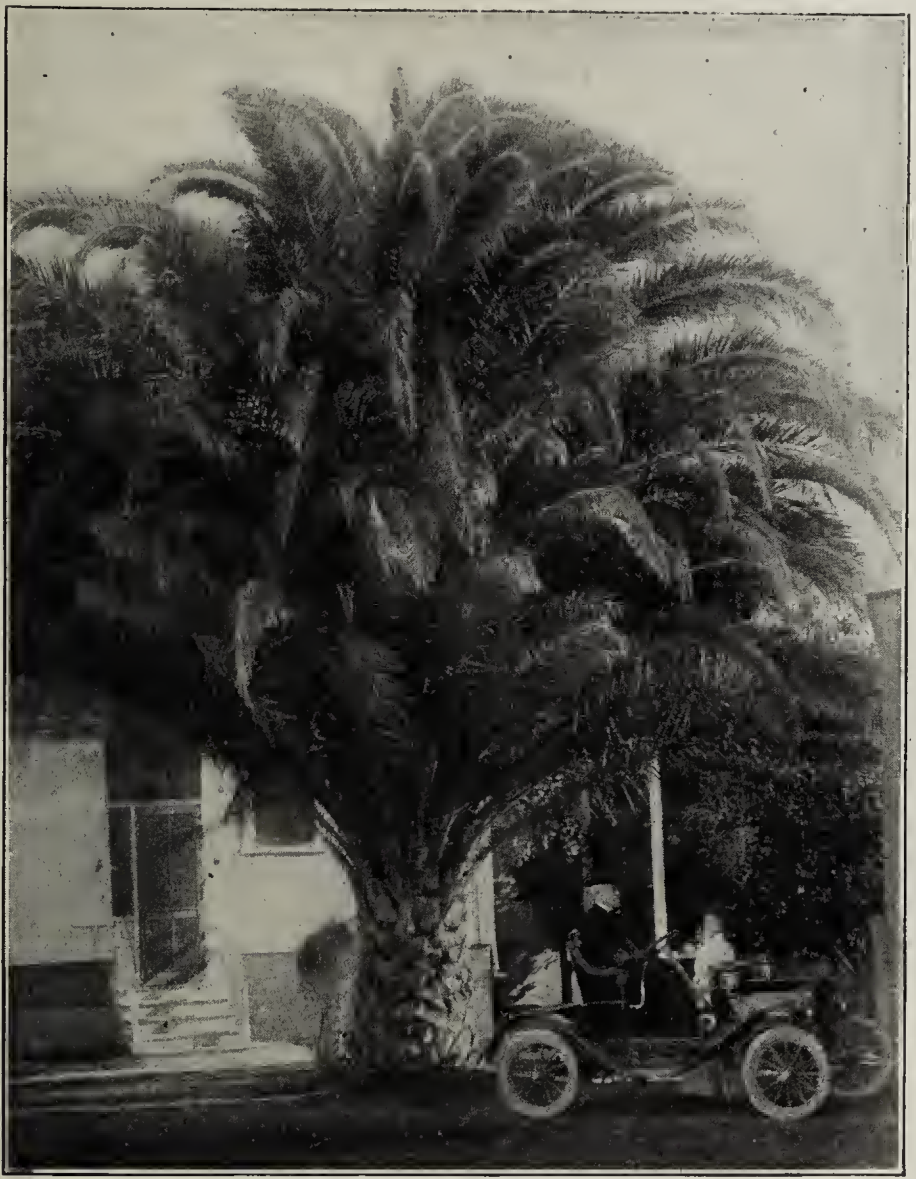

Fig. 26.—Winter scene in the Sacramento valley. Compare this with the picture on the opposite page. Dr. and Mrs. M. W. Ward ready to start from their garage, Woodland, Cal. (Auto 182.)

## THE BETTER WAY

Whether a physician finds an automobile preferable to a horse seems no longer debatable. Changed conditions incident to the practice of medicine make it impracticable to try to do the work of a large practice without a machine. The older physician who would care for the second generation of patients finds them living so far from the parental roof that an automobile is indispensable. The young physician requires all the time available to keep pace with the progress of his art.

### SAVES TIME AND HOLDS PATIENTS

The ability to hold patients who otherwise would have to be relinquished, the gain in availability to the patient at his home and punctuality in the observance of office hours are elements that cannot be computed. "The time on the street" represents the doctor's lost hours. It is reasonable to estimate that for the man who travels over a considerable territory the automobile saves three hours daily. And one medical man facetiously observes that we waste half of this time talking over the relative merits of our machines.

In addition to saving time and so increasing a doctor's earning power, the automobile has proved a boon to the medical man along other lines; the greater protection it affords from exposure, exhilaration in driving, and last but by no means least a hobby for his idle moments.

### SELECTING A MACHINE

The selection of a machine is much simplified by considering the two possibilities. The product of a firm with a complete plant for producing all of the essential parts of an automobile, and having them perfectly standardized; or the product of a plant which is in reality an assembling depot for the parts secured from many makers who have thus no personal responsibility in the completed product.

Almost any machine will give the worth of the price paid; some will give a great deal more for the money invested. The poorest automobile of to-day is better than the best of a few years ago.

### FACTORS LESSENING UP-KEEP

The expense of maintenance is largely a question of the driver and the caretaker. The private garage will greatly reduce the items. A few of the factors in lessening the up-keep are:

A good equipment.

A clean machine.

Good oil constantly where it should be.

Periodical search for needed repairs.

Prompt repairs.

Tires of ample size and properly inflated at all times. Power and speed suited to the work being done.

Buying supplies at the right prices, preferably in large quantities.

Avoidance of grand-stand starts and stops.

Remembering that short turns and curbstones shorten the life of the tires.

A private garage.

### USE AND REPAIRS

During the past year I have driven my 30 horse-power car (108) 7,132 miles with only one puncture, one from a nail which plugged the hole so that I was able to drive home. My tires have averaged about 5,000 miles. The spark plugs have never been removed. No work has been done on the engine except to renew some of the hose on the cooling system.

A trip to Maine and back, via the White Mountains, without trouble with any part of the machine, demonstrated the possibility of service and pleasure to be had from an automobile

My expense item has included the following items:

| | |
|---|---|
| Gasoline | $79.74 |
| Oil | 5.29 |
| Grease | 3.70 |
| Parts | 2.94 |
| Recharging storage batteries | 3.00 |

B. Franklin Stahl, M.D., Philadelphia.

## THE COST DEPENDS ON THE OWNER

My earliest experience with horseless vehicles was with a tiny curved-dash, one-cylinder runabout (150), which, according to its makers, "cranks from the seat, is seen wherever you go and goes wherever you see them." Two years' use of this machine was expensive, if calculated on a basis of mileage traveled, and in a way justified the remark of a critic that "it cost one dollar for each mile you see it going." That was, however, a criticism not taken too seriously, for those were pioneer days in autoing; one must learn auto mechanism sooner or later, and it was no doubt better and cheaper to learn on the small car.

My next venture was a 4-cylinder air-cooled physician's runabout (151). In 1904 this car was reckoned a powerful, reliable, noiseless and handsome professional carriage. I ran it every day, winter and summer, for nearly five years, mostly over the well-paved level streets of the city. It is still in daily use, runs better, I believe, than when new, and should, with proper care, prove an efficient city runabout for another five or more years.

I have recently acquired another car (152) which I selected because this particular type of car appealed to me most in points of moderate weight, apparent perfection of construction, and because of the guaranty of the makers.

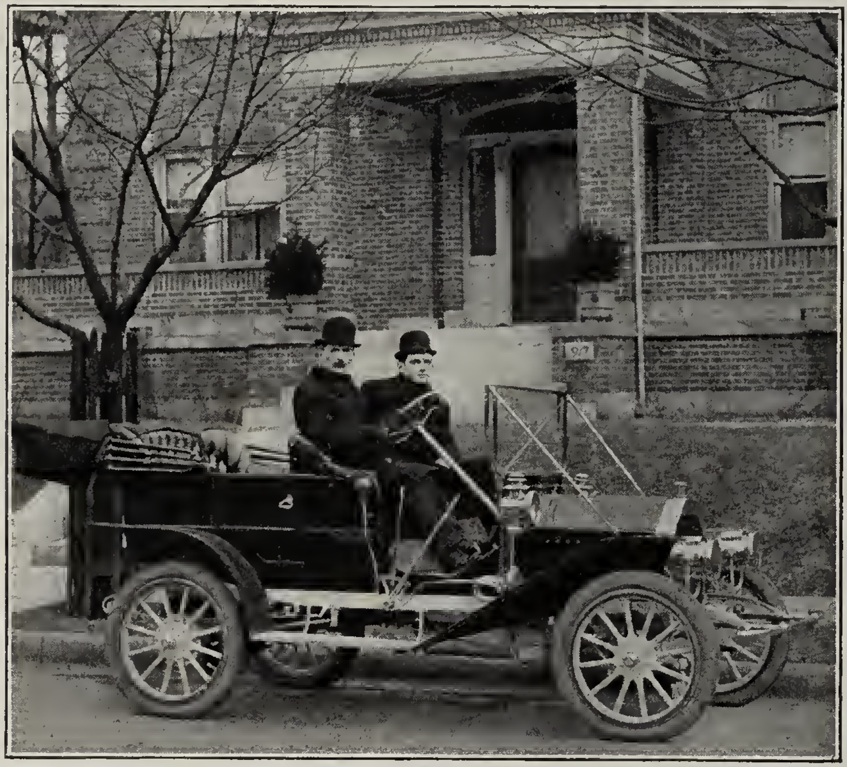

Fig. 27.—Dr. John F. Barnhill, Indianapolis, in his car (152), with Dr. Paul B. Coble, in front of Dr. Barnhill's residence.

But what interests physicians most, perhaps, is the truth about the cost of maintenance and operation of self-propelled vehicles. I have already stated that my first experience was expensive beyond reason, largely, no doubt, because I knew nothing of auto mechanism and because the earliest autos were experimental. The five years' operation of the second car was at an expense, excluding gasoline, oil, and tires, but including an annual painting, of not to exceed $500. During this same time oil, gasoline and tire replacement cost $650. The car itself cost $1,425, making a total of $2,575 expended in five years. Counting the old car still worth $300, this makes a total average expenditure for auto transportation of $455 per year.

In cost of auto maintenance there are two classes of owners who give widely different figures:

1. The one whose outlay is unreasonable and prohibitive. Such an owner, it will usually be found, has been a victim of the following errors: (a) buying a car without reference to the use to which it will commonly be put, in other words the use of a runabout for too much touring, or a touring car when runabout use is chiefly desired; (b) carelessness as to proper tire inflation, lubrication and use of anti-freeze solutions; (c) the owner's employment of a cheap and worthless chauffeur instead of driving the machine himself; (d) reckless driving, especially over roads never intended for an auto; (e) going to the repair shop for the nine-out-of-ten disorders which every owner should be capable of quickly adjusting himself.

2. The owner who is satisfied that the automobile is an economical proposition. Such an owner (a) has selected a car to meet the particular requirements to which he will put it, as well as one suitable to the environment as to the roads and hills; (b) drives the car himself, and with reasonable care, knowing that abuse and lack of proper attention to the machine are expensive faults; (c) studies auto mechanism to the end that he can diagnose his auto trouble at once and thus be able to correct the numerous little "tricks" which even the best cars play, and thus avoids the expensive repair man, except when some actual break of part has occurred; (d) uses the best and most suitable grades of oil and gasoline, and the best obtainable system of ignition, to the end that carbon in the engine is avoided, and the greatest possible amount of power and mileage may be obtained from the fuel consumed.

Any owner can, obviously, make either an expensive luxury of his automobile, or he can, if economy of operation is necessary or desirable on his part, cut the expense to a point that auto transportation becomes the cheapest available means of travel. But aside from cost, the pleasure derived from the rapid dash from place to place in a business way, or the invigorating spin to the country with one's family or friends after business hours, must be counted well worth while, even if the cost at times seems a little more than that paid by our grandfathers for the ox-team journey, or by ourselves a decade ago, behind a team of thoroughbreds.

I might also add to the above that I have maintained, for family use, a coupé electric car (153) for the past fifteen months. I keep this in my own garage, and charge from my own outfit installed for that purpose, and the expense of maintenance so far has not seemed unreasonable; and yet, when compared mile for mile with the gasoline machine my experience is that the electric costs twice as much as the gasoline conveyance. John F. Barnhill, M.D., Indianapolis.

## MODERNIZING A 1908 AUTOMOBILE

Every mother admires her own babe most. Every automobile maker brands his product "best." Every auto owner thinks *his* particular machine is really "it." But we must admit that "there are others." There is no sense in my saying, just because I own a runabout (187) which I think is absolutely "O. K.," that it is the best machine in the market to-day. I realize that there are others just as good.

### THE LIGHTING SYSTEM AND THE BATTERIES

But what concerns me just now has to do with this car. When I bought my machine in July, 1908, it was furnished with few accessories. I set about at once to put on the things that I liked best. Beginning with the lighting system, a headlight (188) was installed on a pivot bracket on the inner side of the dashboard so that I was able to swing the light around a corner, or up against a street sign. Many a night it has come in handy when looking for a particular house number. This headlight burns gas furnished in tanks (189). The side and tail oil lamps were exchanged for electric lamps run in connection with the storage battery. But one night I forgot to turn off the battery supplying the lights, and when I came out from seeing a patient there was not enough life in the battery to get me home; hence the change back to oil lamps.

Every one knows what troubles are caused by weak batteries. So disgusted was I that I took out the battery and the dry-cells and put on a magneto (196). Since that time (July last) I have been entirely free from battery troubles. The machine starts on a quarter turn of the crank, and furnishes a strong rich spark.

### THE TOOL-BOX, TRIMMINGS, ETC.

Those readers of this article who own machines like mine know what an ugly tool-box is provided. Mine soon warped and allowed the tools to get wet every time it rained. Since it occupied plenty of space I saw the possibilities. A carpenter made me a box sufficiently long and wide, put on top irons and placed it on the rear. Now, thank you, I have a rumble seat for a third passenger and a dry place for tools.

I never could understand why there is so much brass on autos. Nothing is so dirty as dirty brass. Rather than have a porter stand over it all the time, I had it all painted black. I have not regretted the change.

I have found that "spring-washers" will keep a bolt tight when nothing else will; that heavy grease in the differential will keep the rear wheels clean from spattering oil, because it does not liquefy like thin grease; that an extra inner tube and casing saves much irritation; that a priming cup on each cylinder-head will allow me to put gasoline directly into the cylinders to make the machine start more easily on cold days; that a few drops of kerosene oil dropped into each priming-cup will keep the cylinders clean; that one-third each of glycerin, wood alcohol and water stopped all freeze-ups, and that an extra two quarts of oil and gasoline, and an extra magneto belt and an oiler belt are most indispensable when I least think of them.

### SERVICE AND EXPENSE

It is truly remarkable what punishment these small machines take and stand up well under it all. I went to Milwaukee from Evanston one Saturday forenoon, a distance of 90 miles, in six and one-half hours, on three gallons of gasoline. I have run the machine almost every day for eighteen months in all kinds of weather, and over all kinds of roads. It has carried me over 10,000 miles. The only thing that broke was a fender-iron, and that was replaced at a blacksmith shop for 75 cents.

It may be of interest to know what has been the expense to me since I bought it eighteen months ago. Well, in the first place, I keep the car in my own garage. It is 12 by 18 feet and 10 feet high, 2 by 4 uprights with 2 by 6 rafters. This is covered with corrugated sheet metal, painted and a sliding door hung on the alley side. The floor is of ashes. Since the item of garage expense is cut off, and since I buy my oil and gasoline at wholesale, you see that I am ahead of the game at the start. My whole automobile expense per month is $19.32.

I am in favor of the small runabout car for city use, because while allowing the maximum speed permitted, its up-keep expense is the minimum. Why drive a four-horse team about when a single horse will well do the work? I have found that a small car uses far less gasoline and oil and is the lightest on its tires. These three items being small, the cost of running the car is correspondingly small. I have added to the equipment as follows: wind-shield, top, rumble seat-tool box, magneto, carburetor (190) (haven't had to adjust it since it was put on in July, 1909), headlight (188), bigger gasoline tank, holding twelve gallons under the seat, small trap-door on top of the hood to allow immediate access to the priming cups, and a meter (191) to measure the miles.

Taken all in all, I venture to say that I have a car that compares well with many a larger and more expensive car from the standpoints of usage, expense and convenience.

As to using a horse, I would not ride behind one except to a funeral. John A. Kappelman, M.D., Evanston, Ill.

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## TROUT STREAMS AND HUNTING GROUNDS BROUGHT WITHIN AN HOUR OF THE CITY

Until a year ago—that is for twenty years—I have driven horses. Then I sold my rig and bought a touring car (148). I would not return to the horse. A machine is cheaper to maintain, can be left without hitching, does not get frightened, is under perfect control, does not get sick and does not have to be exercised when not wanted for use. It is warmer in cold weather and vice versa. A greater extent of territory can be covered by the machine and, to me the greatest desideratum is, that one can get out of the city in an hour to the country, trout streams and hunting grounds, and enjoy a few hours of unalloyed bliss, or with his family ride over new routes and enjoy new scenes.

I take entire care of my car. I have taken it all to pieces and put it together again, and it runs perfectly. An automobilist should know his car as a driver does his horse. Some people never learn to drive a horse properly and some people can never learn a machine perfectly, those are the kickers.

As to expense, I am $25 to the good over the horse for one year and I have had many times the enjoyment and mileage.

A. S. Bolster, M.D., Worcester, Mass.

## TAKE CARE OF YOUR AUTOMOBILE

If you have owned and operated your own car for seven or eight years don't read this little article, for you know as much about it as I do. It is for the benefit of those who are new at it that I am writing these few words. One of my greatest enjoyments in motoring is in taking care of my own car (121), so I say, if you can possibly find the time, take care of your own machine. You will find it a pleasure and an economy at the same time. No matter how trustworthy he is, the other fellow is sure to be more lax than you yourself; he will throw away the extra gasoline rather than save it to be used for cleansing, or what not, he will throw the hood open with a bang instead of laying it back, and so forth.

Briefly, my advice is as follows: When you come in from a run, or at the end of the day, wipe off the body with some waste; this will do the varnish a world of good where frequent washing will do just as much harm. Open the hood and clean the inevitable grease, dust and dirt from the engine, fan, carburetor and piping. By doing this the power plant always looks neat and you will not ruin a clean shirt or coat in trying to make a hasty adjustment that may be necessary when starting or when on the road. Fill your water, oil and gas tanks, thus avoiding irritating, exasperating delays on the road which can only be charged to your own carelessness. See that the grease cups are filled, and where these are not provided put a few drops of oil, looking, meanwhile, for any loose nuts or bolts. Your machine can run without these, but you don't want it to do so. Frequently, and I believe once a month is none too often, jack the car up and examine all four wheels for loose bearings. By doing this you may avoid large repair bills and enforced idleness for your car while a new set of bearings or even a new axle is being installed. Keep your tires hard. You will get more speed and more mileage for your trouble. These things attended to, your car is ready for starting at a moment's notice, at any time of day or night.

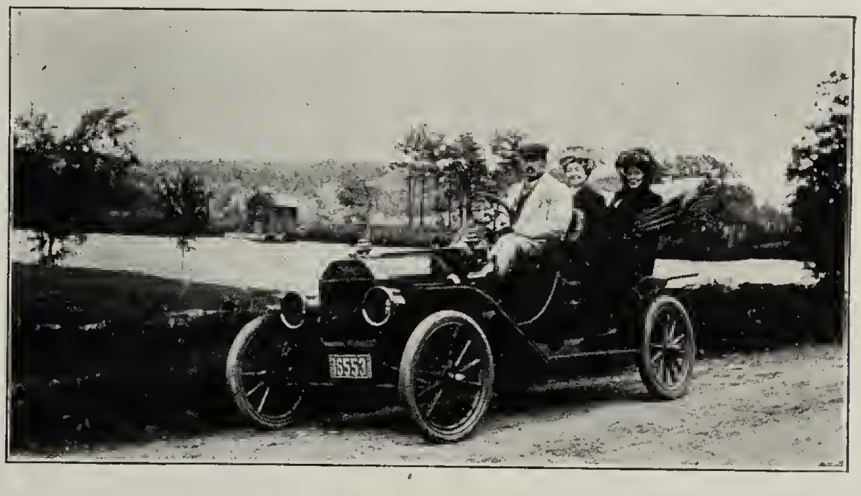

Fig. 28.—A country pleasure ride in a touring car (148) driven by Dr. A. S. Bolster, Worcester, Mass.

When on the road, follow the golden rule, "Do unto your car as you would have your car do by your pocketbook." Feel for the machine; it cannot feel for itself. Use common sense when starting and stopping, doing both gradually. Nothing will do the transmission so much harm as overlooking this easily followed suggestion. Go as fast as you may care to ride on a straight smooth road, but slow down for the many thank-you-ma'ams which invest city crossings, or a broken spring may be the penalty. Do not turn a corner at twenty miles an hour when you can do so at ten, besides, the latter is better for you (mentally, morally and legally) and for the frame of the machine. To get best results open and close the throttle gradually.

To conclude: If the engine worries along on only three cylinders, fix it immediately yourself, for you can do it just as well as to pay a repairman sixty cents an hour to tinker for you, and too often that is his stock in trade. Use deduction, the Sherlock Holmes kind, and you can diagnose and successfully treat your case nine times out of ten.

T. Albert Peppard, Minneapolis.

## OPERATION OF FOUR-CYCLE AND TWO-CYCLE ENGINES

The life and the energy of the gasoline automobile lie in the engine or motor, located beneath the hood in front of the dash and connected to the rear wheels by transmission gears, rods and chains. To build a motor for this purpose with a maximum of efficiency, durability and economy, with a minimum of mechanical detail, replacement and care has engrossed the attention and demanded the scrutiny and study of the world's engineers, and to this end, the four-cycle and two-cycle motors, varying considerably in their own individual arrangement, have been gradually developed and perfected.

### ANALYSIS OF OPERATION

Within the cylinder of every gasoline engine four operations occur consecutively:

1. Intake of the charge.
2. Compression of the charge.
3. Explosion of the charge.
4. Removal of the burned gases or residue.

In the four-cycle type (Fig. 29, A) each of these operations is represented by a stroke of the piston. At the first or downward stroke, the vacuum produced draws the charge into the cylinder through the inlet valve, automatically opened at the time; following this the inlet valve closes and the piston returning, compresses the vaporized gasoline into approximately one-fourth the cylinder space. At the end of the second stroke explosion of the compressed gases takes place, and under the generated pressure the piston again descends, delivering the mechanical power. The exhaust valve, timed to open now, or at the beginning of the fourth and last stroke of the cycle, permits the emptying and cleansing of the cylinder during the entire ascent of the piston.

In the two-cycle motor, aspiration, compression, explosion and exhaust of the gases are obtained in only two strokes of the piston. This is made possible in that with every downward stroke a power impulse is given, and at the same time, through the piston's descent, precompression in the crank-case or in an annexed chamber established; while with every upward stroke, a fresh supply of gas from the carburetor is drawn into the crank-case and also compression of the charge within the cylinder accomplished. For this reason it is called the two-stroke-to-the-cycle engine, or for short the two-cycle engine.

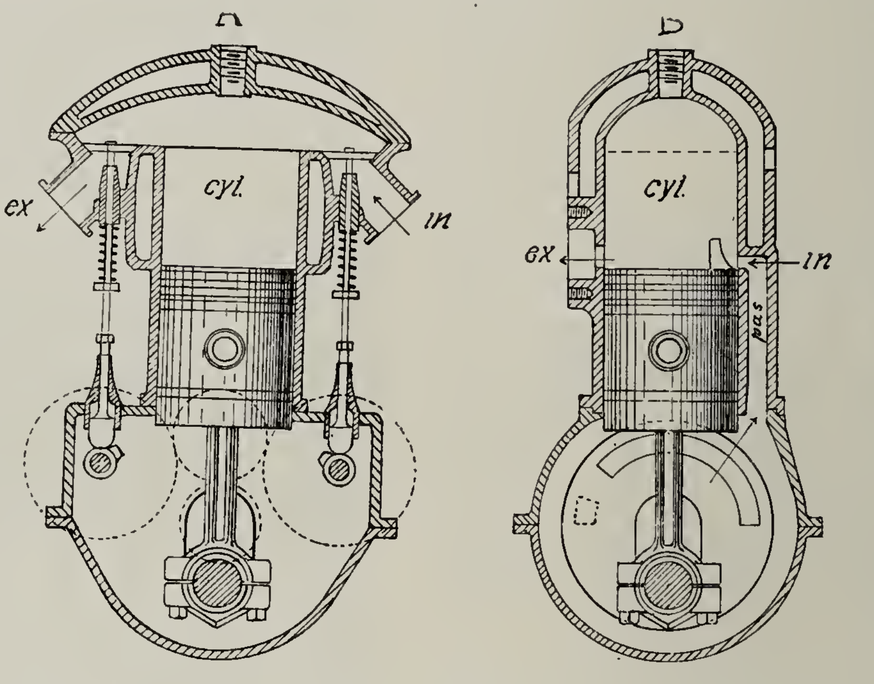

Fig. 29.—A, type of four-cycle construction; B, type of two-cycle construction. The details are explained in the article.

In Fig. 29, B, the cylinder, "cyl," is represented as filled with a fresh charge; on ascent of the piston compression and ignition follow which drives the piston toward the bottom of the cylinder, and the burned gases begin to make their escape through the exhaust port, "ex." A moment later the piston, descending to its lowest level, uncovers the inlet port, "in," and admits the compression charge from the by-pass "pas" and the crank-box. The inrushing and expanding charge completes the scavenging of the cylinder, but is deflected in such a manner as to allow little or no mixing of the gases.

It is claimed then for the two-cycle engine that it will perform the four operations in one-half the time occupied by the four-cycle, that it does this without the intervention of some fifteen to eighteen parts of valve-lifting mechanism to the cylinder, and that with double the impulses smoothness in operation together with 50 to 60 per cent. of additional power is obtained.

I drive a runabout (197) with a two-cycle engine and find it satisfactory.

James B. Baird, Jr., M.D., Atlanta, Ga.

## IT'S WORTH THE DIFFERENCE

Regarding the use of the motor car by the physician my conclusions are based entirely on my own experience; that is, the experience of a country physician who is obliged in the course of a year to drive from 8,000 to 10,000 miles in a locality where good roads are the rule. I may state that my experience has been long and varied, for I have used a motor car since the early days of the automobile industry.

### A PIONEER USER

I purchased my first car in 1899, and after more than ten years of constant use of motor cars in my business I am a firm believer in the automobile as a paying proposition for the country doctor. Does it cost more to operate and keep it in running order than it does one horse? It certainly does, but the comparison is unfair, the two are so entirely different.

### SAVES MONEY BY SAVING TIME

A motor car will do the work of all the horses one man could find time to drive, and do it in one-half the time. If one's time is worth anything the motor car is certainly a great money-saver. Estimates of the comparative cost of keeping up autos and horses are often very inaccurate. We are too apt to base our opinion on the first year's use of the automobile, when repair and tire bills are generally small; if we do so the account will be favorable as compared with the expense of keeping horses. Repair bills will increase with the age of any car.

I am unable to state the actual cost of operating, repairing and depreciation in value of the various cars I have used in the past ten years. I once kept account of expenses for a short time, but it made me feel guilty. I felt as I would were I to keep account of the expense of being married. Supposing it does cost more to run the motor car than it does to drive horses; isn't it worth it? It permits you to spend more time at the office and catch an occasional stray dollar, that fracture case didn't go to some one else because you were not in—and it is such jolly fun to be bowling over the road on a hot, sultry day when you would feel sorry for the horses you were driving. All this is worth the difference in the expense.

### HIS RECORD OF CARS

My first car was a steamer, one of the first ones sold by that concern (154), of narrow-gauge tread with a fire-tube boiler about as large as a good-sized teakettle. This little car would be considered a mere toy to-day; the burner had to be generated by a piece of bent gas-pipe heated in the kitchen stove; it reads like a joke now, but it wasn't in those days. It sometimes did run and it made more stir than any car I have owned since. It took a brave heart and a great deal of patience to go out on the road when every horse attempted to climb the nearest fence and every driver "cussed" that devil-wagon. My second car (155) was also a steamer and was quite an improvement over the first. My third car, a two-cylinder gasoline car (156), made the remarkable record of covering 52,000 miles in the six years of service. My present car (I never dreamed cars would be so perfect) is a four-cylinder 20-horse-power car (157) of the heavier type. It has covered 3,800 miles since August with virtually no trouble or expense, but next season there will probably be repair bills and new tires, but what of it? Were I obliged again to use horses in my business the year round I believe I would throw up my job.

E. Windmueller, M.D., Woodstock, Ill.

## RELIABILITY THE DESIDERATUM IN AN AUTO

Some years ago I became convinced of the necessity of overcoming distance with decreased time. Still, the horse was at least sure of arriving at the destination, while machines, I had noticed, were often passed by the wayside by that faithful animal. I therefore began to look for a machine that could be depended on to reach the desired goal which would not be too expensive or too complicated and which I could understand and run, if necessary, myself.

I found what I sought after some search, and, seeing the simplicity and apparent practicability of the machine (201), I ordered one, which I have used for eighteen months at an average cost of less than $14 a month for oils, repairs, etc., with an average mileage of about forty miles per day. The past winter, because of its severity and the condition of the roads for weeks at a time, demonstrated most practically the absolute dependence which I could place in the machine. I can heartily recommend my car as being very practical for physicians, on all conditions of roads and under all circumstances. J. Leland Boogher, M.D., St. Louis.

## THE ADVANTAGES AND DISADVANTAGES OF THE STEAM CAR

In The Journal's previous Automobile Numbers I have been surprised to find so little relative to the steam car, which seems to be giving good service in this section. After close observance of the types of cars, I purchased last summer a steam car (102) of 10 horse-power, which thus far has given me excellent satisfaction. One should, before purchasing any make of car, know the pro and con of the car.

### TROUBLES

A troublesome feature of my make of car, which would apply to all steam cars, is the constant refilling of the water reservoir, under the seat, which has a capacity of thirty gallons, requiring for convenience, water and hose attachments, both in the garage and in front of the office and residence. A trip of ten to fifteen miles would consume about one-half the contents of the reservoir, depending of course on the condition of the roads and the number of hills encountered, thus making it unwise to attempt like trips without first having refilled the tank, so that for touring purposes I would not select a steam car, unless I was acquainted with conditions of water along the route. Granting the presence of watering troughs along public highways, much of the trouble would be averted, since there is hose and injector attachment, that one may easily refill the tank in a few minutes.

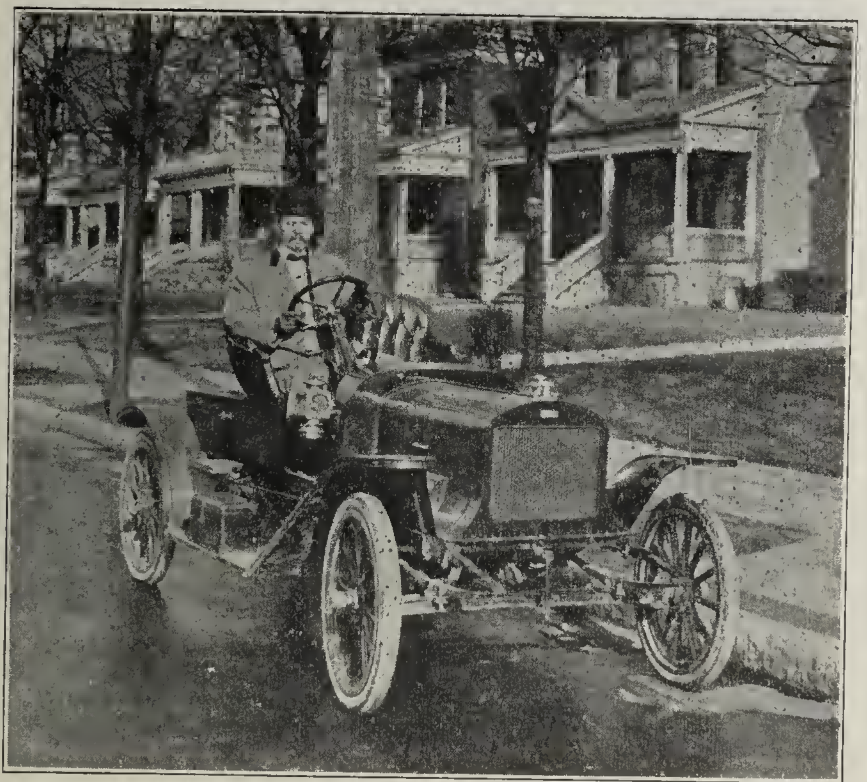

Fig. 30.—Dr. J. Leland Boogher, St. Louis, in his automobile (201).

### STEAM VERSUS GASOLINE CARS

I believe one has more trouble with a steam car than with a gasoline car, but not of such nature as to detain one long on the road. The gasoline consumption of the steam car is greater than that of the gasoline car, averaging from 7 to 9 miles to the gallon of gasoline, according to the condition of the roads. The steam car should have a warm garage in winter, if it is to be used during pleasant weather, but I have yet to see the auto that will combat snow-drifts and hills such as we have here.

### GOOD POINTS OF STEAM CAR

Having briefly enumerated the troubles of my car, I can say in its favor, for endurance, durability and simplicity, it is, I believe, without a peer. Trouble is quickly located. Easy access to all parts: no cranking, wires, dry cells, carburetors, magnetos and the like which trouble some, hours, nay, days as I have seen. My car is noiseless in stopping, starting and passing fractious horses, with little or no odor of gasoline, making as little vibration as possible, which, to my mind, is a big saving on tire wear. As to the time required in steaming up, will say that I can, if need be, obtain sufficient steam in ten minutes to leave the garage. I find that more practical instruction could be embodied in the company's instruction-book, which is very meager in many respects. They stand ready, however, to repair any defect in their machines, and give prompt attention to all.

### A DEPENDABLE CAR

To the physician, who needs a good dependable car that will stand much rough usage for his business, and who can overlook the troublesome features mentioned, I can conscientiously recommend my type of car. I shall continue to use a steam car until I am convinced of the superiority of the gasoline car.

A. H. Hill, M.D., Mifflinburg, Pa.

## COST—CYLINDERS—COOLING

On planning to purchase a piano or a watch or a static machine for long and satisfactory service, do you not go to a reliable dealer of long standing, who sells a make that has been tried and tested, that has been on the market for years, and that is recommended by those competent to judge? On the other hand, if collections are bad and you want a piano merely to fill a vacant space in your parlor, or a timepiece merely to attach to a fob, or a static machine to stand in your office for the psychic effect it may produce on your patients, a cheap product may answer your purpose.

### HOW MUCH DO YOU WISH TO INVEST?

With these comparisons and illustrations in mind how much can you afford to put into a motor car? Can you spend $8,000 or $10,000? If so, buy an imported car and you will have one into which has been put the best material and construction obtainable.

If you can spend, say, from $2,000 to $5,000 for a car, there are numerous American manufacturers who have been staking their reputation on the output of their factories for half a score or more of years. Their product has been improved from year to year until at the present day a mere novice with a dozen or more makes to choose from, and with closed eyes, would make no serious blunder.

### DISCRIMINATION REQUIRED IN BUYING CHEAP CARS

In selecting a car at a price varying from $800 to $1,500 more discrimination must be used. Many cheap cars are at present on the market, to which the time test has not been successfully applied. There has always been and probably always will be a demand for a low-priced car, but thinking men are being gradually convinced that with labor and material at its present price, it is practically impossible to construct a satisfactory car at less than $800 or $900. If a mere toy is wanted, simply to stand in front of the doctor's door, and to take an occasional spin on an asphalt street, there are manufacturers who will supply the demand. But touring in comfort, which is what the doctor really needs, is out of the question with such a car. Of course, in all cases, much depends on what use the car is to be put to and the personal equation of the driver.

### CYLINDERS

When it comes to cylinders, men seem prone to buy them on the same principle that the patient "took his pills." If one pill was to do him good, two would do him more good, and finally he thought the problem solved by taking the whole box. At present there are more four-cylinder cars in use than of all others put together. The increase is notable in the last two years. They have been recruited largely from the two-cylinder class. The whole thing is summed up by how much horse-power you want your car to have. The greatest number of models at both the New York shows this year were from 25 to 35 horse-power. Cars of this horse-power should be of the four-cylinder type, but for a good common-sense car, developing from 16 to 20 horse-power and a speed of twenty miles per hour, two cylinders are enough. Experience seems to have proved that for medium power cars, say under 20 horse-power, the two-cylinder opposed is the most practical. The power furnished by an engine cylinder is in direct proportion to its cubical capacity. One cylinder with a bore of five inches and a stroke of five inches will develop 8 to 10 horse-power, while two cylinders of same dimensions will develop 16 to 20 horse-power. A four-cylinder engine with no greater combined cubical capacity will develop no greater power than the two-cylinder engine. A four-cylinder engine increases the number of parts needlessly, complicates the mechanism and increases the cost. What is the use of using four horses when two will answer the purpose? Four, and even six-cylinder engines undoubtedly have their place; for instance, where more than twenty horse-power is required, or where a car is intended for the transportation of five or more persons at a high rate of speed.

But from the standpoint of the average motorist, not the faddist, this same average motorist who is the mainstay of the American automobile industry, the 20 horse-power two-cylinder car has an advantage in simplicity of construction over its many-cylindered brother.

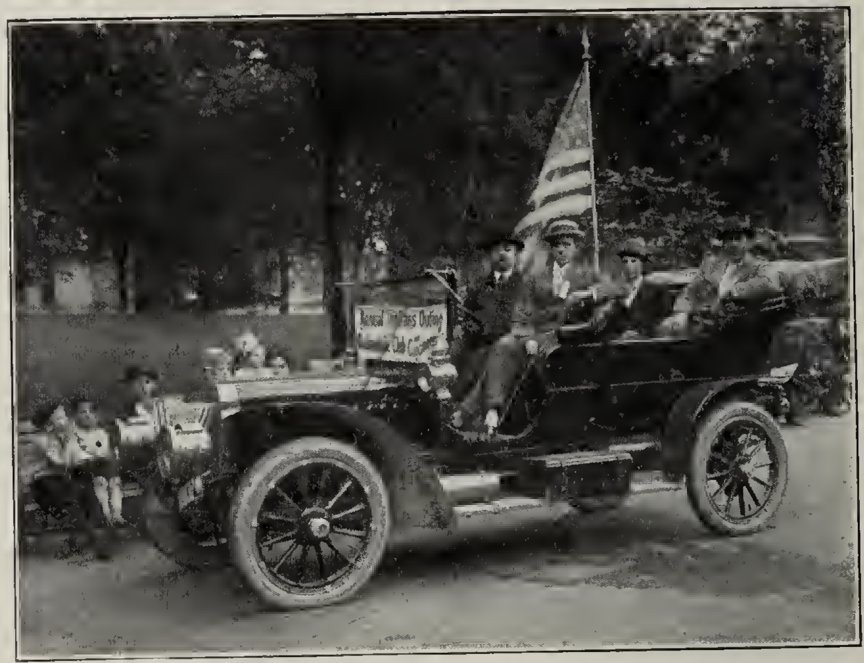

Fig. 31.—A physician cooperating in giving an outing to the orphans, an annual feature in many cities. Dr. Charles L. Bonifield, president of the Cincinnati Automobile Club is at the wheel. In the left rear seat is Mr. Rogers, superintendent of the parks of Cincinnati. (Auto 106.)

### COOLING

There seems to be a variety of opinion among the exponents respectively, of the air-cooled and water-cooled motor. It is a notable fact, however, that of all gas engines used for practical purposes by far the greater number are water-cooled. It is also a notable fact that no great race has ever been won by an air-cooled car.

Water cooling is more reliable than air cooling under all climatic conditions. In an air-cooled motor the temperature varies with that of the atmosphere and the cylinders may, at times, become dangerously hot. To cool sufficiently with air the cylinders must be comparatively small. The motor, of necessity, works at a higher temperature. For this reason the valves do not remain tight and need frequent regrinding.

Among the water coolers, the question as between pump or thermo-siphon circulation seems to be no nearer a definite answer than last year, for the number who use each system is practically the same. I am inclined to favor the thermo-siphon system of cooling and believe that cars using this system will increase from year to year.

### IGNITION—SHAFT DRIVE—BRAKES

Magnetos are well to the front. On a large number of this year's models both batteries and magnetos are to be found. Even on the cheapest cars magnetos are to be found, there ing more models selling below $1,000 which have magnetos than there are that do not. There is no car at present selling for more than $3,000 that is not equipped with magnetos. There seems to be an increase in popularity this year of the shaft-driven car, and also of the double-brakes on the rear hubs.

David Edward Hoag, M.D., New York.

Surgeon for the Glidden Automobile Tours; Surgeon to the Brighton Beach Motor Racing Association.

## AN ENJOYABLE AUTOMOBILE RIDE

For five years I have been using automobiles. I have used, for business and for pleasure, everything from a single-cylinder to a six-cylinder machine (105); but thinking that technical subjects will be well cared for by others I have chosen quite a different experience to describe.

The automobilists of the United States are organized much after the manner of the physicians. There are local clubs, state clubs and the Three As, which, as a national organization, corresponds to the A. M. A.

The A. A. A. designates a day early in the summer as Orphans' Day. The local clubs are expected to give as many orphans as possible an automobile ride and outing on that day. On the third of last June the Automobile Club of Cincinnati gave such an outing to 1,100 orphans, inmates of the various institutions of this city. The children were gathered from the various institutions and brought to the heart of the city, where they were formed into a parade, the children each being given a small flag and the automobiles were suitably decorated. As president of the Cincinnati Automobile Club, it was my pleasure to lead this parade, and I am sending a photograph of my car as it appeared.

We passed through a number of the main streets of the city, then took them through the suburbs on the hill tops, stopping at Burnet Woods, one of the city parks, for a band concert. We then proceeded to Chester Park, an amusement resort, where not only the gates, but all amusements on the grounds were open to the children free of charge. It was a sight to be remembered, to see these homeless children, many of them crippled and deformed, enjoying these amusements s novel to them. They were each served with a substantia luncheon and at sundown delivered to their institution without a single accident having occurred to mar the pleasures o the day.

I urge every doctor who reads this and who owns an automobile to join his local club and be an active participant in th next Orphans' Day Outing.

C. L. Bonifield, M.D., Cincinnati.

## THE AUTOMOBILE ADDS TO EFFICIENCY IF NOT T INCOME

My father and I are associated and do a large genera practice in a community of more than 400,000. Th roads are fair for the middle West but there is muc to overcome before they could be considered good. The country is very hilly and many of the roads and especially th streets are precipitous. We cover a radius of from four t ten miles, and together our mileage is about 15,000. A chauffeur is a necessity. We have three machines, two single-cyli der cars (198) and a larger one (199), all water-cooled. Th large touring-car for the family is not included in these est mates. All cars are driven by gasoline and are equipped with extra large pneumatic tires. We have been driving machines for five years.

Previously we used horses. We always had four and sometimes six. Three buggies were required and $2,000 would probably cover investment in them. The three machines and their equipment may be conservatively estimated at $5,000. I have estimated the equine up-keep, including coachman, at $1,500, and that of the machines at $2,000.

In addition to the above expenses I estimate the depreciation of horse and buggy at 25 per cent. ($500), making total expenses $2,000, and that of the automobile 20 per cent. ($1,000), making that total $3,000. Very little of this expense or mileage is for pleasure. The income has at least increased sufficiently to care for the increased expense. Estimated in dollars and cents, I should say that there is greater expense, therefore greater risk, and no greater profits, and that therefore from a business standpoint machines may not pay. But their use adds so much to the doctor's efficiency, both with regard to better service to his patients and to time and opportunity to study and rest that machines more than pay. I should feel it almost retrogression if necessity required me to return to horses.

The choice of the car is one that requires much consideration. Such a choice demands adaptation to the requirements of the individual man. The cheapest car to maintain is undoubtedly the single-cylinder runabout. Our two of this variety (198) have been run for five years and are doing yeoman service over our very hilly country. They will go anywhere any other car will go, but not so comfortably or so swiftly as some. In our practice they have been maintained at about $20 per month each, exclusive of the chauffeur's wages and depreciation and a few extras. Such a car can be bought and thoroughly equipped for a little under $1,000 and weighs 1,600 pounds equipped. On the other hand, nothing has ever given me more physical comfort and satisfaction than my large water-cooled car (199) which weighs 2,450 pounds equipped. It has abundance of power and responds to the slightest touch of the throttle. Its up-keep, exclusive of depreciation and wages, is approximately $40 per month. Certainly, if one's practice will justify it, the latter is the greater satisfaction. On the other hand, in a level country with good roads the increased expense would be a good deal to pay for pleasure and satisfaction, because the increased efficiency alone would not justify the expenditure.

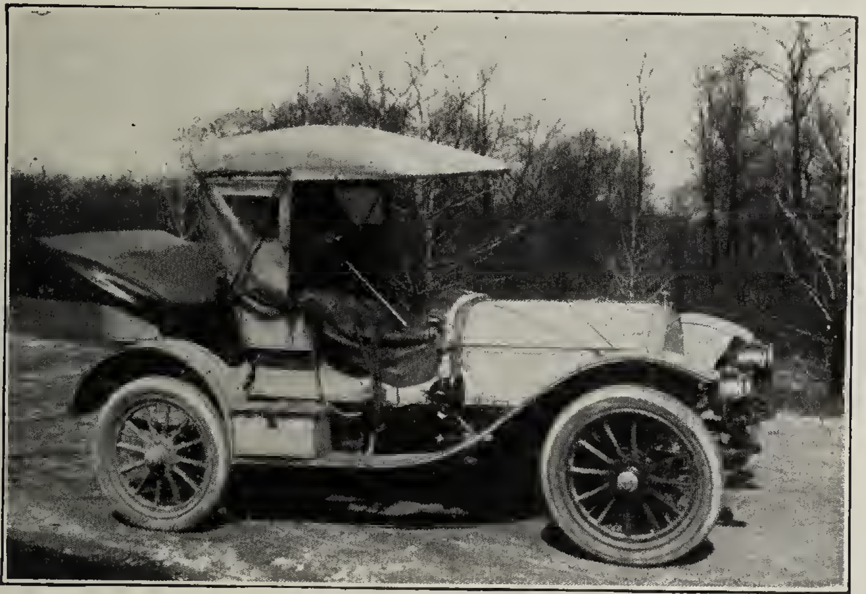

Fig. 32.—Automobile (199) described in accompanying article.

The greatest economy is effected by the use of large tires. I believe that each car should have one-third more tire capacity than the tire-makers require per wheel. One should always ascertain the weight of the car by running it on to good scales. Car manufacturers always underestimate weight. The large car (199), weighing 2,450 pounds, came equipped with 34 by 3½ tires. These are rated to carry 600 pounds per wheel, without load. Thus the four tires would be sufficient to carry 2,400 pounds. So equipped the tire was all shot to pieces in 1,500 miles. I changed my rims to carry 34 by 4½ tires. These are rated to carry 900 pounds per tire or 3,600 pounds. Since this change I have averaged much over 5,000 miles per tire, and had only five or six flat tires in that mileage; I can remember only four. The increased mileage and reduced expense was to be expected, but I was more pleased with the service than the economy. When one remembers that a car is practically as much out of commission while it has a flat tire as it is with a broken crank-shaft and that constant service is what the physician requires it is easy to understand the advantage of the large tires. The first cost of a 34 by 3½ tire is $48.66; the first cost of a 34 by 4½ tire is $74.59. These prices are taken from an old list but serve for comparative estimation. The first cost is less than double and the increased mileage is more than three times, while the difference in service is inestimable.

Another economy is a good chauffeur, whose employment leads to better service. If the doctor has the time he can soon learn all about the machine, and with a little attention each day can keep a cheap man on the job for rough work, but every machine must have careful and intelligent attention. Unintelligent meddling is worse than none. Better feed oil and gasoline and let her run than turn a hammer-mechanic loose on your car. I have known a man do more harm to a car with a hammer, a chisel and a large wrench in a few minutes than a month's usage would do.

It is better to carry as little extra weight as possible. For this reason the back seats of the larger car (199) are not made over-inviting and I do not carry a wind-shield. The latter is difficult to keep from rattling, and if one keeps down the noise of one's car one can the better detect loose connections, etc., before they have done any harm. It is necessary, however, to be protected from the weather. This large car has a top with a long low hood and a rubber apron which fits snugly around the steering wheel. In cold weather I have a large lap-robe over my knees. In the very bad weather and when driving very hard I wear goggles. These, the top, rubber apron, lap-robe and goggles furnish all the protection I have ever found necessary.

Large lamps are an economy because they keep one out of bad holes. I prefer to have them supplied from a tank rather than from a generator.

It has been my experience that the high-priced lubricating oils are not economical and that the cheaper gasoline, if well strained, answers admirably.

In addition to the usual tools I find that a good rope is most valuable to have in one's kit. This will either pull the other fellow or help one to be pulled. Also it may be tied around the tires and thus furnish traction when chains are not serviceable. It has helped me over very wet grass after a hard rain, out of muddy places and deep soft snow.

A good, intelligent horse is a most delightful companion and to me is preferable to a machine for pleasure; but time is the crying need and it is the time for which we Americans pay. The single-cylinder car is more time-saving than a horse and a four-cylinder car more efficient in this way than a single cylinder. One's need for a car depends on his need for time.

It is also true that the practice of a physician in general medicine is limited only by what he is able to do well during the busy season and an automobile well cared for reduces his limitations, thus allowing more work when practice is slack. If a physician could make arrangements to have the use of a machine during his busy season, and was willing to forego the pleasures of the machine in the summer, I am sure that the automobile would be a paying investment from the standpoint of the most exacting accountant. D.

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### Makes Your Hair Grow Long and Curly

The use of the car improves your health, steadies your nerves, expands your lungs, reddens the blood, increases appetite and makes life worth living. I haven't tried the aeroplane, but next to flying, autoing is the most exhilarating pleasure that I have known, and besides lightens the burdens of those dreadful night calls.

J. WILTON HOPE, Hampton, Va. (Auto 222).

## AIRLESS AND CUSHION TIRES VS. SOLID AND PNEUMATIC

The tire undoubtedly gives the physician greater trouble, and is the source of greater expense, than any other part of his automobile, and anything, therefore, which promises to lessen those evils is always of interest, both to the automobile manufacturer and the user.

Until recently there were only two kinds of tires, namely, solid and pneumatic; hence when we speak of "tire troubles" our minds naturally revert to those two types.

Diagnosing the troubles accompanying the pneumatic tire we find the cause of the trouble to be compressed air and insufficiency of ordinary cotton fabric to withstand the enormous internal air-pressure and the terrible knocks and strains occasioned by contact with uneven road surfaces. It follows, therefore, that a stronger and more durable fabric than the highest grade sea-island cotton must be provided in order to retain the great air pressure, or compressed air must be done away with entirely. Up to date nothing has been produced that will do the work of sea-island cotton, and the best authorities believe that nothing can ever be produced that will even do the work as well.

Quickly detachable and demountable rims have facilitated the operation of removing and applying tires, but they have not removed the cause, and pneumatic "tire troubles" are as frequent and almost as annoying as ever.

Diagnosing the troubles accompanying the perfectly solid tire, we find that the trouble, for the most part, manifests itself elsewhere than in the tire, just as a severe headache may be the result of a defect in the eyes; and on account of the rigidity of the tire, the jar and vibration are so severe as to injure the machine; and repair bills and loss of time and use of the machine while in the repair shop, make the use of perfectly solid tires a source of greater trouble and expense than pneumatics. The solid tire wears satisfactorily and cannot puncture or "blow out" like the pneumatic, but it is too hard and rigid.

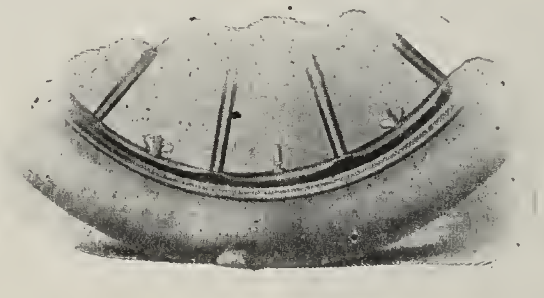

Fig. 33.—Pneumatic tire.

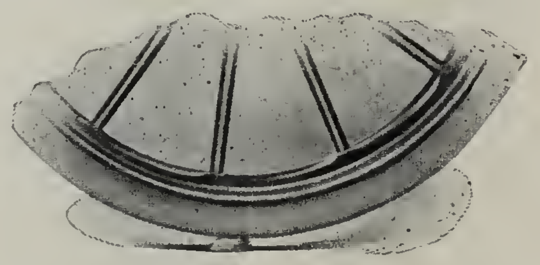

Fig. 34.—Solid tire.

A pneumatic tire absorbs obstructions by removal or displacement of the air at the point of contact between the tire and the obstruction and consequent absorption of the obstruction, and the tire passes over without a jar (Fig. 33). A solid tire rides up over the obstruction (Fig. 34); hence the jar or shock to the machine and occupant.

It follows, therefore, that the ideal tire must be one which will not depend on compressed air for its resiliency, but it must be softer and more elastic than the perfectly solid tire, while retaining its durability.

Taking up the problem, therefore, in a practical manner, we find that the resiliency must be at the point of contact between the tire and the ground so as to absorb the small obstructions that cause jar and vibration. This cannot be secured by springs in the spokes or cushion hubs, or the hundred and one other "patent medicines," but the absorbing medium must be right down at the ground, and if we are to do away with air, we must provide something else which can be displaced, and which is active, lively and resilient; there is only one known substance that can be utilized—rubber.

A fact of very great importance in this connection is that rubber is a non-compressible substance. Press a piece of rubber between your fingers, and it will "give" or compress only in proportion as it can expand elsewhere. You can displace rubber, but you cannot compress it, just as you can displace water by putting your finger into a glass filled with it, but you cannot compress it. If the piece of rubber were encased so that it could not expand, you could not compress it.

If, therefore, the rubber in a tire be so arranged as to permit it to "give" or "displace" all along the tread, when small road obstructions are encountered, you can produce the effect of a pneumatic tire when air is displaced. This is the result aimed at in the different types of "airless" and "cushion" tires, and the tire which is so constructed as best to produce this result is logically the best tire, for it will come nearest to producing the resiliency of the pneumatic, yet retaining the durability of the solid tire.

There are two types of these tires now on the market—one known as the "airless" tire, the other the "cushion" tire. The "airless" tire retains the shape of the pneumatic, and so far as external appearances go, cannot be distinguished from the standard pneumatic, and is designed to fit the standard clincher rims. This type of tire is composed of rubber and fabric and is molded in one operation; it is patterned after a cement bridge having a series of piers or columns of rubber, corresponding to the piers or columns of a bridge and a heavy tread of fabric and rubber corresponding to the road surface of the bridge. When the tire is completed it is just as homogeneous, or completely united, as the cement bridge, for the piers and tread are all molded and vulcanized together in one operation, and the piers will not separate from the tread any more than the columns or piers of the bridge will separate from the road surface. When the "airless" tire, therefore, strikes an obstruction the tire is pressed in at the point of contact, and the tread and pier bulge into the open spaces between the piers, and the obstruction is absorbed into the tire, hence the jar and vibration are practically eliminated. The fabric in its construction keeps the tire from stretching and becoming flabby and soft, and strengthens the piers or columns like guy wires. This type of tire can be retreaded.

The other type—the "cushion"—is made of rubber only, and contains no fabric in its makeup, and instead of having internal cells or open spaces, has a solid mass of rubber around the center of the wheel, but has open spaces on the outside designed to provide places for the rubber to "go" when an obstruction is encountered. This type of tire differs from the standard pneumatic in appearance and size, and cannot be retreaded.

John A. MacMillan, Dayton, Ohio.

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## NOT A MONEY-SAVER, BUT THE PLEASURE COMPENSATES FOR THE EXPENSE

I am one of the pioneer automobilists in the state. Since my first motor-car (202), I have had two runabouts (203, 204), and now have a little car (205) weighing 650 pounds. This is so new that I have not had time to try it out and therefore cannot speak either for or against it. My locatio is very mountainous, giving a car the hardest kind of a test As a matter of economy, the automobile is not a money-saver but the pleasure derived far more than overbalances this expense. The snow is deep here in the winter, at which tim I use a horse almost exclusively. During the summer th horse is often not used for six weeks at a time. For different reasons I shall probably use the horse, on an average, twic a month. My choice is a light-weight, water-cooled car wit pneumatic tires. The specifications of one which I have neve used (206) come the nearest to being my ideal of a car o any in the market.

C. D. Voorhees, M.D., Sonestown, Pa.

# A COMPILATION OF AUTOMOBILE STATISTICS

## Some Deductions About Automobiles from the Statements of Many Physician Drivers

With the idea of securing some information in a statistical form concerning automobiles of various types, and physicians' experiences therewith, THE JOURNAL printed* a list of questions to be answered voluntarily by readers. In all nearly 500 replies have been received, indeed they are still arriving, but it was necessary to draw the line when some 434 had been received to allow time for compilation.

For whatever value may be derived from these statistics, thanks are due to the physicians who replied, and we wish hereby to express our appreciation for their cooperation. We have made arrangements to send a copy of the Automobile Key,† giving the names of the motor-cars referred to in this number, to each one who filled out a blank and also to each of the authors of articles—without any further effort on their part.

Of the 434 replies, 96 concerned horses alone; a few, steam and electric cars, as well as motorcycles, railway gasoline velocipedes, etc., and the remainder, 324, concerned gasoline automobiles. The conclusions drawn from the figures are of necessity very general and are to be accepted with some qualifications according to the circumstances, but they are nevertheless interesting and worthy of perusal.

### GASOLINE AUTOMOBILES

It will be readily agreed that it is unfair to compare an $850 runabout with a $3,000 limousine or even with a $1,750 touring car. The 324 gasoline cars were divided, therefore, into three classes, cars costing less than $1,000, cars costing $1,000 and up almost to $2,000, and cars costing $2,000 and upward. For the purposes of this summary they will be called Classes 1, 2 and 3, in the order named. In Class 1 were 116 cars in Class 2 were 158 and in Class 3 were 50.

QUESTION 20: EFFECT ON INCOME

| | Increased. | Decreased. | No Increase. | Not Answered. |
|---|---|---|---|---|
| Class one | 69 | 1 | 35 | 11 |
| Class two | 82 | 1 | 56 | 19 |
| Class three | 27 | 0 | 19 | 4 |
| Total | 178 | 2 | 110 | 34 |

QUESTION 21: DOES IT PAY TO OWN A CAR?

| | Yes. | No. |
|---|---|---|
| Class one | 97 | 21 |
| Class two | 117 | 34 |
| Class three | 34 | 12 |
| Total | 248 | 67 |

The affirmative answer to this question as indicated by the figures is very emphatic. Of course, as might be expected, these answers involve a variety of considerations. Some nave said "Yes" with the purely financial aspect of the question in mind, while others have thought, not only of the increased number of patients they can see, but of the time saved and relief from the tedium of getting around, with more leisure to themselves, or more time for study. Still others have thought most, perhaps, of the increased joy of living through the exhilaration afforded. These latter have recognized that there are other things in life besides the dollar and that the word "pay" does not relate exclusively to money.

QUESTION 22: STYLE AND PRICE OF CAR PREFERRED

| | Price | | | Style | |
|---|---|---|---|---|---|
| | Low. | Medium. | High. | Runabout. | Touring. |
| Class one | 35 | 60 | 2 | 92 | 13 |
| Class two | 20 | 111 | 6 | 97 | 23 |
| Class three | 3 | 25 | 9 | 22 | 10 |
| Total | 58 | 196 | 17 | 211 | 46 |

The above figures mean that of those who now use low-priced cars 35 still recommend cars of that class, while 60 recommend cars of medium price, and 2 those of high price. Of those now running a medium-priced car 111 still recommend that sort of car, while 20 recommend a low-priced car and 6 a car of high price. In class three only 9 recommend the high-priced car, which they are now using; 25 of these recommend the medium-priced car, but only 3 a low-priced car.

As will be seen, the medium-priced runabout is vastly in the lead, as was probably to be expected.

The following tables give averages which will explain themselves:

QUESTION 16: AVERAGE COST OF MACHINE

| | |
|---|---|
| Class one | $ 747.65 |
| Class two | 1,192.18 |
| Class three | 2,564.74 |

QUESTION 18: AVERAGE COST OF MAINTENANCE AND DEPRECIATION PER YEAR

| | |
|---|---|
| Class one | $282.95 |
| Class two | 492.00 |
| Class three | 716.37 |

QUESTION 3: AVERAGE ANNUAL INCOME

| | |
|---|---|
| Class one | $3,720.20 |
| Class two | 5,028.84 |
| Class three | 8,322.00 |

QUESTION 7: AVERAGE MILEAGE FOR ONE YEAR

| | |
|---|---|
| Class one | 5,004 |
| Class two | 5,397 |
| Class three | 7,933 |

QUESTION 19: PERCENTAGE OF MILEAGE FOR PLEASURE

| | |
|---|---|
| Class one | 18 per cent. |
| Class two | 17 per cent. |
| Class three | 22 per cent. |

QUESTION 8: AS TO EMPLOYING A CHAUFFEUR

| | No. | Yes. |
|---|---|---|
| Class one | 11 | 5 |
| Class two | 146 | 9 |
| Class three | 40 | 7 |
| Total | 297 | 21 |

This last tabulation simply shows how great is the majority of owners who run their own cars.

It will be seen that while there is considerable difference between the prices of cars of the low and high classes, the average mileage of each class does not show a great difference, the high-priced class, being used more for touring purposes, having a little the best of it; but at the same time the high-class car shows a very considerable advance in depreciation and cost of maintenance over the cars of the other classes, without having to its credit a corresponding increase in the mileage. The percentages of mileage for pleasure are strikingly close together in the various classes.

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* The questions were as follows:

1. Your name and address? 2. Size of town? 3. Yearly income?
4. Are your roads good, fair or poor? 5. Hilly or level?
6. Radius of territory you cover?
7. What is your yearly mileage? 8. Do you employ a chauffeur?
9. Coachman? 10. Name of car? 11. Number of passengers?
12. Kind of tires? 13. Gasoline, steam or electric?
14. How long have you used autos?
15. For horses: what is your total investment including vehicle and harness?
16. For auto: what is your total investment including equipment?
17. What does your expense average per year, in using horses, including feed, care; repairs, depreciation, etc.?
18. What does your expense average per year, in using an automobile, including operation (gasoline or electricity), tires, care, repairs, depreciation, etc.?
19. What per cent. of your mileage is for pleasure?
20. What effect has the owning of a car had on your income?
21. Aside from the rest and pleasure, do you think that it pays you to own a car?
22. As a business proposition, would you recommend, for one in your position, a low, medium or high priced car—a runabout or a touring car? 23. Remarks.

† A copy of this key will be sent to anyone who sends a self-addressed stamped envelope.

The cost of upkeep of cars run by their owners, as shown in the answers, varies widely even with the same class of cars with similar roads and equal mileage. Some of this may of course be due to difference in make of car, but the impression received is that most of it is due to personal equation. Leaving out of consideration the matter of doing his own repairs, it seems that the man who is careful, who has a good mechanical sense, who can diagnose an ailment in its incipiency and is always looking for it, runs his car at such an advantage that the expense is really nominal, and in striking contrast with a man of the other sort.

### STATISTICS CONCERNING THE HORSE

Of 96 replies received concerning the horse, the average cost of the outfit was $486.98; the average annual cost of maintenance, repairs to rigs, etc., was $356.85. In some instances more than one horse was used. The average annual mileage for the horses was 2,680.

The cost of the driving outfit is shown to be not much more than half the cost of the average machine in Class 1, but the average cost of maintenance is considerably more than that of cars of Class 1, yet somewhat less than that of Class 2, while the mileage was about half that of cars of Classes 1 and 2. Taking it altogether, the horse seems to be decidedly losing favor and bids fair soon to be out of the running. In other words, to use a racing term, he is not one, two, three in the race.

## THE DOCTOR'S RUNABOUT

THE exactions which, in times past, made the doctor's horse scarcely less well known and respected in his community than his master, are now laid on the doctor's automobile. In the first place, his car must be dependable. It must be ready to go at all times, day or night, rain or shine, hot or cold, and over good roads or bad, and with no preliminary fussing to soil the hands or to consume time. After it is started it must get there, and that without delay. This, also, takes in the item of speed and power.

There are many cars that will answer for this much, and in individual cases any one of these will answer the purpose for a doctor's car. But the average doctor with the average income demands more than this. For such a one, the car must be an economical one. That is, it must be of moderate purchase price and low maintenance cost.

Again, it must be one that the doctor can care for himself without the aid of a chauffeur. This means simplicity as well as reliability, and once more, it must be one that will run through the whole gamut of seasons without the necessity for continual adjustment to suit the changes of temperature or humidity, and to meet the requirements of many doctors, it must be content with an unheated stable.

Is there such a car? From the experience of a year and a half, I think I can honestly affirm that there is, and that I am driving it.

In the first place, my car (246) is of moderate purchase price, costing with full equipment of top, lamps, headlights, speedometer, etc., less than $600. This brings it within the reach of many who would otherwise be compelled to put up with the horse.

It is not a touring car, and never pretended to be one, but as a dependable runabout it has been in my hands a decided success. It is well proportioned, neat in appearance and runs almost without noise.

It has the most simple engine of which I can conceive. There is the one cylinder, water-jacketed and cooled by a thermo-syphon radiator which has been all-sufficient in the hottest weather and has given me no trouble even on long summer runs.

The rapidity of the explosion (2200 R. P. M.) avoids that chug-chug of most one-cylinder cars and by a counter-balance in the crank case, the vibration is so thoroughly absorbed as to be *nil*, even at high speeds.

The top of the cylinder screws out, exposing the piston which can be cleaned or removed through it without dismantling the engine. Two other caps unscrew, exposing the valves which can be removed or ground without any effort. The spark plug is over the intake valve and never accumulates enough soot to rub off on one's fingers.

The timing apparatus and contact maker are simplicity itself. Everything is made adjustable for taking up wear or replacing broken parts, and I have been told by many an amazed spectator, "Any fool could run that." The gasoline tank for over five gallons and the oil tank are both under the hood where, being warmed by the engine, their contents give increased efficiency.

The weight of the car is about 1,000 pounds. The 28x3 tires stand up well under it and are not as expensive to replace when worn out as larger ones. The springs are an innovation. The car is suspended from a spiral spring placed at each corner and is steadied by four shock absorbers. There is no "broken spring" difficulty and the riding is easier than in any other car of its size.

A double chain drive gives the advantage of economy of power with no troubles of alignment common to shaft driven cars, while the two short chains cause almost no noise and are cheaply and easily repaired or replaced when worn out.

People marvel to see what I can do with my car. One man thought I was lying when I told him, but after accepting my invitation for a demonstration ride, went immediately to the shop and ordered one for himself and he has not yet confessed any disappointment in his choice of a car.

I take care of my car myself which usually consists only in filling up my oil and gasoline tanks. Once a week I fill my grease cups, oil my transmission and clean my chains unless hard driving on muddy roads compel more frequent care. I keep my car in an unheated barn and have my radiator filled with a 50 per cent. solution of wood alcohol as an antifreeze.

At first, I had trouble with my cylinder oil becoming thick from the cold, but this winter I have been using a very satisfactory oil which will remain fluid even below zero.

The only time I was stopped by the cold was when the thermometer stood at 27 degrees below zero and my dry cells froze. I borrowed a storage battery and finished my work without mishap. Let me say here, however, that I doubt if there is a car made, at least a pneumatic tired one, that will meet the winter demands of a country practice—for such, the horse still reigns supreme.

I must say in truth, that at times I could use more power, but so say all the auto owners I have ever met—regardless of the power they have. I have had troubles too, but they have been neither greatly annoying nor expensive. The upkeep cost for double the mileage my horse gave me has been well under the cost of the "nag." I am well content with my little runabout and I think it is about the perfect car for the doctor's use.

H. O. SKINNER, M.D., St. Paul, Minn.

### Beware the Garage Man!

Let me whisper this in your ear: 'Ware the garage! The average garage proprietor seems to think that a man who is able to own a car is his lawful prey, and the old joke anent the plumber is not in it with the garage man. He will tighten up a nut or two, crawl under your car, grunt around awhile and come out shaking his head and tell you it is all wrong. He keeps it until you are about ready to explode with wrath and then runs it around to your office. At the end of a month, with a sublime nerve, he will present a bill for "Work on car, $10." But this is not all. While he has the car he will run all of your oil out of the reservoir and all the gasoline out of the tank and tell you he had to refill these receptacles, having this also charged up on the bill. And the crux of the whole matter is that if you are in a place with one garage you will have to swallow your indignation and pay up, looking and acting all the time as if he were doing you a great favor. The moral of all this is, learn not to patronize the garage—except when you must.

J. ALEX MELDAU, Newberry, S. C. (Auto 232).

# A GROUP OF BRIEF REMARKS

### Incurable Infection

A man once infected with the automobile virus remains a maniac throughout the remainder of his life unless maimed or rendered an imbecile by the machine (211).

P. M. Jewell, Decorah, Iowa.

### The Country Doctor Needs Both

In my opinion the country doctor needs a good horse and light buggy and a good motor car (212). Then he is equipped for all seasons. The difference in the keeping expense of the horse and the car is very little by actual count.

O. C. Diehl, Diller, Neb.

### Fine for Night Work

The advantage of the car over a horse in night work is particularly noticeable, especially if you have a sleepy boy or have to hitch your own horse. Without making an effort to economize time, I have made a trip of five miles in the country in 50 minutes from the time I was called from my bed until I returned to it. H. C. M., Ohio (237).

### Fix Your Own Car

It was pretty expensive to take care of my own car (231) the first three months, but since then my expenses have been less than half what they used to be when I had a horse and had to keep a coachman. Besides, I am independent, have more time for study and for pleasure trips and see more of the country than I could have done for three times the expense with a horse. H. S., Connecticut.

### The Horse for Luxury, the Motor for Business

I consider a horse a luxury that I cannot afford. In my opinion there is no comparison between the motor and the horse-drawn wagon. If you are rich and like a horse, keep it for pleasure, but if you are trying to earn a living in the practice of medicine, it is mental, physical and financial suicide not to have a motor car (241).

J. Swett, New Hartford, Conn.

### The Car He Needs

If I could find a car with a 60-inch tread and 36- to 38-inch wheels, solid rubber tires, 25 h. p., chain-drive from each hind wheel, with a maximum speed of 25 miles an hour and made and standardized by a reliable company, I should exchange my car (214) for it. Such a machine should weigh about 1,500 pounds, with the greater portion of the weight over the rear wheels. J. H. Paxton, Elkhart, Texas.

### How It Pays

The value of plenty of rest and pleasure for the busy doctor cannot be stated in dollars and cents, as above all men we need it. But it is far cheaper than horses. Thus you see it don't take much of a head to figure it out. If it is cheaper than what you are using (the horse), and at the same time increases your income, it can't help but pay, and at the same time it turns work into pleasure.

W. C. Nolte, Dazey, N. Dak. (Auto 207).

### The Strenuous Life

A car is not a money-making proposition for a doctor; at least not in this territory. The people do not call you because you have a machine and can get there quickly, except in rare cases. In fact, I think some farmers are fearful lest the bill be in proportion to the ornate equipage of the vender of powders and pills, and really prefer to stick to the plodding old fellow who takes lots of time to talk their kind of shop, and jogs back and forth in the farmer's own rig, perhaps, and is really more in their class. The doctor with an auto is not one of the people as much as he used to be. He has not the time. His is a strenuous life. He covers big territory in record time and has more leisure for pleasure trips and for home life. In joining the Honk! Honk! class he has put himself in another plane. Some look after him with admiration and others with jealousy and criticism. But the earnest, energetic medical man of to-day does not care. In time he will overcome prejudice, as he is usually a careful driver and not stingy when he sees a chance to give some wayfarer a lift. He has at last found a legitimate relaxation that combines his business with his pleasure and adds immensely to his sum total of happiness, and this includes the whole family.

R. J. Sewall, Deerwood, Minn. (Auto 213).

### He Has Not Found It

After all has been said on the subject, I have come to the conclusion that the all-round country practitioner's car is yet to be built. E. D. Spear, Nome, N. Dak. (Auto 234).

### Advantages of a Good Car

The great advantage of owning a good car (233) is in the saving of time for more rest, more study, and in relieving the strain of hurry to accomplish the day's work.

E. W. Mitchell, Cincinnati.

### Are You a Mechanic?

If a man is a natural mechanic, have a good machine, not too light and not less than 30 h. p. (229). If not a mechanic and you can't afford a chauffeur, don't have an auto.

W. E. Rowe, Grand Rapids, Mich.

### The Way to Get There

Any number of horses could not take a physician to a serious case of postpartum hemorrhage over nine miles away in twenty minutes. That is what my machine (216) did for me. J. S. U., Mississippi.

### Depreciation Greatest First Year

It is unfair to the auto proposition to give figures for one year's time, for the depreciation the first year is much greater than for the following three or four years.

C. B. Welton, Peoria, Ill. (Auto 228).

### Has Made Him an Engineer

I have never lost two hours a year with my car (217). It has made me an engineer. I have never had the motor where I could not make it go, and I have never been hauled in.

J. D. Hullinger, Clinton, Iowa.

### Costs Less and Saves Time

My working time has been decreased, I save time on my consultation trips, have more pleasure and enjoyment than with a horse, and it does not cost as much as the two horses I formerly kept. A. R. Allen, Carlisle, Pa. (Auto 226).

### Air Cooling

In one instance (236), at least, air cooling has been brought to perfection, and with that attained I cannot conceive how anybody could want a water-cooled car. If a business man can afford to own a machine for pleasure, I can't see why a physician can't afford one for business and pleasure both.

W. D. Schwartz, Portland, Ind.

### Back to the Horse

A good driving team is always ready, and while progress is slower, it is surer. Hence, for one whose income is not over $3,500 to $4,000 per year, the horse and not the auto is the proper, sensible, economical mode of locomotion. This is my final conclusion after two years' experience with three types of automobiles.

J. A. Pringle, Bagley, Iowa.

### Manufacturers: Please Listen

My kick is that manufacturers of automobiles are not particular enough to send out specific instructions as to how to oil, maintain and operate each individual car, so that every owner could become familiar with his own car. Our great need is for automatic oilers, with oiling places made accessible, self-starting device, stronger magneto and specific explanation of internal mechanism.

F. J. Rosenburg, Lexington, Neb. (Auto 235).

### Handle Your Own Car

If one has any mechanical ingenuity it pays to handle and care for one's own machine (221). There is an interest and a fascination in it that will more than pay for the grime and sweat, beside the security you will feel in knowing you will be able to get in many times where the fellow who depends on the garage would have to phone in for some one to come and locate perhaps a trivial defect.

C. L. S., Kansas

## FAVORABLE EXPERIENCE WITH A ONE-CYLINDER CAR

MY CAR is a 1910 model, one-cylinder runabout (140), with non-pneumatic tires, and I am sure from my own experience that it will take one or two passengers anywhere that any car could take them regardless of size, price or power. The first car I owned was a 1907 stanhope (209), which gave me good service, but the inaccessibility of the motor, which was under the body, a wrong idea altogether, was a drawback in many ways too numerous to mention. The car I am using now has the motor easily accessible, which is a great consideration. A single cylinder means reduction in a number of parts, less expense and less trouble. It also means longer life. My old car is as good as ever so far as the motor is concerned and it has only one cylinder. The argument that some speak of in favor of a two or a four-cylinder engine, that should one go wrong the rest will bring you home, is absurd. What would you say to a man who would sell you a horse and tell you to take another horse along for fear one might die, then you would have a horse to get home with? My car makes no more noise than many of the two or four cylinders. I could break the speed law and get arrested any old time. What then is the use in keeping two or four horses to do your work if one horse will do it? Great motor power in a heavy car is like having money wasted in stock which does not pay your dividends. It is there but you do not get the use of it—that is, you can't realize any more on it than you would if you only had half or a fourth the amount of money invested. A heavy automobile has exactly the same effect. The fewer parts the less likelihood there is that something will go wrong. The springs on this car are easier than on any other car made because they are coil springs. I am sure on the points of first cost, which is $485, economy, reliability, accessibility, easy riding, and in every other way for a one or a two passenger car this car is away ahead of all the others. I am greatly pleased with the tires (210) which I wish more physicians knew about. There is no question but that they ride just as easy as do the pneumatic, at least they do on this car. The springs may have something to do with it, but I surely would not go back to pneumatics again. They are as resilient as a pneumatic tire and are neither solid nor pneumatic, require no pumping and cannot puncture nor blow out, which to a physician means something.

J. E. ASAY, M.D., Rock Island, Ill.

## A COMBINATION TRANSFORMABLE RIG

A FEW years ago I drove fine horses and loved them. When the auto epidemic raged in my neighborhood I fought it off until I was practically alone, I so loved my beautiful bays. When I finally decided to get an auto, contrary to my usual way of doing things, I selected the simplest and most inexpensive machine (215) built, possibly as an apology to my poor horses.

I have since learned that the only mistake I made was that I should have bought two. It was so simple my wife learned to run it. I have driven my machine thousands of miles since I have had it, all over the country, day and night, summer and winter, on all kinds of roads, and what do you think? No more horses for me; they eat too much, they go too slowly, they require too much care. My auto costs me less, is always outside the door waiting for me, and is as much a necessity as my telephone.

It is equipped with two sets of wheels, one with pneumatic tires and the other with solid tires, so I am ready for all seasons of the year and never have to bother with horses. It is a classy runabout one minute and converted into a four-passenger rig the next minute.

J. H. VEATCH, M.D., Marine, Ill.

### A Terse Comparison

Costs less than one horse and does more work than three, and is much easier on the doctor.

C. H. MILLER, Chicago (Auto 230).

### Air Versus Water

For this climate I can see no particular advantage in air cooling. The antifreezing solutions have given me satisfaction, and the water-cooled engines run more smoothly and require less adjustment.

C. S. KALB, Spokane, Wash. (Auto 218).

### The Simple Car

The more simple and less complicated a car, the better. A first-class, medium weight, medium priced car, given reasonable care, will not only stand a wonderful amount of hard work on all kinds of roads and in all kinds of weather, but a wonderful amount of abuse as well.

K. W. B., Nebraska (Auto 224).

### Just Like Fishermen

The reason some auto owners have more expense than others is the overcharging, false representation and grafting of garage owners. There is not one automobile owner in a hundred who will state his true expense. It seems that a truthful automobile owner is a rarity.

W. A. STOECKS, Davenport, Iowa (Auto 223).

### Get a Second-Hand Car to Start With

To the man in my position I would say, get a good second-hand car, as you must learn to run and care for it yourself, and you can get this knowledge most cheaply in this way. Don't expect too much at first. You will have to give a few public demonstrations on the main street, but if your religion will stand this you can be sure it is of the proper brand and you will soon learn to have things in order before starting. After a year's experience you will be in position to buy a new car and get unbounded satisfaction out of it.

C. H. FOX, Clarks, Neb. (Auto 225).

### Does Driving a Car Become Automatic?

A point which seems not to have been raised in any of the answers received by THE JOURNAL is discussed *pro* and *con* by correspondents in the *British Medical Journal* of recent date.

Dr. Allan Wilson writes that a motor car for a medical man "can scarcely be considered a boon or a blessing to his patients, because, when he is going from house to house on his daily rounds, his thoughts and attention, that should be occupied with the contemplation of the nature and treatment of the diseases which come under his notice, are, by necessity, directed to the steering of his car."

Dr. Thomas Fentem replies by saying: "My experience is that one arrives at the patient's bedside much more alert and less jaded after a long round than with horses; and, getting over the ground more quickly, one reaches home earlier than one could with horses. One therefore has more leisure to give to the consideration of the patients' cases in the quiet of one's study and among one's books, and that surely is better than trying to do this sitting beside a coachman, even if one's thoughts are stimulated by such accompaniments as blinding snowstorms, driving rain, gales of wind, and such like.

"The driving of a car becomes after a short time largely automatic, and this applies, perhaps, most of all to the steering, the task which Dr. Wilson appears to think requires such deep mental application as to banish all else from one's mind."

Dr. F. L. Nicholls writes: "One would almost feel inclined to think that Dr. Wilson had made one or two attempts to handle the ribbons or drive a motor and found it too much for his nerves; and if such is the case he is certainly a wise man to depend on his coachman to see him safely on his rounds, but I cannot allow the statement that a driver's whole attention must be given to steering to avoid accidents to pass without protest. If such was the case I pity the poor driver, for at the end of a week his nerves would be in such a state that he would be good for nothing but darning stockings or doing patchwork, even if he was lucky enough to keep out of an asylum.

"Dr. Wilson does not appear to know that all these actions to an experienced and skilled man are almost entirely automatic. The eye and hand do the work, leaving the brain free for the consideration of any matter its owner may desire. I do not speak without experience, for I have for over forty years had the handling of horses, including the breaking-in of young ones, and for over five years I have driven a motor, and I can assure Dr. Wilson that the only time when my brain is 'jumpy' is when I have relinquished the reins or wheel into some other person's hands. I am then anything but at ease; but directly I have again resumed my usual and proper place my brain is at ease and ready for the consideration of the most serious subjects connected with my practice."

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## *Original Articles*

### OCULAR PALSIES IN TABES *

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The importance of examining the eyes of tabetics has long been recognized by neurologists, for the ocular symptoms often precede all other sure signs. Indeed, so constant and characteristic are the pupillary, muscular and optic-nerve changes in this disease that, given in addition to even one of these, the history of previous syphilitic infection and another characteristic sign of tabes, such as loss of knee-jerks, diminution in muscle tonus of the legs, or a marked disturbance of the bladder or sexual functions, the diagnosis of tabes becomes very probable. It is not the purpose of this paper, however, to treat of the ocular symptomatology of tabes in general, but to dwell particularly on the palsies of eye muscles, and especially of the extra-ocular muscles, which are observed so frequently at some stage or other of the disease.

In attempting a generalization of the extra-ocular palsies, it may be remarked that, while they resemble in many particulars palsies of eye muscles due to other causes, they manifest certain characteristics, which, while not in themselves peculiar to tabes, are at least highly suggestive of the presence of that disease.

The first and chief of these is their transient tendency, for it is an almost constant experience that the palsies which appear in the early stages of the disease vanish after periods of persistency ranging from but a few hours to two or three weeks, and, moreover, while it is true that the palsies which occur in the later stages are as a rule permanent, even these may be transient and may totally disappear, usually after a longer period, however, than when they are observed at the commencement of the disease.

The careful historian will often elicit the occurrence of diplopia in very many cases from patients who are loath to believe that the attacks of double vision from which they suffered even months or years before other symptoms of tabes developed had any connection with their general nervous disorder.

As illustrative of a fleeting palsy occurring in the early stages may be cited the case of a man, aged 45, who consulted me in 1895 on account of a paralysis of the right external rectus muscle. He confessed to having had an initial sore when 25 years old, but as he had received prompt and, as he thought, efficacious antisyphilitic treatment and as his health had been uninterruptedly good, he considered himself to be well. In addition to the extra-ocular palsy noted at the examination, Argyll-Robertson pupils were present, and his physician reported other signs of early tabes. Potassium iodid was administered in ascending doses, and the diplopia totally disappeared after two months' duration. Although this case has passed from my observation, it was reported to me five years ago that the patient was still living, and, though manifestly the subject of tabes, he seemed to suffer but little inconvenience from it.

Another patient, M. J., aged 53, a patient in the Philadelphia General Hospital, gave a history of having had diplopia six years before admission and that it lasted two years. When the diplopia disappeared he began to notice occasional jerkings in the right foot and his gait became disturbed. Examination which I made six months ago revealed no ocular palsies, and the neurologic report was as follows:

"Slight ataxia in upper extremities. Romberg symptom. Ataxic gait. Hypotonia in lower extremities. Knee-jerks lost, etc." Syphilis was denied.

As an example of a transient palsy occurring in a late stage of the disease may be mentioned the following:

J. C., admitted to nervous wards of the Philadelphia General Hospital in 1896, aged 51, with the history of an initial luetic lesion twenty years previously. It was elicited on admission that the earliest symptoms of tabes had manifested themselves six years previous to admission as "cutting" pains in feet and legs. Girdle pains were also present. Two years later gastric and bladder symptoms supervened. Argyll-Robertson pupils were present in both eyes, knee-jerks were lost, ataxia was noted in the upper and lower limbs, but the extra-ocular movements were uninvolved. Six years after admission diplopia appeared (due probably to a paretic condition of the right superior rectus) and persisted for several months. The double vision then gradually disappeared and did not return during the two years or more during which the patient still continued to retain sight, vision being gradually lost at the end of that period from optic atrophy. When I examined the patient six months ago the movements of both eyes were found to be markedly incoordinated, not only from the incoordination of blindness, but also from a paretic condition of the extra-ocular muscles, which seemed to reside chiefly in a weakness of the right superior rectus muscle.

Thomas, who analyzed 111 cases of tabes from the Hopkins clinics in 1899, found the initial symptoms to consist of diplopia in 6 instances, and of other eye symptoms in 14 instances. Diminution of vision was the initial symptom in 4 cases. Double vision and dimness of vision were associated once and double vision with other symptoms 7 times. Ptosis was the first symptom associated with pain twice. Of all the symptoms, pain was the one most generally complained of, being present in 57 cases; ataxia was the initial symptom 24 times, numbness of extremities 6 times, paralysis of bladder 5 times, gastric crises 4 times, paralytic attacks twice, while loss of sexual power, mental symptoms and neurasthenia were recorded as initial symptoms in one instance.

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* Read before the Buffalo Ophthalmological Society, Dec. 11, 1909.

Thomas did not mention in how many of his cases the diplopia disappeared, but I think that it has been my experience that the palsies vanish, for a time at least, in perhaps 90 per cent. of the cases which I have had under observation. This percentage is based on an analysis of the histories of 60 cases of tabes taken from my own private and hospital records and from the study of 28 cases of advanced tabes which I recently made in the wards of the Philadelphia General Hospital, through the courtesy of Drs. C. W. Burr and William G. Spiller, neurologists to the institution.

In addition to the transient tendency which tabetic ocular palsies exhibit must be noted a very marked disposition to recurrence, either the same muscle being repeatedly palsied, or the palsy appearing in another muscle or muscles, shortly after it has disappeared in one governed by another nerve. An interesting case of this nature is reported by Pel, in which oculomotor palsy, which was the first indication of the disease, recurred 7 times, after having completely disappeared 6 times. This disposition to recurrence is well exemplified by a case under observation at the present time, in which the diplopia, which previously appeared eight years ago, disappeared after about two months' persistency, to reappear three years later for a period of three months, two years later for three months, while the present attack came on one month ago and is still persistent. The muscle occasioning the diplopia at present is the left inferior oblique; in the other attacks the patient states that one object was always higher than the other and there was some lateral displacement, but he was unaware of the precise muscle or muscles which the oculists to whom he went for relief found implicated. This patient, a man, 49 years old, contracted syphilis when aged 29; he now shows evidence of beginning atrophy of both optic nerves, with other well-developed signs of tabes. Argyll-Robertson pupils are present in both eyes.

So fleeting is the palsy in some instances that it may pass away in a few hours, while in others it may persist for years, the muscle regaining its power only after long loss of function. This return of the muscle to its normal action after even years of paralysis should be recognized by ophthalmic surgeons and should tend to discountenance operations on the eye muscles of tabetics.

As illustrative of this type may be cited the case of R. L., a woman, aged 60, who consulted me at the Howard Hospital in 1896 on account of double vision, which examination showed to be due to a paralysis of the left external rectus muscle. There was a history of recurrent attacks of double vision of a somewhat similar nature having occurred for some years previously, but these attacks had been fleeting, whereas the double vision for which she then sought relief had persisted for six weeks or more. The knee-jerks were absent, Argyll-Robertson pupils were present in both eyes and the discs were partially atrophic, the fields being contracted. There was a probable history of syphilitic infection some fifteen years previously. Potassium iodid was administered for three months in high doses without affecting the palsy. The patient then passed from observation for two years, when she returned for a change of glasses. Examination at this visit showed all the extra-ocular muscles to be functioning, the patient asserting that she had not been troubled with the double vision for some two or three months previously. In this case the palsy completely disappeared after a persistence of about two years. Recent efforts to find the patient, with a view to determining the progress of her disease, have been ineffectual.

Another peculiarity of tabetic palsies is that they are usually dissociated, i. e., paralysis of the levator or rectus internus alone, the palsy following no particular rule. This is especially true when the palsy appears as an initial symptom, when it rarely affects all muscles or muscle groups supplied by a single nerve.

In studying the relative frequency with which the several eye muscles become affected in tabes, Uhthoff found the oculomotor involved in 54 per cent. of his cases, the abducens in 33 per cent., the trochlearis in 8 per cent. Ophthalmoplegia externa existed in 5 per cent. and isolated ophthalmoplegia interna in 5 per cent. Beyer's, Stock's, Erb's, Fournier's and Charcot findings were similar. Of 100 cases of tabes seen in Schoeler's eye clinic, the oculomotor was involved in 26 instances. From an analysis of 60 of the cases which I observed and which lent themselves to such a study, it was found that the oculomotor was at fault in 30 of the cases, the abducens in 6, and the trochlearis in 2. In the remaining 22 cases the paralysis was of a mixed type. Complete unilateral oculomotor palsy occurred in 3 instances. Complete palsy of the oculomotor in all its branches is very rare, Uhthoff meeting it in but 5 per cent. of all his cases, and in but a very small proportion of these was the palsy binocular.

An interesting case of complete palsy of the right third and sixth nerves and of a partial implication of the left third nerve was one of the cases placed at my disposal by Drs. Burr and Spiller and studied by me. This patient, a man, aged 39, had noted that five years previous to his admission to the hospital in 1907 the left pupil did not contract and that he had some difficulty with vision. About the same time a numbness was remarked in the right foot and two years later in the left leg. Girdle pains followed later. Examination which I made six months ago showed the conditions just mentioned. Argyll-Robertson pupils and Romberg sign were present, and ataxic gait, with absent knee-jerks, was noted, with some impairment of sensation in lower extremities.

According to Oppenheim, associated palsies never occur in tabes, but Uhthoff, though stating that the finding must be very rare, cites a case reported by Chvostek with bulbar symptoms, in which there was left-sided ptosis, palsy of the left rectus internus and of the right rectus internus in association with paretic nystagmus.

I found paralysis of both external rectus muscles in two cases. One of the patients, G. H., a man, aged 41, was admitted to the nervous wards of the Philadelphia Hospital Oct. 3, 1907, with well-marked optic atrophy. A period of double vision had preceded the blindness, however, by some five years. The sexual power was lost at the same time that the blindness developed, ataxia in the lower extremities manifesting itself somewhat later. My examination six months ago revealed complete atrophy of both optic nerves with paralysis of both external rectus muscles; knee-jerks lost; ataxia in both upper and lower extremities.

Wilbrand and Saenger observed that isolated palsy was an accompaniment of the initial stages, and generally disappeared, persisting as a permanent finding but very rarely, i. e., in but 3.3 per cent. of 302 cases. Marina, however, found the paralysis to be persistent in 10.6 per cent. of the 150 cases observed by him.

Although the palsies may occur at any stage of the disease, most authors have observed them relatively early, 83 per cent. of Berger's cases and 80 per cent. of Gowers' occurring in the initial stage. Uhthoff's experience was similar, and he considered the palsies to be analogous to the appearance of the Argyll-Robertson pupil and optic atrophy.

After studying an enormous number of cases of tabes, taken from all sources, Uhthoff found that palsy of the eye muscles occurred in from 20 to 22 per cent. of the cases. Moeli placed the figures at 22 per cent., Reumont at 17 per cent., Marina at 19.5 per cent., Leinbach at 16 per cent., Tumpouski at 21.7 per cent. Mann found palsies in 30 per cent. of his cases. It should be noted, however, that the percentage of palsies observed in an eye clinic is necessarily higher than that observed in a clinic devoted to nervous cases, since the moment double vision is complained of the patient seeks the former. In the rare cases of true tabes in children, Uhthoff found ocular palsies in about 14 per cent. of the cases, while Argyll-Robertson pupil occurred in 65 per cent. and optic atrophy in 45 per cent.

According to the figures just quoted, palsy of the eye muscles in tabes in adults is much more common than atrophy of the optic nerve, which, from Uhthoff's figures, is seen in from 18 to 20 per cent. of all cases. They are not observed, however, in the initial stages of tabes as frequently as the Argyll-Robertson pupil or as lancinating pains, or again as the loss of reflexes, as will appear from the table prepared by Fehre and quoted by Uhthoff in his remarkably learned dissertation on this subject in the second edition of the Graefe-Saemisch "Handbuch":

| | Per Cent. |
|---|---|
| 1. Disturbances in sensibility (in the widest sense) | 92 |
| 2. Lancinating pains | 85 |
| 3. Loss in patellar reflex | 83 |
| 4. Argyll-Robertson pupils | 79 |
| 5. Romberg phenomenon | 71 |
| 6. Ataxia | 55 |
| 7. Bladder and rectal symptoms | 50 |
| 8. Gastric crises | 43 |
| 9. Pupillary inequality | 41.5 |
| 10. Paresthesias | 36 |
| 11. Headache and attacks of dizziness | 40 |
| 12. Involvement of cerebral nerves | 40 |
| 13. Girdle sensations | 36 |
| 14. Weakness in legs | 30 |
| 15. Palsy of ocular muscles | 30 |
| 16. Optic atrophy | 21.5 |
| 17. Cardiac neuroses | 21.5 |
| 18. Psychic disturbances | 21 |
| 19. Diplopia | 19 |
| 20. Laryngeal crises | 15 |

Rarely muscles other than the ocular muscles may be palsied at the same time. Thus a case reported by Turner, that of a man of 40, there was some ptosis and also some bilateral palsy of the soft palate and paralysis of the vocal cords. Rarely also, instead of an ocular palsy, a blepharospasm may be noted or a blepharospasm may precede the development of ocular palsies.[1]

Of 1,088 cases of tabes seen by Grosz, Berger, Bernhardt, Leinbach and Bonar, 222, or 20.4 per cent. had optic atrophy. As this number is so large, this percentage probably represents the true frequency of this symptom in tabes.

It is of interest to remark that, from an analytical study of 127 cases, in which optic atrophy occurred 55 times, Mann found no tendency for the involvement of the nerve to lighten the future course of the disease. It must be remembered, however, that the form of tabes which begins with optic atrophy is often for a long time combined with a loss in power of the roots of the thoracic nerves, when all other symptoms are absent. According to Mann, the same holds good not only for optic atrophy, but is also the rule in cases presenting Argyll-Robertson pupils and ocular palsies, both of these symptoms being sometimes associated for a long time solely with anesthesia of the trunk.[2]

Abducens palsy occurred in 13 per cent. of Uhthoff's cases, though binocularly in but 2 per cent. This observation is of considerable moment in establishing a differential diagnosis between tabes and cerebral syphilis, multiple neuritis, intoxications, etc., in which latter conditions binocular isolated disease of the abducens is not unusual. Authorities agree that in tabes abducens palsy is, as a rule, incomplete and but rarely permanent.

Uhthoff's statistics show isolated ptosis in about 4 per cent. of his cases; indeed, so much stress does this observer lay on this symptom that he believes, in common with Wilbrand and Saenger, that a unilateral or bilateral transient ptosis, complicated by one or more pronounced tabetic symptoms, such as Argyll-Robertson pupil, lancinating pains, failure of knee-jerks, optic atrophy, etc., makes the diagnosis of tabes extremely likely. Wilbrand and Saenger and Kahler found the combination of ptosis with abducens palsy not infrequent in the early stages of tabes, while Uhthoff's cases, on the other hand, showed a frequent combination of palsy of the levator with that of the superior rectus.

It has long been a mooted question just what influence syphilis, the underlying factor in so many cases of tabes, might have on the occurrence of the palsies. Berger, for example, found, in 56 cases of tabes studied by him which had ocular palsies, that a direct syphilitic history was obtainable in 25, a specific infection being denied in 31. He asserted also that his observations led him to infer that the palsies in the syphilitic cases showed a greater tendency to be permanent than in the non-syphilitic ones, the syphilitic palsies persisting on an average of six and one-half months, the non-syphilitic but two months. His figures showed also that the former class of palsies exhibited a greater tendency to be multiple than the latter. Uhthoff's figures, on the other hand, do not substantiate Berger's, and this careful observer has not been able to satisfy himself that palsies occurred more frequently in cases of tabes with a syphilitic history than in those where no syphilitic history was obtainable. Uhthoff concedes, however, that a subject with syphilis affected with ophthalmoplegia is oftener later affected by tabes than those with ophthalmoplegia without previous syphilitic infection. Spiller believes that these statistics may be unreliable, for, he says, "many persons deny syphilitic infection with full knowledge of the infection." He thinks statistics based on the Wassermann reaction will be more valuable. At present this reaction seems to be obtained in about 60 per cent. of all cases of tabes.

As a further point in the differential diagnosis between the ocular symptoms of tabes and cerebrospinal syphilis may be cited the observation of Groenouw, that the Argyll-Robertson pupil is generally indicative of tabes, unilateral ophthalmoplegia interna of syphilis. Again, according to Fournier, syphilitic palsies as a rule affect the entire nerve or a great number of its branches, while a single muscle is involved in tabes. It has been my experience that inequalities in the size of the pupil and disturbances in its reaction are found in the early stages of cerebral syphilis, often associated with optic neuritis, while palsies of the extra-ocular muscles, as a rule, belong to the later stages. When syphilitic palsies do occur in the early stages they develop more gradually and persist longer, tabetic palsies, as has been said, manifesting a tendency toward speedy disappearance and frequent recurrence. Conjugate deviations and ophthalmoplegia externa are caused almost exclusively by syphilis.

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[1] Posey and Spiller: The Eye and Nervous System, p. 502.

[2] After a critical reading of this paper, Dr. W. G. Spiller has told me, "It is very important to separate those cases of tabes in which optic atrophy is an early sign from those in which it occurs late. It is only in the former that the atrophy seems to have any influence on the course of the disease, and while it does not invariably modify the course, it does so in a sufficient number of cases to show it has a decided influence. Indeed Déjerine has employed the term of 'tabes arrested by blindness.' Statistics which include the cases of early and late optic atrophy are valueless for this purpose. Early optic atrophy is not very rare, tabes without implication of roots below the thoracic is distinctly rare, and early optic atrophy is frequently seen with the usual lumbo-sacral type of the disease. Byron Bramwell questions the influence of optic atrophy at any stage on the course of the disease."

Ophthalmoplegia interna is rarer in tabes than in other affections of the nervous system. Mann, for example, finding it but 19 times among 127 cases of tabes (14.9 per cent.). Of 30 cases of ophthalmoplegia interna seen by Uhthoff, syphilis was the causal factor in 23.3 per cent., tabes in 10 per cent., progressive paralysis in 6.6 per cent., trauma in 6.6 per cent., extreme cold in 3.3 per cent., intracranial disease in 6.6 per cent., while no etiologic factor could be found in 40 per cent. of the cases. Uhthoff found ophthalmoplegia interna with unaffected external eye muscles oftener in tabes than with palsied extra-ocular muscles. Wilbrand and Saenger's observations tallied with his, but 14 per cent. of the more than 100 cases of tabes and ophthalmoplegia cited by them exhibiting ophthalmoplegia interna in association with palsy of the extra-ocular muscles. In the remaining cases, Argyll-Robertson pupils were observed relatively often, normal pupils but rarely. In view of this fact, Uhthoff has suggested that a nontabetic ophthalmoplegia can readily be differentiated from one due to tabes by the presence of an unaffected pupil. It must be remembered, however, as Gowers has pointed out, that a true syphilitic ocular palsy may coexist with locomotor ataxia; indeed, tabes often cannot be distinguished clinically from syphilis of the nervous system.

According to Gowers, the initial symptom of tabes rarely appears within the first three years after the chancre; indeed, in one of his cases it was not noted until forty years afterward. Spiller thinks that usually about nine years elapse after the initial lesion before syphilitic palsies of the eye muscles appear.

It may not be amiss in this connection to refer briefly to the recent paper by Putnam,[3] in which exception was taken to the almost universally accepted opinion that syphilis was the sole cause of tabes, and stress laid on the necessity of considering other factors in the etiology. In the discussion which followed the reading of this paper, Allen Starr stated that he was utterly unable to find any syphilitic taint in 20 per cent. of his private cases of tabes, and it was elicited that Gowers had positively stated that syphilis could be excluded in 10 per cent. of all cases of tabes.

There is good evidence that tabes is not always directly the result of syphilitic virus, but results from parasyphilis from some toxic substance produced within the body. Indeed, according to Fournier, the comparative mildness of the primary constitutional symptoms in most syphilitics who ultimately become tabetic almost seems to indicate that when the syphilitic virus expends itself in severe primary and secondary manifestations there is less tendency to the subtle poison, which proves so disastrous to the nervous system.

The pathogenesis of ocular palsies in tabes is still in doubt, but the views of most neurologists, however, are probably best expressed by Fraenkel, who states that they are either pathologic occurrences of another nature than the general disease they are implanted on, or they are a part of the general disease. If they belong under the first category they share with the general disease the common etiology only, i. e., the syphilitic infection, and are pathologically primary or secondary nerve inflammations in distinction from the pathologic lesion of the general disease—a primary degeneration of the sensory neuron. The first type is oftener seen in those cases that are rather forms of multiple cerebrospinal syphilis of the tabetic type, and the second in the class of cases that incline toward the picture of a genuine tabes. In the first instance they may, therefore, be looked on as syphilitic ocular palsies occurring in a case of multiple cerebrospinal syphilis of the tabetic type, and in the second instance they are essentially the same phenomena as the motor phenomena in the extremities of tabetics.

It is for the second type that the view of a primary sensory origin seems to Fraenkel to be justified.

In their earlier stages, Fraenkel believes the palsies to be simply due to the loss of tonus which is mediated through disease of the sensory neuron, while later on when, owing to the long duration or the severity of the process in the sensory neuron; the motor neuron has undergone secondary changes, the palsies are more lasting, more extensive, and their immediate cause found to consist anatomically in degeneration of the nucleus, nerve trunk or muscle. Fraenkel is of the opinion that this view is not only quite compatible with the clinical and anatomic characteristics of the type of palsies outlined above, but receives further support from the fact that it permits a uniform pathogenetic conception of the general disease.

According to Uhthoff, an ependymitis in the third and fourth ventricles, as well as in the aqueduct of Sylvius, although found but relatively seldom post mortem, is to be regarded as the pathologic entity in cases of tabes which exhibit ocular palsies, while the transient nature of the palsies is accounted for by Kahler and Dufour by changes in the circulation with ependymitis and vascular dilatation. Strümpell, on the other hand, attributes the transient character of the palsy to peripheral changes in the nerves of the ocular muscles, ascribing the permanent palsies to lesions in the nuclei and roots of the nerves. Finally, there are others, like Basso, Rieger, Forster and Berger, who ascribe the fleeting character of the palsies to sympathetic vasomotor influences.

In concluding this paper, which has dealt with the true muscle palsies of tabes, I would also call attention to certain weaknesses or pareses which may be frequently demonstrated in individuals with cerebrospinal sclerosis. Often these may be diagnosed by the employment of the Maddox rod; more usually, however, they can be made manifest with the ordinary test for diplopia at the end of the excursions of the different muscles. Such pareses must be differentiated from static muscular insufficiencies, and account taken of their shifting and transient tendency in efforts toward their correction, by the incorporation of prisms in the lenses correcting any refraction errors.

I desire to express my appreciation of the honor which the ophthalmologists of Buffalo and its vicinity have done me in requesting me to appear before them, and to thank them for their courteous attention during the reading of my paper. And while perhaps nothing has been said but that is familiar to all, nevertheless I trust that the citation of the statistics of the large European clinics as well as my own experience, insignificant as it may be in comparison with the monumental work of Uhthoff and others, may, nevertheless, stimulate a more general interest in the prompt recognition of a disease whose successful treatment often rests on its early diagnosis.

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[3] Putnam, James Jackson: A Side Light on the Origin of Tabes, Drawn from a Comparison of Tabes with Spinal Degeneration as Seen in Certain Anemias and Kindred Disorders of Nutrition. The Journal A. M. A., Sept. 25, 1909, liii, 996.

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# THE RELATION OF THE UNIVERSITY TO THE MEDICAL SCHOOL *

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The American people are universally distinguished for their business ability and business successes. We live, however, in a world of universal compensations and retributions. If we have an enormous business talent which has won for us a name in the field of trade and commerce, we tend to draw into this province all our other interests. The pulpit and the press are not infrequently denounced as organs of syndicated wealth. In this very city of Chicago, the colleges and universities of the country have recently been declared worthless by a multimillionaire citizen because their graduates have not been trained in the ways of money making. And if in this presence I do not say that the medical profession has been commercialized I do not hesitate to assert that many medical schools and colleges have been established for the pecuniary benefit of their promoters, with the result that we now have in the United States almost as many of these institutions as all the rest of the civilized world, and our standards of medical education are a disgrace to the nation and an outrage on humanity.

The personal profit of individuals has been the most powerful and prolific motive for the multiplication of medical colleges, as it has also been the most pernicious. Fortunately, however, the general spirit of the age, as well as higher ideals of professional education, are working against these commercial medical schools. Not only are the motives of their founders and supporters better understood, but the superiority of medical schools founded on a different basis throws them more and more in the shade, while the growing costliness of a sound education in modern medicine makes their puny efforts ridiculous. At the same time there has been a growing appreciation of the fact that every professional school to be vital and efficient must be a department of a university. Under the influence of these ideas and agencies I have no doubt that the number of private-enterprise medical colleges is destined rapidly to disappear in this country. And I need scarcely say to this audience that this process is already hopefully under way.

I turn to a second motive for the establishment of medical colleges which deserves more consideration than it has hitherto received. I am, indeed, firmly persuaded that no medical school of the highest class can be maintained apart from a university. But I am equally persuaded that no university, merely because it is a university, is justified in founding a medical college. There has been a general impression not only in university circles, but among the members of the medical profession, that a university needed a medical department to round out its organization, and, as it were, to complete its existence. This belief is without warrant in history. It is true that the oldest university in the world, the University of Salerno, had a medical school, and was, indeed, nothing but a medical school. But within a generation came the universities of Bologna and of Paris, the one famous for law and the other for theology, and neither of them in the days of their first glory possessed a medical department. In his great history of universities Rashdall shows that some of the most famous of these institutions had only one or two departments, and that no particular faculty, medicine or any other, can be regarded as essential to the idea of the university, as that institution developed among the nations of Europe. The word university has nothing to do with universal knowledge. It means, on the contrary, merely a guild or corporation. When the founder of Cornell University declared that he would found an institution where any person might find instruction in any study, he formulated a brand-new idea of a university. Yet even at Cornell that idea remains at best an ideal, so vast is the sum total of human knowledge, so varied the fields of investigation, and so costly the maintenance both of instruction and research. And without special endowments, and large endowments too, neither Cornell nor any other university would be justified in the establishment of a medical department. The appeal that such a department is necessary to make a complete university is, as I have shown, historically without justification. And in any event to establish a university department in medicine which you have no special funds to maintain is to be a party to fraud on the public. This is especially true at the present time when, owing to the advance of science and the indispensableness of making provision for it in the curriculum, medical education is the costliest education given at our universities. I recall with satisfaction that on different occasions before the establishment of our own medical college at Cornell University, when I was solicited to "adopt" this or that medical college as the medical department of Cornell, I always replied that I did not want a medical department unless it were as organic a part of the university as any other college; nor would I favor the establishment of one without adequate special endowments for its maintenance. I may add that the members of the medical profession with whom I dealt were invariably amazed at the position I took, and in some cases felt it an affront to themselves that I was so mercenary and autocratic as to decline the offer they made me of eminent men unless the university had the right to control them and endowments to support their work! These recollections are from twelve to eighteen years old. And when I say that the position which I took in those years is now the position of the leaders of the medical profession, I may be pardoned for finding in that circumstance a striking evidence of the great advance which has been made in so short a time on the subject of medical education.

I have spoken of the costliness of medical education. In no other field has science brought such a wealth of new and fruitful discovery. All scientific work is expensive, and the medical sciences the most expensive of all because they deal with the complex phenomena of human life. All education in engineering science is also expensive. But engineering rests in a last analysis on the sciences which deal with energy and motion. And these

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sciences are simplicity itself in comparison with those which deal with the mysteries of living organisms. Education in agriculture, which has to do with soil, and plant, and animal, is more expensive than engineering education. But, as I have already said, medical science, dealing with life in its highest form, is the most expensive of all. It is to be added that its costliness is likely to increase. For both the discovery of new scientific facts and principles and the application of these to medical practice will call for research on the part of able men who must devote to it the uninterrupted service of a lifetime and the maintenance of large and well-equipped laboratories for the conduct of their experiments and investigations. And even scientific investigators, teachers, and laboratories, do not complete the list of objects of expenditure in a medical college. It is now coming to be accepted as a commonplace that a medical college is in as much need of a hospital for the study of disease as it is of laboratories for scientific investigations and experiments. And at the first annual conference of this Council on Medical Education Dr. Councilman of Harvard stated that the hospital must be regarded in a certain sense as a laboratory for the study of disease, and that the future and the highest development of medical education in this country is wrapped up with the control of hospitals. I understand that a thousand dollars a bed is a moderate estimate of the cost of maintaining a hospital after the institution has been built and equipped. A hospital for a medical college with 200 beds would, therefore, require for its maintenance, after it had been built and equipped, an endowment of $4,000,000 or $5,000,000. When a couple of years ago I recommended to the faculty of the Cornell University Medical School that we should restrict admission to graduates in arts or science of recognized colleges and universities, I stated that the faculty should not accept this recommendation unless they were prepared to see the enrollment in the medical college drop from 300 or 400 students to 50 or 100 students. But I added that we should not decrease, but rather increase the cost of maintenance. And the cost per student is going to be between $2,000 and $3,000. Of course, this expenditure could be reduced by diminishing the number of men on the faculty who give their entire time to investigation. On the other hand, it would be increased if our medical college were put to the expense of supporting a hospital of its own.

In view of these facts, the first advice I should be disposed to give to a university that was inclined to "round out its organization" by establishing a medical department would be the single word: *don't*. Institutional ambition is as unhallowed a motive for the multiplication of medical colleges as the love of personal gain. The latter motive has filled the country with commercial schools of medicine. These schools are a disgrace to our country. Starving medical departments of impoverished universities are equally disgraceful. And the supposed glory accruing to a university which institutes professional schools when it has no funds to maintain them is as dishonorable a motive as the gain in professional advancement sought by physicians and surgeons who establish and maintain the private-enterprise medical institution.

The first service, therefore, which universities may render to medical education is a negative one. But, though negative, it is fundamental and vital. Have done with sham in medical education! Recognize that a medical department is the costliest department of a university! There may be a first-class university without a medical department. But a medical department which is not first class lowers the standing and hurts the reputation even of a good university. Whether any given university shall found a medical school or not is not a difficult question to determine. If the university has ample funds for this purpose which it ought not or cannot use for other departments to which it is already committed, if there is no first-class medical college in its state or locality, if, in a word, the university has both the opportunity and the funds, let it by all means establish a medical department. But let this new institution be not an attachment (or detachment) to the university, but an organic and vital member like other departments of the university, and, like them, animated by its spirit and controlled by its standards. A genuine university department of medicine of this character is as likely as any other department to receive endowments from the public for the maintenance and extension of its work. Indeed, I am inclined to think at the present time that no other object embraced in a university curriculum appeals so strongly to the interests and sympathies of public-spirited and generous men and women of wealth as the problem of the prevention and cure of disease, which is the central function of the medical faculty of the university.

Besides putting the medical school on a proper and dignified basis, the university can render to this department another service of exceeding great importance. Men engaged in the active practice of any profession are apt to lose touch with educational ideals. Like the world about them, they want practical results and quick methods. The scholars and scientists, however, know that in educational matters the shortest distance even to a practical goal is not always a straight line. In order to be a capable physician or surgeon, a man needs to know a good deal more than the "practical" branches of the curriculum. Sciences apparently remote from those branches often illuminate them with new light. The facts which stimulate and fructify the mind of the investigator are often out-of-the-way, trivial and insignificant facts. Nothing in the life of Darwin has impressed me more than this very circumstance. Why, Darwin owed to the reading of a work on economics the germinal idea of his whole theory of evolution. Technical and professional education is narrow and arid unless interfused with a broad and generous culture in the sciences, and also in the liberal arts, and this is peculiarly true of medical education. So far as the sciences are concerned, the leaders of the medical profession are, I am glad to say, keenly alive to their needs. Besides good general training in physics, chemistry and biology—training which in most cases must be furnished by colleges and universities, as only a few high schools are equipped to supply it—these leaders are demanding thorough training in anatomy, histology, embryology, physiology, physiologic chemistry, pharmacology, pathology, and bacteriology. If to these indispensable sciences be added a reading knowledge of French and German, which is an almost indispensable tool for the medical man, it will be seen that a medical education demands a good training in the sciences and presupposes also a certain amount of linguistic discipline.

I have been specifying the scientific requirements of a medical curriculum from the point of view of medicine alone. But a university cannot be content to turn out men with merely a professional training. Physicians and surgeons are not mere practitioners: they are also human beings. And a university must think of training them for manhood and citizenship, as well as for the practice of medicine or surgery. Now we have reached a point in the higher education of this country in which it is recognized that the proper time to begin professional work or to specialize with reference to that professional work is at the end of the sophomore year in college. I have no time here to argue this position. But I may say that it is a conclusion which has been reached both by the National Association of State Universities and by the Association of American Universities; the former organization embracing all the state universities of the country, and the latter a score or so of our foremost universities, both state and endowed. Perhaps the position of the Association of American Universities would be more accurately described if I stated that its desideratum is a minimum of two years of college work as a basis for professional work, and that some of the institutions embraced in that association would prescribe even a longer time. The important point is that both these organizations, which include all the leading universities of the country, demand that at least two years shall be spent on liberal education before undertaking professional education or specializing with a view to it. I am myself in hearty accord with this program. I should like to see our schools of medicine, law, and engineering reorganized with reference to it. And I am glad to say that a movement of that kind is now in full force in our schools of law, and especially in our schools of medicine. While Johns Hopkins in 1893, Harvard in 1900, and Cornell in 1908, demanded a degree in arts or science of students in medicine, a score or more of medical schools now require two years of college work, and about the same number now require, or are soon to require, one year of college work which shall include the courses in physics, chemistry and biology.

So far as this latter group is concerned, the requirement of a year of college work is probably due to the necessity of providing satisfactory instruction in physics, chemistry and biology. But as this departure breaks with the traditional high-school requirement for admission to the medical course, it prevents the high schools from continuing to be feeders of the medical colleges, and yet it does not establish a preliminary education sufficiently high to command the confidence and the patronage of college men. The chances are, therefore, that this arrangement will prove only a provisional one, and the institutions which have adopted it will either rescind their action and re-establish their connections with the high schools or prescribe a preliminary education of two years in arts and sciences, with a view to attracting the patronage of college undergraduates. It has not, I think, been sufficiently considered that when a medical college once severs its educational connections with the high schools it may so far as the effects on attendance are concerned almost as well prescribe two years of college work as one, and pretty nearly as safely three years as two.

Another service which the universities should render to the medical college is the determination of the question, What subjects of study should enter into the education of prospective physicians and surgeons? Assuming, that is to say, that candidates for the medical degree will have at least two years of study in a college of arts and sciences, the question is, What subjects shall they study? The criterion in answering this question should undoubtedly be the requirements of a liberal education. And it frequently happens that in the case of a professional subject like medicine the requirements of a liberal education in arts and sciences coincide to some extent with the scientific conditions which the medical profession would like to see fulfilled before students enter the medical college. I believe that a perfectly satisfactory adjustment of the problem can be worked out along these lines. I am well aware that this has not been the prevalent point of view. On the contrary, we have had two extreme positions more or less contradictory, which seemed to exclude a middle ground on which educators and medical men might alike agree. These two conflicting views have been voiced by the advocates of liberal education on the one side and of professional education on the other. The former have been in the habit of insisting that an A.B. degree should be a condition of admission to a medical college without much regard to the subjects embraced in the A.B. curriculum, provided only that a liberal education might be claimed on the basis of that A.B. degree. I believe that the underlying desideratum of these advocates was a classical education.

Opposed to them stood the other party made up mostly of medical men who insisted that an A.B. course in itself was of very little value as a preparation for medical studies. What they desired was a preliminary education in the pure sciences: physics, chemistry, biology, comparative anatomy, etc., on which the medical sciences were based. Between these two schools there has in the past been little agreement. But I believe that the time has come for a satisfactory adjustment of the problem.

I have already stated that the foremost educators today agree in demanding that the first two years of the college course shall be required of students who intend to enter such professional schools as law and medicine. These educators, furthermore, have in the course of the last two years come to a pretty close agreement as to the content of the curriculum of these two years of college study. They are agreed that it should embrace English, history, economics, one or two foreign languages, and mathematics, and one or more of the following sciences: physics, chemistry, biology, geology or botany. Such a curriculum furnishes the prospective medical student not only with subjects which are requisite to a liberal education, but also with subjects which form the best preparation for the subsequent study of medicine. Do you ask me what studies I would prescribe for this prospective medical student? I answer at once the English language and literature, French and German, history, economics, advanced algebra and trigonometry, and chemistry, physics, and biology. To these I would add a subject which I never see mentioned by advocates of either of the extreme positions I have already described. I mean the important subject of the study of the mind, and more particularly those aspects of it which are embraced in the modern science of experimental psychology. Considering the close relation between mind and body and the dependence of some diseases on mental conditions, I am often amazed that medical men fail so completely to realize the importance of the study of the sciences of mind as a part of that curriculum of the preliminary education they lay down for prospective students of medicine. I believe that in the first two years of a college course there is time to include psychology with the other studies in liberal arts and sciences which I have already specified. And I do not hesitate to assert that a young man who has received a thorough training in these subjects may, on the one hand, be regarded as a liberally educated man, and, on the other, as scientifically qualified for admission to a medical college and the successful study of the sciences prescribed in the first year of the medical curriculum.

The last service I shall mention which a university could and should perform for a medical college is to provide it with capable and devoted teachers and investigators imbued with the spirit of research. I do not think that the medical profession, and I am sure that the general public does not realize the nature of the change which the advances in modern science make necessary in the faculties of our medical schools. In the commercial and private-enterprise medical colleges, a number of practicing physicians and surgeons came together and devoted the fag end of their time to the instruction of students in medicine. Not only were these men not scientifically prepared for the task they assumed, but their interests lay in the practice of their profession, and the one object they had in view in establishing a medical school was to enlarge their medical practice and make it more lucrative. Now the authorities of our universities know that we cannot have efficient teachers and fruitful investigators, first, unless they are thoroughly trained for their work, and, secondly, unless they devote their whole time and energy to that work. The staffs of our medical colleges are sadly in need of reorganization under the guidance of this criterion. If our medical colleges are to rank with other colleges in the university, it can only be because the teachers and investigators on the staff bring undivided hearts to their work and render the same whole-souled service. It is practically impossible for a man to have a large and successful practice and to be at the same time a scientific and efficient teacher and investigator in medicine. I lay it down, therefore, as a first condition for the elevation of our medical colleges, that their chairs shall be filled by teachers and investigators of the highest scientific standing, who devote their entire time and energy to the work of instruction and investigation. There is no difficulty in applying this criterion to the professorships represented by the first two years of the medical curriculum—to subjects like anatomy, physiology, biochemistry, pathology, bacteriology, etc. I recognize, however, that there is a difficulty when we come to the professional and practical branches embraced in the last two years of the curriculum—medicine, surgery and obstetrics, not to speak of the minor specialties. Yet I am confident that it is impossible, under the present system of appointing to these subjects distinguished practitioners who continue in unrestricted practice, to produce satisfactory results in the work of instruction and investigation in these fields. I recognize, on the other hand, that men are not qualified to teach medicine, surgery, obstetrics, children's diseases, and other special diseases, unless they are engaged in the treatment of these diseases. It looks, therefore, as though a satisfactory solution of the problem of thorough and scientific instruction and investigation, both in the major and minor practical branches of the curriculum, would be an impossibility. I hope at any rate that I have stated the problem and shown the supreme importance of finding a solution. No solution will be satisfactory which does not do justice to the inexorable demands made by modern science on the teacher and investigator, and at the same time to the necessity of constant practical experience as a qualification for professorships in the practical branches of the curriculum. If I may venture to make one suggestion in the way of a positive solution of the problem I have stated, it would be that future professors in medicine, surgery, obstetrics, and similar branches in our best medical colleges will give a fixed portion of their time and energy to the work of instruction and investigation in the medical college. I should not be content with their evenings or even with their afternoons. Teaching and investigation demand not only their best powers, but their best powers when they are fresh and capable of their highest exercise. Keeping this consideration in mind, I would suggest that their forenoons might be devoted to the work of the medical college. And if the rest of the day were devoted not to general practice, but to consulting practice, or to practice in a hospital owned or controlled by the medical college, we should have the best solution of the problem I can think of at the present time.

I have been speaking of the services which a university can and should render a medical college. I have spoken also of the unsatisfactory condition in which much of our medical education is at the present time. But I cannot conclude without calling attention to the enormous progress which has been made in the last few years, and I want finally to express my own belief and conviction that there is no subject embraced in the purview of our universities in which such rapid progress in recent years has been made, both in instruction and investigation, as in medicine, and there is no subject in which I look toward the future with more hopefulness and confidence of results, great, fruitful, and beneficial to mankind.

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# THE ADMISSION RATE FOR TUBERCULOSIS AMONG MERCHANT SEAMEN DURING THE PAST TWENTY YEARS

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The figures presented herewith will, I think, be a surprise to many people, even to some of the medical officers of the Public Health and Marine-Hospital Service who have been active in bringing about the result which the figures indicate. A few words of explanation are necessary before the figures themselves are presented.

In 1893 Passed Assistant Surgeon J. O. Cobb of the service contributed to the annual report of Surgeon-General Wyman a strong plea for the establishment of special hospitals for the care of tuberculous seamen. The following year Passed Assistant Surgeon Bratton submitted a very strong plea for the same action. Surgeon-General Wyman took up the plan at once and quickly secured the use of the abandoned military reservation at Fort Stanton, New Mexico. The original plan of Dr. Cobb was to have two sanatoriums, one on the Atlantic, in North Carolina mountains, and one in California; but lack of funds, together with the theory, much more generally held a dozen years ago than now, that tuberculosis necessarily did better in the arid Southwest than elsewhere, led to the opening of one general sanatorium at Fort Stanton.

The controlling reason for the establishment of the sanatorium was the fact that under conditions as they then existed patients who got well enough to demand their discharges went at once aboard ship, to spread the infection among their shipmates and again to break down themselves under the strain of their occupation and the stress of their unfavorable environment. The bad cases remained in hospital and were comparatively harmless, except in the smaller hospitals where they could not be put in wards by themselves.

The effect of all this was that the patients who should have had a good chance for recovery not only lost it, but became the means of actively producing other cases. Moreover, the patients were averse to entering hospitals, and as long as they could get about preferred to come at long intervals to our out-patient dispensaries, as the figures to be here presented clearly show.

It was believed that by sending the favorable cases to Fort Stanton they could not only have a better chance for recovery, but, what was much more important, they would lessen the active foci of infection among their fellows. At first only selected cases were to be sent, but this was rather vague, as individual medical officers naturally differed a good deal both as to their prognostic skill and as to the appeal of the purely humanitarian side of the matter. The proportion of those sent to Fort Stanton has steadily risen, however, reaching 56.4 per cent. in 1908.

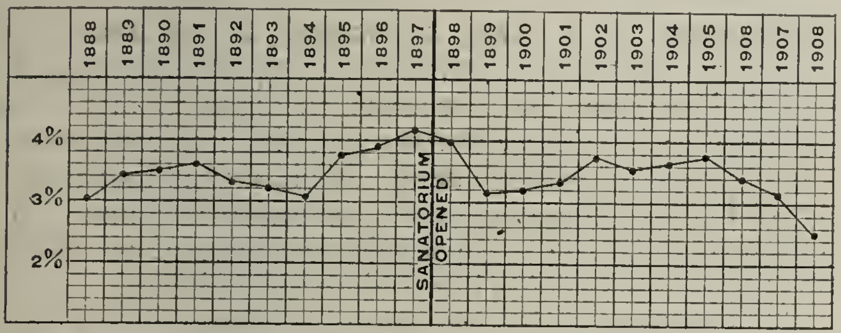

Chart 1.—Percentage of admissions for tuberculosis 1889 to 1908. Total admissions to hospital for all causes were 270,210. The average annual total was 12,867.

The sanatorium was opened in 1897, but only in a small way at first, so that the close of the fiscal year 1908 practically marked the end of the first decade of its existence. I have, therefore, taken the figures for the past twenty years, ten before the policy of segregation was begun and ten since.

During that time there were 270,210 patients admitted to U. S. marine hospitals for all causes; the annual admissions ranging, in round numbers, from eleven to fifteen thousand. These figures are large enough to amount to something, and their value is enhanced by the three factors which give peculiar value to all the admission statistics of the marine hospitals, viz.: The beneficiaries of the service are practically all adult males, from 21 to 50 years of age; the diagnoses are all made in strict accordance with an official nomenclature, and the figures are recorded and tabulated in all the hospitals in accordance with a uniform system.

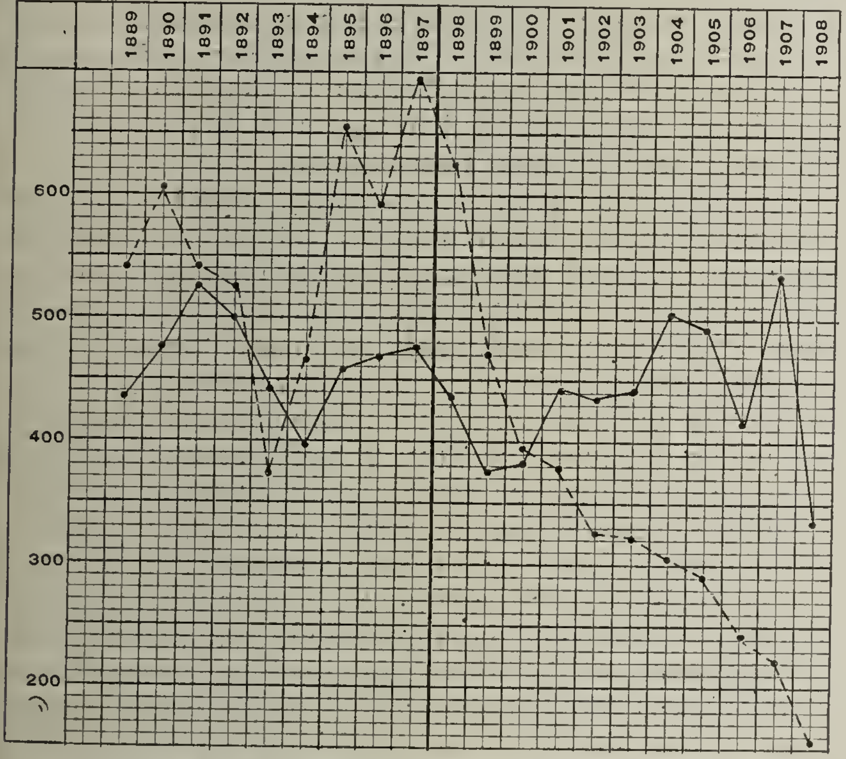

Chart 2.—Relation between numbers of out-patients (dotted line) and of hospital admissions (solid line). The heavy vertical line in the center indicates the date of beginning the policy of segregation.

To make the figures truly contrasting I have omitted the figures from the insular stations not existing prior to 1898. The following table shows the percentages of admissions for tuberculosis during the twenty years, and Chart 1 shows the same thing graphically:

TABLE 1

| Year. | Percentage of Admissions for Tuberculosis. | Year. | Percentage of Admissions for Tuberculosis. |
|---|---|---|---|
| 1889 | 3.42 | 1899 | 3.18 |
| 1890 | 3.47 | 1900 | 3.15 |
| 1891 | 3.67 | 1901 | 3.30 |
| 1892 | 3.33 | 1902 | 3.66 |
| 1893 | 3.20 | 1903 | 3.57 |
| 1894 | 3.08 | 1904 | 3.64 |
| 1895 | 3.79 | 1905 | 3.78 |
| 1896 | 3.90 | 1906 | 3.40 |
| 1897 | 4.19 | 1907 | 3.15 |
| 1898 | 3.98 | 1908 | 2.53 |

At first glance one would say that the figures represented an almost complete failure to secure the result aimed at. The rate for 1908 is only 1.19 per cent. less than that of 1889, while it is only 1.64 per cent. less than the rate of 1897, the year the sanatorium was opened. The real result is seen, however, when we compare these figures with those of the out-patient records.

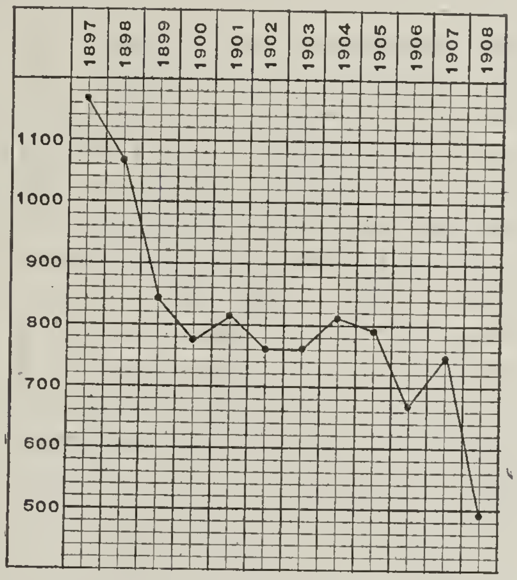

Chart 3.—Total admissions for tuberculosis (out-patients and hospital patients) since policy of segregation was initiated.

I therefore present Table 2, which shows the totals of out-patients treated for each of the twenty years, the admissions to hospital for the same years and the total in each case:

TABLE 2

| Year. | Out Patients. | Hospital Patients. | Total. |
|---|---|---|---|
| 1889 | 543 | 437 | 980 |
| 1890 | 605 | 474 | 1079 |
| 1891 | 547 | 529 | 1076 |
| 1892 | 526 | 500 | 1026 |
| 1893 | 376 | 443 | 819 |
| 1894 | 465 | 395 | 860 |
| 1895 | 654 | 457 | 1111 |
| 1896 | 592 | 469 | 1061 |
| 1897 | 696 | 475 | 1171 |
| 1898 | 625 | 439 | 1064 |
| 1899 | 470 | 376 | 846 |
| 1900 | 395 | 383 | 778 |
| 1901 | 376 | 441 | 817 |
| 1902 | 329 | 438 | 767 |
| 1903 | 321 | 441 | 762 |
| 1904 | 304 | 502 | 806 |
| 1905 | 293 | 496 | 789 |
| 1906 | 247 | 418 | 665 |
| 1907 | 222 | 533 | 755 |
| 1908 | 157 | 342 | 499 |

This shows that the total admissions in 1908 are only 46.7 per cent. of what they were the year before the segregation was begun. Now, of course, it would be absurd to claim that the present policy alone has resulted in more than cutting the rate in two. The fact is, of course, that there was formerly much duplication, both by admission of patients to hospital who had previously been treated as out-patients and the readmission of hospital cases, and by out-cases being treated at different places. To what extent these readmissions would reduce the totals shown ten years ago it is impossible to say, but the figure was very considerable.

On the other hand, there is not the slightest doubt that admissions for all causes are now examined much more critically for signs of tuberculosis than was done fifteen years ago. I know that at the Marine Hospital in Chicago a very respectable per cent. of men recommended for transfer to Stanton have been ones seeking admission for various causes, medical and surgical, and found to have incipient tuberculosis. There can be no doubt that we are now diagnosing much more nearly all the tuberculosis presenting itself than we formerly did.

This increased accuracy of diagnosis compensates for a good many of the readmissions under the old order of things, but, assuming that there remain 20 per cent. of the readmissions to account for, a very liberal estimate, we would still have the astonishing and gratifying result that we have reduced the amount of tuberculosis among the beneficiaries of the service at the present time by more than 25 per cent. as compared to what it was when the policy of segregation was begun. Unquestionably this has been due to having eliminated very largely the chance of the active, walking cases infecting their mates aboard ship. If we could send all the out-patients to hospital, even if we only transferred to Stanton the 56 per cent. sent last year, we could doubtless in five years make a more striking reduction, but for several reasons this is difficult to do. That it can be closely approximated, however, if care is taken to fully explain the matter to the men themselves, is shown by the experience in Chicago, where we have had only three out-patients treated for tuberculosis in the past two years.

The change brought about in the relation between out-patient numbers and the number of hospital admissions, as well as the total cases, is strikingly shown in Chart 2.

Chart 3 shows the result of combining the total figures, and it shows, I think, that the Public Health and Marine-Hospital Service has a right to claim a very notable accomplishment in the direction of securing a decrease of tuberculosis among the merchant seamen.

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## THE EARLY DIAGNOSIS OF RENAL TUBERCULOSIS *

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No more striking instance of concerted action against disease by the combined efforts of the profession and the laity has ever been seen in this country than the war that is at present being waged against tuberculosis. The line of battle is being directed against the pulmonary form of the disease because this is its stronghold and the focus from which other organs become secondarily infected.

In the second annual report of the Phipps Institute of Philadelphia, an institution established for the prevention, treatment and cure of tuberculosis, may be found a resumé of the autopsy findings in sixty cases of advanced pulmonary tuberculosis, of which number thirty-five showed unmistakable evidences of renal involvement. It is hardly necessary, however, to repair to the tabulations of our large hospitals for a knowledge of the frequency of the disease in individual organs, because tuberculosis is always with us and there is no community that does not witness it in many of its varied forms.

The curability of phthisis in a majority of the early cases receiving proper attention is a well-established fact. With the advent of more positive means of diagnosis, the recognition of the incipient stage of tuberculosis in the kidney has become an added responsibility on the profession.

Albarran has well said: "The early diagnosis in renal tuberculosis is the key to success in its treatment." There are certain somewhat vague signs occurring early which it is essential to observe in order to bring these patients under proper environment in time for favorable results in their management. Especially is this true for practitioners removed from laboratories and unacquainted with the more precise methods of those more favorably situated for the study of the disease.

The disease at its beginning is characterized by an absence of symptoms on the part of the kidney, but in a majority of instances manifests its presence by vesical irritation. Because of these facts the earlier writers drew the erroneous conclusion that the bladder was primarily the seat of infection. More recent investigation, aided by the ureteral catheter, has proven its hematogenous origin.

The cases of patients presenting themselves to the physician because of frequent, painful or burning micturition without definite origin should at once excite suspicion, no matter how short the duration of the attack, and should call for a very thorough physical examination of the entire body, and especially of the lungs, the testicles, the epididymis, the seminal vesicles and the prostate. When early symptoms exist in the kidney region they are of little value, as slight pain and enlargement may mean only hypertrophy of the sound side. If the patient is a female a vaginal examination should be made in the attempt to find a thickened ureter. Fenwick of London attributes great diagnostic significance to this sign if combined with a displaced and retracted ureteral orifice, as seen through the cystoscope.

Much may be gained of diagnostic value from the cystoscope in the hands of those skilled in its use, and the localization of the disease is only possible by ureteral catheterization. Under the most favorable circumstances these procedures are difficult and many times rendered impossible by disease processes. At the onset of the irritation the bladder mucosa is much congested, the vessels cannot be outlined, bleeding is easily caused and flakes of pus that cannot be washed away cling to the walls. Ulceration supervenes, and if the condition is unilateral ulcers may be found, either single or multiple, about the ureteral orifice of the infected side. The mucosa, having lost its original color, becomes a dull gray and thickened to such an extent that the ureteral orifices become buried. If unchecked the inflammation extends to the musculature of the bladder, causing thickening of the walls, trabeculation, sacculation and sufficient contraction to render its capacity too small for sufficient media to allow investigation. The very early cases may show marked pathologic changes in the bladder mucosa, hindering many times the rapid catheterization which is essential if we are to guard against carrying the infection to fresh soil. If the catheterization cannot be accomplished easily and with the least possible manipulation of the cystoscope, it should be deferred until such time as the bladder may have been rendered sufficiently clean by daily irrigations.

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* Read before the Northern Tri-State Medical Association (Michigan, Ohio and Indiana), at Fort Wayne, Ind., Jan. 11, 1910.

When the bladder involvement is more or less superficial it shows a strong tendency to heal without further aid than the removal of the kidney focus. The more persistent conditions call for heroic treatment, as they are many times the cause of more anxiety to both patient and physician than the original focus of the disease. After having discontinued the use of carbolic acid because of the pain incident to its application, I have resumed its employment with modifications. Instead of using 50 c.c. of the aqueous solution of carbolic acid, as advised by Rovsing, I find that the pain and collapse will not be encountered if smaller amounts are at first used, allowed to remain in the bladder but a few seconds, and the excess that may have clung to the walls washed out with a 30 per cent. alcohol solution. In this way a tolerance will be secured and the full amount may be employed later.

The positive diagnosis of renal tuberculosis is dependent on competent bacteriologic and chemical examination, and necessitates laboratory facilities and a knowledge of cystoscopic technic. In the most expert hands tubercle bacilli can be demonstrated in 75 to 80 per cent. of the cases. The sample of urine sent to a laboratory should not be less than three ounces. It should be drawn through a sterile catheter into a sterile bottle after having carefully cleaned the external parts. After several failures to find the organisms by the staining methods in vogue, resort must be had to the inoculation of guinea-pigs. While bacteriuria without a kidney lesion is not common, it is a possibility, rendering the demonstration of the bacilli in the absence of pus of little diagnostic significance. Tuberculin may be employed as a diagnostic aid, but as a matter of fact it has little value when compared with the laboratory methods. During the delays incident to the laboratory investigation and the return of reports, the bladder should receive daily irrigations to aid in the removal of inflammatory products constantly being poured into it from above, thus aiding materially in the localization of what might become an interstitial inflammation in the mucous membrane of the bladder.

With few exceptions it may be stated that a unilateral renal tuberculosis with the opposite kidney showing sufficient function calls for nephrectomy, but many of the patients entering the hospital are far removed from the early stages of the malady, and nephrotomy, or the opening of a perinephritic abscess, is many times a measure which must be resorted to for the saving of life. Many times these are examples of our sins of omission and a strong plea for the early recognition of the disease and the removal of morbid processes.

However, I cannot agree with the more or less widespread opinion that in the early stages and under the conditions above cited the kidney must inevitably be removed. Post-mortem examinations many times disclose healed tubercles of the kidney as well as of other organs. Complete cures are at times shown in cases where the existence of the disease was easily demonstrable. I have recently had the opportunity to follow a case that very aptly illustrates my point.

*History.*—A female patient, 22 years of age, consulted me in July, 1909, for frequent and burning micturition. She was very emphatic in her statement that it had been of only two weeks' duration, and that she had never experienced the trouble before the present attack. A bacteriologic examination of the urine from the bladder contained tubercle bacilli, and the subsequent samples obtained by ureteral catheterization revealed a right unilateral infection with the opposite kidney normal. The sediment of the urine from the right side also contained pus-cells, but no other organisms. Because of the short duration of her trouble, coupled with the fact that the patient had financial support sufficient to procure for her the most favorable environment, I did not advise operative procedure, but sent her to a cool climate for the summer, where she lived out of doors both night and day. She also had a sufficient and well regulated diet and received daily bladder washings, with the injection of a 2 per cent. solution of iodoform in sweet oil twice a week. She returned to me in October having gained twenty-one pounds in weight, her cystitis was cured and her urine showed an absence of both bacteria and the products of inflammation.

While I am well aware that the kidney in her case may harbor a latent infectious process, I think no one could at the present time advise its removal, more especially as the patient is a member of a family of more than average intelligence and has been advised of the possibility of a recurrence and the consequent necessity of surgical measures. Such methods are only applicable in selected cases, in which the most favorable conditions are obtainable; nor should the expectant treatment be persisted in if beneficial results are not immediate. As the means for earlier diagnosis in renal tuberculosis become more common there will be more cures without operation reported, and more rapid results will be obtained by local application of remedies to the kidney pelvis.

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# A STUDY OF THE EYE IN MENTAL DEFECTIVES *

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It is difficult to understand why the fundus examination in idiocy has been so little emphasized. Probably the examination of the fundus in such cases, being so extremely difficult, may account in part for the lack. Possibly the negative findings of Moss[1] have also deterred some from the study. He examined 116 feeble-minded children in Berlin. The study showed but 2 cases with alteration in the fundus. His cases, however, were not drawn from the low-grade idiots.

The much more careful work of Gelfe[2] on 578 cases throws more light on our subject. His cases comprised (1) 192 mentally backward boys and 192 girls of the same class; (2) 25 boys and 21 girls who were weak-minded (feeble-minded of our designation) and 47 boys and 30 girls who were unteachable imbeciles (imbeciles of our classification), and, finally, 42 boys and 28 girls of the low-grade idiots. All the cases were examined in the institute for mental defectives at Berlin. But 27.5 per cent. of all Gelfe's cases showed normal eyes. These results are quite in accord with our findings. Gelfe's idiots showed a percentage of 43 for normal idiot fundi as compared with 56 for weak-minded and 83 for simply backward children.

Many writers concern themselves with functional imperfections only in examining for visual defects in the mentally deficient child, which accounts for the apparent discrepancy of data. It may be said in passing that there seems to be unanimity of opinion that eye defects are much more frequent in mentally defective children, and that these defects react in further crippling the child's mental development.

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* Read before the Pediatric Section of the New York Academy of Medicine, April, 1909.

[1] Legrange and Valude: L'Encyclopedie française d'opthalmologie, 1905, iv, 34.

[2] Gelfe, T.: Relationship between Visual Organ and Feeble-mindedness (Karlsruhe), Samml. a. d. Gebiete d. Augenh. Hälle a. S., 1904.

Our study of the eye in the mentally defective child was undertaken with a twofold purpose:

1. From studies made in 1907 by Clark and Tyson[3] into the nature of the eye changes found in dementia præcox it was shown that a fairly constant eye syndrome was present in that mental disorder, embracing, among other signs, a mild grade of optic nerve degeneration, which was thought to be of autotoxic origin. In the numerous discussions of the paper held before various societies on the occurrence of the optic nerve changes in dementia præcox, it was thought that the syndrome was due more to a strong tendency to neural degeneration in the precocious dements than to a particular autotoxin, and that careful examinations into the allied states of mental degeneracy so ideally presented by such conditions as imbecility or idiocy ought to throw light on this phase of the subject. And, indeed, it has. Fully three-fourths of all cases of idiocy of our present study show varying degrees of a retrobulbar neuritis of a degenerative character.

2. The second object of inquiry was to note the presence or absence of pathognomonic structural defects in the eyes of feeble-minded and idiots comparable with the other grosser mental and physical defects so well known. The negative findings on this second part of our study have been disappointing. It would seem that the eye defects in idiocy do not usually extend beyond those of mere functional incompetence of vision. Moreover, the defective central innervation may explain the lack of visual acuteness, in defect of attention, as well as defect in perception of color, etc.

Our study was made in our Randall's Island service, which gives a range of more than 1,000 cases to select from. Although 150 cases were selected, but 129 patients could be examined carefully. Fifty cases, each, of feeble-mindedness, imbecility and idiocy were chosen. The patients of the feeble-minded class were of the highest teachable grade. Those of the imbecile class were of the non-teachable grade, but able to care for themselves and do simple tasks about the wards, while those of the idiot class were the lowest types of helpless cases in the entire service. Only idiopathic cases were studied.

Changes in external examination of the eyes were found in but few patients; unilateral ptosis was noticed in two feeble-minded children and in one idiot. Strabismus was found in one feeble-minded child. The pupillary reflexes to light, accommodation, etc., were present in all, but sluggish in the idiots. There was rigidity of the pupils in one idiot. The acuity of vision, the fields of vision and the refractive errors could not be determined, owing to lack of accurate cooperation because of mental defect. By means of retinoscopy there were found 4 cases of myopia of high degree, 3 of hypermetropia and 15 of astigmatism of various types.

The ophthalmoscopic examination was made by Dr. Cohen by means of the indirect method, with a candle as the source of light; complete mydriasis was obtained by the use of atropin sulphate solution. In only 106 of the 129 could the fundi be properly examined.

*Feeble-Minded.*—But 9 of the 29 examined showed normal fundal appearances. Pallor of the temporal half and edema of the nasal half of the disc were present in seven cases. Two patients showed slight indistinctness of the disc and one well-marked neuritis. Evidence of an early stage of atrophy (as shown by pallor of disc) was found in 6 cases. In none was there advanced atrophy present. Dilatation of veins was seen in four patients.

*Imbeciles.*—Of the 24 examined there were 15 in whom the eyegrounds were normal in appearance. Only 4 patients of this group showed pallor of the temporal half and edema of the nasal half of the disc. Slight indistinctness of the disc was present in one patient. Pallor of the disc was seen in these cases. One patient showed well-marked atrophy.

*Idiots.*—Normal fundal appearance was present in but 2 of the 53 cases of this group. Temporal pallor and nasal edema were seen in 13 cases. One showed general congestion of the entire disc, 8 presented a generalized pallor of the discs. Optic atrophy was present in 3 cases; the veins were dilated in one. One patient, each, showed choked disc, thrombosis of the central vein, retinal congestion, retinal hemorrhage.

No specific cause can fully account for the degenerative changes which we have noted in the optic discs of idiots. It is not necessary or desirable to review in detail the considerable literature of pathogenesis of idiocy. It is doubtless likewise unnecessary to say that, after all possible causes of idiocy have been considered, a very large number of idiots remain unaccounted for. We are content at this time to call attention to the fact that in the majority of the cases idiocy is attended by fairly constant and definite changes in the optic nerve.

In conclusion, it may be said that our study shows there is probably a well-marked tendency to neural as well as psychic degeneration in the great majority of all grades of idiots. The research is submitted as a contribution to the clinico-pathologic study of idiocy and degeneration.

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[3] Tyson, H. H., and Clark, L. Pierce: The Eye Syndrome of Dementia Præcox, The Journal A. M. A., May 2, 1908, l, 1415.

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# CONGENITAL SACROCOCCYGEAL CYST OF EPENDYMAL ORIGIN

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Although it is the primary purpose of this paper to report a case of congenital cystic tumor occurring in the sacrococcygeal region, a few words regarding the general subject of tumors situated in this locality will help to make clear the pathogenesis of this case. Therefore, after considering the general classification of sacrococcygeal tumors and reviewing the cystic type in some detail, the embryology of the caudal end of the human embryo will be considered before taking up my case.

The congenital dorsal-sacral hernia containing bowel and bladder must be considered in connection with tumors of this region. Lotzbeck[1] gathered from the literature 6 such cases, which he divided into simple and combined cases. Under the heading of simple he cites three cases: two were hernias of a part of the bowel with a normal sacrum, reported by Bezold[2] and Schreger,[3] respectively, and one case of hernia of a part of the bladder with a normal sacrum, reported also by Schreger. Under the heading of combined cases he cites also 3 cases: one a dorsal hernia combined with a cyst, in which case the sacrum was normal, reported by Meinel,[4] and 2 cases with defective sacrum; one reported by Schmidt[5] in connection with a cystic tumor and absence of the sacrum, and another reported by Stafford[6] in combination with a spina bifida.

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[1] Lotzbeck, C.: Die angeborenen Geschwülste der hinteren Kreutzbeingegend, Munich, 1858.

[2] Bezold, von: Sammlung seltener chirurgischen Beobachtungen und Erfahrungen, Arnstadt, 1812.

[3] Schreger: Chirurgische Versuche, ii, 164, etc.

Analogous to the bony defects and accompanying complications found in the cervical, dorsal, and especially in the lumbar region, we note that spina bifida, both anterior and posterior, and spina bifida occulta, with meningocele and myelomeningocele, are likewise to be reckoned with in the classification of tumors of the sacrococcygeal region. Nieberding,[7] in an excellent article, has collected 9 cases with anterior sacral meningocele. Lotzbeck also reports 9 cases of congenital hydrorachis in the sacral region, 3 of which were without spina bifida and 6 with spina bifida. These have been confused with another group of tumors, the genesis of which is yet but little understood, although histologically they are readily classified as cystic lymphangiomas, angiosarcomas or peritheliomas (coccygeal gland?) and simple lipomas. A combination of the former (meningocele, etc.) with the latter (lymphangiomas, lipomas, etc.) is also found and deserves special classification according to von Bergmann.

Aside from these hernias and spinal defects and neoplasms, such as lipomas and lymphangiomas which have no character peculiar to this region, the congenital pathologic productions of the sacrococcygeal region may be classified according to the more modern authors (Herrmann and Tourneux,[8] Tillmanns,[9] E. von Bergmann,[10] Stolper,[11] Marchand,[12] Borst,[13] Calbet[14]) into four principal groups: the caudal appendages, the dermoid cysts (pilonidal cysts and sinuses), mixed tumors and fetal inclusions.

### I. CAUDAL APPENDAGES

The caudal appendages are of two types: the pseudo and true tail formations. The pseudo-tails are devoid of vertebræ and are due to the abnormal persistence and hypertrophy of the caudal filament (Herrmann and Tourneux[8]), or they may be formed in some cases by lipomas which have simulated the shape of a caudal appendage. The true tail formations (Förster[15]) consist of new growth of bone and cartilage or are prolongations of the sacrum.

### II. DERMOID CYSTS

The sinuses and simple dermoid cysts, or pilonidal cysts, so called from the fact that frequently they contain nests of hair, occurring in the median body line, between the buttocks at lower end of sacrum and coccyx, though congenital, are often first noted during early adult life after irritation or inflammation has called attention to this region. Various theories have been advanced to explain their genesis. Hodges explained them as congenital dimples, being filled in by hair rubbed off from the body; the dimple being due to imperfect union of the lateral halves of the body. Féré thought them due to incomplete closure of "posterior umbilicus," meaning the lower end of the medullary canal. Lannelongue assumes that there is an extension inward of the skin which is bound down to the coccyx. Mallory,[16] to study this condition, made microtome sections through the sacrum and coccyx of embryos at various ages. He says:

> These cases show that in fetuses of three to six months there is very frequently present over the coccyx, a canal lined with epithelium, in some cases connected with the skin, in others not; in some situated near the skin, in others near the coccyx. It seems much more likely that they are due to incomplete obliteration of a former canal, and extending as they all do upward and posteriorly to the coccyx, the medullary canal seems the most likely origin.

Tourneux and Herrmann[17] had earlier noted these epithelial rests of the medullary canal (*vestiges médullaires coccygiens*) which contracted adhesions to the deep layers of the skin, but explain the dimple or *fossette coccygienne* as due to the traction, during downward growth of coccygeal end of vertebral column, by the caudal ligament, which is a bundle of fibers connecting the *vestiges coccygiens* to the extremity of the coccyx. The anatomic facts which Tourneux and Herrmann presented in 1887 in support of this mechanical explanation have been confirmed by Ernst Unger and Theodor Brugsch.[18] Further reference will be made to this subject in the discussion of the embryology.

### III. MIXED SACROCOCCYGEAL TUMORS

The mixed tumors (cystosarcomas, etc.) of the sacrococcygeal region present a very complex structure and have been found in the following formations (Herrmann and Tourneux, Lotzbeck, Borst and others); cysts of more or less voluminous size, the simple or stratified epithelial lining of which is essentially polymorphous and may or may not have cilia; epithelial masses of glandular aspect; cartilaginous or bony masses; smooth and striated muscle fibers; masses of nervous substance; the whole distributed without any apparent order in a framework of connective tissue.

These tumors, according to Borst,[19] Herrmann and Tourneux,[8] von Bergmann,[20] Braune,[21] Lotzbeck,[1] result from the abnormal hyperplasia of a group of organs, belonging to the subjects which carry them. They are monogerminal—that is, they have arisen from a single impregnated ovum and the cysts and neoplastic masses result from developmental errors, excessive hyperplasia of one or more elements, ectopia of contiguous tissues and similar errors in development. It appears very probable that the various transitory organs are able to give birth, each to that which concerns it, to the neoplasms, the origin of which will be indicated by the analogy of their histologic composition. These transitory structures are: (a) the caudal medullary tube (*les*

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[4] Meinel: Prag. Vrtljschr. f. pract. Heilk., 1849, iii, 116.

[5] Schmidt: Jour. d. pract. Arznk. u. Wundarznk. (Hufeland's), lv, 147.

[6] Stafford: A Treatise on the Injuries, the Diseases and the Distortions of the Spine, London, 1882, p. 48.

[7] Nieberding: München. med. Wchnschr., 1904, li, 1384.

[8] Herrmann, G., and Tourneux, F.: Sur l'origine des Tumeurs congénitales de la région sacro-coccygienne, Jour. de l'anat. et physiol., Paris, 1905, xli, 113.

[9] Tillmanns: Zur Enstehung der angeborenen Sakraltumoren, etc., Deutsch. med. Wchnschr., 1904, xxx, 629.

[10] Bergmann, E. von: Berl. klin. Wchnschr., 1884, No. 48.

[11] Stolper: Die augeborenen Geschwülste der Kreuzsteissbeingegend, Deutsch. Ztschr. f. Chir., 1899, L, 207.

[12] Marchand: Sacraltumoren, Eulenberg's Real-Encyclopedie, 1899.

[13] Borst, M.: Die angeboreneu Geschwülste der Sakralregion, Centralbl. f. allg. Path. und path. Anat., 1898, ix, 449.

[14] Calbet: Contributiou à l'étude des tumeurs congénitales d'origine parasitaire de la région sacrococcyglenne, Thèse de Paris, 1893.

[15] Förster: Handbuch der allgemeine pathologische Anatomie, 1855.

[16] Mallory: Sacrococcygeal Dimples, Sinuses and Cysts, Am. Jour. Med. Sc., 1892, New Series, ciii, 263.

[17] Tourneux, F., and Herrmann, G.: Sur la persistance de vestiges médullairies coccygiens pendant toute la période foetale chez l'homme, etc. Jour. de l'anat., 1887, xxiii, 498.

[18] Unger, E., and Brugsch, T.: Zur Kenntniss der Fovea und Fistula sacrococcygea, S. caudalis, etc., Arch. f. mikr. Anat., 1903, lxi.

[19] Borst: Ein Sacraltumor von hirnartigen Bau, Beitr. z. path. Anat., 1902.

[20] Bergmann, E. von: Zur Diagnose der angeborenen Sacralgeschwülste, Berl. klin. Wchnschr., 1884, No. 48.

[21] Braune: Die Doppelmissbildungen und angeborenen Geschwülste der Steissbeingegend, Leipsic, 1862.

*vestiges médullaires coccygiens*); (b) the primitive streak and neurenteric canal described by O. Hertwig,[22] von Spee,[23] Eternod,[24] Nasse,[25] Hildebrand;[26] (c) postanal gut or caudal intestine described in the human being by His[27] and by H. Fol;[28] (d) chorda dorsalis; (e) the coccygeal gland. Other writers, Förster (1861), Virchow (1869), Stolper (1899), Marchand and Bonnet, considered these tumors to be of a bigerminal origin, corresponding to a second embryo in a more or less rudimentary or undeveloped stage.

### IV. FETAL INCLUSIONS

The sacrococcygeal teratomas of a bigerminal nature are characterized by the existence of well-formed rudimental organs which one is not able to attribute to the development of the caudal extremity of the carrier. When this bigerminal formation is complete we have the double formation, as Siamese twins. More often it is incomplete, as when an arm, leg or foot is attached to the sacrum or a part is included under the skin. Since the case to be reported belongs to the third group of tumors—the mixed tumors, monogerminal in origin—and is of the cystic type, these cystic tumors will be considered in some detail.

### MIXED TUMORS—CYSTIC TYPE

The cystic tumors form by far the overwhelming majority in the run of congenital sacral tumors. The earlier authors recognized a conformity of these tumors with those that occurred in the neck, back and in axillary region of the new-born, after they became aware that the similarity with sacral spina bifida was only outward, the etiologic factors of one having nothing to do with that of the other. Wernher,[29] in considering the "hygroma cysticum congenitum" in various parts of the body, after careful sifting and arrangement of material reported up to that time, reported under the term, "hygroma cysticum congenitum sacrale oder perineale," only those cases which were clearly of a pure cystic type. These cases had been reported by Slevogt,[30] Gemmil,[31] Saxtorph,[32] Buxtorf,[33] Schmidt,[34] Mechel,[35] Löffler,[36] Osiander,[37] Otto,[38] Terris,[39] Faber,[40] Heineken.[41] Lotzbeck[1] later, in considering the congenital sacral neoplasms, gathered similar cases under the heading of *reine Cystengeschwülste* which had been reported by Gläser,[42] Schindler[43] and Elässer.[44]

These tumors are sometimes confined to the sacral region, sometimes to the perineal, but often a separation of these localities is not possible, as the tumor may be situated in the sacral as well as in the perineal region, extending either from the former into the latter or from the perineal into the sacral region.

The cysts may vary from the form of a half sphere to a complete sphere, or may have the shape of a pear, bottle or a cone. The latter form is more commonly induced in cysts of considerable weight which have changed with their growth and suffered various modifications. Cysts with broad insertion and flat in form may be equally developed in the median line of the body. With a pedicle or string insertion, however, the tumor generally develops to one side. The pedicle itself is generally inserted into the posterior or lateral surface of the sacrum, and less frequently into the anterior excavation of the sacrum.

The growth of the tumor, on account of its weight, is generally downward, so that it may reach to the knees or it may extend forward, as in my case, into the perineum. Less frequently the extension is upward into the lesser pelvis or even into the greater pelvic cavity. These three regions, however, may be equally involved by the same cystic tumor, as in the case reported by McCarthy,[45] in which at necropsy the intestines were found pressed forward by a large unilocular retroperitoneal cyst which extended from the upper part of the perineal growth to the diaphragm.

The size is variable; it may be from the size of a man's fist to the diameter of the adult head, but as a rule the tumors are about the size of a new-born head. Excessive growths may occur, the tumor being as large as the head and trunk of a child (Otto), or even as large as the child itself (Gemmil). The growth of the tumor as a rule is in proportion to that of the child, but may increase rapidly from the proportion of an apple to the size of a head in six months (Himly). The size of the tumor may be but slightly increased after birth, remain unchanged, or indeed through pathologic processes decrease in size. Neighboring organs, especially the rectum, bladder and genitalia, may be displaced and function disturbed, and atrophy of gluteal and rectal muscles, as well as of the external rotators of the leg, may follow extension and pressure from the tumor.

The surface may be of normal skin, varying in thickness; most frequently it is very thin, but at times it is changed to a thick sclerotic layer. Pathologic processes, by quick growth, sudden stretching, chemical substances, injuries and infection, often set in and the tumor becomes reddened and a suppurating condition results soon after birth. Frequently pus formation has set in before birth because of long-continued labor. Indeed, scars in skin over tumors of the new-born show signs of such a process having gone on during intra-uterine life. The outer skin in some cases is set with tufts of hair which may be fine or coarse, and long or short, and may differ in color in different individuals. The smooth, even, regular surface over the larger cysts is in contrast to the nodular, uneven surface corresponding to smaller cysts in the same tumor. The tumor is soft, fluctuates, and its translucent quality—similar to the hydroceles—differentiates it from solid tumors.

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[22] Hertwig, O.: Lehrbuch der Entwicklungsgeschichte, Jena, 1896, Ed. 5.

[23] Spee, von: Beobachtungen an einer menschlichen Keimscheibe mit offener Medullarrinne und Canalis neurentericus. Arch. f. Anat. u. Physiol., 1899, p. 159.

[24] Eternod, A.: Communication sur un œuf humain avec embryon excessivement jeune, Monit. zool. ital., 1894, v, 70; Arch. ital. de biol., 1894. Suppl. xii, et xiv.

[25] Nasse: Beitrag zur Genese der sacrococcygealen Teratome, Deutsch. Arch. f. klin. Chir., 1893. xlv, 700.

[26] Hildebrand: Ueber angeborenen cystöse Geschwülste der Steissgegend. Arch. f. klin. Chir., 1895, xlix, 192.

[27] His: Anatomie menscnlicher Embryonen. Leipsic, 1880-1885.

[28] Fol, H.: Embryon humain de cinq millimètres et six dixièmes, Rec. zool. suisse, 1884, i, 357.

[29] Wernher, A.: Angeborenen Kysten Hygrome, Giessen, 1843.

[30] Slevogt: Programma de singularibus quibusdam partus impedimentis, Jehae, 1704.

[31] Gemmil: Medical Essays, v, part 1, p. 362.

[32] Saxtorph: Soc. med. Havn. collectan., ii, No. 4, p. 25.

[33] Buxtorf: Acta Helvet., vii, 108.

[34] Schmidt: Jour. d. pract. Arznk. u. Wundarznk. (Hufeland's), 24.3, p. 147.

[35] Mechel: Handbuch der pathologischen Anatomie, i, 372; Descriptio monstrorum nonnullorum, p. 40, tab. iv, f. 4.

[36] Löffler: Neues Arch. f. Geburtsh. (Stark's), i, 1747.

[37] Osiander: Handbuch der Entbindungskunde. B. I. Abt. 2, p. 757.

[38] Otto: Seltne Beobachtungen zur pathologischen Anatomie—gehörig. 2te Sammlung. Monstrorum sexcentorum, etc., p. 329.

[39] Terris and Sedillot: Recueil périod., 1806, xxvii.

[40] Faber: Duorum monstrorum descriptio anatomica, Diss. inaug. Berol., 1827, c. tab. p. 548.

[41] Heineken and Himly: Beiträge zur Anatomie und Physiologie, second installment, p. 79

[42] Gläser: Virchow's Arch. f. path. Anatom., xiii, Bd. 2, p. 3, Heft (1858).

[43] Schindler: Deutsche Klinik, 1853, No. 19, Gaz. Med., 1854, p. 313.

[44] Elässer: Würtemberg. med. Corr.-Bl., 1858, xxviii, No. 4.

[45] McCarthy: A Case of Congenital Coccygeal Cyst in an Infant, Lancet, London, 1888, i, 920.

### EMBRYOLOGY OF THE CAUDAL END OF THE HUMAN EMBRYO

The embryology of the caudal end of the embryo has thrown much light on the origin of the sacrococcygeal tumors, and a brief outline of the derivatives of the three blastodermic layers will aid in the consideration of the pathogenesis of this case.

From the entoderm are derived the caudal intestine (post-anal gut), canalis dorsalis, chorda dorsalis and part of neurenteric canal (Fig. 1): from the mesoderm the vertebræ, the muscles, connective tissue and blood-vessels; and from the ectoderm the primitive streak, the medullary tube and its vestiges and the neurenteric canal (external part).

By the investigation of Ecker, His, etc., it has been demonstrated that the human embryo at the end of the first month has a caudal appendage analogous to that in embryos of other mammifera. At this stage the intestinal canal is continued much further down in the caudal end posterior to the proctodæum than is represented in Figure 1. But with the growth of the embryo and the disappearance of the caudal appendage, and opening of the anus through the proctodæum; that part of the gut posterior to the anus is obliterated. When, however, the obliteration of the gut is incomplete the vestiges may give rise to new growth, and thus we have the post-anal gut tumors.

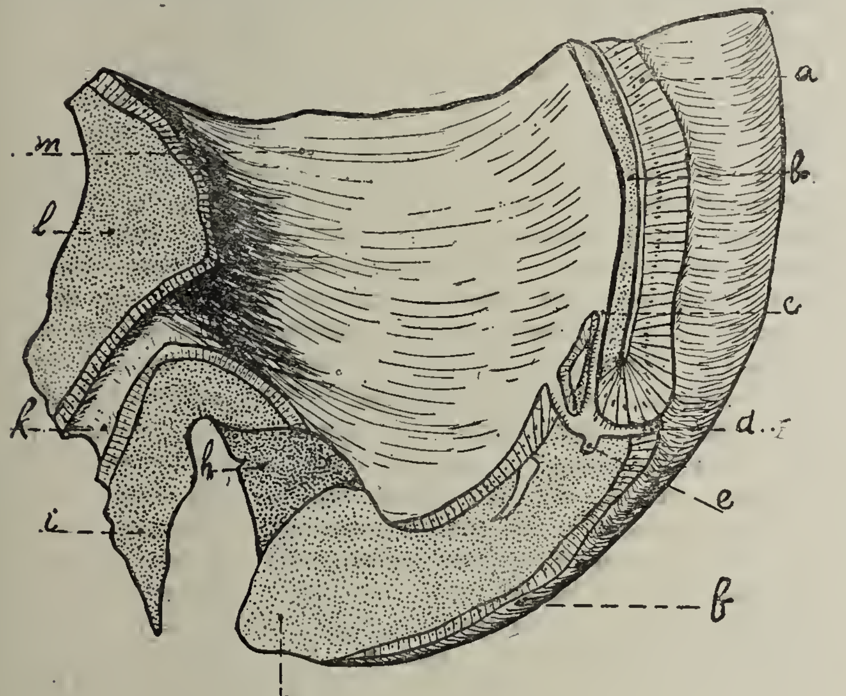

Fig. 1.—Sagittal section through lower end of body of embryo 2.11 mm. long (according to Eternod, from Kollmann's "Handatlas der Entwicklungsgeschichte des Menschens," fig. 79, 1907); a, neural plate; b, chordal plate; c, chordal canal; d, neurenteric canal; e, primitive intestinal cavity; f, primitive streak; g, caudal end; h, proctodæum, closed with epithelium; i, pedicle of allantois; k, allantois canal; l, wall of vitelline sac; m, primitive intestinal tube.

The drawings are by Miss M. von Stoesser.

The chordal canal (Fig. 1), which runs through the center of the primitive axis, is formed by invagination of the entoderm; and the opening of the canal posteriorly is called the blastopore. After the canal has acquired a not inconsiderable length its lower wall develops a series of irregular openings on its ventral side by which it comes in communication with the underlying yolk cavity. These openings grow until the ventral wall of the canal is entirely lost. The cells on the dorsal side of the notochordal canal, however, become thickened to form the anlage of the future chordal plate or notochord or, so called from its origin, the chorda dorsalis. The notochord anlage separates off and the entoderm proper closes across under it so that the notochordal band lies between the entoderm and the overlying ectoderm (floor of the medullary groove).

In a later stage the mesoderm grows across the median line of the embryo, completely surrounds the notochord and forms a special sheath about it, developing the future bodies of the vertebræ. As the vertebral column develops the notochord degenerates (Figs. 2 and 3). It first ceases to be continuous by breaking apart at points corresponding approximately to the center of each vertebra.

The ectoderm gives rise to the "lamina medullaris" (Fig. 1) or neural plate, which by deepening forms the neural groove, and the sides uniting above and then separating from the overlying ectoderm, shape this into the neural canal. At the posterior end of the lamina medullaris, and communicating with the primitive intestinal canal, is the neurenteric canal, which is thus formed, on the one hand, internally from the primitive, intestinal and chordal canals of entodermal origin, and, on the other hand, externally by the neural plate of ectodermal origin. The neurenteric canal normally becomes obliterated at a very early period, so early, indeed, that its existence in the human embryo has seldom been demonstrated. By its persistence, however, Meddeldorph and others explain the origin of certain brain-like structures in this region. The posterior portion of the medullary tube which extended far into the caudal appendage undergoes a process of obliteration analogous to that of the caudal intestine and neurenteric canal, but to the persistence of this medullary coccygeal vestige is attributed the presence of nerve tissue scattered between epithelial and connective tissue elements described by Tourneux and Herrmann[17] as *vestiges médullaires,* and also described by Mallory. To these structures also have been ascribed the origin of certain tumors of the mixed type containing nervous substance.

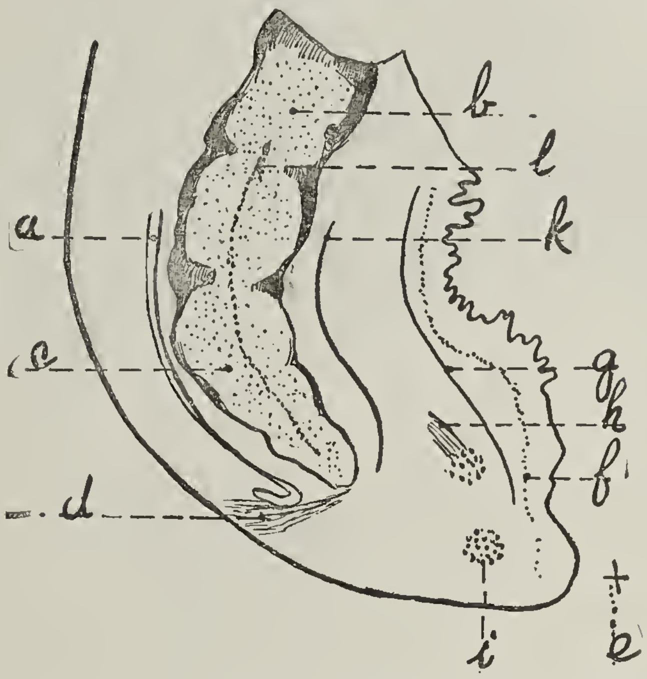

Fig. 2.—Sagittal section of caudal extremity of a human female fetus 7.9 by 10.5 cm. Enlargement 10/1 (from G. Herrmann and F. Tourneux, cited in Note 8); a, medullary tube, the atrophied end of which will form the paracoccygeal medullary vestiges, is turned backward and upward; b, vertebral column; c, coccygeal vertebræ; d, caudal ligament; e, anus; f, internal sphincter; g, longitudinal muscular layer of the rectum; h, levator ani; i, external sphincter; k, caudal artery.

According to Tourneux and Herrmann[17] (Figs. 2 and 3), at the commencement of the third month of fetal life the medullary tube is prolonged to the end of the vertebral column, and at the last vertebra it is curved backward and becomes adherent to the deep layers of the skin. And at the end of the third month by the more rapid growth of the vertebral column than that of the soft parts, the portion of the medullary tube adjoining the vertebræ is dragged down with it and as the reflected portion remains attached to the external integument a curve is described by the neural axis, the branch of which that is in relation to the dorsal surface of the coccygeal vertebræ is termed the direct coccygeal segment (*segment coccygien direct*) and the portion directed upward and backward is termed the reflected coccygeal segment (*segment coccygien réfléchi*). In the fourth month the direct coccygeal segment atrophies and disappears, but the dorsal or reflected segment continues its evolution, and it is to the cellular masses constituting this segment that the authors apply the term *vestiges coccygiens* of the medullary tube. These medullary coccygeal vestiges attain their maximal development during the fifth month, when they are composed of masses of small spherical or polyhedral cells having an irregular cavity lined by a layer of prismatic polyhedral or pavement cells. These are attached to the extremity of the coccyx by bundles of laminated fibers, the caudal ligament. From the sixth month of fetal life the *vestiges coccygiens* undergo progressive atrophy. Nevertheless, rests or remnants of them may be found at the time of birth. In the growth of the soft parts which force the cutaneous coverings backward, the skin situated in relation to the "coccygeal vestiges" remains fixed at the point of the coccyx by the caudal ligament. In certain cases this ligament does not yield to the extension of the neighboring parts and the skin invaginates and constitutes an infundibular depression more or less deep (*fossette coccygienne*). The wall of this depression is lined by the cutaneous covering, devoid of hair follicles, but containing sudoriferous glands in abundance. It is thus that cysts of the second type or dermoid cysts (pilonidal cysts) are formed in the sacrococcygeal region.

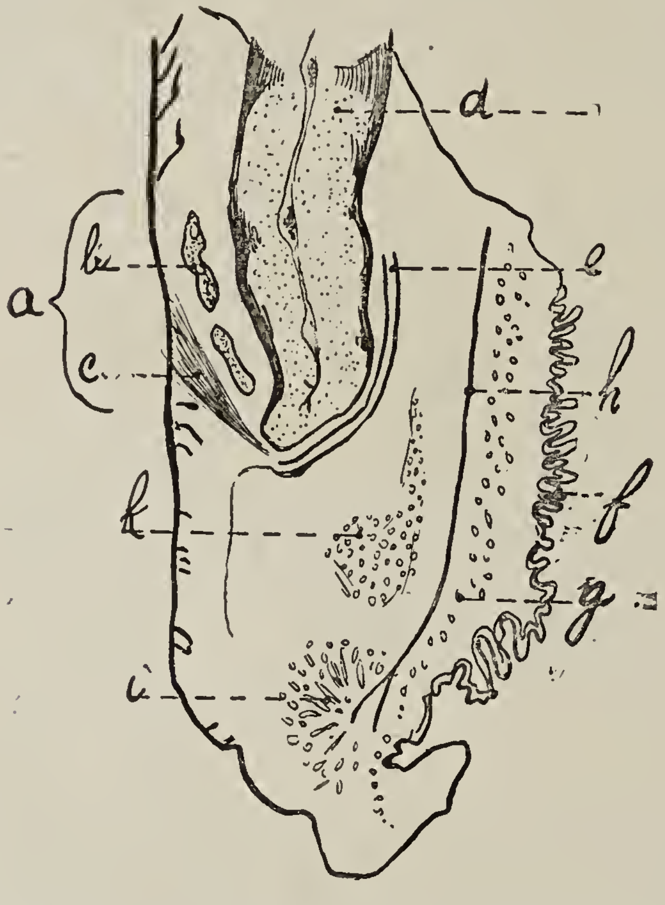

Fig. 3.—Sagittal section of caudal end of human female fetus of 16 by 23.5 cm. Enlargement 8.5/1 (from G. Hermann and F. Tourneux, cited in Note 8); a, "glabelle," surrounded by hair follicles; b, paracoccygeal medullary vestiges; c, caudal ligament; d, coccygeal vertebræ; e, caudal vein (anterior) and artery (posterior); f, mucosa of rectum; g, internal sphincter; h, longitudinal muscular layer of rectum; i, external sphincter; k, levator ani.

### REPORT OF CASE

The following history I obtained Sept. 17, 1909, at the Central Free Dispensary (case No. 16118) of Rush Medical College in the department of surgery:

*Patient.*—Baby L. L., aged 7 days. When the child was born a swelling the size of a man's fist was noted in the perineal region. At birth the skin was smooth and white and of quite normal appearance. The swelling enlarged after birth and the skin took on a blue color. The grandmother, who brought the child to the dispensary on account of the swelling, mentioned no other defects or untoward symptoms. Urination and defecation were not interfered with. Father and mother were both living and well. The mother had had no miscarriages. This was the third child; the other two were strong and healthy and were 4 and 2 years old respectively. The birth of this child was normal; head presentation and no instruments used and no difficulty experienced in delivering the buttocks with the attached swelling.

*Physical Examination.*—The child was well nourished, strong and appeared healthy. The head was of normal size and fontanelles not enlarged. Eyes, nose and mouth were negative, as were also the chest and abdomen. The arm and leg movements were free and there was no sign of paralysis. From the right gluteal region protruded a pedunculated or rather sessile tumor almost as large as the baby's head. This growth extended from the gluteal fold below to the notch between the coccyx and gluteal muscle above, and from the greater trochanter laterally, to the median line of the body, where, extending into the perineum, it encroached on the vulva and the anus (Figs. 4 and 5). The skin covering the tumor was in a normal condition and there were no signs of old scars or inflammatory processes; it was smooth and presented no elevations or depressions. The color was white with faint blue tint where the skin was stretched tightly over the fundus of the tumor. At the apex of the fundus was a reddish discolored area the size of a quarter. Tortuous veins were clearly outlined over the surface of the swelling. A linear elevation of skin showed a white cord-like structure coursing over various parts of the swelling subcutaneously. When held to light the swelling was found to be translucent. The mass fluctuated distinctly. The white linear structure described above could be moved under the skin and felt like a piece of wet hemp string slipping under the palpating fingers. Posteriorly the coccyx was very movable and was pushed to the right side by the tumor mass. Above and to the left of the coccyx was felt a mass of cartilaginous consistency which was very movable. The tension of the swelling was not increased when the child cried. When pressure was made on the tumor, the volume of swelling was not diminished, nor were the fontanelles thereby affected, or any disturbances referable to the cord caused by so doing. (No rectal examination was made.) A puncture of the cyst was made for the purpose of diagnosis; an ounce of light yellow, turbid fluid was obtained which gave reaction for albumin and microscopically showed red cells.

*X-Ray Examination.*—On September 21, when ten days old, the patient was brought again to dispensary and was referred to the *x*-ray laboratory, where two views of the lower portion of the vertebral column were taken, one lateral, and one antero-posterior. The lateral view (Fig. 6) showed no abnormal condition of the spinal column; the cyst was well outlined and no solid contents seen within. The antero-posterior view (Fig. 7) again outlined the cyst and also showed the coccyx pushed to opposite side. There also appeared in the lumbar and sacrococcygeal region a linear area situated to the left side which was not shaded, while on either side of the same shadows were distinctly visible. This picture at first was thought to be of some value in throwing light on the genesis of the cystic swelling; the possibility of a spina bifida anterior with a meningocele was considered. But Dr. Potter, who took the *x*-ray pictures, interpreted the non-shaded area as the place between the two centers of ossification: T, the smaller shadow, being the ossific point of the transverse process and lamina on the one hand and B the larger, the ossific point of the body of the vertebræ. The reason a similar picture was not produced in the opposite side of the body was probably that the child was not lying perfectly straight. Another picture of a normal child ten days old was taken as a control to compare with this, and a somewhat similar condition was found.

*Operation.*—The patient was referred to Dr. Bevan, who operated on the child (September 29) when 19 days old. Under ether anesthesia two half-moon-shaped flaps, one anterior and one posterior to the tumor, were made, thus avoiding injury to the nerve and arterial supply to the perineum; the skin was readily stripped from the tumor mass and with slight hemorrhage the growth was followed to its insertion about the coccyx, a part of which had to be removed in taking away the mass. Some difficulty was experienced in separating the growth from the lateral wall of the rectum, which was pushed forward by the tumor, which almost filled the pelvis. The skin flaps with plenty of redundant tissue were brought together with silk and horsehair. Instead of the usual gauze dressing a zinc oxid paste was first applied over the sutured surface to protect the wound from infection from feces and urine. During the operation the surface of the sacrum was freely exposed and no bony defects were found. The child made an uneventful recovery.

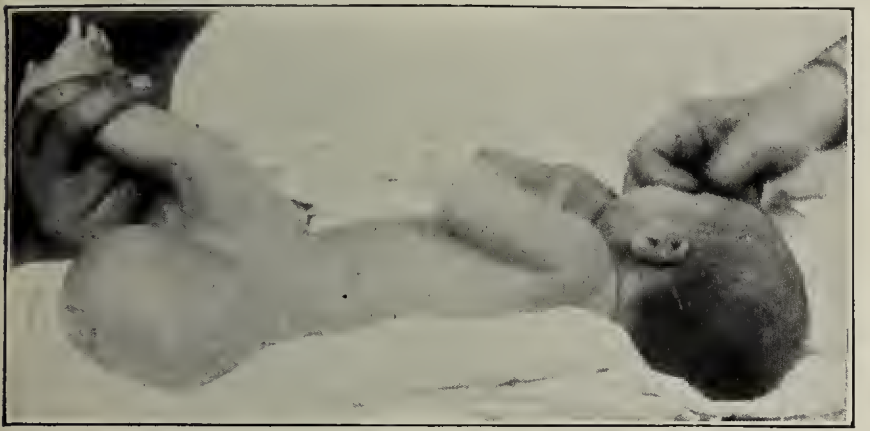
Fig. 4.—Sacrococcygeal cyst, showing extension of the growth downward from coccygeal region.

PATHOLOGIC REPORT

The gross specimen (Fig. 8) consisted of a mass almost the size of a new-born child's head, one half of which was covered with skin; the other presented an exposed area where skin was removed at operation. The mass on palpation felt like a sac full of fluid. At the center of the exposed area (Fig. 8, A) was a piece of cartilage (tip of coccyx) three-quarters of an inch long, one-fourth of an inch wide, and one-eighth of an inch thick, tapering to a point. At the side of the coccyx was an opening to a smaller cyst the size of a hen's egg. The lining of this cyst was smooth, shiny, and white. In the wall of this cyst were four nodules projecting the lining of the cyst forward, also causing an elevation on outer aspect of the cyst. These varied from the size of a BB shot to that of a pea. They were white and of a firm consistency. They cut with slight resistance and on cross-section presented a white homogeneous granular surface. A small cyst the size of a pea, punctured, emitted a clear white fluid. At the base of the attachment of the egg-shaped cyst to the large cyst was an annular thickening of firm consistency which was described in physical examination as a "mass of cartilaginous consistency and very movable." Diameter of base attachment is size of a quarter, the annular thickening itself is about one-fourth of an inch thick.

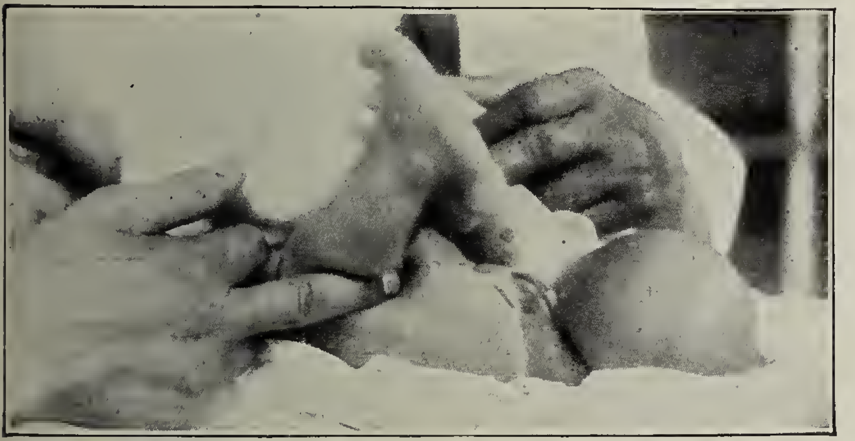
Fig. 5.—Infant lying on its back with legs flexed on its thighs: the tumor mass on the right displacing the anus and vulva.

The main large cyst was punctured (at B, Fig. 8), contents removed and cyst hardened *in toto* in 10 per cent. formalin.

The fluid contents of the cyst amounted to 400 c.c.; were light yellow in color; did not give reaction for the reduction of sugar; 1015 sp. gr.; gave reaction for albumin and showed under miscroscope red and epithelial cells.

The main cyst cut after hardening is shown in Figs. 9 and 10. Between the main cyst and the coccyx (A) were three smaller cysts (C) varying in diameter from one to three cm., the walls of which were thick (2 to 3 mm.) and of firm consistency, and were lined with a smooth and shiny surface. The wall of the large cyst was thin (1 mm.) over the fundus of the swelling, and a little thicker (2 mm.) nearer the coccyx. The skin could easily be separated from the cyst wall. The cavities of the cysts did not communicate with one another. The lining of the cyst was generally smooth and shiny, and presented three points of special interest; first, two nodules, second, three areas of depressed scar-like tissue formation, and, third, several string-like growths of a heavy, white, fibrous-like tissue. The nodules (B, Figs. 9 and 10) were the size of split peas, projected beyond the inner surface of the cyst, and had a darker brown color than the rest of the cyst wall. They were similar to lymphatic glands in appearance. The scar-like formations (D, Figs. 9 and 10) referred to had a punched-out border, and the base was composed of lines radiating to the center. The ulcer resembled the scar of a healed ulcer of the stomach. There were three of these scar formations; two about 5 cm. in diameter and one about 10 cm. Distributed irregularly over the cyst wall in varying thickness, from a mere line to several mm. in thickness, were the cord-like, linear elevations referred to in the physical examination (E, Figs. 9 and 10).

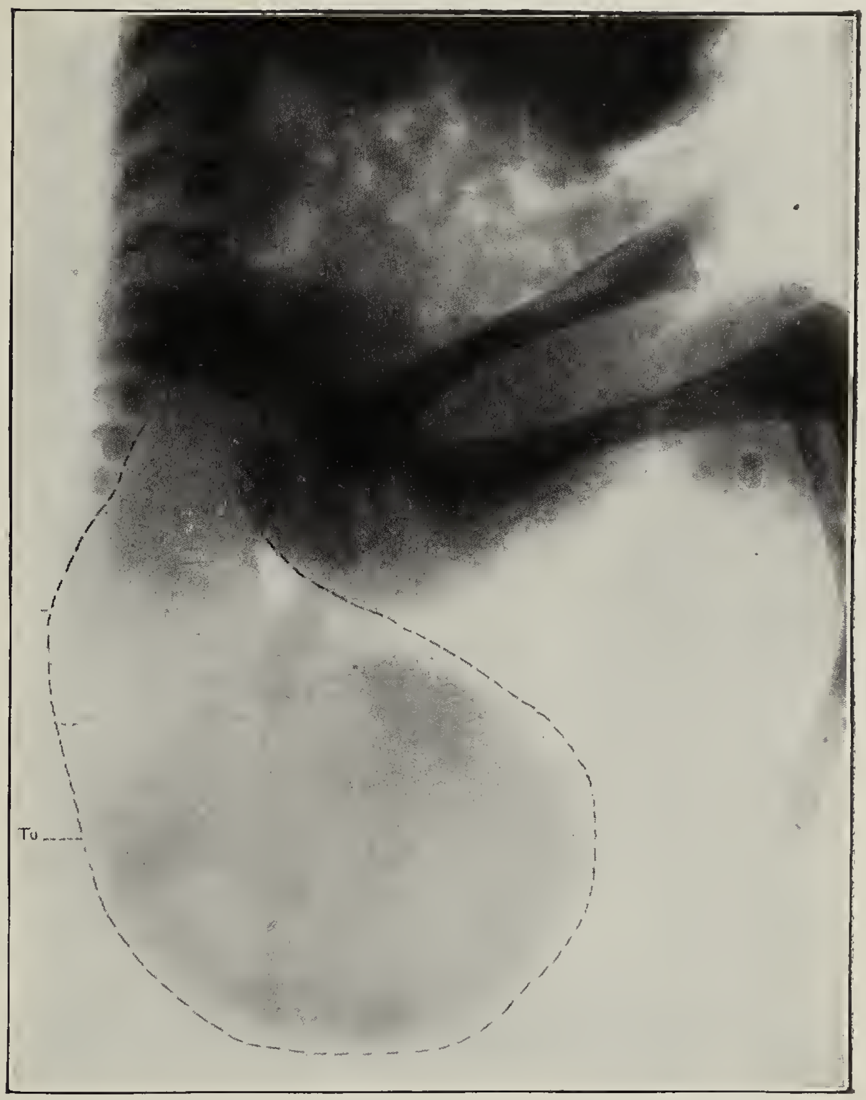

Fig. 6.—Lateral view of tumor (area inclosed by broken line) by *x*-ray.

Sections for microscopic study were taken from three points of interest (Fig. 9): Section I, to show portion of wall of cyst and skin covering it, white fibrous band, and portion of depressed ulcer-like area; Section II, a section of nodule; Section III, through annular thickening described above several blocks were cut in succession at this point and illustrations here will be referred to as III A, III B, and III C.

*Section I (Fig. 11, Hematoxylin-eosin Stain).*—There is a line of cleavage separating the skin from the cyst wall proper. The stratum corneum of the epidermis is thin; the stratum germinativum thick; the tela subcutanea is lacking in sudoriferous glands and panniculus adiposus, which are replaced by a fibrous connective tissue containing many young blood-vessels. The cyst wall proper (b) is composed of con-

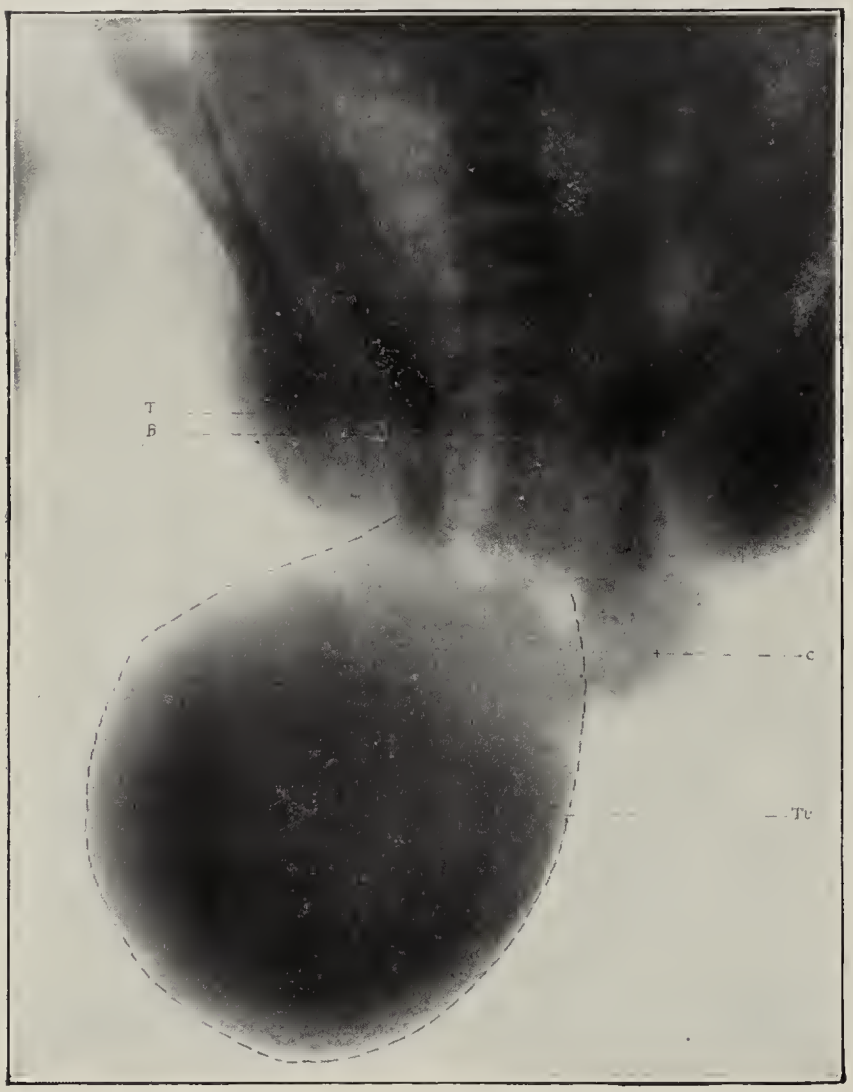

Fig. 7.—Antero-posterior *x*-ray view of tumor: Tu, tumor. c, coccyx displaced to the right; T, ossific point of transverse process; B, ossific point of body of the vertebræ.

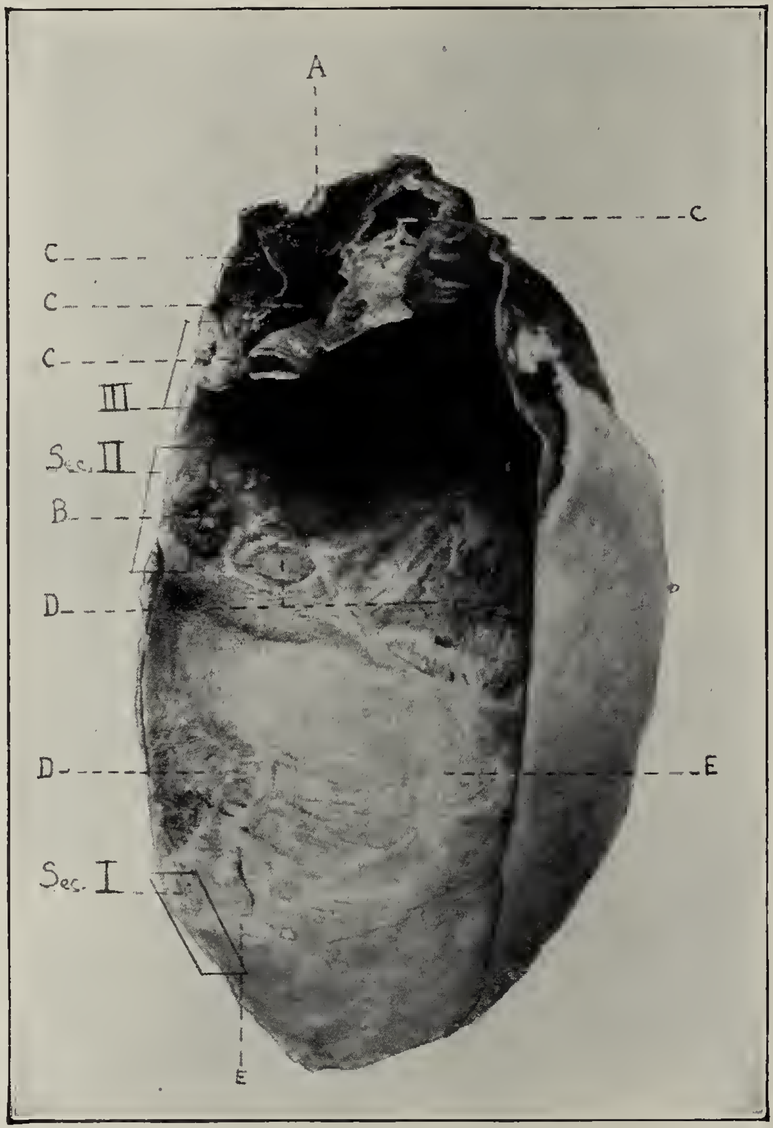

Fig. 9.—Tumor cut open after hardening; A, coccyx; B, nodule; C, cyst; D, scar-like formation; E, white fibrous bands.

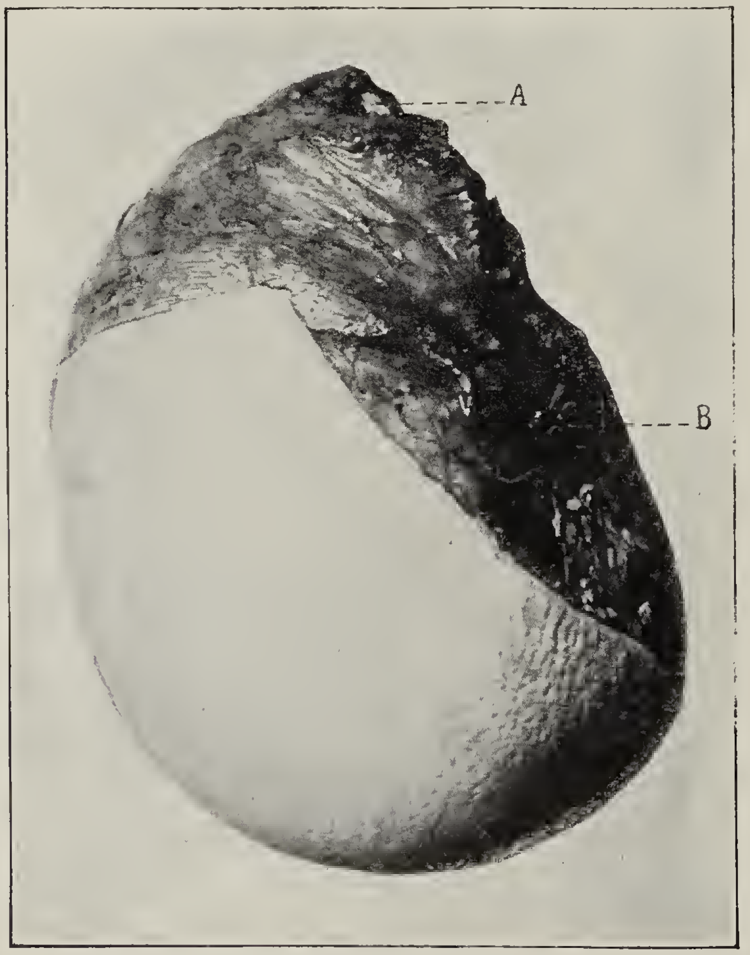

Fig. 8.—View of tumor after removal; A, coccyx; B, site of puncture.

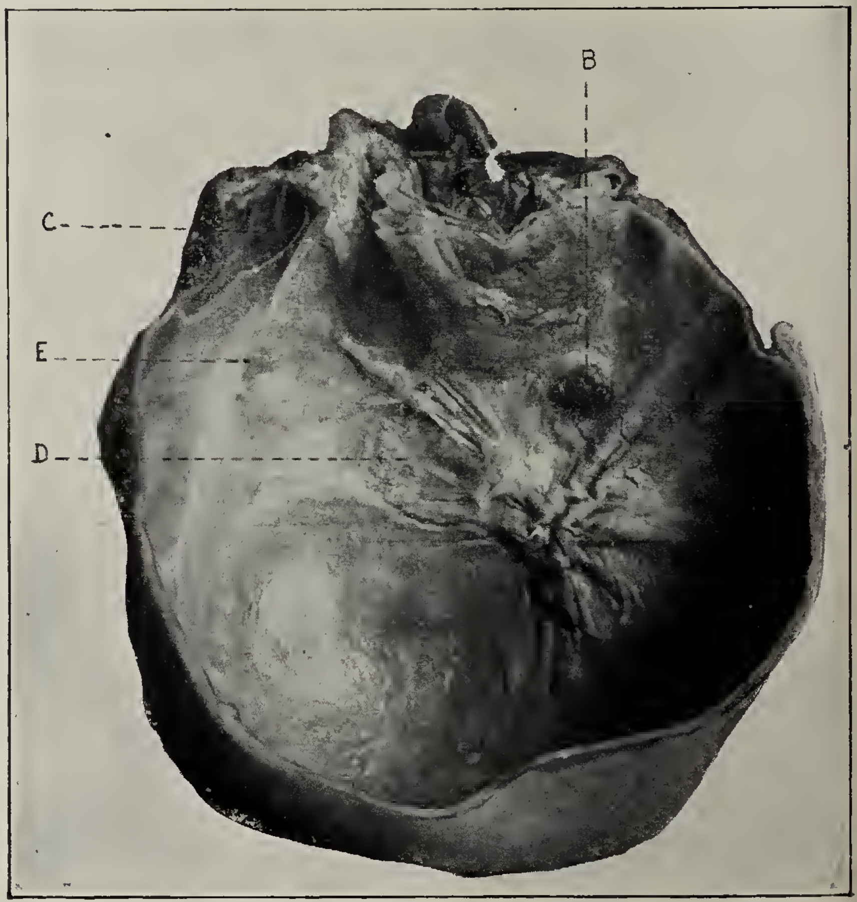

Fig. 10.—Other section of tumor cut open after hardening; B, nodule; C, cyst; D, scar-like formation; E, white fibrous bands.

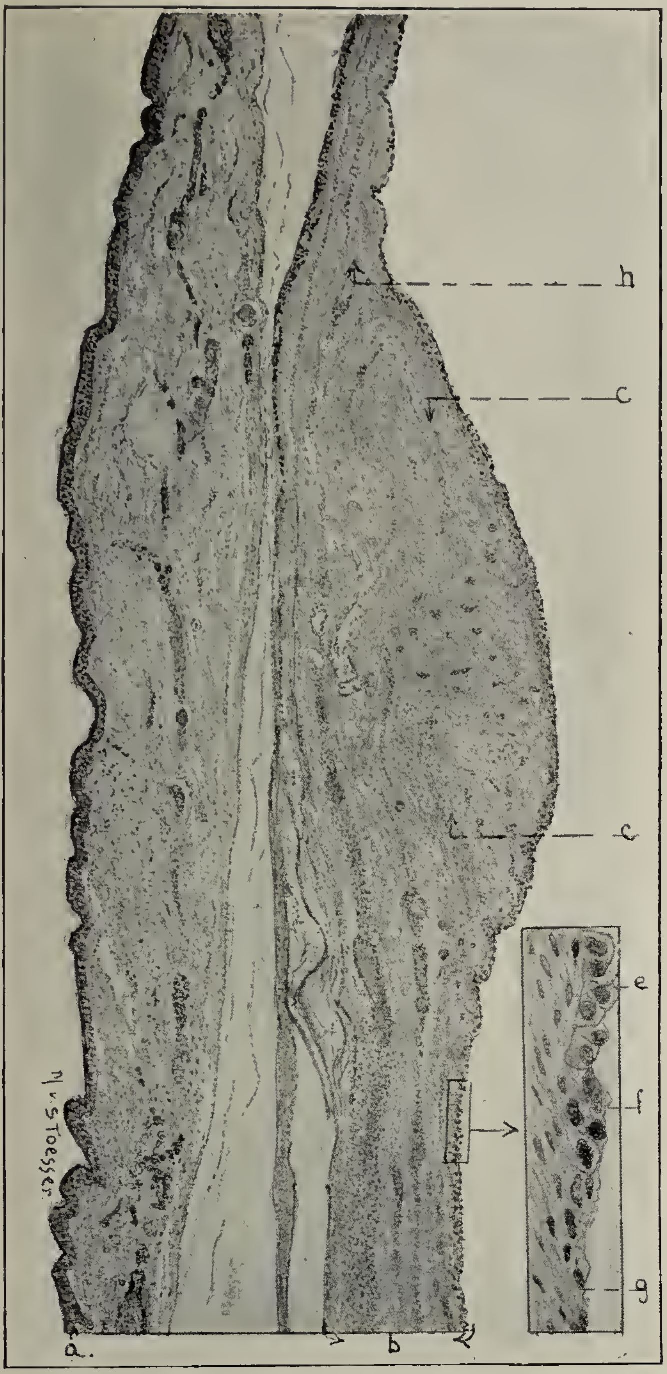

Fig. 11.—Section I (hematoxylin-eosin stain); a, skin; b, cyst wall proper; c, white fibrous band; d, lining of cyst—high-power drawing; e, cells of epithelial type; f, cells of endothelial type; g, cells of connective-tissue type; h, depressed ulcer-like area.

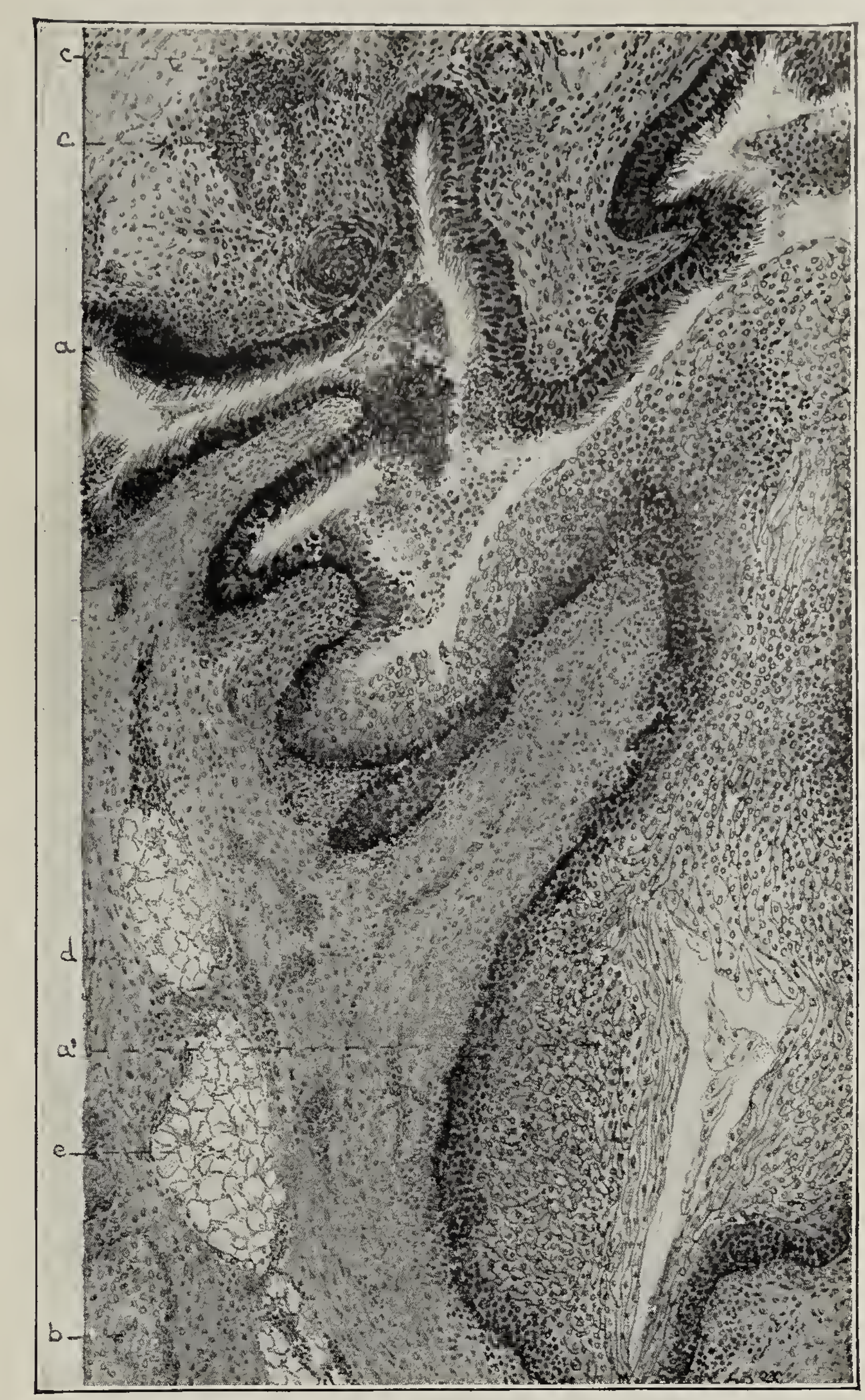

Fig. 13.—Section III B; a, ciliated ependymal cells; a', stratified epithelial cells; b, island of glia cells; c, gland-like or tubular arrangement of glia cells; d, connective tissue; e, fat cells.

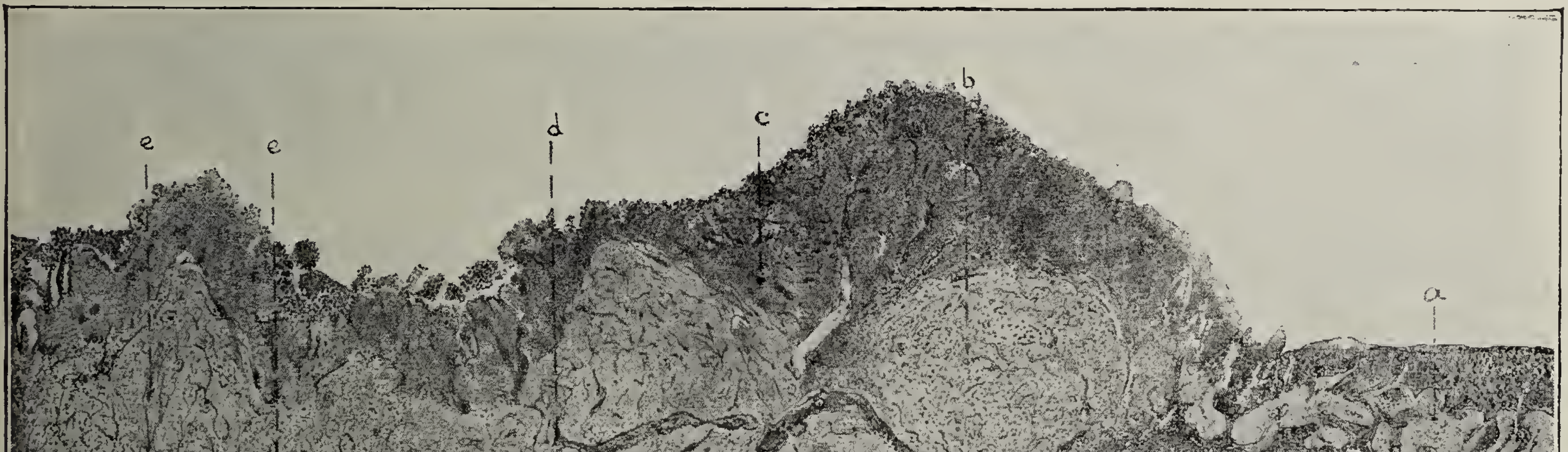

Fig. 12.—Section II (hematoxylin-eosin stain); a, islands of glia cells; b, glia cells in tissue rich in blood-vessels; c, glia cells numerous; few blood-vessels; little intercellular reticulum; d, connective tissue; e, blood-vessels.

nective tissue which is rich in small blood-vessels. The lining of the cyst at places is composed of a layer of large cells arranged side by side which present the characteristics of epithelial cells of columnar type (e) having large nuclei and well-defined protoplasm. These cells are in marked contrast to the elongated spindle cells of the immediately underlying connective tissue of the cyst wall. In other places, however, the epithelial-like layer of cells was wanting and the cells are of an endothelial type (f) and approach the character of the underlying connective tissue cells. In fact, in certain places the spindle cells themselves form the lining and the epithelial and endothelial cells both are wanting. The white fibrous-like band (c) is composed of an increased amount of connective tissue. The depressed area (d) shows the fibrous tissue more compressed and less vascular.

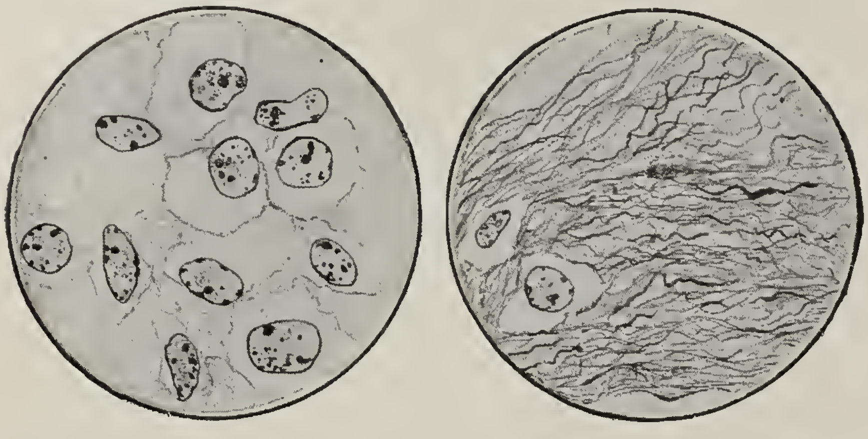

Fig. 14.—Section III B. (Mallory phosphotungstic acid hematin stain); to left, ependymal cells; to right, straight and corkscrew-like neuroglia fibers and two ependymal cells.

*Section II (Fig. 12). Through Nodule as Shown in Fig. 9. (Hematoxylin-eosin Stain).*—Other sections are also stained by phosphotungstic acid hematin stain to study the tissue. This section presents glia cells in three different groupings: a, islands of cells which are faintly stained with the hematoxylin-eosin which gives a light area, in contrast to the heavily stained surrounding connective tissue; the cells are few in number and the intercellular reticular substance gives the light appearance; b, glia cells in tissue which is rich in blood-vessels; the cells here are also scarce and the intercellular substance is abundant, predominating over the blood-vessels which are mostly thin-walled and small; c, the cells are numerous and closely set together, there is little intercellular substance, and blood-vessels are comparatively few. The glia cells mentioned have large nuclei which are round or oval and contain no nucleoli but are rich in chromatin granules. The protoplasm is fairly abundant and surrounds the nucleus evenly, or the nucleus may be eccentrically placed. The protoplasm is light and not stained.

The cells are of the ependymal type, similar to those shown in Section III B.

*Section III A (Fig. 13, Hematoxylin-eosin Stain).*—This presents several points of interest: a cavity lined with epithelial cells which in the upper half have the character of (a) columnar ciliated epithelial cells corresponding to the type of ependymal cells of neural tube; in the lower half the cavity is limited by epithelial cells which take on the type of (a′) stratified or pavement epithelial cells. Below, to the left, is an island of cells (lighter stained) the nuclei of which are large and contain four to eight or ten chromatin bodies; the protoplasm is wide and clear. These (b) are glia cells of ependymal-like type. This is also shown in Figure 14, a high-power drawing with Mallory phosphotungstic acid hematin stain. Near by are seen several areas of (e) fat cells in marked contrast to the surrounding (d) connective tissue. Above and to the left are more (c) glia cells of ependymal-like character arranged in glandular or tubular fashion.

*Section III B (Fig. 14).*—In this are found islands of glia cells similar to those seen in Sections II and III A. With the Mallory phosphotungstic acid hematin stain the following characteristics of the cells were brought out. The cells (upper picture) are of an epithelial type: nuclei are round, or oval, containing chromatin granules but no distinct nucleoli. The protoplasm is generally abundant though in some cells there is little or none. The nucleus at times is surrounded by protoplasm, sometimes, however, located eccentrically. The limits of the protoplasm are well defined. The cells are of the type of ependymal cells, but no characteristic markings of the protoplasm, the *Körnchen* or *Punktierung* of Weigert[46] are found.

Neuroglia fibers (to the right) are numerous, sometimes straight but more often assuming a corkscrew shape. Some are fine and others are coarse; in places they are bunched together containing few cells, but elsewhere they are scanty and the glia cells are plentiful.

*Section III C (Hematoxylin-eosin Stain, Fig. 15.)*—In the upper left quadrant of the field the cartilage cells (a, coccyx) show the intimate connection of the tumor with the coccyx. The connective tissue is studded with small cysts which are filled by a villous growth which is lined by epithelium of a cuboidal or columnar type.

## CONCLUSIONS

From the clinical picture and gross and histologic findings, it may be concluded that this cyst is of neural, or, more definitely speaking, of ependymal origin. Its situation anterior to the sacrum and coccyx and its extension into the pelvis, as well as downward and forward beyond the coccyx, and not at all posterior to or above it, speak for its origin from the neurenteric canal rather than from the vestiges of the medullary canal.

The size of the tumor with no accompanying bony defects speaks against the origin of such a growth from a portion of the medullary canal, such as the filum terminale before it atrophied, and the lack of functional disturbances exclude the remote possibility of its coming from the conus medullaris or higher up.

The most successful treatment of the cysts is early and radical excision, for there is a tendency to progressive enlargement and thinning of the wall, and the liability to infection, is increased from day to day. Palliative measures, such as tapping, injections of iodin, etc., have seldom been followed by a cure and have often resulted in pus formation and death of the child.

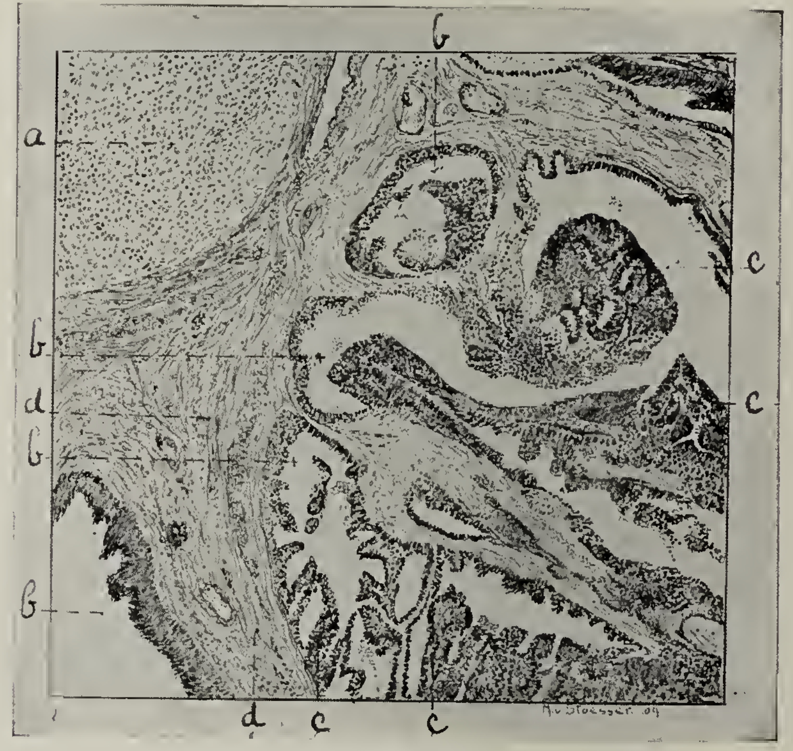

Fig. 15.—Section III C. (hematoxylin-eosin stain); a, cartilage cells—tip of coccyx; b, small cysts; c, villi, with cuboidal epithelium; d, connective tissue.

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[46] 46. Weigert: Centralbl. f. allg. Path. und path. Anat., 1890, p. 736.

# TRICHINELLA SPIRALIS IN HUMAN BLOOD

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The statement that the *Trichinella spiralis* passes from the intestines to the muscles by way of the chyle and blood-streams has been generally accepted, although until recently no proof has been furnished that this occurs in man. In April, 1909, Drs. Herrick and Janeway[1] of New York first demonstrated the *Trichinella spiralis* in the circulating blood of man. The following report of the finding of an embryo of *Trichinella spiralis* in the human blood may, therefore, be of interest as adding still further proof that the parasite reaches the muscles through the blood-stream.

*Clinical History.*—The patient, an Italian woman, aged 29, was admitted to St. Luke's Hospital, Jan. 26, 1910, in the service of Dr. S. W. Lambert. She had been suffering for three weeks with headache, pains over the whole body, anorexia, occasional diarrhea, and weakness. She had vomited frequently during her illness, and had also had several attacks of epistaxis.

*Course of Disease.*—The patient, on admission, was markedly prostrated. The face, especially about the eyes, was puffy. Tenderness was marked over the lower portions of the biceps, over the deltoid insertions, and over the heads of the gastrocnemius muscles. The temperature was 102.8 F. Blood-counts were as follows:

| Date. | Leucocytes. | Polynuc. | Lympho. | Eosinoph. | Basoph. |
|---|---|---|---|---|---|
| 1/27 | 10,700 | 72 | 18 | 10 | .. |
| 1/30 | 15,000 | 57 | 28 | 15 | .. |
| 2/11 | 12,400 | 52 | 34 | 13 | 1 |
| 2/15 | 10,700 | 52 | 33 | 15 | .. |

The patient's course in the hospital was uneventful; the severe symptoms gradually subsided.

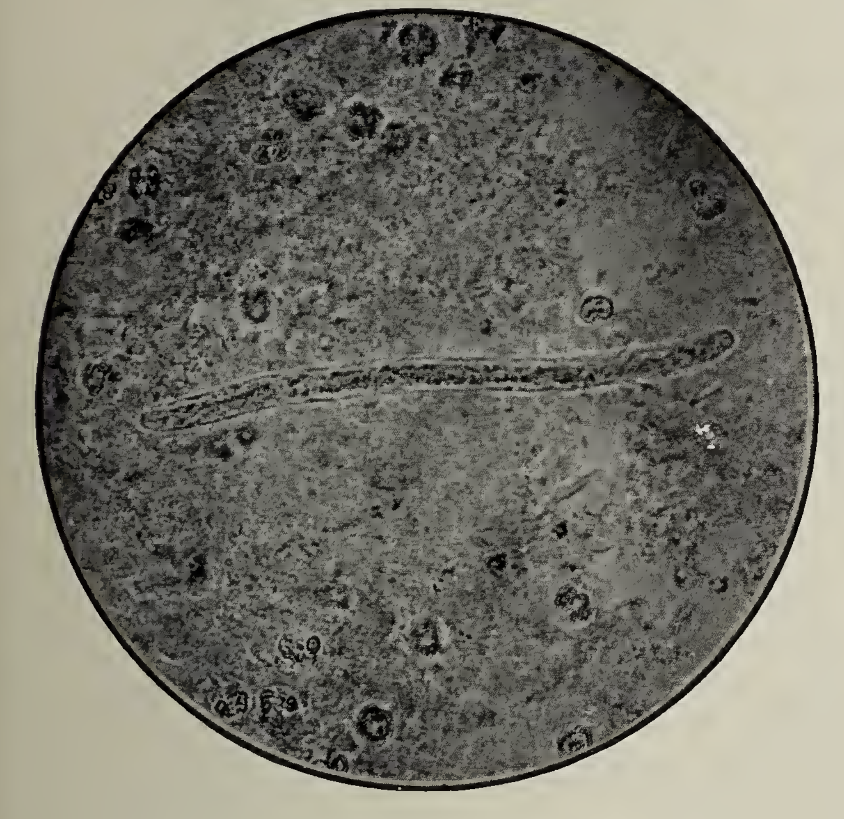

Fig. 1.—Trichinella spiralis in blood (× 500).

*Blood Examination.*—On the day following the patient's admission, twenty-two days after she was first taken ill, her blood was examined for the *Trichinella spiralis*. The method used for laking the blood, namely, by means of a 3 per cent. acetic acid solution, was that employed by Stäubli,[2] who first demonstrated the embryos in the blood of a guinea-pig. About 8 c.c. of blood were drawn from a vein in the forearm, directly into 30 c.c. of the acetic acid solution. A portion was then centrifugalized and the sediment examined under the microscope. As the blood was not sufficiently laked, the sediment was washed and centrifugalized twice with the 3 per cent. acetic acid. A large drop of the sediment was then placed on the slide and examined. After a half hour's search of different slides, the *Trichinella spiralis*, the picture of which is here given (Fig. 1), was found. A few days later a fragment removed from the deltoid muscle showed several larger embryos, not yet encysted (Fig. 2).

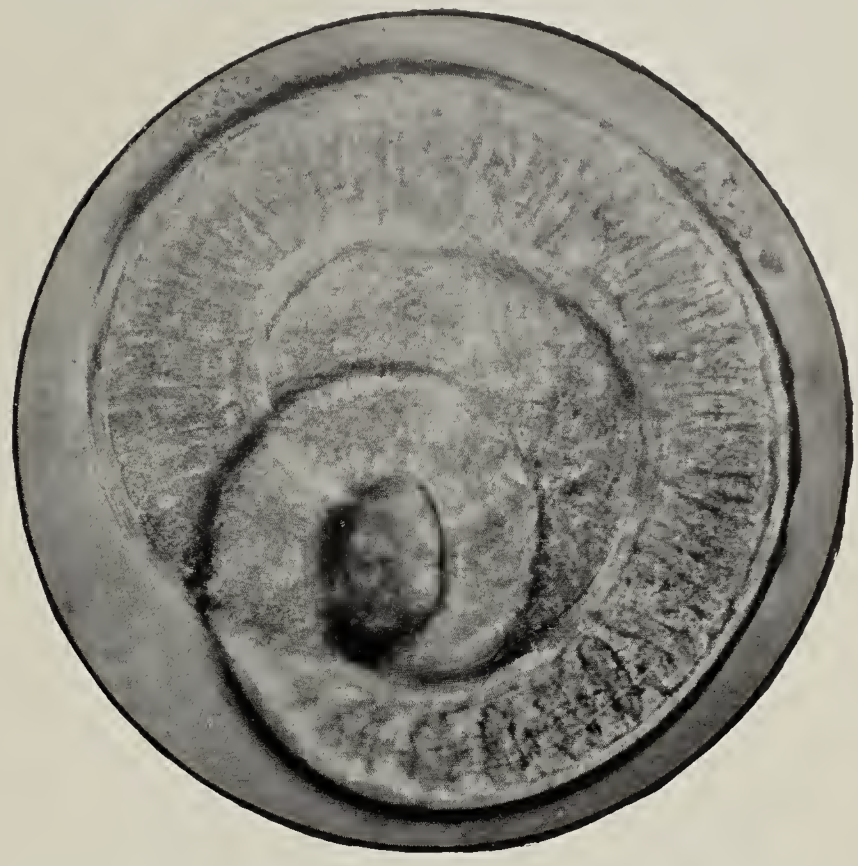

Fig. 2.—Trichinella spiralis found in muscle five days after embryo was found in blood (× about 250).

An interesting feature of this case is that the embryo in the blood and the large embryo in the muscle were found at about the same period, showing that the adult parasites in the body must have continued giving off embryos during a considerable period of time.

437 West Fifty-ninth Street.

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[1] Herrick, W. W., and Janeway, T. C.: Demonstration of the *Trichinella spiralis* in the Circulating Blood of Man, Arch. Int. Med., 1909, iii, 263.

[2] Stäubli: Klinische und experimentelle Untersuchungen über Trichinosis, Verhandl. d. Kong. f. klin. Med., Wiesbaden, 1905, p. 354.

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# SOME ORIGINAL CONTRIBUTIONS TO SURGERY *

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## I. TRANSPLANTATION OF THE PROXIMAL END OF THE ULNA TO THE DISTAL END OF THE RADIUS IN AN UNUNITED COLLES' FRACTURE

*History.*—Figures 1 and 2 show radiographs of the wrists and hands of W. M. Y., who, at the age of 9, suffered a compound right Colles' fracture which, becoming infected, resulted in non-union, destruction of the epiphysis, arrest of growth, and extensive atrophy of the proximal end of the radius.

*Examination.*—Six years later the boy was brought to me, and the comparative condition of the two extremities is here shown. The right hand was deflected sharply toward the radial side, and having no bony support, hung loose like a flail and was practically useless. The ulna continuing to grow, was slightly curved in the direction of the radius.

*Operation.*—The end of the posterior surface of the distal fragment of the broken radius was freshened by section with a chisel, and the ulna divided with the Gigli saw on the same level. The tissues were separated from the bones anteriorly and posteriorly, and the cut surface of the longer (posterior) section of the ulna was carried over and wired to the anterior fragment of the radius. The anterior extremity of the ulna was then dropped back as shown in the diagram (Fig. 3). The contiguous surfaces of the periosteum were lifted and the bone chipped with the chisel in order to excite osteogenesis, and a silver wire collar was thrown around the opposing sections to hold them firmly in contact. This manipulation carried the hand in a straight position, and at the same time brought the spindle-shaped, atrophied posterior fragment of the radius in contact with the anterior fragment from which it had long been separated.

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* Read before the Clinical Society of the New York Polyclinic Medical School and Hospital, March 7, 1910

*Subsequent History.*—Figure 4 is an *x*-ray taken two years after the operation, and shows perfect fusion between the two fragments of the ulna, and between the ulna and the anterior fragment of the broken radius. It also shows the very remarkably improved condition of the proximal portion of the radius. This is no longer spindle-shaped, but having reunited itself to the anterior fragment proper, it has very appreciably thickened as a result of its increased function.

The result of this operation has been very satisfactory. The hand has been restored to usefulness, and the arm has become strong so that the lad can use it for practically any purpose. While supination and pronation have been lost, rotary movements at the shoulder have been acquired and have greatly lessened the inconvenience of the loss of rotation in the forearm.

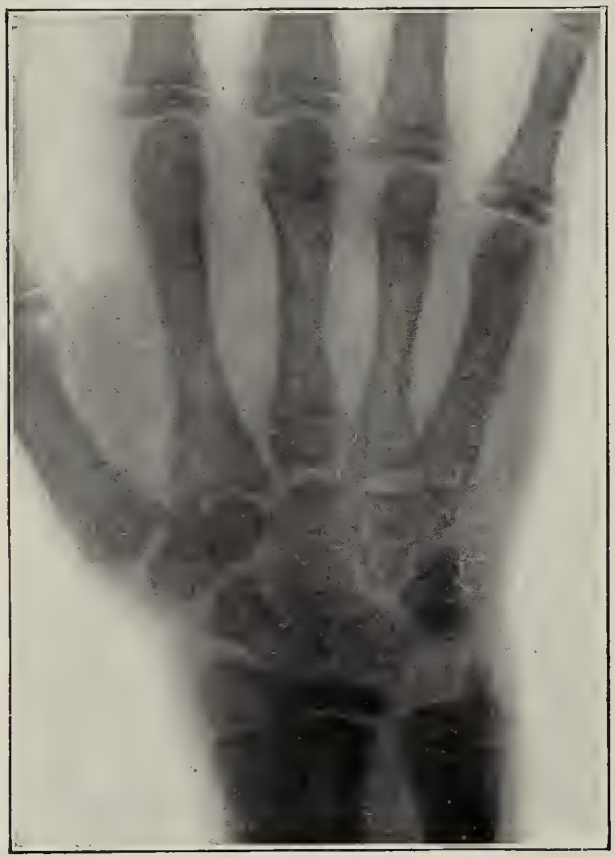

Fig. 1.—Normal left hand of W. Y. at 15 years of age.

In a letter dated Feb. 3, 1910, the father writes: "The developments in the arm have been most remarkable and surprising."

Should it become essential, I may within a year or two divide that prong of the Y-shaped ulna which has attached itself to the distal end of the radius, unite this piece to the shaft of the radius, and thus restore pronation and supination.

## II. FRACTURE OF THE RADIUS NEAR ITS MIDDLE

*Complete Supination of Upper Fragment and Pronation of Lower: Union in This Position Resulting in Complete Loss of Pronation and Supination: Refracture of Bone and Divulsion of Contracted Muscles with Reunion and Restoration of Function*

*History.*—M. C., a Cuban lad, was brought to me in January, 1902. In a fall from a horizontal bar he had injured his forearm. No surgeon was consulted, and there had been no treatment. The pain suffered at the time gradually disappeared, but when after three or four weeks he tried to use the arm, it was discovered that the power of pronation and supination had been lost.

*Examination.*—An *x*-ray picture (Fig. 5) showed that there had been a fracture just above the middle of the radius. As the two bones of the forearm were not in contact at any point, and as there was no muscular paralysis, interosseous union and injury to the nerves were eliminated.

A careful study of this case convinced me that there had been a green-stick fracture, without displacement of the fragments. The pronator radii teres, no longer opposed by the supinator brevis, had rotated the anterior fragment into complete pronation and fixed it there, while the supinator brevis, acting on the upper end, had rotated that fragment in an opposite direction and held it there until bony union at the point of fracture had taken place.

*Operation.*—Under ether the bone was divided at the point of fracture, the ends seized with lion-jaw forceps, and by forcible inward rotation for the upper, and outward for the lower end, the contractured muscles were divulsed. The ends were held in this corrected position, splints applied and normal reunion secured with restoration of supination and pronation as complete as before the injury.

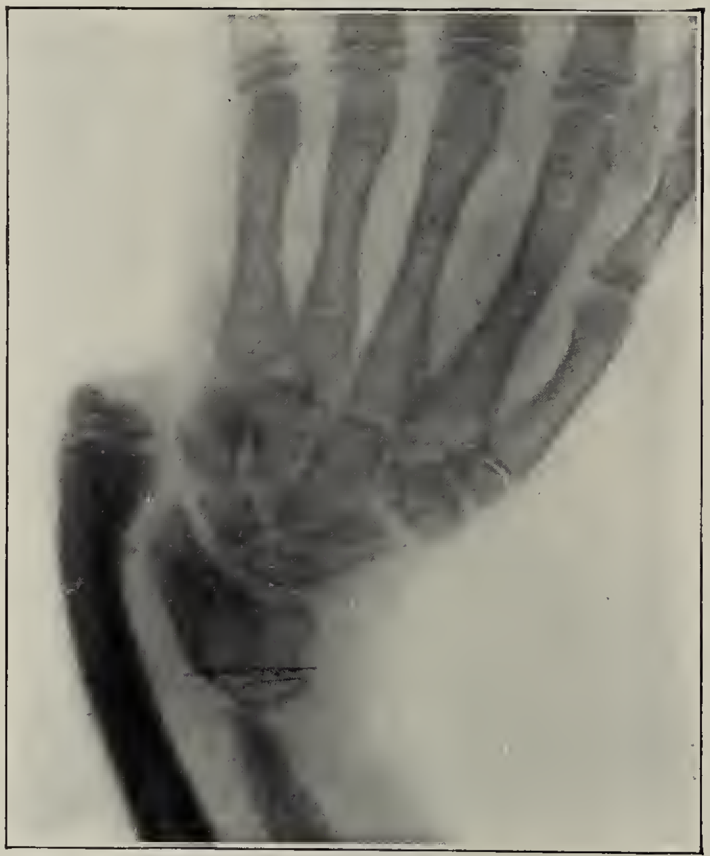

Fig. 2.—Right hand of W. Y. six years after a compound ununited Colles' fracture. Lines of section through ulna and distal fragment of radius shown. Note spindle shape of the proximal end of radius.

## III. REPRODUCTION OF CARPAL END OF RADIUS

*History.*—T. A., male, about 21 years of age, in excellent general health, was operated on Nov. 15, 1890. A 38-caliber pistol ball entered through the articular surface, traversed and destroyed three inches of the carpal end of the radius. Some of the fragments were carried away and lost, while others were embedded in the contiguous muscles and under the skin.

*Operation.*—These were carefully removed, placed in a solution of warm mercuric chlorid, 1 to 3,000, and kept at about 100° F. A hole was drilled through the proximal end of the radius, and the scaphoid, and through each of the dozen fragments of the shattered bone, and these were threaded like beads on a silver wire secured first to the scaphoid, and then to the radius above. All of these fragments survived and fused, and by their presence stimulated osteogenesis, and formed a new and useful radius.

## IV. FRACTURE OF THE FEMUR IN THE NEW-BORN

*History.*—Jan. 26, 1887, I was called to see an infant just born. The accoucheur in making traction by means of the fingers inserted into the flexures at the groin in a case of breech presentation in order to make a rapid delivery, had caused a fracture of the left femur immediately below the lesser trochanter.

*Examination.*—The fracture was very evident, for when I made extension on the leg, the upper fragment projected forward, the end being felt just beneath the skin. The position of this fragment was evidently due to the still contracted condition of the psoas and iliacus muscles, since the thigh had as yet not been extended. The only position of the thigh which brought the fragments in line and in apposition, was by flexing it firmly against the abdomen just as it had been in utero.

*Operation.*—In this position with the leg at an angle of 90 degrees to the thigh, firm rolls of cotton batting were applied along the abdomen on either side of the thigh. While extension was made, the lower portion of the chest, the entire abdomen, and the thigh were included in a plaster-of-Paris cuirass. The bandages did not encircle the thigh but included it in the cast which surrounded the body. Plaster bandages were applied to the leg from the ankle to the knee. To secure complete immobility, these were incorporated into the general cuirass. The right leg was left free, and the plaster cut away so as to permit of the necessary attentions to the infant. Firm extension from the flexed knee in an upward direction was made until the plaster hardened.

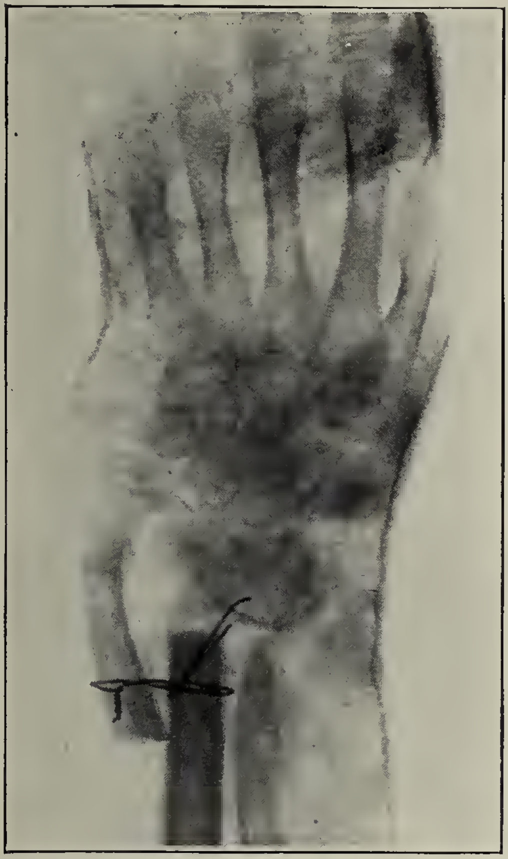

Fig. 3.—Showing section of ulna and wiring of proximal end to distal fragment of radius distal fragment of ulna dropped back overlapping shaft to which it is collared by wire.

*Result.*—At the end of three weeks the dressing was removed, and union without deformity or shortening had resulted. This patient is now a well-developed young woman twenty-three years old, and there is no difference in the length of the extremities.

To the date of this experience I had not heard or read of this complication. Dr. Edgar Wilkinson of Hamilton, Bermuda, writes me that he has met with a similar case and carried out with perfect success the exact treatment as given in my book on surgery.

## V. THE TREATMENT OF CARIES OF THE LUMBAR SPINE BY CONTINUOUS EXTENSION[1]

Without suspending, as advised when the Sayre solid plaster-of-Paris jacket is applied, the patient stands erect. Over the tightly fitting knit undershirt, *two* jackets or zones of plaster of Paris are applied, the lower edge of the upper being just above, while the upper edge of the lower is just below the point of disease. The one catches over and rests on the hips, while the other meets the upward expansion of the chest and scapulæ. As the plaster bandages are setting, three zinc plates about 2 by 4 inches (perforated by numerous holes to make them fasten readily) are placed in each section of the jacket. To the center of each plate is securely riveted a flattened staple of iron. One of these is fastened over the spinal column above and below, one under each arm, and one directly underneath these over the hips. These plates are securely held in position by several turns of plaster bandage, passing alternately above and below the staples, which are left exposed. As soon as the jackets are firmly set, extension bars are applied.

Each bar consists of a shoulder at each end, and a solid section cut with cogs and grooves which telescopes into a hollow section, with a key for lengthening or shortening, and a spring-catch to hold it fixed at any point. This is the exact mechanism that is used in Dr. Sayre's knee-joint splint. The shoulders are caught in the staples riveted to the immovable plates, and the requisite extension is secured by means of the key. In this way it can be graduated exactly, the weight of the upper half of the body being transferred from the spinal column to the supporting bars anchored in the upper and lower segments of the jacket. The patient whose case is reported was treated by this method for about one year and a half and was entirely cured.

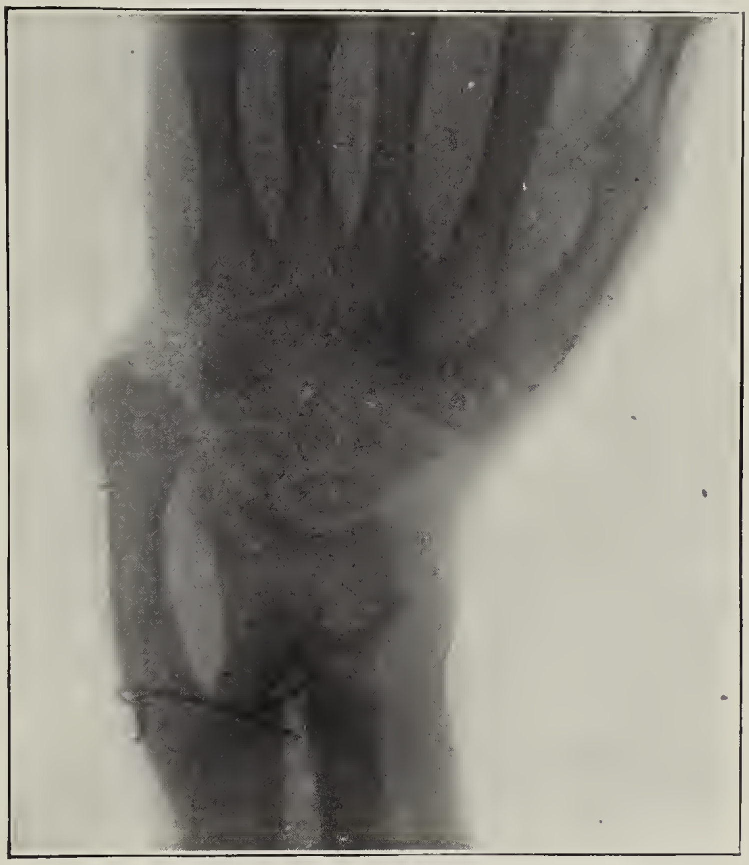

Fig. 4.—The same two years later. Note the solid fusion between the two fragments of the ulna; the ulna with the distal fragment of the radius and (most remarkable) the increased size of the once atrophied radius which is reunited.

## VI. TREATMENT OF A VASCULAR TUMOR OF THE NECK BY INJECTION WITH WATER AT A HIGH TEMPERATURE

### *Temporary Occlusion of the Internal Jugular to Prevent Pulmonary Embolism: Temporary Deligation of the Common Carotid with Reversion of the Current in the Internal Carotid of That Side*[2]

At the fifty-fourth annual session of the American Medical Association, held in New Orleans in May, 1903, in a paper before the Section on Surgery and Anatomy, I described for the first time the technic of a new method for the cure of certain forms of vascular neoplasms.

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[1] Read before the New York County Medical Society, Jan. 27, 1879.

[2] The Journal A. M. A., June 27, 1903.

In this paper I reported some typical cases of the two principal forms of angiomata which are, as a rule, inoperable, and, therefore, incurable by the knife. These are the venous angioma (cavernous nevus), the most frequent, and the arterial angioma (cirsoid aneurism), which is less frequently observed.

Since reporting these cases I have had a larger and very satisfactory experience in the management of these lesions, and, in view of the results obtained, must emphasize the importance of the method.

Since the injection of boiling water directly into the substance of a tumor composed largely of dilated and tortuous blood vessels causes immediate coagulation, the first thought of the surgeon is the possibility of embolism and the great dangers which would ensue from this accident. Of course, in dealing with arterial angioma, no such danger is present, for the reason that the capillaries stand between the coagulating blood and the heart and lungs.

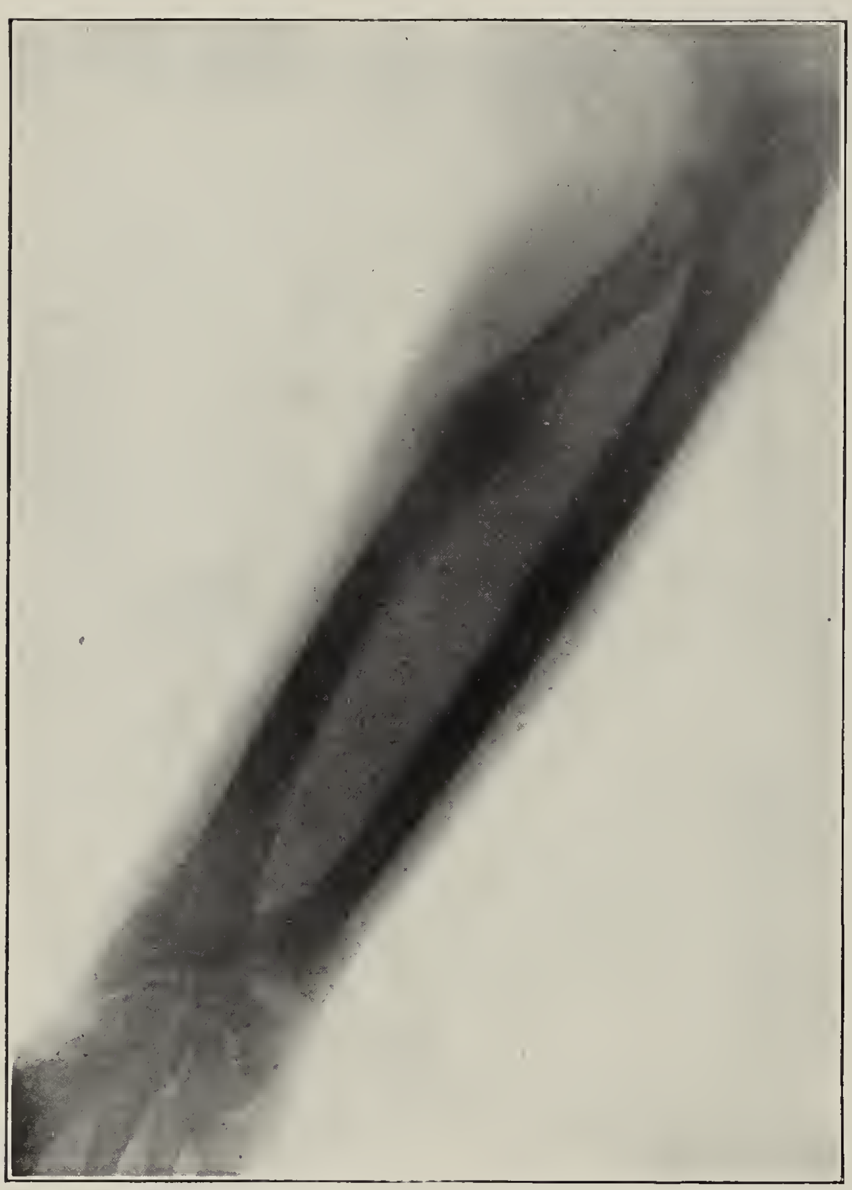

Fig. 5.—Case of M. C. Fracture of radius between the insertions of the supinator brevis and pronator radii teres. Rotation of fragments in opposite directions. Union in false position with complete loss of pronation and supination.

In venous angioma, however, the way is open, and, while I have not yet met with a single case of embolism, every precaution should be taken to prevent this accident.

Most of the neoplasms of this group which I have treated have been located in the neck, generally near the level of the lower jaw, and are in immediate relation to the external and internal jugular veins, as well as the carotid arteries and the large and important nerves of this region.

In the case which I now report, the danger of embolism was so great that I hesitated undertaking the operation, and only did it because the patient's condition was otherwise hopeless.

*History.*—The patient, F. D., a youth of 19 years, laborer, who, with the exception of the lesion to be described, was in perfect physical condition, came under my observation at the New York Polyclinic Hospital in 1907.

*Examination.*—Situated on the side of the neck in the line of the internal and external jugular veins, below the angle of the left jaw, was a vascular tumor which measured about three inches in two directions, and projected well beyond the level of the jaw, the tumor having a thickness of between two and three inches. It was of bluish color, and without pulsation. By steady compression, it could be practically emptied of blood and reduced almost to the natural level of the neck. When the pressure was released it filled rapidly and resumed its former size.

On account of the intimate relation of this tumor to the common, *internal* and external carotid arteries, the external and internal jugular veins and the pneumograstric, sympathetic, facial, and spinal accessory nerves, I hesitated to employ the hot water method for fear, first, of causing an embolism in the jugular vein or the internal carotid artery, the first of which would produce death by occlusion of the pulmonary circulation, and second by cerebral embolism and paralysis. A second danger, but one which was less immediate in its effect, was the injury to one or more of the nerves which have been enumerated.

*Operation.*—Impressed with these dangers, I advised and undertook the removal of this growth by dissection. The hemorrhage, however, was so alarming and seemingly uncontrollable that I was obliged to desist, and had considerable difficulty in arresting it by compression. Three weeks later the following operation was carried out successfully:

To prevent the possibility of pulmonic embolism, the internal jugular was exposed and temporarily occluded by passing around it a large-sized catgut ligature which was twisted and held firmly by an artery clamp. A similar ligature was then thrown around the common carotid artery, and this vessel was in like manner temporarily occluded. The object of this last ligature was to reverse the current of blood in the internal carotid. Blood, like all moving substances, must travel in the direction of least resistance, and in order to prevent the possibility of cerebral embolism, I relied on the force of the unimpeded current to the brain through the internal carotid of the opposite side, and the free anastomosis through the circle of Willis, to carry the blood into the artery of the left side, the stream traveling temporarily downward in its distribution through the branches of the external carotid.

The metal syringe was then filled with boiling water, the piston inserted, and under the barrel of this was held an alcohol lamp in order to keep the water at the boiling temperature. Taking the usual precautions to prevent scalding, by holding a gauze pad in front of the needle as it approached the tumor (for the escape of steam and water from the needle cannot be prevented), the needle was thrust through the gauze as it touched the tumor, and carried well toward the further side of the mass. From ten to fifteen minims were then injected and withdrawing the needle half an inch, this was repeated, until the entire tumor was rapidly subjected to the contact of the hot water.

The result was an immediate coagulation or solidification of the mass. I waited fifteen minutes to satisfy myself of the absence of coagulum in the internal jugular, which could readily have been recognized by the sense of touch. I then removed this ligature. The catgut around the common carotid was then removed.

*Result.*—There was no suggestion of paralysis and no change in the pupils during or after the operation. The patient made an uninterrupted recovery, has been kept under observation, and now after three years is entirely well. There is no suggestion of a tumor or swelling in the neck, the two sides being symmetrical and normal.

## VII. DEMONSTRATION BY EXPERIMENTAL STUDIES ON ANIMALS AND OPERATIONS ON HUMAN BEINGS, OF THE PROCESS OF PERMANENT ARTERIAL OCCLUSION AFTER DELIGATION[3]

April 26, 1882, I presented to the New York Pathological Society a series of specimens which showed the results obtained by the use of broad animal ligatures applied to arteries in continuity. One of these specimens was the carotid artery of a woman which I tied in September, 1881, using the sciatic nerve of a calf which had been made aseptic by treatment in carbolic acid solution. This ligature was not quite one-fourth of an inch in width. The artery was tied just tightly enough to entirely arrest the circulation without doing violence to the inner elastic layer. The patient died seven months after the operation from an intercurrent disease. The artery was completely occluded and its continuity unbroken. There was a slight depression, one-fourth of an inch in width, which marked the exact location of the ligature, every other trace of which had disappeared.

I presented at the same meeting the carotid and subclavian arteries of another patient which I had tied with a broad ligature made of ox aorta after the method of Mr. Richard Barwell of London. This operation had been done for the cure of an aneurism of the ascending segment of the aorta, which operation had proved successful. The patient died one year later from enterocolitis. The occlusion of the arteries was complete, and the condition the same as in the case first reported.

I also presented the carotid artery of a large dog tied experimentally with the nerve ligature. The animal was killed five weeks later, and, as shown, the artery was completely occluded and the continuity of the inner layer seemingly unbroken. In another specimen the carotid artery of a horse was shown. In the application of this ligature, the lumen of the vessel was intentionally not entirely occluded, permitting a portion of the blood current to pass through. Mounted sections of these arteries showed active proliferation in all the normal cells of the arterial wall, most marked in the connective tissue group. They demonstrated that arterial occlusion was the direct result of cell proliferation and the resulting fibrillation and contraction of the new cells of the inflammatory process caused by the traumatism or irritation of the constricting band or ligature.

Scarpa had advanced the idea many years before that it was not necessary to constrict an artery with a ligature forcibly enough to break even the internal elastic layer. Jameson of Baltimore, with this same idea in mind, had later recommended broad animal ligatures made of deer-tendon, but the fact that the clot was an accident of, rather than a factor in, arterial occlusion after the ligature and that closure was due to cell proliferation, *was now for the first time demonstrated.*

When I found in the work of Ballance and Edmunds on "Ligation in Continuity," published in 1891, no mention of these researches, I addressed to them a letter calling their attention to it, and received the following reply:

> "London, England, Sept. 24, 1894.
>
> *Dear Sir:*—We are much obliged to you for your kind letter with respect to our book. Its main conclusion is identical with that at which you had arrived long before. We congratulate you on the result of your ligations. Yours very truly,
>
> Charles A. Ballance,
> Walter Edmunds."

## VIII. LIGATION OF THE EXTERNAL CAROTID ARTERY

Ligation of the external carotid artery for any lesion in the distribution of this vessel is comparatively a modern operation. Prior to 1878, when the investigations which were given in my "Essays on the Arteries"[4] were made public, in the entire history of surgery the external carotid artery alone had been tied only sixty-nine times. Practically all of these operations were done in ignorance of, or without regard to, the accepted rules laid down in the text-books, for there was then not a work on surgery in the English or any other language, to my knowledge, which did not advise the ligation of the common carotid, rather than the external branch, for a lesion in the distribution of the external carotid alone.

It was said in justification of this position that the branches of the external carotid artery were so irregular in their origin, and at times so close together, that there was not space enough to permit the application of a ligature to the trunk of this vessel.

It had occurred to me as early as 1874 that, as this was the only artery in the human body which was given as an exception to the general law of development, there might possibly be some error in the deductions given in the text-books on surgery and anatomy.

In my investigations I made 121 dissections of the neck with special regard to the terminal divisions of the common carotid. The origin of each of the six regular branches of the external carotid, the distance from the center of bifurcation of the common trunk, and their relations to each other were carefully measured and noted, with the result that it was demonstrated that the external carotid did not differ from the other arteries in the arrangement and relation of its branches, and that it could be ligated in any part of its course as safely as any other artery in the body.

In these essays I collected the histories of 789 cases in which the common carotid artery had been ligated for all causes, with a death-rate of 41 per cent., while in the 69 cases in which the external carotid alone had been ligated—in disregard to the text-books—the death-rate was only 4.3 per cent., a difference in the mortality ratio as based on the results of surgical methods at that time of 36.7 per cent.

When these essays were made public by the American Medical Association, the conclusions reached were universally accepted,[5] and there is to-day not a work on surgery which does not advise the deligation of the external instead of the common carotid artery in all cases for a lesion within the distribution of the former.

The external carotid artery has now been tied in thousands of instances, and the death-rate under the improved technic is practically *nil.*[6] The following is quoted from the report for 1878 of the Committee on Prize Essays of the American Medical Association:

> One paper, in the judgment of your committee, is fully up to the requirements, and should be considered as *two* rather than *one* essay. The analysis of 789 cases of operation on the (common) carotid artery and the careful and minute measurements of the (external) carotid artery and its branches in 121 subjects, showing the range of variation and the percentage of the same, followed by inferences, bold and original, naturally constitutes a paper complete in itself. Another essay on the same

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[3] Published in the Tr. New York Path. Soc., 1882, Med. Rec., July 22, 1882; and in Wyeth: Text-Book on Surgery, 1887, p. 171.

[4] Prizes of the American Medical Association, awarded in 1878; The Surgical Anatomy and Surgery of the Common, External, and Internal Carotid Arteries, and The Surgical Anatomy and Surgery of the Innominate and Subclavian Arteries, William Wood and Co., New York, 1879.

[5] For the immediate acceptance and establishment of these conclusions I was greatly indebted to the late Prof. Henry B. Sands, one of the foremost American surgeons.

[6] I have tied this vessel in several hundred instances without a death, and in three cases the ligature rested exactly in the crotch of bifurcation of the common trunk.

plan with reference to the innominate and subclavian being an analysis of 300 cases, and the observation of 52 subjects, is presented to us in such a maner that we may consider the whole as one prize, or they may compete for both. Your committee believe that both prizes should be awarded to the two essays by one person.

In the American edition of Bryant's Manual for the Practice of Surgery,[7] from the section devoted to this subject, the following is quoted:

> In this connection the views of Dr. John A. Wyeth of New York deserve great attention, for, in his prize essays, presented to the American Medical Association in 1878, he has investigated the subject of ligation of the primitive carotid artery and its branches with such painstaking accuracy that his paper will deservedly become classical. He has collected and analyzed 789 cases of ligation of the common carotid artery, 91 instances of ligation of the external, and 18 of ligation of the internal carotid. In addition, he has given accurate measurements of the arteries in 121 subjects, showing the range of variation and the position of branches. His inferences from this astonishing amount of research are at variance in some respects with the surgical teaching and practice of the day, but it would seem that the profession must be in the wrong, rather than he, who has considered the subject in such a thorough and scientific manner.

### IX. BLOODLESS AMPUTATION AT SHOULDER AND HIP

In 1889 I devised the bloodless operation for amputation at the shoulder-joint by elastic constriction over the scapula and pectoral regions, completely controlling the blood supply to the upper extremity. At this operation the applicability of the same idea to hip-joint disarticulation occurred to me, and within a year I did my first bloodless amputation at the hip joint. Both operations were first performed in the surgical amphitheater of the New York Polyclinic Medical School and Hospital.

When the conditions render it permissible, the arm may be emptied of blood by applying Esmarch's elastic bandage. If, on account of the lesion present, this is not advisable, elevation of the member will in large measure allow the blood to gravitate into the body. Two good-sized mattress needles, or preferably the pins specially devised by me, are employed as follows:

The anterior one is inserted through from two to three inches of skin, pectoral muscle and fascia, far enough within the scapulo-humeral articulation to permit free approach to the joint. This pin is anterior to, and does not endanger the vessels. The other is inserted posteriorly over the scapula at the same relative position, and both points are at once shielded with cork. A piece of elastic rubber tubing about half an inch in diameter is wound tightly around the shoulder on the proximal side of the pins. The cumulative pressure of the tourniquet traveling three or four times over the same surface completely closes the blood vessels.

Disarticulation can be accomplished by any of several methods. My own preference, when conditions permit, is a longitudinal incision from the acromion process down to the joint, splitting the deltoid fibers for a sufficient length. From its lower end, a circular or oval incision is carried around the arm, completely dividing the vessels and other soft tissues. The cuff is raised from the bone and the disarticulation effected. The blood vessels are secured, and,as a precautionary measure before closing the wound, the tourniquet may be momentarily relaxed in order to demonstrate any bleeding points which may have been overlooked. This operation has been done in a number of instances, and the hemostasis has been complete in every case.

The bloodless method of disarticulation of the hip-joint was first done by me in February, 1890, and made public before the Nashville meeting of the American Medical Association in that year. The technic is as follows:

> The patient is placed with the sacrum resting on the corner of the operating table. The extremity is emptied of blood by elevation of the foot, and, when permissible, by the application of the Esmarch bandage. Two large steel needles about 3/16 of an inch in diameter and ten inches long, are employed. One of these is introduced 1/4 of an inch below the anterior superior spine of the ilium and slightly to the inner side of this prominence, and is made to traverse superficially for about three inches the muscles and fascia on the outer side of the hip. The direction is at right angles to the plane of the body. The point of the second needle is thrust through the skin and tendon of origin of the adductor longus muscle half an inch below the crotch, the point emerging an inch below the tuber ischii. The points should be shielded at once with heavy cork to prevent injury to the hands. No vessels or nerves are endangered by these skewers. A mat or compress of sterile gauze about two inches thick and four inches square is laid over the femoral artery and vein as they cross the brim of the pelvis. Over this a piece of strong rubber tubing 1/2 an inch in diameter when unstretched, and long enough when in position to go five or six times around the hip, is now wound very tightly around and above the fixation needles and secured with a strip of ordinary bandage. If the Esmarch bandage has been employed, it is now removed. The extremity is bloodless, and will remain so.
>
> In the formation of the flaps the surgeon must be guided by the condition of the parts within the field of operation. When permissible, the following method is preferred:
>
> A longitudinal incision commencing at the tourniquet is carried over the trochanter major a sufficient distance down the thigh to form a suitable flap. This is joined at the lower end by a circular incision. A cuff that includes everything down to the muscle is dissected up to the level of the trochanter minor. At about this level the remaining soft parts, together with the vessels, are divided squarely down to the bone by a circular cut. At this stage of the operation, the divided proximal ends of the great femoral vessels are in plain view and should be tied with good-sized catgut. This done, disarticulation is rapidly completed by dividing the muscular insertions from the trochanter and digital fossa, keeping very close to the bone and holding the soft parts away with retractors. The capsular ligament is now exposed and divided, and by forcible elevation, adduction and rotation of the femur, the joint is opened, the ligamentum teres ruptured and the head of the bone dislocated. The remaining vessels, including the saphenous vein, should now be secured—the sciatic artery alongside the nerve, the obturator between the stumps of the adductor brevis and magnus, two or three good-sized branches of the external circumflex beneath the rectus and in the substance of the crureus and vastus externus. The descending branches of the internal circumflex are insignificant, and are usually found on the level of the femoral vessels in the substance of the adductor longus and between it and the adductor brevis and pectineus.
>
> In tying the larger femoral vessels I make it a rule to dissect both the superficial and deep femoral stumps back from one-half to three-fourths of an inch in order to apply the ligature behind any branches which may have been divided close to their points of origin, and I do not hesitate to include the large veins in the same ligature in order to save time. Before closing the stump, it is a wise precaution to loosen the tourniquet in order to see that no bleeding point has been overlooked. The considerable oozing which otherwise would occur from so large a surface may be controlled by introducing a gauze pack into the cotyloid cavity, the end of which is brought out between the flaps for drainage, and then making firm compression with the bandage which holds the dressing on the stump.

The operation has been generally accepted and practiced now in many hundreds of cases. The death-rate from gunshot wounds during the civil war in America was 93 per cent. and between 40 per cent. and 50 per cent. in civil practice in the years preceding the adoption of the method herewith described. It has now been reduced, under modern conditions of hemostasis and asepsis, to about 8 per cent. in disease and 16 per cent. in traumatic cases.

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[7] Manual for the Practice of Surgery, by Thomas Bryant, F.R.C.S., Surgeon to and Lecturer at Guy's Hospital; edited by Professor John B. Roberts, Philadelphia, 1881, p. 366.

In the *Annals of Surgery*, September, 1895, Dr. John F. Erdman reports that from January, 1884, to January, 1895 (the aseptic period) there were eighteen hip-joint amputations done in Bellevue, Roosevelt, St. Luke's, Mt. Sinai, Chambers Street, German, and Presbyterian hospitals in New York City, with eight deaths, a mortality of 44.4 per cent. Of the eighteen patients, seven were operated on by the method here described, and all recovered, leaving eight fatal cases in eleven amputations by other methods, a death-rate of 72.7 per cent. I do not claim that such a death-rate as this would follow by any other method of operation, but I do insist that my method of hemostasis is so simple and generally applicable that it removes from the procedure all possible danger of operative hemorrhage.[8]

## THE TREATMENT OF SARCOMA BY STREPTOCOCCUS AND PYOGENIC INFECTION

That erysipelas has an inhibitory influence on sarcoma, which is at times curative in its effect, has long been known.

In 1882 there was admitted to Mt. Sinai Hospital, in the service of my colleague, Dr. A. G. Gerster, a young woman, suffering with sarcoma of the leg, for which an amputation was made just above the knee. A recurrence took place, followed by a hip-joint disarticulation. The disease again appeared in the stump, developing rapidly into an extensive cauliflower-like mass which became accidentally infected with erysipelas. This infection ran the usual course of erysipelas, during the progress of which the tumor began to diminish in size and eventually it entirely disappeared. In 1907, more than twenty-five years after this experience when this patient was last heard from, she was entirely well, and still actively engaged in her work as a school teacher.

The experiments of Fehleisen and others by direct infection with the *Streptococcus erysipelatis* have confirmed the result in the case above narrated.

Two years later, in my service at Mt. Sinai Hospital, I had the following experience which has since been repeatedly confirmed, namely, that pyogenic infection was capable of producing the same result.

J. P., aged 28, was admitted May 20, 1884, with the following history: A year previous he had received a blow on the abdomen over the right iliac region, which was followed by induration and the development of a neoplasm. At the time of examination, the tumor was 4 by 6 inches in surface measurement, and about 3½ inches in thickness. On account of the involvement of the abdominal wall, it was found impossible to remove it. A section extending almost entirely through the mass was excised and examined by Dr. William H. Welch and two other competent pathologists. The diagnosis of each was spindle-celled sarcoma. Having noticed in a current medical periodical the report of a case of sarcoma, said to have been cured by the direct injection into the substance of Fowler's solution of arsenic, in view of the hopelessness of the patient's condition, I advised this treatment. I began with injections in two or more portions of the mass of from one to three minims of this solution, gradually increasing the quantity to as much as ten minims. These injections were repeated daily for four or five days, then every other day for about ten days. They became so painful that at the patient's request the treatment was discontinued. The increased pain was occasioned no doubt by a pyogenic infection which had supervened. The tumor became red and swollen, and pitted on pressure. The skin did not have the glazed or "stove-polish" appearance of erysipelas, but rather the look of a severe dermatitis. The infection proved to be pyogenic, and several incisions were necessary to permit the free discharge of pus. The patient suffered very considerably from the high temperatures due to septic absorption, but after a period of about two weeks, the tumor began to diminish in size, and with this there was a general improvement in his condition. Four months later his physician, Dr. A. H. Conson of Gainesville, informed me that the tumor had entirely disappeared. The patient regained his former condition of health and survived, without recurrence, eighteen years, and until a few days before his death from acute pneumonia, was hale and hearty, his weight at that time being 170 pounds.

So far as I am able to learn, this was the first known case of a cure of sarcoma by an infective process other than erysipelas. This experience has since been confirmed in a number of instances, one of the most remarkable and instructive of which is the following:

In 1893, J. P., aged 35, of Augusta, Georgia, consulted me in regard to a large tumor occupying the right hypochondriac region. He was anemic, greatly emaciated, and had the marked cachexia of a malignant growth. On account of ascites, he had been tapped on three occasions, and I removed at one operation five gallons of fluid from the peritoneal cavity. With the collapse of the abdominal wall there was felt a hard, round, slightly movable tumor 4 or 5 inches in diameter. It was exposed by an incision about 6 inches in length. To the touch, the tumor was firm, slightly elastic, and occupied the space between the stomach and liver, having developed from the gastrohepatic omentum. It was of a reddish-brown color, and covered in front with a network of large vessels. On account of its vascularity and the feeble condition of the patient, I did not venture to remove a section for microscopic examination, but from its location and macroscopic appearance I have no doubt that it was a sarcoma. The edges of the abdominal incision were retracted so as to permit about one-third of the anterior surface of the mass to present in the wound, while sterile gauze was inserted to secure adhesions and to prevent any general peritoneal infection. Three days later this packing was removed, and the wound and the exposed surface of the tumor were permitted to become infected. Suppuration was soon established; the dressings were changed daily, and within two weeks' time there was a noticeable diminution in the size of the mass and an improvement in the patient's general condition. This wound was kept open, and allowed to suppurate for about two months, at the end of which time, as well as I could estimate, the neoplasm had diminished about one-half its original size. After the wound healed, the shrinkage continued, and six months after the operation it had disappeared. The patient's general health became better from day to day. Five years later I operated on him for hemorrhoids. A few years after his recovery, he married, and is the father of a number of children, and to-day, after a lapse of seventeen years, is in the enjoyment of excellent health.

244 Lexington Avenue.

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[8] With the introduction of Esmarch's elastic bandage, it was employed in various ways in the effort to control hemorrhage in hip-joint disarticulation. In the Lancet, 1883, i, 897, Jourdon-Lloyd described a method in which "a strip of black India rubber bandage about two yards long is doubled and passed between the thighs, its center lying between the tuber ischii of the side to be operated on and the anus. The ends are drawn tight, one in front, and one behind, to a point above the center of the iliac crest."

Trendelenburg endeavored to improve on this method by adding transfixion with a single needle which was passed in front of the neck of the femur and beneath the great vessels. A rubber cord in figure-of-eight fashion was carried over the ends in front, compressing the anterior, vascular portion of the flap.

Fourneaux-Jourdon's plan was a figure-of-eight rubber spica, using the Esmarch bandage in practically the same manner as Jourdon-Lloyd.

Richard Volkmann endeavored to control hemorrhage by circular constriction without needles. His three cases were reported in the *Deutsche Klinik* of 1868, but in each case a preliminary ligature of the femoral was done. That this method was not accepted is evident in the fact that neither in Billroth and Luecke's *Deutsche Chirurgie*; in the *Handbuch der Chirurgie* by Von Pitha; the works of Linhart, nor in the *Centralblatt fur Chirurgie* or *Klinische Vorträge*, of which Volkmann himself was an editor, is there any mention or description of this procedure. I never read or heard of Volkmann's discarded operation until several years after my method had been made public and had been generally accepted by the profession. Of the method, Professor W. W. Keen, of Jefferson Medical College, in a report dated January, 1892, says: "It was reserved for an American surgeon to devise what is undoubtedly the best method, and in fact, what I think we can now call the only method of hemostasis in amputation at the hip-joint."

# THE TRANSMISSION OF THE TYPHUS FEVER OF MEXICO (TABARDILLO) BY MEANS OF THE LOUSE (PEDICULUS VESTAMENTI)*

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In a previous article[1] we referred to Nicolle's experiment, in which he apparently succeeded in transmitting the typhus fever of Tunis from the chimpanzee to the macacus monkey, through the bite of the louse. Nicolle used twenty-nine lice in his experiment; after feeding on the chimpanzee they were allowed to feed on the monkey for several successive days. Also, Anderson and Goldberger[2] report two attempts to transmit the typhus fever of Mexico City to the macacus by means of the louse. Their first experiment seemed to be without result, and although the second showed a slight rise in temperature, their inability to give an immunity test to the animal makes it imposible to interpret the result. This test is essential, as will be manifest from considerations which follow.

Since January 1 we have performed a series of experiments bearing on the relation of *Pediculus vestamenti* to the typhus of Mexico, some of which may be recorded at this time.

Certain conditions pertaining to the experiments should be detailed before the protocols are given.

The first relates to the susceptibility of the monkey to typhus, and the positiveness with which the disease may be recognized in this animal.

As shown by the experiments of Anderson and Goldberger, and by our own, the injection of virulent blood from man, under suitable conditions, gives rise to a well-marked course of fever, following an incubation period from five to twelve days. A further constant factor is the absence of micro-organisms, which are susceptible to cultivation by ordinary methods, from the blood of the animal during his course of fever. This sequence of events has now resulted a sufficient number of times without any failures, so that it may be expected constantly when the established technic is observed. In the course of our experiments so far six monkeys have received virulent blood from man in doses of from 1 to 7, c.c.; two have received virulent unfiltered serum in doses of 7.5 and 8.5 c.c.; and one received 5 c.c. of defibrinated blood from another monkey as an experiment in passage. All of these animals exhibited an incubation period followed by a distinct course of fever, accompanied by signs of severe illness, and with negative attempts to obtain cultures from the blood. Anderson and Goldberger obtained similar results in the four animals inoculated by them. It would seem, therefore, that even in the absence of an eruption resembling that of typhus (and indeed, no such eruption has appeared), the consistency of the phenomena mentioned is a satisfactory index of the transmissibility of the disease to the monkey. Constantly the temperatures of seven or eight normal monkeys were taken twice daily as a means of detecting possible adventitious infections which might be contagious in character; but none was observed.

A second, and, as it seems, a conclusive method of determining whether a course of fever was really due to an infection with typhus, consists of an immunity test, i. e., a second injection of virulent blood, after the subsidence of the fever. The immunity test must, of course, be accompanied by the injection of a similar quantity of the same blood into a normal monkey, as a control to the virulence of the material. Thus, six monkeys (Nos. 3, 7, 9, 11, 24, and 25) which exhibited a distinct course of fever following their first inoculation, and all of which were seriously ill, showed no febrile response, or other signs of illness, when the second inoculations, or the immunity tests, were given. They received their immunity tests in three groups at different times, and in all five normal controls were used for each group. Five cc. of human virus were injected into each member of one of the groups, and 4 c.c. into each of the other two. The controls in each case developed a course of fever similar to that already described.[1]

The degree of susceptibility of the monkey is another important consideration, and, if it is low, experiments on insect transmission might be rendered difficult or impossible. It will be recalled that Nicolle failed entirely in his attempts to infect the macacus with the Old-World typhus by the direct injection of human blood; he succeeded only by first infecting the chimpanzee and then transferring blood from the latter to the macacus. After the macacus was once infected, he attempted to maintain the disease in this species by passage, but the virus apparently underwent a rapid loss in virulence, and the infection "died out" after two or three passages.

It seems also that Anderson and Goldberger had a similar experience in trying to maintain Mexican typhus in the macacus.

We, also, have made two attempts to keep the disease alive by passage. In one instance, the second monkey (No. 11) became infected, whereas the third (No. 22) showed no fever. In the second instance the second animal (No. 9) exhibited only an indefinite fever, and further passage was not attempted.

There was, therefore, sufficient reason to suspect that the macacus might not be sufficiently susceptible for satisfactory work on insect transmission. Information of at least suggestive value regarding this question might be obtained by determining the minimum infective dose of human blood for the monkey. Although it appeared inadvisable on account of the cost, to investigate this point extensively, one experiment was performed in which one animal (No. 25) received 1 c.c. of virulent human blood, and another 0.2 c.c. of the same material. After the lapse of an incubation period of ten days, the former developed a severe course of fever of ten days' duration, and showed no reaction to a second injection which was given a month later. The animal which received 0.2 c.c. had no fever and showed no signs of illness. Although the immunity test of the latter remains to be given, it is probable that the minimum infected dose in this instance lay between 0.2 c.c. and 1 c.c.

The question arises, however, as to whether the monkey may undergo a mild type of infection, which might be accompanied by little or no fever, and which would be recognizable only from the fact that the mild or "abortive" attack had established immunity to a subsequent injection of virulent blood.

The possibility of such an occurrence is well known. We have observed it a number of times in experiments with spotted fever on the guinea-pig. We have, furthermore, one instance of a very mild and scarcely perceptible infection with typhus in the second attempt at passage referred to above.

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[1] The Journal A. M. A., Feb. 5, 1910, p. 463.

[2] Anderson and Goldberger: Pub. Health. Rep., Feb. 18, 1910.

Monkey 4, which was infected with virulent human serum, and whose history was given in a previous paper,[1] was bled from heart on its second day of fever and 5 c.c. of the blood were injected intraperitoneally into No. 9, which showed on successive days the temperature given in Table 1:

TABLE 1.—TEMPERATURE OF MONKEY 9 AFTER INTRAPERITONEAL INJECTION OF INFECTED BLOOD

| | A. M. | | P. M. | |
|---|---|---|---|---|
| | F. | C. | F. | C. |
| January 19 ............. | 103.6 | 39.8 | 102.6 | 39.2 |
| January 20 ............. | 102.5 | 39.2 | 103.4 | 39.6 |
| January 21 ............. | 101.8 | 38.8 | 103.1 | 39.5 |
| January 22 ............. | 103.2 | 39.5 | 103.9 | 39.9 |
| January 23 ............. | 102.3 | 39.1 | 102.8 | 39.3 |
| January 24 ............. | 102.0 | 38.9 | 102.5 | 39.2 |
| January 25 ............. | 101.6 | 38.6 | 102.6 | 39.2 |
| January 26 ............. | 102.0 | 38.9 | 103.6 | 39.8 |
| January 27 ............. | 102.0 | 38.9 | 103.2 | 39.5 |
| January 28 ............. | 101.0 | 38.3 | 102.4 | 39.1 |
| January 29 ............. | 102.7 | 39.3 | 104.3 | 40.2 |
| Jauuary 30 ............. | 102.9 | 39.4 | 102.0 | 38.9 |
| January 31 ............. | 101.8 | 38.8 | 103.1 | 39.5 |
| February 1 ............. | 102.9 | 39.4 | 103.4 | 39.7 |
| February 2 ............. | 102.7 | 39.3 | 103.2 | 39.5 |
| February 3 ............. | *104.0* | *40.0* | *104.8* | *40.4* |
| February 4 ............. | *104.0* | *40.0* | *104.4* | *40.2* |
| February 5 ............. | *103.9* | *39.9* | *103.9* | *39.9* |
| February 6 ............. | *103.1* | *39.5* | *103.6* | *39.8* |
| February 7 ............. | 101.8 | 38.8 | 103.3 | 39.6 |
| February 8 ............. | ..... | .... | 103.0 | 39.4 |
| February 9 ............. | 101.0 | 38.3 | 102.8 | 39.3 |

Below 103 for two weeks thereafter.

Not until the sixteenth day after inoculation did the temperature rise above a possible normal (for this individual), remaining somewhat elevated for only three or four days. A positive diagnosis of infection with typhus could not be made under these conditions; yet, when an immunity test was given (February 18) the temperature did not rise higher than 103 during the twenty-six days it was under observation. The control (No. 18) exhibited, on the other hand, a severe course of fever.

Hence, as a consequence of this experiment, and from the experience with spotted fever, it seemed not unreasonable to anticipate that the monkey might suffer from mild infections with typhus, not manifested by marked elevation of the temperature or by distinct signs of illness, but the occurrence of which might be determined later by means of immunity tests. This we believe, is what happened in our attempts to transmit the disease by means of the louse, as will appear below.

The point may also be raised as to whether some of our monkeys may have acquired typhus by contagion, or by means of their own lice from other monkeys which had been infected deliberately, thus vitiating later experiments. Although the evidence is entirely against typhus being contagious, we protected our experiments, (by first killing the lice on the monkeys by means of insect powder, petroleum and scrubbing with green soap; and furthermore, by the practice of keeping a healthy monkey in the same cage with an infected animal in order to test the question of contagiousness. Two monkeys which were thus exposed (Nos. 18 and 20) proved susceptible to later inoculation, the result tending to disprove contagiousness.

Comparatively large numbers of lice were used in each experiment, because of the supposed low susceptibility of the monkey. This condition lays the experiments open to the objection that the transmission might be purely mechanical, and may not, on this account, reproduce the natural conditions. The natural method, however, is still unknown, and may indeed be of a mechanical nature rather than the so-called "biologic." If sixty lice are able to infect a monkey mechanically, a smaller number may infect man, provided the latter is more susceptible. Protocols follow.

### TRANSMISSION OF TYPHUS FROM MAN TO THE MONKEY BY MEANS OF PEDICULUS VESTAMENTI

Group 3, *Pediculus vestamenti*, was infected as follows: January 5, they fed for thirty minutes on E. S., on the tenth or eleventh day of his sickness; January 6, on J. V., tenth day of sickness; January 7, on C. A., ninth day of sickness; January 8, on the same patient.

On January 9, 45 lice were alive and 40 fed on Monkey 1 for about on hour; January 10, 334 were alive and 23 fed on the monkey; January 11, they were not fed; January 12, 19 fed; January 13, 13 fed; January 14, 11 fed; January 15, 9 fed. The feedings were not carried further.

The temperature of the monkey on successive days was as shown in Table 2:

TABLE 2.—TEMPERATURE OF MONKEY 1 AFTER BEING BITTEN BY INFECTED LICE

| | A. M. | | P. M. | |
|---|---|---|---|---|
| | F. | C. | F. | C. |
| January 9 ..... ....... | 100.4 | 38.0 | ..... | .... |
| January 11 ............. | 102.8 | 39.3 | 104.6 | 40.3 |
| January 12 ............. | 98.6 | 37.0 | 101.2 | 38.4 |
| January 13 ............. | 99.2 | 37.3 | 102.9 | 39.4 |
| January 14 ............. | 99.4 | 37.4 | 99.9 | 37.7 |
| January 15 ............. | 101.2 | 38.4 | 101.7 | 38.7 |
| January 16 ............. | 100.8 | 38.2 | 100.2 | 37.9 |
| January 17 ............. | 99:0 | 37.2 | *103.6* | *39.8* |
| January 18 ............. | *100.6* | *38.1* | *102.9* | *39.4* |
| January 19 ............. | *100.6* | *38.1* | *102.0* | *38.9* |
| January 20 ............. | *99.1* | *37.3* | *103.2* | *39.5* |
| January 21 ............. | *98.9* | *37.2* | *103.2* | *39.5* |
| January 22 ............. | *101.2* | *38.4* | *103.2* | *39.5* |
| January 23 ............. | 99.7 | 37.6 | 102.6 | 39.2 |
| January 24 ............. | 100.9 | 38.3 | 102.1 | 39.0 |
| January 25 ............. | 99.4 | 37.4 | 102.6 | 39.2 |
| January 26 ............. | 98.5 | 37.5 | 103.3 | 39.6 |

Did not rise above 102.4 F. thereafter.

It will be noted that in the afternoons of January 17, 20, 21 and 22, the temperature lay between 103.2 and 103.6, the first rise being eight days after the lice began to feed, or having the 20th in mind, the interval was ten days. Inasmuch as the animal's temperature was constantly below 102.5 for a period of thirty-one days later, it is not improbable that the slight elevation referred to represented a mild infection, although no other signs were apparent.

The belief that the animal had suffered from typhus was corroborated by an immunity test consisting of 7 c.c. of defibrinated blood from Patient 27, given February 8. For nineteen days thereafter, the morning temperature lay between 99.0 and 102.0, and in the afternoon between 101.5 and 102.8. This immunity test was controlled by inoculations of 4 c.c. of the same blood[3] into No. 3, and 1 c.c. into No. 25.

No. 3, after an incubation period of seven days, and No. 25 of nine days, developed fever, which in both animals lasted for ten days, going as high as 106 in the former, and 106.8 in the latter.

The immunity of No. 1 was again tested a month later, March 11, with the same result, whereas Control 20, after an incubation period of five or six days, passed through the usual course of high fever. The first immunity test, however, is the one which indicates, and it would seem conclusively, that No. 1 was infected by the lice.

### TRANSMISSION FROM MONKEY TO MONKEY BY MEANS OF THE LOUSE

Monkey 7 was infected by the injection of blood from man, as described in our first paper.[1]

Group 5, *Pediculus vestamenti*, was infected by three feedings on Monkey 7, on the sixth, seventh and eighth days of its fever. Thereafter, the lice were fed for eight successive days on Monkey 12, their number gradually decreasing from eighty-one on the first day to nine on the last day of feeding.

The temperature of No. 12 was irregular and rather high prior to the experiment, although the animal was active and well nourished.

Its temperature continued as in Table 3:

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[3] No. 3 had been injected previously with filtered serum, without becoming infected; hence this injection constitutes an immunity test for No. 3.

TABLE 3.—TEMPERATURE OF MONKEY 12 AFTER BEING BITTEN BY INFECTED LICE

| | A. M. | | P. M. | |
|---|---|---|---|---|
| | F. | C. | F. | C. |
| January 23 | ..... | .... | 103.2 | 39.5 |
| January 24 | ..... | .... | 103.6 | 39.8 |
| January 25 | 103.4 | 39.7 | 103.4 | 39.7 |
| January 26 | 103.6 | 39.8 | 103.9 | 39.9 |
| January 27 | 102.7 | 39.3 | 104.3 | 40.2 |
| January 28 | 102.6 | 39.2 | 103.2 | 39.5 |
| January 29 | 102.9 | 39.4 | 101.9 | 38.8 |
| January 30 | 104.2 | 40.1 | 103.0 | 39.4 |
| January 31 | 103.3 | 39.6 | 104.2 | 40.1 |
| February 1 | 103.0 | 39.4 | 104.0 | 40.0 |
| February 2 | 102.7 | 39.3 | 103.6 | 39.8 |
| February 3 | 103.7 | 39.8 | 103.4 | 39.7 |
| February 4 | 103.7 | 39.8 | 103.3 | 39.6 |
| February 5 | 103.6 | 39.8 | 104.0 | 40.0 |
| February 6 | 103.4 | 39.7 | 103.5 | 39.7 |
| February 7 | 102.1 | 38.9 | 103.7 | 39.8 |
| February 8 | ..... | .... | 103.7 | 39.8 |

A definite course of fever cannot be made out positively. If present, it would appear to lie between January 30 and February 5 or 6, a period of seven or eight days, and the incubation period would be seven or eight days. On February 2, the animal was manifestly ill, in contrast to its former active condition, and this condition continued for four or five days. On February 9, however, it was again active and appeared well. At this time an immunity test was given; the temperature is given in Table 4:

TABLE 4.—TEMPERATURE OF MONKEY 12 AFTER IMMUNITY TEST

| | A. M. | | P. M. | |
|---|---|---|---|---|
| | F. | C. | F. | C. |
| February 9 | 103.9 | 39.9 | 103.9 | 39.9 |
| February 10 | 102.5 | 39.2 | 103.9 | 39.9 |
| February 11 | 103.3 | 39.6 | 103.9 | 39.9 |
| February 12 | 103.1 | 39.5 | 103.7 | 39.8 |
| February 13 | 102.9 | 39.4 | 103.4 | 36.7 |
| February 13 | 102.9 | 39.4 | 103.4 | 39.7 |
| February 15 | 102.7 | 39.3 | 104.3 | 40.2 |
| February 16 | 102.3 | 39.1 | 104.4 | 40.2 |
| February 17 | 102.9 | 39.4 | 103.5 | 39.7 |
| February 18 | 103.2 | 39.5 | 103.5 | 39.7 |
| February 19 | 103.2 | 39.5 | 104.1 | 40.1 |
| February 20 | 101.9 | 38.8 | 103.7 | 39.7 |
| February 21 | 102.9 | 39.4 | 103.6 | 39.7 |
| February 22 | 102.6 | 39.2 | 102.8 | 39.3 |
| February 23 | 102.4 | 39.1 | 102.9 | 39.4 |
| February 24 | 101.1 | 38.3 | 103.2 | 39.5 |
| February 25 | 102.9 | 39.3 | 102.4 | 39.1 |
| February 26 | 102.4 | 39.1 | 103.7 | 39.7 |
| February 27 | 102.4 | 39.1 | 102.6 | 39.2 |

Continued similarly for twelve days more.

The controls were Nos. 3, 24 and 25, already cited. A second immunity test resulted in the same way. No. 20 (see above) being the control. During neither of the immunity tests did the animal show any sign of illness.

No. 25 is a particularly good control for No. 12, since, like the latter, its temperature was naturally high and irregular. The course of fever was as shown in Table 5:

TABLE 5.—TEMPERATURE OF MONKEY 25. CONTROL OF NO. 12

| | A. M. | | P. M. | |
|---|---|---|---|---|
| | F. | C. | F. | C. |
| February 9 | 103.9 | 40. | 104.4 | 40.2 |
| February 10 | 104.0 | 40. | 104.0 | 40.0 |
| February 11 | 103.3 | 39.6 | 104.1 | 40.1 |
| February 12 | 103.9 | 40. | 103.2 | 39.6 |
| February 13 | 103.5 | 39.7 | 103.6 | 39.8 |
| February 14 | 102.5 | 39.2 | 103.3 | 39.6 |
| February 15 | 100.9 | 38.3 | 103.9 | 40.0 |
| February 16 | 103.4 | 39.7 | 103.9 | 40.0 |
| February 17 | 102.3 | 39.1 | 103.2 | 39.6 |
| February 18 | 102.5 | 39.2 | 105.2 | 40.7 |
| February 19 | 104.6 | 40.3 | 105.5 | 40.8 |
| February 20 | 103.7 | 39.8 | 104.4 | 40.2 |
| February 21 | 104.4 | 40.2 | 104.4 | 40.2 |
| February 22 | 104.2 | 40.1 | 104.7 | 40.4 |
| February 23 | 106.3 | 41.3 | 106.8 | 41.5 |
| February 24 | 106.2 | 41.2 | 105.8 | 41.0 |
| February 25 | 104.6 | 40.3 | 104.5 | 40.3 |
| February 26 | 105.8 | 41.0 | 104.2 | 40.1 |
| February 27 | 103.6 | 39.8 | 103.2 | 39.5 |
| February 28 | 101.6 | 38.7 | 102.9 | 39.4 |

Continuing as before the fever appeared.

In our opinion, the result justifies the conclusion that No 12 was infected by the lice of Group 5

### INFECTION OF THE MONKEY BY INTRODUCING INTESTINAL CONTENTS OF LICE INTO SCARIFICATIONS

A first experiment, which consisted of the subcutaneous injection of the intestinal contents of infected lice, resulted in death in less than twenty-four hours, from septicemia.

A second experiment was performed as follows: As the lice of Group 5 were feeding on Monkey 12, a small quantity of feces was collected from a number of the lice as it was extruded, and placed in a sterile test-glass. To this material the abdominal contents of three lice were added and the mass was triturated in sterile salt solution. This was done three days after the last feeding of the lice on the infected Monkey 7.

Twelve small incisions, each less than one-eighth inch in length, and extending through the entire depth of the skin, were made in the abdominal skin on Monkey 13. The emulsion of feces and abdominal contents was then instilled into these incisions, which thereafter were massaged by means of a sterile probe. The incisions healed promptly and without suppuration. The temperature of No. 13 was as shown in Table 6:

TABLE 6.—TEMPERATURE OF MONKEY 13 AFTER INFECTION WITH ABDOMINAL CONTENTS OF INFECTED LICE

| | A. M. | | P. M. | |
|---|---|---|---|---|
| | F. | C. | F. | C. |
| January 26 | 102.7 | 39.3 | 103.4 | 39.6 |
| January 27 | 102.4 | 39.1 | 103.6 | 39.7 |
| January 28 | 100.3 | 38.0 | 102.1 | 39.0 |
| January 29 | 102.2 | 39.0 | 101.9 | 38.8 |
| January 30 | 102.8 | 39.3 | 104.0 | 40.0 |
| January 31 | 103.3 | 39.6 | 103.9 | 40.0 |
| February 1 | 103.0 | 39.4 | 103.8 | 39.8 |
| February 2 | 102.2 | 39.0 | 103.8 | 39.8 |
| February 3 | 104.4 | 40.2 | 102.4 | 39.1 |
| February 4 | 103.7 | 39.8 | 103.0 | 39.4 |
| February 5 | 102.4 | 39.1 | 103.1 | 39.5 |
| February 6 | 101.8 | 38.7 | 102.1 | 39.0 |
| February 7 | 102.0 | 38.8 | 103.0 | 39.4 |

As appears in the table, the temperature rose on the fifth day after inoculation and remained above the normal for this animal for five or six days. During this period the animal became passive and was not inclined to run about, although it was not seriously ill at any time.

As a consequence of an immunity test given on February 9, the animal showed no febrile reaction whatever and appeared perfectly well, whereas the controls (Nos. 3, 24 and 25) reacted with severe fever, as stated above. A second immunity test, given a month later, gave the same results, the control in this instance being No. 20 (see above).

In our judgment, this experiment proves the existence of the virus of typhus fever in the abdominal contents of the louse for at least three days after feeding on infected blood.

### SUMMARY AND CONCLUSIONS

1. It seems that *Macacus rhesus* can be infected with tabardillo invariably by the injection of virulent blood from man taken on the eighth to tenth day of fever. The blood should be diluted with salt solution, as stated previously.

2. Attempts to maintain typhus in the monkey by passage through other monkeys were not successful.

3. The monkey may pass through an attack of typhus so mild that it cannot be recognized clinically. Vaccination results.

4. The immunity test is a reliable proof of the previous occurrence or non-occurrence of typhus at least within a period of one month.

5. Typhus was transmitted to the monkey by the bite of the louse in two experiments, the lice in one instance deriving their infection from man and in another from the monkey.

6. Another monkey was infected by typhus through the introduction of the feces and abdominal contents of infected lice into small incisions.

Other experiments, in which the immunity tests have not yet been given, corroborate the carrying power of the louse.

As to whether these experiments on transmission are to be considered merely as substantiating that of Nicolle, or whether they should be regarded as new observations, will depend on the identity or non-identity of tabardillo with the Old World typhus. If *Macacus rhesus* is susceptible to the direct injection of blood from patients suffering from tabardillo, and not to the injection of the blood of the Old-World typhus, the two diseases in our judgment cannot be regarded as identical, although they may be closely related. As stated in a previous paper, Nicolle was unable to infect the macacus directly with human blood, but succeeded first in infecting the chimpanzee and then the macacus by the injection of blood from the chimpanzee. Nicolle's result, if it is to be regarded as final, when compared with ours and with those of Anderson and Goldberger, seem to indicate non-identity of the disease in the two localities.

It would seem that Nicolle's work, at least in this regard, demands repetition. Possibly, also, the point may be elucidated further by determining whether an attack of Old-World typhus confers immunity to tabardillo.

We are greatly indebted to Director Gaviño of the Bacteriologic Institute, to his assistant, Dr. Girard, to their superiors of the Department of Public Instruction, to the authorities of the General Hospital of the City of Mexico in particular to Dr. Escalona, for their numerous courtesies and cooperation.

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# A PRELIMINARY REPORT OF THE PEDIATRIC DEPARTMENT OF AN OUTDOOR MATERNITY CLINIC

## ALSO A PLAN BY WHICH INFANT MORTALITY MAY BE REDUCED IN LARGE CITIES *

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ASSISTED BY ADELAIDE BOWLAND, R.N.
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The outdoor maternity service mentioned in the title of this paper is one conducted by Dr. I. L. Hill in New York City for the past nine years. By means of graduates and undergraduates who desire experience in obstetrics, six to seven hundred women are treated during childbirth in their tenement homes in the course of a year. In November, 1908, I organized a pediatric department to this outdoor maternity service, a novelty in this country.

As soon as the mother applies for aid a social worker calls at her home and obtains on a special card exact data concerning the age, nationalities of parents, previous pregnancies, premature deliveries, miscarriages, causes of death of these children, parents' occupation, total earnings of family, rent paid per month, housing conditions, number of people per room, boarders, cleanliness, amount of food, knowledge of infant hygiene, general intelligence, willingness to cooperate, mother's general condition, etc. Should these notes show that the woman required medical care, this is obtained for her. If other conditions are present, she is referred to the various charities, so as to put her in the best possible condition for the child birth.

As soon as the child is born a trained nurse is sent to the house and instructs the mother in the principles of infant hygiene. The child is seen every day until it is taking the breast properly. The nurses are impressed with this, for it is our aim to supply that link in the chain which is missing in other institutions that we know of, namely, to get the care of the child before its birth and from its birth, to be sure that it is nursing well or to find the reason why it is not.

The first day the child is taken into the street it is brought to the clinic, and this clinic visit is repeated once a month until the child is a year old. We realize that this time limit is rather short, but we also know that the first half-year is the most important and needs absolute follow-up work. Every child is seen once a month somewhere, either on the street, in its home, or at the clinic. In order to do this the children are indexed as to names in a book where the months of the year are ruled off in perpendicular parallel columns. Each time a child is seen a mark is made opposite its name. At the end of the month every child must have had its present mark in evidence, or the parents are written to or called on. The only way we lose track of our cases in this great city is by being unable, in spite of all possible detective work, to find out the new address. Thus we have taken care of 784 children; 100 we have lost track of, and 38 have died. The average attendance at the clinic was 14; largest number, 40; attendance during the year, 2,042. During July, August and September, 1,872 house visits were made. The cost of this work, including rent, salaries of three nurses and one social worker, gas, telephone, etc., was $350 per month, or about $4,000 per year. Much interesting data as to infant mortality and sociologic conditions have been gathered during the progress of the work, which will be published elsewhere *in extenso*.

One of the main objects of this work is the propaganda of breast feeding, which, to our minds, is the most important element in the reduction of infant mortality. The changes in the sociologic conditions, which must not be underestimated, are but a means to this end. Statistics of breast feeding, both as to the number of children on the breast and the duration of this manner of feeding, are entirely lacking in America. There are many methods by which this information has been obtained more or less completely—by questioning physicians, midwives, at public vaccinations, in clinics, and in the census taking. The most reliable method is to follow each child individually and, as it becomes a bottle baby, put it in that class. The following is a table which we have been able to compile, showing the number and length of time our babies have been breast babies:

| Number of Infants. | Time Observed Months. | Number on the Breast. | Percentage. |
|---|---|---|---|
| 641 | 1 | 616 | 96 |
| 532 | 2 | 486 | 91.3 |
| 472 | 3 | 423 | 89.6 |
| 387 | 4 | 331 | 85.5 |
| 309 | 5 | 250 | 80.9 |
| 258 | 6 | 196 | 75.9 |
| 181 | 7 | 123 | 67.9 |
| 138 | 8 | 95 | 68.9 |
| 92 | 9 | 60 | 65 |

From this it will be seen that of our babies observed for five months 80 per cent. were on the breast, which is up to the critical period of their lives. One might here sound a warning to all charitable institutions, hospitals and dispensaries, that have to do with the distribution of cow's milk, that they must be sure that no more than the 20 per cent. of babies in these five months should get cow's milk, and if they increase that number they are doing more harm than good.

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* Abstract of an address before the Section on Hygiene and Public Health of the Academy of Medicine, New York City, Dec. 14, 1909.

As an immediate remedy for the reduction of infant mortality in large cities, I would suggest the establishment of a number of such maternity clinics with the proper follow-up work so that the children will be under control and kept healthy at the most perilous time of their lives. This in New York City could be done with fifty such clinics at an expense of $150,000. There would be less morbidity, which would be a great economical feature from the standpoint of our dispensaries and hospitals, breast feeding would increase, which is another economical feature for the families concerned, and the infant mortality would undoubtedly be reduced. To my mind, clinics such as I have described should be the first link in the chain, rather than milk depots, babies' dispensaries, and what not. But these various institutions already established in conjunction with a maternity pediatric service would make a combination by which breast and bottle babies would be admirably taken care of among the poor.

50 East Ninety-first street.

## HEXAMETHYLENAMIN IN SUPPURATION OF THE MIDDLE EAR AND THE NASAL SINUSES

EDWARD J. BROWN, M.D.
MINNEAPOLIS

A case of acute suppuration of the middle ear treated by three daily doses of 5 grains of hexamethylenamin, with speedy recovery and the detection of the drug in the secretion of the ear, has recently been reported.[1]

A natural inference would be that the drug would be eliminated as well through the mucous membrane of the nasal sinuses, and the rapid improvement of two patients under the treatment suggested leads me to send this communication urging the trial of the remedy in both classes of cases.

Case 1.—Miss L. B. G., aged 26, school teacher, consulted me March 7 for a stuffiness of the right ear which had lasted three days following a cold of two weeks. I found a subacute otitis media, the watch heard at half an inch and after slight inflation and use of the Siegle pneumatic otoscope, at 16 inches. The floor of the left naris was covered with mucopus flowing from the middle fossa. Transillumination showed both antra light, and ethmoid regions dark. On the 10th, as there had been no material improvement under hot douching the drum membrane was punctured and a small amount of serum evacuated. On the 12th a small adenoid with considerable masses of granular matter in Rosenmüller's fossæ was removed. On the 14th there was some pain and tenderness around the left eye and profuse yellow discharge from the ethmoid region. On the 15th there was buzzing in the ear, which was so deaf that only on pressure could the watch be heard. The drum was opened widely and serum exhausted by the Siegle otoscope. There was no satisfactory determination of bacterial content. On the 18th the head of the left middle turbinal was resected and 5-grain tablets of hexamethylenamin ordered three times daily. On the 21st the ear was healed and hearing improved. The ethmoid suppuration was practically well and the patient left for her Easter vacation.

Case 2.—My personal case of chronic suppuration of the right antrum, dating back to the New York grippe epidemic of 1889, has been less throublesome since the heads of both middle turbinals were removed four years since by my friend, Dr. W. R. Murray, but has always been renewed with every new cold in the head. When I read Dr. Barton's paper I was slowly recovering from an attack which had lasted all winter, persistent discharge of yellow pus and an unpleasant subjective sense of fetor, when the sinus discharged its contents. Within forty-eight hours after beginning the 5-grain doses of hexamethylenamin, the yellow discharge had practically ceased, the sense of fetor had wholly disappeared, and now after only six days' use of the drug the only discharge noticeable is white and mucoid and very slight at that, and the head feels greatly relieved.

39 Syndicate Block.

## THE EXTRUSION OF INTRASPINAL TUMORS

### PRELIMINARY REPORT OF THE APPLICATION OF A NEW PRINCIPLE TO OPERATIONS FOR LOCALIZED EXTRAMEDULLARY AND INTRAMEDULLARY GROWTHS OF THE SPINAL CORD

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A few months ago I operated on a patient who presented the symptoms of an extramedullary tumor of the cervical spinal cord. The operation was done in two stages, the tumor was successfully removed, and the patient is now well on the way to recovery. During the operation several observations were made which may be of value in the surgery of the spinal cord and brain, and which may make the removal of intramedullary tumors of the cord more feasible. The full details of the case will be reported in a later publication by Dr. Fraenkel and myself; for the present purpose the following few facts will suffice:

*History.*—Dr. L., a private patient of Dr. J. Fraenkel at the New York Neurological Institute, was referred to the surgical department for operation by Dr. Fraenkel with the diagnosis of an extramedullary tumor at the level of the fourth to sixth cervical segments of the cord.

*Operation.*—At the first operation the spines and laminæ of the fourth, fifth, sixth and seventh cervical and first dorsal vertebræ were removed. When the dura had been incised the much enlarged cervical cord presented, and it was evident that a tumor existed in the cord. A small injury had been made in the pia, and through the opening a small prominence was noted which was clearly tumor tissue. The incision in the pia was enlarged, and through the opening a tumor mass of about the size of an almond was extruded. It was evident that the mass was a part of a tumor which was being gradually extruded through the pia by the intramedullary pressure. At this time the patient's condition became somewhat poorer and it was considered advisable to delay further manipulations to a later time. The muscles and skin were carefully sutured and a firm bandage applied.

*Second Operation.*—One week later the wound was reopened. The following remarkable condition was found. A tumor which measured 5 cm. in length and 3½ cm. in breadth had been almost entirely extruded from its bed under the pia mater so that it lay outside of the cord substance and could be removed with great ease with few manipulations, and therefore with a minimum of danger of injury to the cord itself. Whether we had to deal with a subpial extramedullary, or with an intramedullary, growth could not be determined with certainty at the time.[1]

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[1] Barton, Wilfred M.: The Elimination of Hexamethylenamin by the Mucous Membranes of the Middle Ear . . . , The Journal A. M. A., March 12, 1910, p. 87.

[1] In the full report of the case the question whether the tumor was an extra or intramedullary one will be considered in detail. Based on our experience in this and in another operation we believe that intramedullary tumors have sometimes been removed by the surgeon in the belief that he had removed an extramedullary one.

### CONCLUSIONS

A consideration of the facts of the above case have led to the following conclusions:

Whenever an operation for spinal cord tumor is done in two stages it may be of great advantage to make a small incision in the dura at the first operation.. At the second operation the tumor will probably have been extruded from its bed and the intradural structures will have accomodated themselves to their again-changed relations. If the growth be subpial, it will be advisable to make a small incision in the pia at the first sitting, with the expectation that the growth will be found outside of the pia when the second stage of the operation is done, so that the removal of the tumor will be easy and the dangers of injury to the delicate cord structures will be reduced to a minimum.

If the surgeon has to deal with a true localized intramedullary growth, a small incision in the pia in the location where the growth is nearing the surface of the cord may be sufficient to allow of the gradual extrusion of the tumor by the intramedullary pressure, with the same advantages that have been mentioned for extramedullary tumors.

I believe that operations for tumors of the spinal cord in the cervical region should always be done in two stages, and I recommend that the first stage should end, not with the laminectomy, but with the small incision in the dura, and, if the tumor is subpial or intramedullary, with a small incision in the pia mater. If the tumor is subpial or intramedullary, the dura may be closed at the end of the first stage of the operation. The edges of the cut muscles and skin must be carefully approximated by sutures without drainage.

A discussion of the advantages and possible disadvantages of the method here proposed will be considered in detail in a future paper. I believe that in the application of the principle of extrusion of tumors to the surgery of intramedullary growths of the spinal cord the removal of localized growths from the substances of the cord—which has been recommended by some but has been done in but very few instances—will become much more feasible.

Madison Avenue and Sixty-third Street.

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# IS THE UNCINARIA DUODENALIS SOMETIMES AN ETIOLOGIC FACTOR IN APPENDICITIS AND APPENDICEAL COLIC?

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MONTGOMERY, ALA.

The case reported below raises the somewhat interesting question as to whether or not the hookworm is ever a causative agent in appendicitis and appendiceal colic. That such may be the case seems both reasonable and probable, as there is no reason why the appendix should not be invaded by the parasite, its presence acting as an irritant, producing colic and in favorable conditions as a starting point for a true inflammation. A further investigation by the profession should be of some interest and of practical importance to physicians practicing in infected districts.

*History.*—Mrs. S., aged 19, was referred to me for operation on February 25 by Dr. W. V. Stough of this city. General history was good; menstruation normal. Some three months previous the patient had suffered an attack of severe pain in right side followed by tenderness, since which time she had suffered three other attacks of a similar nature, the last attack occurring on February 25.

*Examination.*—The patient was admitted to St. Margaret's Hospital on the afternoon of February 26, at which time her chart showed temperature 99.4, pulse 88, respiration 22. Physical examination showed pain and tenderness in the region of the appendix, uterine appendages normal; diagnosis, appendicitis. Examination of the stools showed presence of hookworm ova.

*Operation.*—On March 1 the appendix (about three inches long, somewhat thickened and congested, but with no adhesions) was removed.

*Examination of Specimen.*—The possibility that the hookworm was a causative factor being suspected, the appendix was sent to the state laboratory for examination, which showed the presence of two of the parasites situated within the lumen of the organ, one located at the tip being a female containing a number of eggs. A careful examination of the contents of the lumen failed to demonstrate the presence of free ova, possibly owing to the fact that, if present, they had been forced out by the peristaltic action of the appendix during the recent attack. Pathologic examination by Dr. Mason of the state laboratory showed catarrhal inflammation with a marked infiltration of eosinophiles.

19½ South Perry Street.

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# A DEVICE FOR THE PREVENTION OF BLEEDING IN BLADDER OPERATIONS

G. KOLISCHER, M.D., and H. KRAUS, M.D.
CHICAGO

Some time ago A. Bauer made a theoretical suggestion for the prevention of bleeding in operations for tubal pregnancy and of placenta prævia. He proposed to tie off the extremities with rubber bandages, so as to stop the venous reflux, while the arteries would still keep on pumping blood into the limbs. While he did not expect much in the line of depleting the organs of the trunk, he put great hopes in the autotransfusion following the release of the constriction of the limbs. He suggests this "operating by blue extremities" in all cases in which considerable hemorrhage during the operation could be expected.

We put this theoretical suggestion to practical use in bladder operations, and the results were highly satisfactory. Fifteen minutes before the operation the four limbs were tied up with gauze roller-bandages close to the armpits and to the inguinal regions respectively. These bandages were put on very tight. When the skin of the extremities began to turn blue, the operation was started. The condition of the tissues was now simply astonishing. Already the skin incision was practically dry and all the further steps appeared like operating under Esmarch or on a cadaver. Any surgeon with experience along this special line will know to what annoyance the hemorrhage during a bladder operation of any kind puts the operator, while at the same time the loss of blood is no indifferent matter to the patients, especially if they are advanced in age or otherwise weakened.

A prostatectomy or a removal of a bladder tumor is done under this blood-saving device practically dry and without any appreciable loss of blood. After the operation is finished and the wound taken care of, the bandages are released one after another. So far we have not observed any subsequent hemorrhages or other untoward results.

It is apparent what bloodless operating means for a proper technic and for the shortening of the duration of the operation. It furthermore seems that the healing process is enhanced by the elimination of all bruising of the tissues through blood-checking manipulations and by the prevention of intermediary hemorrhages between the layers of the tissues. That, at least, is the only way by which we could explain the fact that, for instance, suprapubic prostatectomies practically healed up inside of three days in men varying in age from 70 to 83 years. Another advantage of this method is that, in accordance with the experience of Klapp and Hoerman, patients under this reduced circulation require smaller quantities of the anesthetic given and recuperate more quickly from the anesthesia.

The disagreeable sensations produced by rubber constriction are entirely absent in this method, and any appreciable changes in the blood-pressure, as observed in Momburg's compression of the abdominal aorta, are not to be found. We want to recommend emphatically this simple and effective procedure to the attention of the profession. There is no doubt in our mind that this method can be used just as successfully in other surgical operations as in those mentioned above.

92 State Street.

## *Therapeutics*

### CREOSOTE IN PULMONARY TUBERCULOSIS

If one were to base an opinion on current medical literature, he must conclude that the use of drugs in the treatment of pulmonary tuberculosis had been practically abandoned, and that nourishing food and fresh air were adequate to cure most cases of the disease. It would be grossly unfair to the physicians of three or four decades ago to assume that the use of these latter remedial agencies was unknown or ignored by them. The value of food and fresh air is no new discovery, but has long been insisted on by sensible and practical physicians, although, of course, the general adoption of the plan of sleeping out-of-doors did not attain great popularity until comparatively recently, and perhaps has already experienced its most extensive practice.

Although the treatment of pulmonary tuberculosis in institutions is now a steadily growing fashion, it does not to-day seem probable that the multiplication of sanatoria will lead, at least in the present generation, to the entire abolition of tuberculosis from civilized communities, nor is it likely that the time will ever come when a very large proportion of tuberculous patients will be treated in sanatoria. On the other hand, it is extremely probable that the majority of these patients will continue to be treated in their own homes.

Consequently it becomes a question of great practical importance to every general practitioner to know whether any drugs can be expected to benefit his patient and assist and increase the improvement derived from food and pure air.

A number of drugs have been highly commended and extensively used with asserted benefit. Perhaps none has been more commended and used than creosote; but, rather curiously, there does not seem to be any general agreement as to its value or uselessness. Many physicians who are looked up to as authorities on the subject, among them heads of sanatoria, teachers and hospital attendants, ignore it entirely, some with a manner as though they had scarcely heard of such use of the drug. Others pass it on with slight mention, or enumerate it in a perfunctory way among the drugs which have been recommended.

On the other hand, not a few men do not hesitate to advise its use, and assert with the assurance of decided conviction that it is exceedingly beneficial in this disease; indeed, more beneficial than any other drug. Among its distinguished advocates is Dr. Beverley Robinson, of New York, who for more than twenty years has been using and praising the drug in tuberculosis of the respiratory organs. He asserts that he practically introduced the treatment in New York and read a paper on the subject before the Association of American Physicians over twenty years ago. Since then he has used the treatment continuously, and recently (*Medical Record*, Nov. 20, 1909) asserts: "I have written and spoken many times on this subject, and tried in every way to convince my colleagues that I was in dead earnest in regard to the doctrine preached. To-day I am thoroughly convinced that we have absolutely no medical treatment of pulmonary tuberculosis at all equal to the creosote treatment properly used and insisted on. In fact, I might say, without much fear of effective contradiction, that no other medical treatment up to date has any great value at all, except so far as temporary relief, perhaps, of symptoms is concerned. . . . By the combined, persistent, intelligent use of beechwood creosote internally and by inhalation, many patients may be saved who otherwise would die. In nearly all cases, no matter what the stage of the disease, much relief to symptoms may be obtained."

Robinson thinks that the best method of administering creosote internally is in the following combination:

| | | |
|---|---|---|
| ℞. | Creosoti (beechwood, the best) | gtt. vi |
| | Glycerini | fl.℥i |
| | Spiritus frumenti | fl.℥ii |

M. et Sig.: A desertspoonful every two, three or four hours, diluted with a little water.

Or this may be written as follows:

| | | Gm. or c.c. |
|---|---|---|
| ℞. | Creosoti (beechwood, the best) | \|50 |
| | Glycerini | 25\| |
| | Spiritus frumenti, ad | 100\| |

M. et Sig.: A teaspoonful, in water, three times a day, after meals.

The dose of this may be increased to two or three teaspoonfuls, or, if it is desired to increase the creosote, the amount of it may be increased to 1 c.c. or more in the 100 c.c. mixture. If the whiskey is deemed inadvisable, elixir calisaya or the compound tincture of cardamon may be substituted.

For inhalation Robinson (*American Journal of the Medical Sciences*, August, 1908) recommends equal parts of creosote and alcohol, or, when there is much irritative cough, equal parts of beechwood creosote, alcohol and spirit of chloroform. Ten drops should be used on the sponge of a perforated zinc inhaler. The inhaler should be used frequently, at first for a few minutes, later gradually increasing the time until it is used from half an hour to an hour at a time, and finally it may be used almost continuously during the day, and frequently all night. "These inhalations modify sputum favorably, diminish its quantity, lessen cough, thus promoting rest, sleep and nutrition and general improvement physically, and in some instances appear to be the means through which the patient has gotten rid of tubercle bacilli permanently."

Such positive evidence by a man of Dr. Robinson's extensive clinical experience, extending, as regards the use of this particular drug, over twenty years, should carry greater weight than the negative testimony of a writer who has ignored the use of creosote because, perhaps, some favorite teacher has not recommended it.

Somewhat less enthusiastic testimony came to us, not so very long ago, from England. In a public lecture on

"The Evolution of the Treatment of Pulmonary Tuberculosis," delivered in connection with the sixth International Congress on Tuberculosis, at Horticultural Hall, Philadelphia, Sept. 24, 1908, and published in the special volume supplementary to the transactions of the Congress, Dr. C. Theodore Williams, of London, an eminent phthisiographer, says: "Creosote, and its derivative guaiacol, has been largely used in the treatment of consumption, principally by the French and Germans. Their reported successes led me to give both a trial, my chief experience relating to creosote.

"I tried this method largely according to various methods in tuberculous disease of the lungs. First, by inhalation of steam impregnated with creosote vapor. Patients lived and slept in rooms impregnated with this atmosphere.

"Secondly, dry creosote vapor, produced by heating it in an evaporating basin. Patients inhaled this vapor for from one-quarter to half an hour at a time, and this practice was continued for months.

"Thirdly, creosote was administered by the mouth in capsules, in doses of three to ten minims, three times a day, for weeks and months.

"Fourthly, creosote was mixed with olive oil, as recommended by Dr. Gimbert, of Cannes, in the proportion of 20 minims to half an ounce of olive oil, and injected subcutaneously. As much as a tablespoonful was injected at a time, and shortly afterward the patient used to taste the creosote in the mouth.

"The results of these experiments taught me that creosote has a wonderful influence in reducing catarrh and diminishing the amount of expectoration, but that it exercises no control over the evolution or spread of tubercles."

It has seemed worth while to present these remarks in full, not only on account of the position which Dr. Williams occupies as a trustworthy contributor to the literature of the subject of tuberculosis, but also because the entire lecture is printed in a volume of the very voluminous transactions of the congress, where, it is greatly to be feared, it will be overlooked by many who ought to read it.

In the present unsatisfactory and uncertain state of the treatment of pulmonary tuberculosis, the testimony of such distinguished clinicians that creosote affords considerable relief to many patients would seem to indicate, to put the matter most conservatively, that every practitioner who is treating a patient who has pulmonary tuberculosis should at least consider seriously the desirability of giving that patient the opportunity of obtaining any benefit, which in his particular case may be possible, from the use of creosote.

Now, just what is creosote expected to do to these tuberculous patients? The appetite should be increased, digestion stimulated, nutrition improved, weight added, expectoration diminished, the pus in the sputum lessened, the disagreeable odor from the sputum should disappear, and associated non-tuberculous laryngitis, tracheitis and bronchitis of the larger tubes should be cured. It can do all this when associated with fresh, clean air, good food, and rest.

What has driven creosote to the defensive is that so many results are no better than those from fresh, clean air, good food, and rest without creosote, and that so much harm has been done with creosote. The large doses advised and used so long are really inexcusable. Pushing creosote to the point of tolerance and then reducing it and again pushing it to the point of tolerance, until 10, 15, 20, 25, or even 30 drops, three times a day are taken and retained, is unjustifiable. The demand of the body from this nutrition stimulant for the organs to work overtime is bound to result, sooner or later, in a great loss to the body by the overworked organs going on strike. And this is just what occurs after too much creosote has been taken. The appetite is lost, the tongue becomes coated, nausea and vomiting occur, the liver acts sluggishly, there is a yellow tinge to the sclerotics, the pancreatic secretion is lessened, sugar or albumin may appear in the urine, serious kidney irritation and bladder irritation may develop, headaches occur, there is a loss of red corpuscles, there is a loss of weight, and the patient is where he began, as to nutrition, before he took the creosote.

Small doses of creosote may inhibit the growth of or kill the tubercle bacilli that are swallowed into the stomach (so will dilute hydrochloric acid in small doses) and will often increase the appetite and digestion, especially the pancreatic. It acts as a bowel antiseptic, and in small doses will not ordinarily injure the kidneys. Part of the creosote will be excreted by the lungs, and will inhibit the growth of secondary germs of infection (pus germs), and in so much certainty acts for good in pulmonary tuberculosis. The dose, however, that acts for good must be individualized, and is not large. The tongue and digestion should be watched, and the urine frequently examined for albumin during the administration of creosote, and any symptoms of overaction should cause it to be stopped.

Creosote is a phenol poison, and the symptoms of its poisonous action are those of phenol (carbolic acid): gastro-intestinal disturbance, circulatory depression, nervous depression, and kidney inflammation.

It seems probable, from all the testimony presented, that there are patients suffering from pulmonary tuberculosis who will do better on fresh clean air, good food, rest, and creosote than without the creosote. Whether creosote will be of advantage to a given patient must be determined by studying him while he is taking it. It is theoretically indicated if he expectorates a lot of yellow, bad smelling pus; in other words, has a secondary bronchitis or cavities. Albumin in the urine or persistent dyspepsia would contraindicate its use. It should not be forgotten that creosote is more or less absorbed when inhaled, and can thus irritate the kidneys.

Besides the combination for inhalation suggested by Robinson, the following formulas may be used:

℞,

| | c.c. | | |
|---|---|---|---|
| Creosoti (beechwood, best) ............ | 1 | or | m. xv. |
| Tincturæ benzoini comp. ................ | 100 | | fl.℥iii |

M. et Sig.: To inhale a teaspoonful, from boiling water, three or four times a day.
Shake.

Or:

℞,

| | c.c. | | |
|---|---|---|---|
| Creosoti (beechwood, best) ............ | 50 | | m. vii |
| Olei pini silvestris .................... | 10 | or | fl.ʒiiss |
| Tincturæ benzoini comp., ad ............ | 100 | | ad, fl.℥iii |

M. et Sig.: To inhale a teaspoonful, from boiling water, three or four times a day.
Shake.

Or:

℞,

| | c.c. | | |
|---|---|---|---|
| Creosoti (beechwood, best).............. | 50 | | m. x |
| Olei pini silvestris ...................... | 5 | or | |
| Olei terebinthinæ ........................ | 5 | | āā, fl.ʒiss |
| Tincturæ benzoini comp., ad ............ | 100 | | ad, fl.℥iv |

M. et Sig.: To inhale a teaspoonful, from boiling water, three or four times a day.
Shake.

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[*For other information see second page following reading matter*]

SATURDAY, APRIL 16, 1910

## THE INTRAVENOUS INJECTION OF ANTITOXIC SERUM

By serum therapy we aim to introduce into the body, in the most effective manner, specific antibodies and to maintain a high concentration so long as necessary.

The results of investigations as to the influence of the place of introduction on the time when the maximum concentration of antibodies in the blood in passive immunization is reached may be summarized to this effect: On intravenous injection the maximum concentration is reached at once, while on subcutaneous, intramuscular and intraperitoneal injection it is reached only after an interval variously stated at from twenty-four to forty-eight or seventy-two hours. In man, Henderson Smith[1] found absorption of diphtheria antitoxin from the subcutaneous tissue complete only after two or three days. In the case of certain agglutinins and of diphtheria antitoxin, the maximum concentration (according to Levin[2]) in the blood in animals is reached in about three days after subcutaneous and intramuscular injections, but during the first twenty-four hours the absorption is greater from the muscles than from the subcutaneous tissues—at the end of ten hours it is fourteen times greater.

Levin also found that the introduction in animals of immune serum, no matter whether from the same or different species and whether by intravenous, intramuscular or subcutaneous injection, appears to be followed by an immediate and marked loss in antibodies for which he could offer no explanation. That is to say, the demonstrable content of antibody in the serum of the animal in all cases falls far short of the amount calculated on the basis that the antibodies are simply diluted in the blood. This deficit in his experiments was greatest when the antiserum was introduced subcutaneously, less when introduced intramuscularly and least when introduced intravenously, but even here it amounted to from 40 to 60 per cent. and in some cases more.

The fact that intravenous injection immediately gives a far greater concentration of antitoxin and other antibodies in the blood, and hence in the lymph also, thus reaching all parts, than is ever attained by the gradual absorption from the subcutaneous tissue is a strong point in favor of the direct injection into the blood of antidiphtheritic serum in severe and urgent cases. This is urged by Behring, Madsen and others. The principle is, of course, equally applicable to other conditions. According to Berghaus,[3] the curative value of antidiphtheritic serum for guinea-pigs on direct injection into the blood is 500 times greater than on subcutaneous injection and from 60 to 90 times greater than on intraperitoneal injection. Schreiber[4] and Berlin[5] injected antidiphtheritic serum intravenously in a number of cases. They state that general improvement follows sooner than on subcutaneous injection, while the local process in the throat follows about the same course in both cases. And that in very severe cases and in cases coming under treatment late in the disease the intravenous injection of large doses may offer the only chance. In their series no dangerous symptoms developed. Fette[6] injected 145 patients intravenously and believes that the lives of several desperately ill patients were saved by so doing. According to Park,[7] large doses of antitetanic serum injected intravenously within a few hours of the onset of the symptoms of tetanus have given good results.

In case of difficulty in entering the vein in suitable cases, it is advised that the injections be made into the muscle of the buttock which, so far as concerns the rapidity and degree of absorption of antoxin into the blood, is a more favorable place for injection than the subcutaneous tissue.

The one objection of any consequence against the intravenous method is the increased danger of anaphylactic shock in susceptible persons. But in order still further to reduce the mortality from diphtheria this risk may well be taken in desperate cases. Says Ker:[8] "Occasionally I have seen an intravenous injection act almost like magic in an entirely hopeless case."

## THE REVISION OF THE NATIONAL FORMULARY

The national Food and Drugs Act raised the National Formulary to the position of an official standard and gave it a significance and an importance which previously it could not claim. In order to meet the requirements of the new function of this book, the American Pharmaceutical Association, at its last meeting, invited the Section on Pharmacology and Therapeutics of the American Medical Association to cooperate in the revision and a committee of five members was appointed.

This idea of having the cooperation of physicians is a good one, for the National Formulary is a book in which physicians are becoming more and more interested since the propaganda against nostrums was initiated. A thorough study of the book is now necessary in order to adapt it more closely to our present knowledge and to eliminate certain features that are not a credit to it. When some of the formulas were selected there was not sufficient investigation made to show whether or not they were of therapeutic value; and in others there was evident disregard of chemical and other incompatibility. Thus, in liquor antisepticus alkalinus, small amounts of reputed antiseptic drugs satisfied the implied demand for an antiseptic solution, and no investigation was made to determine whether or not the strength was sufficient for antiseptic or germicidal results. In a similar manner, because acids were found to be necessary to the digestive action of pepsin, a little acid (not sufficient for any therapeutic purpose) was added to a popular digestive powder. The same thing was done with the compound elixirs; and thus was perpetrated the absurdity of combining pepsin and pancreatin in an acid solution, an incompatibility that we fully demonstrated three years ago.[1] But it is asserted that the use of elixir digestivum compositum (N. F.) and proprietary elixirs of similar composition as a vehicle in the administration of salicylates, bismuth salts, bromids, etc., is actually on the increase. It hardly seems possible that this can be true, that a physician should continue to use something supposed to be a digestive when all he needs is a suitable elixir. But there is no doubt that the demand for these elixirs and for the proprietaries of which the elixir digestivum compositum is an imitation is to a great extent a demand for a vehicle. The Pharmacopeia already contains two highly alcoholic elixirs which serve as vehicles, elixir adjuvans and elixir aromaticum, so that it would seem unnecessary to add still another more or less similar preparation. If, however, it is deemed desirable to have a colored vehicle, one could be made by omitting the digestives from the elixir digestivum compositum and giving it a name to signify its use as a vehicle.

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[1] Jour. Hyg., 1907, vii, 205.

[2] Ztschr. f. Immunitätsf. u. exp. Therapie, 1909, i, 3.

[3] Centralbl. f. Bakt., 1, 1909, l, 87; Also experiments of F. Meyer, Berl. klin. Wchnschr., 1909, xlvi, 1202.

[4] München. med. Wchnschr., 1909, xxxv, 1597.

[5] Deutsch. med. Wchnschr., 1910, xxxvi, 210.

[6] Med. Klin., 1909, v, 1891.

[7] The Journal, Jan. 22, 1910, p. 254.

[8] Infectious Diseases, 1909.

The medical men who have been selected to advise the committee on revision on the question of the character of the formulas to be included in the book are supposed to be chosen for their knowledge, not of pharmacy, but of therapeutic possibilities. It is evident, therefore, that therapeutics is to be guarded as well as pharmacy in this revision.

It has been suggested that all complex formulas and mixtures should be left out of the Pharmacopeia. The suggestion may be a good one. All such formulas found pharmaceutically correct and therapeutically efficient might then be included in the National Formulary. There should be added also the formula of a simple vehicle as suggested above; and there might be included formulas for mouth-washes or throat-washes, external applications such as liniments, pastes, ointments and counter-irritants, and perhaps injections of various sorts. These could be given by way of suggestion as to strengths that might be employed and as to pharmaceutical elegance and suitability rather than as set formulas to be used for all patients without variation. The book, however, should not mislead any physician by containing preparations that are worthless therapeutically or chemically impossible. It should be kept in mind that the use of set formulas in prescribing is not scientific, and the aim should always be to prescribe single drugs or simple combinations directly adapted to the case in hand. Until that method is followed by physicians universally, however, some of the present formulas now included in the Formulary will perhaps have to be retained.

### CARCINOMA OF THE TONGUE

Much of the recent discussion concerning the increase of cancer is confined to statistics relative to cancer of the uterus, breast and stomach. It is pertinent, therefore, to call attention to a form of carcinoma of the epithelioid type (epithelioma) which is quite as fatal as any other.

Of the epithelioid type, carcinoma of the tongue is much more frequent than is commonly supposed. Andrew of Glasgow presents some very surprising statistics relative to epithelioma of the tongue. Of 118 cases comprising various diseases of this organ, such as abscess, hematoma, glossitis, leucoplakia, papilloma, and tuberculous ulcer, 98 were cancer of the epithelioid variety. Of the 98 patients, 88 were males and 10 were females. These figures are similar to those obtained for cancer of the lip. Andrew found that in 469 cases of epithelioma the order of frequency was: tongue, lower lip, esophagus, penis, cheek, larynx and tonsil. In other words, epithelioma of the tongue comprised 20.8 per cent. of all cases of epithelioma seen during a period of ten years. Of the 118 cases there was only one case of tongue syphilis, or 0.8 per cent. The tongue and floor of the mouth are very rich in blood vessels and this, combined with the constant muscular movements of the tongue, produces a quick extension of the cancerous process into the lymphatic and submental and submaxillary glands.

The entire statistics cited by Andrew cover the histories of over forty thousand cases of general diseases, and bear out the opinions of the rhinologists and stomatologists who naturally see cases of tongue disease more frequently than the average general practitioner.

It needs to be emphasized that tertiary syphilis is rare in the tongue—a fact which is by no means well known. Recently three cases were reported in which several physicians diagnosed gumma of the tongue, and the patients were given iodids in large doses. Each of these cases, when a section of the tongue was taken, proved to be epithelioma, and all were practically inoperable at the time the true diagnosis was made.

However, if the patient has had an initial syphilitic lesion it is necessary to be on guard, for Brandt of Berlin says that it is not uncommon to find carcinoma arising from the base of a syphilitic ulcer and Koerner of London has seen at least twelve undoubted cases in the tongue. These observations are somewhat discounted by the statement previously made relative to the infrequency of syphilitic tongue conditions, but the possibility should be kept in mind.

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[1] Liquid Combinations Containing Pepsin and Pancreatin, THE JOURNAL A. M. A., Feb. 2, 1907, xlviii, 434

A leukoplakia, a fissure or an ulcer of the tongue should not be temporized with, but a portion of the growth should be submitted early to microscopic examination. It need scarcely be stated that the cure of cancer anywhere in the body depends on early diagnosis and complete eradication. Anything short of this means that the patient is deprived of the only opportunity he has of preventing a speedy and fatal termination of his malady. It is well, therefore, to be constantly on guard as to all suspicious lesions of the tongue.

### RECENT ACTIVITY FOR A SAFE CELEBRATION OF THE FOURTH OF JULY

Never before has there been so much fruitful effort toward the securing of a safe celebration of the Fourth of July as during the past few months. Action thus early in the year is well advised for two chief reasons: First, before dealers in fireworks have laid in their supplies, valid objections cannot be raised to prohibitive or restrictive ordinances, and such ordinances are more easily secured; second, ample time is needed to plan other forms of celebration. Hundreds of cities and towns throughout the country have passed or are being strongly urged to adopt restrictive or prohibitory ordinances against the use of fireworks. Various organizations are taking an active part in the work. One city council, that of Hamilton, Ohio, recently passed an ordinance prohibiting the sale of fireworks, which was objected to by dealers on the ground that having already laid in their stocks of fireworks the enforcement of the ordinance would result in serious financial loss to them; whereupon the people raised a fund, bought up all the fireworks and will hold an exhibition in the public park on July Fourth. Meanwhile the ordinance will be made effective. Equally interesting is the movement to substitute other forms of celebration, and many cities report plans for pageants, military parades, flag-drills, picnics, etc. One city has raised a fund of $60,000 for this year's celebration. That the larger cities are undertaking these safer and more sensible methods of celebration is especially encouraging, since it will be a stimulus to smaller cities to do likewise.

### ANOTHER FRAUDULENT PRACTITIONER ELIMINATED

According to the *Texas State Journal of Medicine* "the greatest charlatan and quack that ever imposed on the credulity and gullibility of the Texas public" was put out of business in Judge Camp's court at San Antonio, March 4, when a jury brought in a verdict revoking the license of "Doctor" Lafayette Berry, the self-styled "Phenomenal." He had worked in many cities in Texas and had relieved many people of money by flagrant and fraudulent methods. He made a practice of touring the state with a company of performers and a brass band doing what he styled "bloodless surgery" on opera house stages and in public halls. Having been exonerated of fraudulent practices by minor courts several times, he became arrogant and bold in his denunciation of the medical profession. One of his strongholds was his apparent success with gall-stones. It is said that he used olive oil, followed by an alkali, and the resulting concretions of soap passed by the patient were claimed by him to be gall-stones. Our Texas exchange states that he secured $25 from Captain Moore, of the Beaumont fire department, by this plan. The matter was taken up by the profession of the city, the fraud exposed, the "Phenomenal" was brought into court and his license revoked as stated. On examination in court the "doctor" admitted that he had never graduated in medicine, but had secured a diploma from an Eclectic school in Philadelphia after two months' attendance and had obtained another from a school in San Francisco without any attendance. The profession of Texas and the *Texas State Journal of Medicine* deserve credit for their persistent and successful efforts to rid the state of this notorious quack.

## *Medical News*

### ARIZONA

**Hospital Burned.**—St. Mary's Hospital, Douglas, was burned February 10, with a loss of about $5,000. The patients were removed without casualty.

**Society Meeting.**—At the annual meeting of the Pima County Medical Society, held in Tucson, Dr. Ira E. Huffman was elected president; Dr. Abram Morrison, vice-president, and Dr. A. Garfield Schnabel, secretary-treasurer, all of Tucson.

**Convicted of Violating Health Law.**—A jury in Phoenix is said to have found Dr. Benjamin B. Moeur, Tempe, guilty of a misdemeanor in failing to report to the Maricopa county board of health, a case of smallpox in that city, and a fine of $20 was imposed. Dr. Henry A. Hughes, superintendent of the count yboard of health, was the complaining witness in the case. The defendant's attorney gave notice of his intention to appeal to the district court.

### ARKANSAS

**Fortune for Sanitarium.**—By the will of A. W. Shirey, Mintern, who was assassinated March 8, $200,000 is left to the Grand Lodge of Odd Fellows to establish a sanitarium at Hot Springs.

**District Society Meeting.**—The semi-annual meeting of the Tenth Councilor District Medical Society was held in Fort Smith, March 15. Dr. Thomas Douglas, Ozark, was elected president; Dr. James J. Smith, Paris, vice-president; Dr. Othello M. Bourland, Van Buren, treasurer, and Dr. Dred R. Dorente, Fort Smith, secretary (reelected).

**Medical Society Organized.**—Montgomery County Medical Society was organized at Womble, March 22, with the following officers: President and delegate to the state society, Dr. Leroy S. Kennedy, Mount Ida; vice-president, Dr. John E. Alford, Womble; secretary, Dr. John H. McLean, Caddogan; corresponding secretary, Dr. John B. Stewart, Black Springs; and treasurer, Dr. Isaac N. Freeman, Washita.

### CALIFORNIA

**State Society Annual Meeting Planned.**—The Medical Society of California will hold its annual meeting at Sacramento, April 19-21.

**Decides Against Appellant.**—The court of appeals, on March 16, is said to have affirmed the sentence of five years in the state prison imposed on Dr. Benjamin B. Lee, San Francisco, for manslaughter.

**Plead for Benefactor.**—Eight lepers of the colony at the San Francisco Isolation Hospital have joined in a petition to the San Francisco Board of Supervisors, asking that the board of health rescind its action in removing Dr. John Atcherly from attendance on them.

**Antituberculosis Society Meeting.**—At the first annual meeting of Alameda County Society for the Study and Prevention of Tuberculosis, March 25, Kenneth A. Millican was reelected president; Dr. Edward von Adelung, Oakland, first vice-president; Dr. Charles A. Dukes, Oakland, a member of the executive committee, and Drs. Nelson H. Chamberlain, Oakland, Edward N. Ewer, Oakland, Alexander S. Kelly, Oakland, Florence M. Sylvester, Oakland, F. M. Simpson, and Samuel J. Wells, Pleasanton, members of the board of directors; Dr. Ergo J. Majors, Oakland, chairman of the hospital committee; Dr. A. A. Alexander, Oakland, chairman of committee on public education and hygiene; Dr. Florence M. Sylvester, Oakland, chairman of the open air school committee; Dr. Walter S. Rutherford, Oakland, chairman of the membership committee; Dr. Edward N. Ewer, Oakland, chairman of public service committee, and Dr. Edward von Adelung, Oakland, chairman of clinic committee.

## COLORADO

**Site for Tuberculosis Sanatorium Bought.**—By the purchase of fifteen acres near the southeastern limits of Denver, the Sisters of St. Francis have inaugurated a movement for the erection of a tuberculosis sanatorium to be known as St. Leo's Memorial Hospital, to cost $250,000.

**Personal.**—Dr. William S. Osborn, assistant superintendent of the Colorado State Insane Hospital, Pueblo, has been appointed chief of the Wisconsin State Receiving Hospital for the Insane, Mendota.——Dr. Jesse U. Sickenberger, Ouray, has been appointed surgeon of the Bureau of Pensions for the district of Ouray.

**Faith Healers Convicted of Neglect.**—In the Otero County Court, March 21, Judge E. W. McDaniel rendered his decision in the case of Mr. and Mrs. D. B. Messenger, La Junta, eddyists, charged with neglect in failing to call in a physician to attend three children after three other children had died. The decision holds the parents guilty of neglect.

**Society Meetings.**—The annual meeting of the Colorado Alumni Association of the Northwestern Medical School was held in Denver March 26. Dr. Alexander T. King, Pueblo, was elected president; Dr. Holmes, Pueblo, vice-president, and Dr. Karl F. Roehrig, Denver, secretary-treasurer. It was decided to hold the next annual meeting in Pueblo.——At the annual meeting of the Teller County Medical Society, held in Victor, March 29, the following officers were elected: Dr. John B. Polly, Victor, president; Drs. Albert C. McClanahan, Victor, and John A. Dunwody, Cripple Creek, vice-presidents; Dr. Thomas A. McIntyre, Cripple Creek, secretary-treasurer, and Dr. Albert C. McClanahan, delegate to the state medical society.

## CONNECTICUT

**Mental Hygienists Meet.**—The board of directors of the Connecticut Society for Mental Hygiene, at its annual meeting in New Haven, elected the following physicians as officers: President, Dr. George Blumer, New Haven, and executive committee, Drs. Henry S. Noble, Middletown, Henry M. Pollock, Norwich, Whitefield N. Thompson, Hartford, and George H. Knight, Lakeville.

**Malpractitioner Convicted.**—Charles E. Harvey, Hartford, charged in the criminal superior court with performing a criminal operation, is said to have been found guilty and sentenced to imprisonment for not less than two nor more than three years in the state penitentiary, Wethersfield. It is stated that in 1905, on being found guilty of a similar offense, he was sentenced to one year in jail, expelled from the medical societies and his license to practice revoked.

## GEORGIA

**Personal.**—Dr. William C. Lyle, Augusta, was recently elected secretary-treasurer of the Georgia Medical Association, and not Jarrett W. Palmer, Ailey, as was erroneously stated in The Journal of April 2.——Dr. Jesse G. McAfee has been appointed surgeon of the Southern Railway at Dalton, vice Dr. Charles P. Gordon, deceased.

**District Society Meeting.**—The Medical Society of the Ninth Congressional District held its annual meeting in Commerce, March 16. The plans of the Georgia State Tuberculosis Sanatorium, now being constructed at Alto, were presented by Dr. Jeff Davis, Toccoa, and a resolution was unanimously adopted that the state use its influence to have the general assembly apply the license tax on physicians of $10 per annum for the support of this institution. This will bring in about $25,000. The economic problem of tuberculosis and the fly as a carrier of infection were considered in papers presented by Dr. Lamartine G. Hardman, Commerce, who also gave a report of the Pellagra Conference. Dr. Jeff Davis, Toccoa, was elected president; Dr. Laetus Sanders, Commerce, vice-president, and Dr. A. D. White, Gainesville, secretary-treasurer.——The fifth semi-annual meeting of the Seventh District Medical Society of Georgia was held in Dalton, March 9, and the following officers were elected: Dr. Josephus J. P. Bowdoin, Adairsville, president; Dr. T. S. McLain, Calhoun, vice-president, and Dr. Harlan L. Erwin, secretary-treasurer (reelected), Dalton.

## ILLINOIS

**Sanatorium for Rock Island.**—At the recent local election the municipal tuberculosis sanatorium tax levy was carried in Rock Island. This is the first city outside of Chicago to take advantage of the Glackin Sanatorium Tuberculosis Law.

**Fire at Insane Hospital.**—Fire caused by lightning partially destroyed the store building of the Bartonville State Hospital early in the morning of April 4. The 150 patients who were asleep on the third floor of the building were removed without casualty by the attendants.

**Found Guilty of Murder.**—After thirty-six hours' deliberation, the jury in the Sayler murder case at Watseka, on April 12, returned a verdict of guilty, sentencing Dr. W. H. Miller, Crescent City, to imprisonment for twelve years in the state penitentiary. Notice of appeal was filed.

**Found Guilty.**—Dr. Benjamin A. Arnold, Freeport, charged with committing a criminal assault while attending a young girl under 16 years of age, is said to have been found guilty, March 26, and sentenced to imprisonment for four years in the state penitentiary. A motion for a new trial was made.

**New Interns for County Hospital.**—As the results of the annual competitive examination, forty interns were selected for Cook County Hospital, each to serve for eighteen months. Of the successful candidates, 24 are graduates of Rush Medical College, and 8 each of Northwestern University Medical School and the College of Physicians and Surgeons.

**Personal.**—Dr. James A. Clyne, Joliet, who recently underwent an operation for appendicitis at St. Joseph's Hospital, is reported to be convalescent.——Dr. George P. Powell, Dixon, has been appointed a member of the local board of pension examining surgeons, vice Dr. David H. Law, deceased. ——Dr. Harry M. Hayes, Peoria, has returned from Europe.

**Free Bed for Nurses.**—A free bed for nurses afflicted with tuberculosis has recently been established at the Edward Sanatorium, Naperville, a department of the Chicago Tuberculosis Institute, in recognition of the valuable services of the nurses of Chicago, who as members of the Nurses' Auxiliary Committee of the Institute, took a leading part in the sale of Red-Cross Christmas stamps. From the proceeds of this sale, the money to support the bed has been appropriated.

### Chicago

**For a Contagious Hospital.**—The Chicago Hospital Day Association has decided to set aside one-third of the money collected on Hospital Day, May 16, to a fund for the establishment of a contagious disease hospital, the need for which is urgent.

**Personal.**—Dr. Isadore S. Trostler was operated on in St. Joseph's Hospital, April 2, for a fracture of the right patella. ——Health Commissioner William A. Evans, Dr. William K. Murray and Dr. Egil T. Olsen have been appointed a board to pass on the medical and physical defects of 370 members of the police department who have attained the age of fifty years, and have been twenty years in the police service.

**To and From Europe.**—Dr. Julius H. Hess, accompanied by his family, sailed for Europe April 12. He will be abroad about four months and will inspect children's hospitals in Germany, Austria, France and England.——Dr. Charles Adams sailed for Europe April 9.——Dr. and Mrs. Franklin H. Martin have returned from Egypt and the Orient.——Dr. Frank W. Lynch has returned after a four months' trip abroad.——Dr. and Mrs. Jacob Frank have returned after a trip to Egypt, Palestine, Syria and Turkey.

## KENTUCKY

**Hospital Dedicated.**—The new building of the Children's Free Hospital, Louisville, a model in every respect, was formally dedicated, April 2.

**Appropriation Passed.**—The governor has allowed the $30,000 annual appropriation for the State Board of Health to become a law without his signature, and he has signed the bill giving the King's Daughters Home for Incurables an appropriation of $10,000.

**Hospital Commission Appointments.**—The mayor of Louisville has appointed the following members of the Hospital Commission: Sam A. Culbertson, capitalist; Hon. Arthur Peter, former county judge; John H. Leathers, banker, and John Hubbuck, Sr., merchant. The recommendation of the Jefferson County Medical Society that a physician be appointed a member of the commission was not heeded.

**Sanatorium to Open.**—The Waverly Hills Sanatorium of the Louisville Board of Tuberculosis Hospital is almost completed and will be opened the latter part of this month. Two houses have been erected and the institution will accommodate at first from forty to fifty patients. Later it is hoped to double the capacity of the institution. Drs. George S. Coon, Sidney J. Meyers, and Eugene Y. Johnson are members of the board, and Dr. A. M. Forster will be in charge of the sanatorium.

## MARYLAND

**Merritt Guilty.**—In the case of Dr. James B. Merritt, Easton, indicted in Caroline County Court for malpractice, the defendant is said to have pleaded guilty April 6, and to have been fined $1,000 and costs.

**Legislative Action.**—In spite of the efforts of Dr. Thomas A. Ashby the optometry bill was passed by the legislature; 13 counties and the city of Baltimore, however, are exempted from its provision. Other bills which received the governor's signature were the following: The bill regulating the practice of midwives; the bill regarding health and sanitation in Baltimore county; the pure food and drug law; and the lunacy bill for state care of the insane, which appropriated $600,000 for buildings and for the care of the colored insane, and for the supervision of asylums by the lunacy commission. The bill for reorganization of the State Board of Health was passed but has not yet been signed by the governor.

### Baltimore

**Personal.**—A luncheon was given by Dr. Lewellys F. Barker at the Baltimore Club, April 1, to Drs. Louis Hamman and Paul Clough, who sailed for Europe the following day.——Dr. Herbert C. Evans, Baltimore, sailed for Europe March 23, to attend the International Congress of Anatomists to be held in Brussels.

**The Trimble Lectureship.**—The amount needed for the Trimble Lectureship is nearly completed and will be turned over to the Medical and Chirurgical Faculty of Maryland. Its purpose is to have a fund sufficient to yield an annual income of $1,000. The lectureship is in memory of Dr. Isaac Ridgeway Trimble, who died in Baltimore, Feb. 24, 1908.

## MASSACHUSETTS

**Personal.**—Dr. Elmer E. Southard, Cambridge, has been appointed by President Gorgas, a member of the Council on Medical Education of the American Medical Association to fill the unexpired term of Dr. William T. Councilman.——Dr. W. Burton Thorning, Winchendon, accompanied by his wife and son, has started for Europe.——Dr. Charles W. Page, superintendent of the Danvers State Hospital, has resigned on account of illness in his family, and will be succeeded by Dr. H. W. Mitchell.——Dr. Joseph F. O'Shea has been appointed city physician of Lynn.——Dr. Emelie H. Jones Barker, resident physician at Wellesley for thirty-five years, and for more than twenty years superintendent of Eliot Cottage, has resigned.——Dr. S. B. Wolbach has been appointed assistant professor of bacteriology, and Dr. Walter R. Brinckerhoff, assistant and instructor in pathology from 1903-1906, and since that time connected with the national leprosy investigation at Molokai, H. I., has been appointed assistant professor of pathology in Harvard Medical School.

**Hospital of Dentistry and Oral Hygiene.**—A hospital of dentistry and oral hygiene has been opened at 31 Anderson street, Boston, under the charge of Dr. Alice M. Steeves.

**Safe and Sane Fourth.**—The Lawrence Medical Club has appointed Drs. George B. Sargent, John Parr, and Gustave E. Kurth, a committee to attempt to bring about "a safe and sane Fourth of July" in Lawrence and surrounding towns.

**Bequests to Hospitals.**—By the will of the late Lillie B. Hill, Malden, $1,000 is bequeathed to the Malden Hospital.——The will of the late Martha Rebecca Hunt, Somerville, leaves a bequest of $15,000 to the Baldwinville Cottage Hospital, one of $5,000 to the Charlestown School and Children's Hospital, one of $10,000 for the Massachusetts General Hospital, and one of $10,000 to the Willard Hospital, Bedford.

## MISSOURI

**Asks Release of Appropriation.**—Three members of the board of managers of the State Sanatorium for Tuberculosis, Mount Vernon, appealed to Governor Hadley, March 23, to release $35,000 appropriated by the state legislature for the erection of a new building.

**Medical Library.**—The St. Joseph-Buchanan-Andrew County Medical Society is about to install a medical department in the public library. Arrangements have been made with the public library board whereby the society will provide 500 standard medical books and about 25 reliable medical periodicals to be circulated through the library.

**Hospital Bills Signed.**—The ordinance regulating the reorganization of the eleemosynary institutions of St. Louis was signed by the mayor, April 1, and went into effect April 10. The ordinance provides that instead of a superintendent in charge of each institution there shall be a hospital board composed of six citizens appointed by the mayor, who constitutes the seventh member of the board. The board shall contain not more than one physician from any one medical college. The board will appoint a commissioner, not a member of the board, who shall have supervision over the medical staff in charge of each institution. A chief physician with a staff of interns under him will be in charge of each institution. All the city dispensaries, the City Hospital, Female Hospital, Poorhouse, Quarantine Hospital and Industrial School come under the control of this board.

## NEW JERSEY

**Personal.**—Dr. John J. Broderick has been appointed city physician of Jersey City, vice Dr. Henry H. Brinkerhoff, resigned to become director of the public schools medicine inspection department.——Dr. J. Franklin Chatten, Trenton, has returned from abroad.

**Physicians Raise Fees.**—In accordance with a decision made at a meeting three weeks ago, the Gloucester County Physicians' Protective Association raised their fees fifty per cent., beginning April 2. The high cost of living and the difficulty of collecting many accounts are given as the causes of the increase.

**Preventorium Moves.**—The Children's Tuberculosis Preventorium has been moved from the Cleveland Cottage, Lakewood, N. J., to Farmingdale, six miles north of Lakewood, where 100 acres of woodland and a free lease for twenty-five years of a 200-acre stock farm have been presented to the institution.

**State Pediatric Society.**—The New Jersey State Pediatric Society was organized in Hackensack, January 11, in connection with a symposium on "Infant Feeding" by the Bergen County Medical Society, when 13 physicians of the state met on the invitation of Dr. J. Finley Bell, Englewood, and after a statement by Dr. Henry L. Coit, Newark, effected organization. On February 3, at a meeting in Newark, permanent officers were elected.

**Vivisection Bill Introduced.**—At the request of Mr. Minard a bill has been introduced in the house, regulating vivisection, and providing that no person except a duly qualified physician or surgeon may perform vivisection; that it must be performed to advance knowledge which will save or prolong life, and alleviate human suffering; the operation must be performed under the direction of two members of the state commission; curare must not be used; no operation is to be begun until the animal is completely anesthetized, and the two commissioners shall, when desired, witness the operation.

## NEW YORK

**For Hempstead Hospital.**—The Hempstead Hospital Association of Hempstead, L. I., has filed incorporation papers and will take over the South Shore Hospital.

**Would Help Babies.**—The Babies Dairy, organized to operate in New York City, and formed to supply proper food to orphans, pauper, destitute and sick children and to care for and board such children, and to educate mothers in the care and feeding of children, has been incorporated.

**City Aid for Hospitals.**—The legislature has been asked to authorize the city of Lockport to raise money for the purpose of improving, operating and maintaining the city hospital in that city and to issue bonds therefor.——A bill is before the legislature asking that the city of Mount Vernon be authorized to make an annual appropriation for the care and maintenance of the Mount Vernon Hospital.

**Plans for County Tuberculosis Hospital Approved.**—The proposed tuberculosis hospital for Monroe county will be on the cottage plan following the suggestion of Dr. Eugene H. Porter, state health commissioner, that three or four cottages be built on the site selected. An administration building will be also erected to contain the offices of the institution and apartments for the officers. The hospital is to be built on the county farm site in West Brighton.

**Release of Insane Prisoners.**—The Attorney General has advised C. V. Collins, State Superintendent of Prisons, that a patient at the Dannemora State Hospital for the Criminal Insane, whose term of imprisonment has expired, but who continues to be insane, is not entitled to be paroled. If the condition of the patient is such that it is reasonably safe for him to be at large and he has friends or relatives willing to maintain him he may be discharged by the medical superintendent of the hospital.

### New York City

**Museum of Safety.**—With the assistance of the Public Health Section of the New York Academy of Medicine, it is hoped to raise $5,000,000 as an endowment for the Museum of Safety. Dr. William H. Tolman is director of the proposed institution.

**Personal.**—Dr. Sidney D. Wilgus, chairman of the Board of Alienists of the New York Commission in Lunacy, has been appointed superintendent of the Eligin, Ill., State Hospital, vice Dr. Vaclav H. Podstata, resigned, and will assume charge of the institution May 1.

**Dentists for Hospital.**—It has been announced that a dentist and an assistant dentist will be appointed to Mount Sinai Hospital for the purpose of caring for the teeth of patients in the wards. Special care will thus be secured for the teeth of patients suffering from affections of the mouth, throat or digestive tract.

**Mott Memorial Library Goes to Academy of Medicine.**—The Mott Memorial Library, which was founded by the late Louise D. Mott as a memorial to her husband, Dr. Valentine C. Mott, the surgeon, is to be sold in an action for partition brought by a granddaughter of Dr. Mott. The property was bought as a permanent home for the medical books, surgical instruments and anatomic plates left by Dr. Mott. The New York Academy of Medicine will take these articles and mark them.

**Endowments.**—Among the recent endowments to the New York Polyclinic Medical School and Hospital are one of $250,000 from Mr. William P. Clyde and one of $125,000 from Mrs. Helen Hartley Jenkins.——The will of Mrs. Amelia Kaufman bequeathes $1,000 each to Mount Sinai Hospital, the Hebrew Benevolent and Orphan Asylum, the Montefiore Home for Chronic Invalids, the Home for Aged and Infirm Hebrews, the United Hebrew Charities and Beth Israel Hospital.

**Crusade Against Venders of Wood Alcohol.**—The Department of Health has begun a campaign against sellers of wood alcohol. Inspectors have visited many saloons and taken samples of liquors offered for sale for analysis. Of the first fifteen samples analyzed three contained wood alcohol. This step has been incited by the number of cases of blindness due to wood alcohol that have come to the notice of physicians and by the records of the coroner's office, which show a number of deaths each year attributed to wood alcohol.

## NORTH CAROLINA

**Alleged Violators of Prohibition Law Acquitted.**—Dr. Millard F. Fox, Guilford College, president of the Guilford County Medical Society, who was on trial at Greensboro for alleged violation of the state prohibition law, was promptly acquitted. ——Dr. Louis N. Burleyson, Greensboro, tried by the same court on the charge of having issued sixty-six prescriptions for whiskey during January, was also promptly acquitted. During the last few months several such prosecutions have been made at different places in the state, and in each instance the accused physician has been promptly acquitted.

## OHIO

**Doctors' Building for Canton.**—A three-story brick and stone office building, containing twelve suites of rooms, to be used exclusively by physicians and dentists, will be erected by Dr. Charles A. Crane.

**New Tuberculosis Hospitals.**—The counties of Auglaize, Allen, Mercer, Van Wert and Shelby will join in the building of a tuberculosis hospital at Lima to cost $75,000.——The bonds have been sold by the county commissioners for the erection of the Franklin County Tuberculosis Hospital. The structure will be three stories in height, and will be built on the grounds of the Franklin County Infirmary.

**Illegal Practitioners Found Guilty.**—Nora Cook, Columbus, charged with malpractice, is said to have been found guilty, March 30, and sentenced to imprisonment for two years in the state penitentiary.——Three out of five persons arrested in Toledo the last week in March by the State Medical Board, on the charge of practicing medicine without legal authority, pleaded guilty and were fined $25 and costs each.

**Injunction Wiped Out.**—The recent decision of the Supreme Court in the Rose case, upholding the right of the State Board of Medical Registration and Examination to revoke certificates, wipes out a number of injunctions restraining the board from acting in eight cases, in which certificates of physicians charged with improper conduct had been revoked. These cases will be considered by the board at the April meeting.

**Did Not Report Births and Deaths.**—Dr. Joseph J. Boone, Mount Victory, is said to have been found guilty of refusing to return certificates of births and deaths as required by statute, and to have been fined $5 and costs. In his defense, Dr. Boone said he had meant to comply with the law, but had been unable to secure the information within the ten days required. The fine was suspended for sixty days pending an appeal to the higher court.

**Society Meetings.**—The Physicians' Business Men's League of Dayton, at its annual meeting March 29, elected the following officers: President, Dr. Claude N. Christman; vice-presidents, Drs. Charles E. Shawen and Webster S. Smith; secretary-treasurer, C. C. McClain, and censor, Dr. William H. Swisher.——The Ohio Alumni Association of Jefferson Medical College met for organization at Dayton, March 15. Dr. Alonzo H. Dunham, Dayton, was elected temporary chairman, and Drs. Fred Fletcher, Columbus, and Richard S. Gauger, Dayton, secretaries. It was decided to hold the first regular convention of the society in Toledo May 4-6.

## PENNSYLVANIA

**Schuylkill County's Bulletin.**—The most recent addition to the group of the county medical society papers, is the Bulletin of the Schuylkill County Medical Society.

**Additions to the State South Mountain Sanitarium.**—The Department of Health announced, April 8, that sealed proposals would be received by the Commissioner of Health until April 29, for the furnishing of all labor and materials necessary for the construction of the following buildings of the Pennsylvania State South Mountain Sanitarium, Mont Alto, in accordance with the plans on file at Harrisburg: 15 cottages; pavilion; alterations and additions to infirmary; nurses' and physicians' dining buildings at camp and infirmary; children's building; alterations and additions to laundry and alterations and additions to main dining building.

### Philadelphia

**Bequest.**—The will of the late William D. Ziegler bequeathed $10,000 to the German Hospital for the establishment of two free beds in memory of the testator's parents, George J. Ziegler and Anna Barbara Ziegler.

**Opportunities for Clinical Work.**—Several vacancies exist in the throat, nose and ear outpatient service at the German Hospital, and these are open to young men desirous of becoming assistants. Applications should be made to the chief of clinic.

**Hospital Addition.**—Thomas Bradley, who had offered $25,000 for an addition to the Methodist Hospital, to be known as Bradley Hall, has increased his offer to $35,000. Work on the hall, which will contain the kitchen and offices of the hospital, thus making room in the main building for 50 more beds, will be started May 1.

**Gifts to College of Physicians.**—At the stated meeting of the College of Physicians, April 6, a marble bust of the late Dr. George B. Wood, the gift to the College by Messrs. Craige, Walter and J. Bartram Lippincott, was presented by Dr. Horatio C. Wood, Jr., and a marble bust of Dr. Horatio C. Wood, the gift of Mr. George Wood and Mr. George Wood Bacon of New York, was presented by Dr. James Tyson.

**Progress in Medical Library.**—It is announced that the Central Free Library will be the first of the city library system to establish a medical section, and all physicians having surplus medical books or journals are requested to send them to Mr. John Thomson, chief librarian. This is the work of the Philadelphia County Medical Society, which desires ultimately to have a medical section in all the free library branches in the city.

**To Raise $20,000 for Penn Dispensary.**—Marking the centennial anniversary of the obstetric department of the University of Pennsylvania, an effort was begun, April 6, to raise an endowment of $20,000 to perpetuate the Southeastern Dispensary, which is conducted by the department and which was started 20 years ago by Dr. Barton Cook Hirst. The first gift of $1,000 toward the $20,000 was received April 6, from Dr. Richard A. Cleman, an alumnus of the university, who, as the executor of an estate, had a sum for charitable insitutions, and made this contribution to the dispensary fund. During the last year, according to the dispensary report, 1,200 families received medical attention there.

**Personal.**—Dr. Edward J. G. Beardsley has been appointed chief of the medical dispensary of Jefferson Medical College Hospital.——Dr. Henry R. M. Landis has been appointed director of the Tuberculosis Department of the Phipps Institute of the University of Pennsylvania and associate of medicine at that college.——Dr. John C. Flynn has been made pathologist to St. Joseph's Hospital.——Dr. Pierre N. Bergeron has been appointed visiting physician to the medical department of St. Joseph's Hospital, vice Dr. Michael T. Prendergast, resigned.——Dr. Charles H. Frazier, clinical professor of surgery in the University of Pennsylvania, underwent operation for appendicitis at the University Hospital, March 30.

**Cocain Crusade.**—A crusade against the illegal sale of cocain was inaugurated, March 29. The work is being conducted under the direction of Dr. Christopher Koch, of the State Pharmaceutical Board. Several physicians have been arrested and also more than a score of druggists and all have been held under bonds ranging from $400 to $1,000. It has been learned that the drug has not only been distributed to habitual users but has even been given to public school pupils. In going over the reports of wholesale dealers as to the amount of cocain sold, it was found that one had sold 1,900 ounces of the drug in one month, while another's sales amounted to 1,400 ounces. This would make yearly sales of between 15,000 and 20,000 ounces, which amount it is claimed, is entirely too high for the quantity of the drug which can be disposed of legally. On April 7, Judge Carr is reported to have sentenced George and Charles Rollins, negroes, to two years in jail and imposed on them a fine of $500 each for illegally selling cocain. The arrest, on April 8, of Benjamin P. Ashmead, U. S. Government inspector of drugs at this port, on the charge of unlawfully selling cocain, will, it is said, be followed by more startling disclosures when he is arraigned before Magistrate Beaton. The arrest of Ashmead is regarded by Dr. Koch as the most important of the whole crusade so far, though there are other men of equal standing who are under suspicion.

**Private Societies Aid in Campaign Against Infant Mortality.**—The Philadelphia Bureau of Municipal Research and several other societies and private agencies will begin, June 1, a campaign to decrease infant mortality, which, later, it is expected, will be taken up and continued by the Department of Public Health and Charities. Dr. Neff, director of the Department of Health, desired to organize a division of child hygiene, with a corps of trained nurses, to make a house-to-house canvas in the congested sections, to instruct mothers in the care of children. Last summer, a volunteer corps was organized from among the charitable organizations and the Babies' Alliance was formed. As a result of the systemic work of these volunteers, the mortality in 1909, among children under 5 years, was 11 per cent. less than in 1908, when special work was commenced, and 16 per cent. less than in 1907. Councils have appropriated no money and there is no volunteer service available this year, so that nothing could have been done along this line had not the Philadelphia Bureau of Municipal Research and other societies planned to take up the work. The Bureau of Municipal Research has been investigating conditions in all the city's departments and bureaus for a year. In his annual report, April 14, to the mayor, Dr. Neff said: "One-third of all infants, born alive, die before the fifth year of life, 65 per cent. of these deaths being preventable. Still further effort has been exerted to reduce this unnecessary slaughter. The organization of a division of child hygiene, with a corps of municipal nurses, would solve the problem, but this has not been practical as yet, it is believed, on account of insufficient funds. Education of the mother by the public press, by circulars and by lectures has been beneficial, but frequently has failed to reach those for whom it is intended. The keynote of the situation is in the home, to reach which the department has endeavored to procure volunteer visitors through charitable associations."

## RHODE ISLAND

**Fined for Unlawful Practice.**—Gesumina Maccarone, Providence, arraigned on a warrant sworn out by the secretary of the State Board of Health, on the charge of intent to practice medicine without a license, is said to have been found guilty and fined $50 and costs, March 17.

**New Consulting Staff.**—The following staff of consulting physicians for the City Hospital, Providence, has been appointed and confirmed by the State Hospital Commission: Medicine, Drs. Frank L. Day, Edmund D. Chesebro, William F. Gleason and Joseph M. Bennett; surgery, Drs. Edgar B. Smith and John W. Keefe; ear, nose and throat, Drs. Edward S. Bacon and N. Darrell Harvey; eye, Drs. Frederick T. Rogers and George W. VanBenschoten; dermatology, Drs. Gardner T. Swarts, Harry W. Kimball and John T. Farrell, and pathology, Dr. Frank T. Fulton.

## TEXAS

**New Editor.**—The trustees of the State Medical Association of Texas have elected Dr. Holman Taylor, Marshall, editor of the *Texas State Journal of Medicine,* and he moved to Fort Worth and assumed charge of the work, April 1. Dr. Ira C. Chase, the former editor, who declined to accept the editorship again, will remain in Fort Worth for two months to induct Dr. Taylor into the work and will then go to Europe for a year of study.

**Dispensary Organized.**—The San Antonio Free Dispensary and Hospital Association was organized February 17. At a subsequent meeting March 1, the following medical staff was elected: General and abdominal surgery, Dr. Charles S. Venable; gynecology and obstetrics, Dr. William E. Luter; diseases of the eye, ear, nose and throat, Dr. John V. V. Spring; genitourinary surgery, Dr. F. C. Walsh; internal medicine, Dr. Milton J. Bliem; diseases of children, Dr. Edward C. Clavin, and nervous diseases, Dr. George H. Moody.

**For Adjudication by Law.**—In the case of J. Lafayette Berry, known as "Phenomenal Lafayette," the jury in the Forty-fifth District Court, San Antonio, is said to have decided that the license to practice medicine should be withdrawn.——A writ of error was granted by the Supreme Court, March 16, in the case of the State Board of Medical Examiners versus Henry and E. C. Zindell Taylor, Paris. In this case, the board refused the latter a license for general practice, but offered a verification license to practice in diseases of women and children, and the court holds that the petition does not show the right to verification certificate for general practice of medicine.——W. E. Baird of Jefferson county has filed application in the District Court, March 22, asking a writ of mandamus against the State Board of Medical Examiners, compelling the board to grant him a verification certificate.——A. William Terrell, an osteopath of Tyler, is said to have pleaded guilty to practicing medicine without a license, and to have been fined $50 and sentenced to thirty minutes' imprisonment in jail.

## VIRGINIA

**Plan for Epileptic Colony.**—The board of trustees of the State Epileptic Colony met in Lynchburg, March 24, and organized with Dr. Henry W. Dew, Lynchburg, as chairman. The board will elect a superintendent at its April session. It favors the cottage plan for the colony.

**New Wing for Hospital.**—Through the liberality of Mr. Charles Steele, New York, $50,000 has been presented to the University of Virginia Hospital, Charlottesville, with which it is planned to add a new wing to the hospital building, which will contain a modern teaching dispensary and well equipped clinical laboratory.

**Unlicensed Practitioner Fined.**—In the Norfolk police court, February 24, F. G. Wright, who had practiced medicine in South Mills and vicinity for several years, was tried at the instance of the Pasquotank Medical Association, and is said to have been found guilty of practicing medicine without a license and fined $50 and costs.

**Tax on Professional Men.**—The finance committee of the Norfolk City Council, April 1, decided on a tax on attorneys, physicians, surgeons, oculists, osteopaths, opticians, and veterinary surgeons who have practiced their professions for from one to five years, $10; for over five years, $25; and in addition thereto 1.40 per cent. of the gross receipts from practice in excess of $1,000 for the year ending April 30, provided that the license tax shall not be more than $10 a year or any part thereof if the receipts be less than $500 for the year preceding.

## WASHINGTON

**Pure Drug Store as Well as Pure Drugs.**—Members of Pierce County Medical Society are favoring druggists who do not distribute samples of dangerous drugs to residences.——The society has been an important factor in establishing drug stores devoted entirely to compounding prescriptions.

**Hospital News.**—The Catholic Sisters of Walla Walla have decided to erect a hospital to cost $150,000.——Improvements about to be undertaken at Fannie Paddack Hospital, Tacoma, are expected to cost $500,000, and when finished, the hospital will cover an entire block.——The Sacred Heart Hospital, Spokane, moved into its new building in the Manito Park district, March 24.——The King County Board has given orders for the erection of additional cottages at the County Hospital for Tuberculosis, Georgetown.——St. Joseph's Hospital, Tacoma, is to be enlarged at a cost of between $50,000 and $60,000. At present the institution has accommodation of about 90 patients.

## GENERAL NEWS AND COMMENT

**Hospital to be Moved.**—During the month of May, the State Hospital, Puebla, Mexico, will be moved from its present location to its new quarters on the old Rancho Noriatenco.

**Annual Meeting of Society.**—At the annual meeting of the Manila Medical Society, held January 3, the following officers were elected: President, Dr. Vernon L. Andrews; vice-president, Dr. Philip K. Gilman; secretary-treasurer, Dr. Arthur F. Coca, and councilor, Dr. Edward R. Stitt.

**Care of the Exceptional Child.**—The National Association for the Study and Education of Exceptional Children will meet in New York City April 21 and 22. The topics for discussion at the various sessions are "Recognition of the Problem of the Exceptional Child;" "Phases of Exceptional Development," and "The Perspective in the Problem of the Exceptional Child."

**The Permanent Committee for the International Medical Congresses.**—This committee, organized at the last international medical congress at Budapest, now has headquarters at the Hague. Professor Pavy of London is chairman, and Professor Wenckebach of Groningen is secretary. Most of the nations have already appointed their representatives on the committee.

**Students of Epilepsy.**—The National Association for the Study of Epilepsy will hold its annual meeting in Osler Hall, Baltimore, May 7, under the auspices of the Maryland Psychiatric Society. The purpose of the association is to awaken the interest of the profession and the public in the treatment of epilepsy, and especially to induce the state to establish a colony similar to those of other states, and especially Virginia, which has received an appropriation of $100,000 for this purpose.

**Work of the Health Education League.**—Pamphlets 17 to 21 of the "Health Education Series," published by the Health Education League, Boston, have been received. They comprise such subjects as health in labor camps, tuberculosis, when to call a physician, habits of health, and wastes and their disposal. These pamphlets are written in the same sensible, popular style as those formerly issued, and contain much useful information and sound advice in matters of health and sanitation. They should have wide circulation, and the league should be encouraged in its work.

**Personal.**—Drs. G. Betton Massey, Philadelphia, and Fred H. Morse, Boston, are delegates from America to the International Congress of Physiotherapeutics, to be opened at the Sorbonne, Paris, March 29.——Dr. Charles W. Stiles, chief of the division of zoology of the United State Public Health and Marine-Hospital Service, and head of the Rockefeller Commission for the Eradication of Hookworm, has decided to make Raleigh, N. C., his permanent headquarters during his investigation.——Dr. Helen I. McGillicuddy has been appointed secretary of the Canal Zone Committee on Public Health and Preventive Medicine.

**Tuberculosis Sunday.**—April 24 has been set aside by the National Association for the Study and Prevention of Tuberculosis as the day on which the subject of tuberculosis is to be presented in churches in all parts of the United States. Clergymen of every denomination have been asked to cooperate, and in New York State in more than sixty cities and towns, they will preach on "No Uncared-for Tuberculosis in 1915." Labor unions in every large city are to be asked to attend church in a body on this day or to have the subject of tuberculosis brought up at their regular Sunday meeting.

**Training of Attendants for Insane Hospitals.**—One of the most important purposes of the Chicago School of Civics and Philanthropy, as stated in the announcement of summer courses, is to provide training for attendants in institutions for the insane. The first session of a summer school for this purpose was held from July 7 to August 7, 1908; the second session from June 28 to July 30, 1909, and the third will be held from June 21 to July 29, 1910. As the care of the insane is the most important institutional work carried on by the various states, this training course should be instrumental in securing better care for these unfortunates.

**Missouri Valley Meeting.**—The semi-annual meeting of the Medical Society of the Missouri Valley was held in Omaha, March 17 and 18. Dr. Frank P. Norbury, Hospital, Ill., delivered the address in medicine on "The Physical Basis of Mental Disease," and the address in surgery by Dr. Leonard Freeman, Denver, was on "Local Anesthesia." The society adopted resolutions setting forth that, as this is the day of specialized technical training among all lines of scientific care for the defective, dependent and delinquent classes of society, it commends the passage of such civil-service reform laws as shall demand the merit system of appointment and retention in all public institutions for the above classes, and deprecates the relegation of such appointments to the political spoils system.

**Von Eiselsberg of Vienna Visits America.**—Prof. Anton Freiherr von Eiselsberg, accompanied by his wife, arrived in Baltimore a few days ago, where he visited his brother-in-law, Prof. Clement von Pirquet. On Thursday evening, April 14, he was the guest of the Chicago Surgical Society at a dinner given at the University Club. Prof. von Eiselsberg will also visit St. Paul and other cities which are regarded as centers of surgery. Prof. von Eiselsberg was president of the German Surgical Association in 1908. In 1904 he declined a call to Berlin, preferring to remain in his native country, Austria, although before he was called to the chair of surgery at Vienna he had held similar chairs at Utrecht and Königsberg. His contributions to surgical literature have been numerous and important.

**Officers of School Hygienists.**—At the annual meeting of the American School Hygiene Association, held in Indianapolis, March 2-4, the following officers were elected: Honorary presidents, Drs. Arthur T. Cabot and Henry P. Walcott, Boston, and Dr. John H. Musser, Philadelphia; president, Dr. Luther H. Gulick, New York City; vice-president, Dr. Robert W. Lovett, Boston; secretary-treasurer, Dr. Thomas A. Story, New York City, and councilors, Drs. John J. Cronin and Abraham Jacobi, New York City; Philip King Brown, San Francisco; Walter E. Fernald, Waverly, Mass.; Henry M. Bracken, Minneapolis; J. H. McCurdy; Charles O. Probst, Columbus, Ohio; Frederick Forchheimer, Cincinnati; Washington E. Fischel, St. Louis; George Meylan, New York City, and William H. Welch, Baltimore; and Fletcher B. Dresslar, Ph.D., Alabama; Elmer E. Brown, Ph.D.; William Henry Burnham, Ph.D.; Thomas M. Balliet, Ph.D., New York City; Joseph Lee, LL.D., Boston; Calvin N. Kendall, A.M., Indianapolis; George H. Martin, LL.D., Massachusetts; Edward L. Stevens, L.H.D., New York City; J. J. Storrow, Boston; Edwin O. Jordan, Chicago; L. N. Hines, A.B., B.M., Crawfordsville, Ind.; Willard S. Small, Ph.D., Washington, D. C., Clark W. Hetherington, Ph.D., Missouri, and the officers of the association.

## CANADA

**New Home for Academy.**—The trustees of the Academy of Medicine, Toronto, who wish to spend $30,000 in erecting a large stack-house and new assembly rooms, have failed to secure the necessary right from the university authorities, on whose land they are domiciled, so will be given new quarters on university property.

**Hospital News.**—The misunderstanding between the governors of the Regina General Hospital and the medical practitioners is said to be adjusted. Hereafter no medical man will be on the board of governors, but there will be an advisory medical board of three practitioners, elected by the medical staff of the hospital.——Arcola, Sask., is to have a new hospital.——Regina, Sask., will erect a new Isolation Hospital.——Saskatoon, Sask., will erect an addition to the municipal hospital.

**Personal.**—Dr. Harvey Smith, Winnipeg, has returned from a trip to the Bahamas.——Dr. Charles J. Hastings, Toronto, Chairman of the Milk Commission of the Canadian Medical Association, is visiting Victoria, Vancouver and other western cities organizing local milk commissions.——Dr. E. A. McCullough, Toronto, has been appointed superintendent of the new Sanatorium for Tuberculosis, London, Ont.——Dr. Charles Sheard, for 18 years medical health officer of Toronto, has resigned and will devote himself to private practice.

## LONDON LETTER

(*From Our Regular Correspondent*)

London, March 26, 1910.

### Treatment of Syphilis by Injections

A new edition of Hutchinson's work on syphilis has appeared in which he again condemns the use of injections of insoluble preparations of mercury in the treatment of syphilis. He says that only a small part of the evil resulting from it is ever reported, and adds that in certain cases this method is followed because it is more profitable than prescribing mercury by the mouth.

Of the new organic preparations of arsenic—atoxyl, soamin, etc.—which have been much recommended of late, evidence is also accumulating that they are dangerous innovations. Sir Jonathan Hutchinson considers them liable to all the disadvantages of the older preparations of arsenic and without any advantages over them. "Laudatory notices," he says, "are written by those who have little knowledge of what Fowler's solution can do and who would be more profitably employed in studying the properties of old-established simpler drugs than in urging the claims of new ones. Why should the attention be wearied and the memory burdened with details as to soamin and atoxyl, when, after all, nothing is claimed which has not already been amply proved for liquor arsenicalis, and the probability is not disputed that, although efficacious, in comparison with mercury they are only second best?" Moreover, it is now proved that these preparations are dangerous to the eye, for they are liable to cause optic neuritis.

On this point some interesting disclosures have been made in the *British Medical Journal* by Mr. Ernest Lane, a surgeon of considerable experience in the treatment of syphilis, and they have led to the prompt discontinuance of these drugs in some of the London hospitals. In 1908, Mr. Lane reported a series of twelve cases of syphilis in which he had used arylarsonates. He regarded the treatment as very successful and advocated it until the middle of last year, when he had reason to regret that he ever used it. He gave a syphilitic patient 10 injections of orsudan in 10 gr. doses on alternate days. The patient then suddenly became blind and was found to be suffering from double optic atrophy. Mr. Lane therefore at once abandoned the treatment. A second case has recently come under his notice in which a patient became blind after a course of 15 injections of soamin in 5 gr. doses. In a third case, an elderly patient was given a course of injections of soamin for sciatica and after 60 gr. had been administered met with the same fate. In a fourth case, a patient suffering from lymphadenoma was treated with soamin and became totally blind. Mr. Lane concludes with a serious criticism of the well-known firm of Burroughs, Wellcome & Co. In a pamphlet commending these arsenical preparations they reproduce, among others, the cases Mr. Lane orginally described. They only casually mention the fact that signs of intolerance, such as visual disturbances, nausea, vomiting, etc., have been encountered after soamin and should be a signal for withholding the drug. This is the only warning note, though they were informed by Mr. Lane of one case of total and irremediable blindness after the use of orsudan and knew that he had abandoned the treatment.

The injection method of treating syphilis has never been so popular in Great Britain as on the Continent of Europe; in Great Britain it is little used by the general practitioner. Many deaths from poisoning have been reported after the injection of insoluble preparations. In France, Professor Gaucher has reported ten deaths from injection of the favorite French preparation—grey oil.

[The experience of Mr. Lane is referred to in an article in Pharmacology in this issue.—Ed.]

### The Cambridge Hospital for Special Diseases

A new departure in hospitals was inaugurated four years ago by a Committee for the Study of Special Diseases consisting of some of the most eminent members of the profession—Sir Jonathan Hutchinson, Sir Clifford Allbutt, Professor Osler, and others. The object was to study certain diseases which in consequence of their chronic character and uneventful course receive little attention from clinicians and pathologists. The patients are, as a rule, refused admission to hospitals because they would encumber the beds which can be more profitably devoted to acute cases. A small hospital containing only four or five beds was founded at Cambridge for the purpose of the study of such diseases under the direction of Mr. Strangeways, lecturer on special pathology at the university. This little hospital is principally supported by subscriptions from members of the medical profession who also cooperate in the work by sending suitable cases. The work of investigation is of the most thorough-going scientific kind and bulletins describing it are published from time to time. At present, an investigation is proceeding on that most hopeless malady—rheumatoid arthritis. The patients have been selected from a large number sent by physicians throughout the country, and notes on over 1,000 cases of various forms of arthritis have been collated. The nature of the work done is shown by the last number of the bulletin. An elaborate study of the blood pressure in arthritic diseases is contributed by Dr. Lambert. Dr. James Lindsay discusses the relation of infective foci to rheumatoid arthritis and analyzes 172 cases. Of these 138 occurred in women, among whom no infective focus was found in 65, a vaginal discharge was present in 36, pyorrhea alveolaris in 19, otorrhea in 7, gastric ulcer in 5, the disease followed labor in 4, there was rhinorrhea in 1, and chronic lacunar tonsillitis in 1. Of 34 patients no infective focus was found in 19, there was gonorrhea in 10, otorrhea in 3, rhinorrhea in 1 and the disease followed furunculosis in 1. These figures show that in 52 per cent. of the females and 44 per cent. of the males an infective process preceded the disease and they indicate a causal connection. Mr. Strangeways has studied the conjunctival reaction to tuberculin in 340 cases of arthritic disease, clinically of a non-tuberculous kind, including rheumatoid arthritis, gout, chronic rheumatism, acute articular rheumatism, subacute rheumatism, gonorrheal rheumatism, Charcot's disease, osteitis deformans, and arthritis of doubtful nature. He found a positive reaction in 210 or 62 per cent. In six of these cases he was able to make a necropsy. In two cases in which the reaction was negative there were old tuberculous scars at the apex of one lung; in a third which gave a slight reaction, and in a fourth which gave a severe reaction old tuberculous scars were present but there was no evidence of active mischief; in a fifth which gave a severe reaction no sign of tubercle was found; and in a sixth which gave no reaction no evidence of tubercle was found. In view of the observations of others these results are regarded as "strange and disconcerting." Dr. H. Ackroyd gives some careful observations on purin metabolism in rheumatoid arthritis. He finds that acute or subacute attacks are sometimes accompanied by increased purin excretion.

### The Annual Meeting of the British Medical Association

The next annual meeting of the British Medical Association will be held in July at the University of London and the adjacent buildings of the Imperial College of Science and Technology at South Kensington which will provide ample accommodation for the various sections. These buildings are in a portion of London largely devoted to science and art; close at hand is the Natural History Museum and the art galleries of the Victoria and Albert Museums. The annual exhibition will be arranged in the great hall in the west gallery of the university and in the galleries overlooking the reception room.

### The Progress of Cremation

Cremation continues to make only slow progress in Great Britain. The number of cremations in 1909 was only 855, an advance of 60 on the previous year. The whole total since the opening of the first crematorium in 1885 to the end of 1909 is 8,121. The Cremation Society continues actively its propaganda work but the support it receives is almost confined to persons of advanced views of one kind and another, many of whom are eminent in science or the arts.

### Death Under Anesthesia for Tooth Extraction Attributed to the Status Lymphaticus

The status lymphaticus has recently occupied a prominent position as a cause of death under anesthesia even in adults. In the latest case, a woman, aged 37, died when under a mixture of chloroform and ether given by the open method for tooth extraction. A curious fact was that a few weeks previously she had had 9 teeth extracted successfully under the same anesthetic given by the same administrator and took it well. On the second occasion she changed color when one root was extracted and all attempts to resuscitate her failed. The anesthetic had been administered five and one-half minutes. Artificial respiration was kept up for four hours because she showed signs of rallying. The necropsy showed enlargement of the lymphatic glands of the tongue and throat, and thymus gland weighing one and one-half ounces. At this age the organ of course should have been absent. There was also chronic Bright's disease.

## PARIS LETTER

(*From Our Regular Correspondent*)

Paris, March 25, 1910.

### Experimental Typhoid Fever

In the session of March 21 of the Academy of Sciences, Professor Metchnikoff made a communication on experimental typhoid fever. Up to the present, no one had succeeded in communicating typhoid fever to animals under conditions analogous to those under which man contracts this disease; that is to say, by ingestion of typhoid bacilli. M. Metchnikoff thought that the failure of the experiments made on this subject were due to the fact that the animals were fed pure cultures of the Eberth bacilli, while typhoid infection in man manifests itself after the absorption of dilutions of excreta charged with bacilli. He gave a chimpanzee food contaminated with a dilution of this kind and at the end of six days observed a disease presenting all the characteristics of typhoid fever. There will be hereafter, therefore, a means of learning whether the vaccines, the employment of which had been proposed for man, can prevent the disease, and if the serums prepared for typhoid fever are really efficacious.

### Present Condition of the Medical Syndicates in France

The *Union des Syndicats médicaux de France* has recently celebrated the twenty-fifth anniversary of its foundation. These syndicates are organizations distinct from the medical societies which pursue a scientific end on the one hand, and from the provident societies for the aid of ill or aged colleagues or their families on the other. The medical syndicates are, according to the law, professional associations for the purposes of study and the defense of the interests of the profession. Thus they undertake to mediate in the conflicts which may arise between colleagues, to aid their members whenever the interests of the profession demand it, and to combat the illegal practice of medicine. Out of the 20,877 physicians now in France, 12,013 belong to the 212 syndicates, of which the most important is the Syndicate of the Physicians of the Seine, with 1,420 members. Out of the 212 syndicates, 154 are affiliated with the central organization, called the Union of the Medical Syndicates of France. The latter lends its material and moral support to the syndicates and federations. Thus, in case of legal prosecution undertaken by a local syndicate, the Union of the Syndicates, if the resources of the syndicate are insufficient, shares the expenses. Since, to render illegal practice of medicine amenable to the French law, it is necessary that it be habitual, prosecution is not easy and calls for many proofs. It is to remedy this difficulty and to study the means of suppression that the Union of the Medical Syndicates took the initiative in creating the office for the repression of the illegal practice of medicine, which advises and guides the syndicates. The union has likewise taken an active part in the campaign for the reform of medical studies.

### Law in Regard to Period of Rest for Female Teachers During the Period of Childbirth

A law has just been promulgated giving leave of absence of two months with full pay, outside of sick leave, to female teachers, one month before and one month after childbirth. The teacher cannot resume her service until she has undergone medical examination and submitted a certificate stating that she is in condition to do so without injury to her health. In case she is not able to resume her work the leave is prolonged under the same conditions to a limit of two months.

### A Straw Vote on the Concours de l'Agrégation

The Society of the Interns of the Hospitals of Paris has just published the results of a referendum which it held among its members on the subject of the *concours de l'agrégation*. The questions were the two following: 1. "Do you favor suppressing the *concours d'agrégation* and replacing it by free recruitment of professors (privat-docentism)?" 2. "Are you in favor of demanding postponement of the *concours d'agrégation* until after the nomination of a commission for the reform of medical studies by the minister of public instruction?"

Out of 130 voting, 103 voted "yes" and 19 "no" on the first question; and 111 voted "yes" and 19 "no" on the second question. It is true that of the 380 members of the *Société de l'Internat*, 250 members did not vote.

### Life-Insurance Companies and Professional Secrecy

The *Comité médical des Bouches-du-Rhône* has resolved that its members shall not furnish life-insurance companies, either directly on their own demand, or indirectly on the demand of the beneficiaries of the policies, whether relatives or not of the deceased, any certificate indicating the nature of the disease to which one of their insured patients has succumbed and the circumstances under which he died, notwithstanding the clause of the policy which seems to authorize the demand and the delivery of this certificate.

The council of the organization has, moreover, passed a resolution that, according to an understanding among the great French medical associations, steps should be taken toward the suppression of the clause in life-insurance policies demanding, among the evidence to be produced after the death of the insured, a medical certificate on the nature and the duration of the disease having caused the death, this clause being incompatible with the obligation of professional secrecy.

### The Gingeot Prize

This prize, amounting to 1,000 francs ($200) will be awarded by the Medical Society of the Hospitals of Paris, to the author of the best work on the subject of catarrhal icterus (pathogenesis, clinical features and therapeutics). Memoirs bearing on the whole or a part of the subject will be admitted to the contest. They should be deposited with the *Société médicale des hôpitaux de Paris* between October 15 and November 15, 1910.

### Election of Two National Correspondents to the Academy of Medicine

In its session of March 22, the Academy of Medicine elected as national correspondents in the surgical section, Dr. Delagénière of Mans, and Dr. Monprofit, professor of clinical surgery at the Angers medical school. Dr. Delagénière is the acting president of the French Surgical Association. Both the new members are especially well-known for their works on abdominal surgery.

### Infant Mortality and Industry

At the Academy of Medicine recently, Dr. Oui, professor of obstetrics and the hygiene of infancy at the college of medicine of Lille, and Dr. H. Paucot, head of the obstetrical clinic of the same college, made an interesting report on infant mortality in industrial centers and the dangers of depopulation to which modern industrial customs subject our country. In the industrial centers the working woman is inevitably compelled to give her child into mercenary hands. Around Lille the care of the children that the working-women are obliged to abandon has grown into a regular occupation. Dividing the children of an industrial region into three classes, Drs. Oui and Paucot have ascertained that the mortality is 24 per cent. among children brought up directly by their mothers, 43 per cent. among children cared for by other persons than the mothers at the parents' homes, and 78 per cent. for children put in charge of care-takers. It is easy to see what peril there is leaving to these substitutes the task of bringing up children; not to speak of their ignorance of the most elementary rules of hygiene and of cleanliness, these care-takers, in order to save themselves trouble, resort to dangerous means, such as the administration of infusions of poppy-heads to the infants.

Drs. Oui and Paucot believe that the most efficacious means of remedying this state of things would be to create in each factory and in each large workroom places to which the working woman would bring her child and leave it to be looked after while working; she would thus be able herself to give it the necessary attention from time to time during the day.

### The Floods and Typhoid Fever

Fear has been expressed that the floods might be followed by an epidemic of typhoid fever. Facts have shown that this fear is somewhat exaggerated. In studying from this point of view the most important rises of the Seine in the course of the last half century, that is to say, those of 1872, 1876 and 1882, Dr. Jacques Bertillon, head of the statistical department of the city of Paris, has discovered that floods, instead of causing an outbreak of typhoid fever, have been, on the contrary, followed by a marked diminution. This time again the same phenomenon has been observed; from Feb. 20 to Feb. 26, 1910, 31 cases of typhoid fever, with 3 deaths, have been recorded in Paris; for the corresponding week of the five preceding years the average is 36 cases, with 6 deaths.

This apparently paradoxical diminution of morbidity may evidently be explained by the greater precautions taken by the population, especially in respect to alimentary hygiene. In fact, because of the floods most of the inhabitants of Paris have almost entirely ceased to use uncooked vegetables.

### The Public Charities and the Physicians of the Hospitals of Paris

The administration of the Public Charities having undertaken to reorganize a hospital service without previously consulting the head of that service, the Society of the Physicians of the Hospitals of Paris has just unanimously passed a resolution, to be transmitted to the Director of the Public Charities, expressing regret that a commission could have been formed to reorganize a hospital service without the head of the service having been asked to take part in it, and even without his having been informed of its reorganization.

### A Monument to Rabelais at Montpellier

A committee has just been formed at Montpellier to erect to Rabelais a monument to commemorate his student days at the college of medicine in that city. Of course, the close connection between the illustrious writer of the sixteenth century and the college of medicine of Montpellier is well known. The "robe of Rabelais" was for a long time kept there as a relic, the candidates for the doctorate degree putting it on to pass their final examination.

### Election of M. Lucet to the Academy of Medicine

In its session of March 15 the Academy of Medicine elected an honorary member in the Section of Veterinary Medicine to fill the vacant place of Dr. Saint-Yves Ménard, who died last June.

M. Lucet, assistant in comparative physiology at the Museum of Natural History, was elected by 46 votes against 31 for M. Martel, head of the veterinary meat-inspection service. It was M. Lucet who, collaborating with Professor Nocard, published in 1888 the first observation in France of human actinomycosis.

## BERLIN LETTER

(*From Our Regular Correspondent*)

Berlin, March 24, 1910.

### Personals

Professor Borst of Würzburg has been called to Munich to succeed Professor von Bollinger as director of the pathologic institute.

Professor Bumm, formerly director of the second university gynecologic clinic which is located in the Charité hospital, has been appointed director of the first university gynecologic clinic in place of Professor Olshausen.——Professor Kroenig, the gynecologist of Freiberg, has been elected a successor of Professor Bumm.

Dr. Kehrer, privat-docent at Heidelberg, a son of the former professor at that place, has been called to Bern as successor of Professor Mueller in the chair of gynecology and obstetrics. The Swiss government did not confirm the nomination of the faculty, but decided according to its own choice.

In Bonn, March 16, Professor Pflüger, the most distinguished German physiologist, died at the age of 81. Pflüger was a pupil of Johannes Müller, contemporaneous with du Bois-Reymond and Virchow. He followed Helmholtz in the chair of physiology at Bonn in 1859. The first very important discovery which he published there pertained to the physiology of electrotonus, known in literature as Pflüger's law of contraction. Of his other investigations the best known are on glycosuria. From 1868 he was editor of the *Archiv für die gesamte Physiologie.* Pflüger was a knotty personality who could utter sharp tones in polemics. In late years he had a noted encounter with Minkowski. Further back lies an attack against the deceased professor of physiology, Immanuel Munk, in which Pflüger's dislike of Jews found unpleasant expression. The vigor which Pflüger showed during his last years was astonishing; he published articles even in the latest numbers of his *Archiv.*

March 17 the Munich gynecologist, Professor von Winckel, formerly director of the gynecologic clinic of that place, celebrated the fiftieth anniversary of his doctorate.——A few days ago Professor Emil Richter of Breslau, for many years editor of the *Zentralblatt für Chirurgie,* also celebrated his semicentennial as a doctor——As successor of privy councilor Schmidtmann, councilor Finger of Arnsberg has been appointed chairman of the medical bureau of the department of education.

### A Petition Against Noise

In the development of our elevated railroad system an extension of the line in the neighborhood of the hospital in Urban has been planned. Against this project a medical society of this city has petitioned the city council to request that the elevated line be given a different route. It is said that the proximity of the elevated road has caused a great deal of trouble to the patients in the municipal hospital in Gitschinerstrasse.

### Hospital Statistics

The authorities have directed that statistics of the number of convalescents, chronic invalids and tuberculous patients in the Berlin city hospitals be obtained with the view to determining the propriety of erecting special hospitals for these classes, so as to relieve the overcrowding of the general city hospitals. In Charlottenburg, which has already arranged for the erection of two hospitals, one for men and one for women and children, to accommodate convalescents and mild cases, it is estimated that the cost of management of the large general municipal hospital will be reduced by this new arrangement from $1.09 to $1 per patient per day, which will mean a saving of about $3,000 of annual expense to the city.

### Medical Loan and Death Benefit Bureau

The Leipsic league, like the Berlin Brandenburg medical council, provides a loan bureau for its members in case of need and also a death benefit to the survivors. After a period of five years (with an entrance fee of 50 cents) for an annual premium of $1, a death benefit of $50 is assured. Members who on admission are over 60 must pay a double premium. The highest death benefit paid is $500.

### Care of the Insane

The commission of the Berlin city government for municipal care of the insane has determined to establish consultation stations in charge of a nurse and group of charitable men and women, which shall care for the insane on their dismissal from asylum treatment, provide a place of refuge, assistance and employment, and undertake the supervision of their affairs. For the present only a limited field is taken up until more extensive experience has been gained.

### Disinfecting Power of the Flat-Iron

In the institute for infectious diseases of this city, in consequence of a publication elsewhere, the question has been investigated how far ironing answers as a method of sterilization for linen; 150 to 250 C. (300 to 480 F.) was estimated as the temperature of the flat-iron. Pieces of linen which had been soaked with impure river water, with tuberculous sputum, with a pure culture of tubercle bacilli, typhoid bacilli, etc., were ironed under various experimental conditions and afterward examined bacteriologically. The results showed that material containing spores, and especially anthrax spores, was not certainly disinfected by ironing at a temperature of even 250 C. Vegetative forms were sterile after ironing with the flat-iron heated to 250. At a temperature of 150 C., which is undoubtedly frequently the temperature used with single pieces of the wash, the success was uncertain or slight. Tubercle bacilli were killed at 250 C., but with an ironing temperature of 150 C. animal experiment proved the germs viable, although markedly reduced in virulence. Dry ironed linen showed a smaller disinfecting action of the ironing than when ironed moist. Ironing the pieces on both sides gave better results than ironing only on one side. According to these experiments a careful application of the ironing process at a temperature of 250 C. will secure a good disinfecting action. It can scarcely be expected, however, that this requirement will be met in practice. It is rather to be feared that any sort of ironing will be assumed to be an effectual guard against infection and a false feeling of security will in this way be engendered.

### Heredity of Eye Disease

From an extensive statistical investigation of hereditary eye diseases, especially myopia of high grade, Czellitzer has shown that the first-born children of families hereditarily affected are much more liable to inherit eye defects than the later children. The consanguinity of the parents is also shown to be a predisposing factor in such heredity. Further, the statistics show that myopia is more frequently transmitted by the mother than by the father. Female children are more apt to inherit myopic defects than male children, while the males seem to show a greater tendency toward the inheritance of other eye lesions.

### Birth-Rate Among Jews and Christians

In the period from 1877 to 1882 there were annually 30 births for 1,000 Jewish inhabitants of Prussia and 38 per 1,000 in the rest of the population. Since then the birth-rate for Christians has fallen to 34 per 1,000 but the Jewish birth-rate has decreased to a much greater extent, as shown by the following: for the years from 1888 to 1892, 23.7; 1893 to 1897, 21.6; 1898 to 1902, 19.7; and 1903 to 1905, 18.2. Thus the birth-rate of Jews in Prussia is only half as great as the birth-rate in the rest of the population. A certain compensation is afforded by the fact that the Jews in consequence of their better economic condition are better able to care for their children than the Christians. In Prussia from 1888 to 1902 the death-rate of Christians under 15 years of age was 10.43 per 1,000, while that of the Jews was only 3.26. The death-rate of the Christian children was thus three times as great as that of the Jews.

## VIENNA LETTER

*(From Our Regular Correspondent)*

VIENNA, March 23, 1910.

### The New Semester of the Vienna University

The summer term of the University of Vienna will begin a fortnight after Easter and will last three months; it ought to be called, therefore, "trimester." The program for this term announces 439 classes and courses on medical subjects, which will be delivered by 32 ordinary, 71 extraordinary professors and 153 privat-docents or clinical assistants. There were in this last winter term 1,568 ordinary students matriculated in the Vienna medical school, including 77 women, besides 486 foreign students. The increase against the winter term, 1908-'09 was 208 ordinary students; the number of medical students was 24.5 per cent. of all the students in the Vienna University, while 1908-'09 the number was 22 per cent. This is the sixth year of the constant increase in the number of medical students, in spite of the repeated warnings issued to students in colleges and gymnasia by medical corporations. The new semester will no doubt show another increase in numbers.

### Appointment of Professor Wertheim to the Obstetric Clinic

The emperor has appointed Prof. Ernst Wertheim successor to Professor Rosthorn, and thus the new clinic for gynecology and obstetrics has again a director. Professor Wertheim is the second holder of the office; he follows only two years after the appointment of Rosthorn, who died after having been director only one year. Wertheim is only 46 years old and studied in Vienna. He was at first a physiologist, later he turned to the study of gynecology and became assistant to Chrobak and to Schauta, the leading gynecologists in this country. His attention was soon directed to the operative fight against uterine cancer, and his operation is well known and practiced by many surgeons, giving nearly 60 per cent. cures, if done in time. Many foreign surgeons are his pupils, especially in England and America. The appointment of this eminent surgeon and investigator is a most fortunate one.

### The Latest Achievement of the Street Ambulance Corps

A few days ago, on the occasion of the funeral of a prominent political personage, more than half a million spectators had gathered in a relatively small space. The emergency had been anticipated by the ambulance corps (*Rettungsgesellschaft*), which, profiting by the experience of 1908, when a pageant witnessed by over 1,000,000 persons was held in June, erected 20 different first-aid stations, provided a staff of 60 physicians, together with 120 stretcher-bearers, and made provisions of drinking-water for the spectators and places for urinating. The latter is a very important item, as many cases of discomfort and slight illness were due in 1908 to the omissions of due care in this respect. Since the funeral procession took some two hours and people waited for three hours in advance, the corps had some work on its hands, although there was no serious injury, but merely minor accidents. It was no small matter to provide first aid for such a multitude; and at the same time a first-aid service for the remainder of the population who were at their work, had to be in working order as on ordinary week-days. The daily average emergency calls of the ambulance corps were 85 in 1909, which shows how very much such an institution is an integral part of daily life of a large city, the more so, as it is a strictly private and charitable institution, which gives help free of charge, and which the local authorities refuse to acknowledge or to aid even by a smallest grant. On the contrary, some difficulties arising from the private position of the institution have been set right only after a storm of indignation from the population burst over the head of the red-tape magistrates.

# Pharmacology

## TOXICITY OF SOAMIN

### The Danger Attending the Use of Some of the Organic Arsenic Salts

A correspondent in the *British Medical Journal* (March 5, 1910, p. 599) calls attention to the dangers of the arylarsonates, "orsudan" and "soamin." The latter is probably better known to American readers under the earlier name "atoxyl," atoxyl and soamin differing only in the number of molecules of water of crystallization. The correspondent states that the success which attended the use of these preparations in a series of 12 cases of syphilis induced him to continue it until an untoward occurrence compelled him to abandon it and to regret that he had ever advocated it. The untoward occurrence was blindness from double optic atrophy after ten injections of orsudan. He says further:

> "A second case has recently come under my notice in which a syphilitic patient also became blind after a course of about fifteen injections of 5 grains of soamin (Burroughs, Wellcome and Co.). A third case is that of an elderly patient, with marked arterial degeneration, who was put on a course of injection of soamin (Burroughs, Wellcome and Co.) for sciatica, but who after the introduction of about 60 grains also met with a similar fate. I am also cognizant of a fourth case, in which a patient suffering from lymphadenoma was treated with soamin (Burroughs, Wellcome and Co.), and became totally blind.
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> "It is inexpedient to enter more fully into the history of these cases, and I should not have written this communication had not I recently received from Messrs. Burroughs, Wellcome and Co. a pamphlet commending their preparations, soamin and orsudan, and reproducing among others the cases I originally described. In this pamphlet a casual mention is made of the fact that signs of intolerance had been met with after the use of soamin, such as 'visual disturbances, nausea, vomiting, gastric pains, dermatitis, nervousness, and insomnia,' and that 'the appearance of any of the above symptoms should be a signal for withholding the drug.' This is the only warning note in this pamphlet, though the manufacturers, through one of their representatives, had been informed by me of one case of total and irremediable blindness which had occurred after the use of orsudan, and knew that I had abandoned the treatment on that account.
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> "Further, in the *British Medical Journal*, Jan. 22, 1910, Drs. Lundie and Blaikie describe a case of total blindness following on a course of soamin and the possibility of causing optic atrophy by the use of that substance is alluded to. In the *Lancet*, ii, 1909, p. 1196, Dr. Bagshawe writes:
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> " 'The arsanilates, and especially atoxyl, are not without their dangers; there are many recorded cases of blindness following the use of atoxyl . . . It seems that loss of vision is less frequent, if it occurs at all, after the use of soamin, which has of course a chemical formula identical with atoxyl.'
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> "There was, therefore, in the medical journals some indication that these drugs were not quite so innocent as they had been depicted. In the strict sense of the word, I suppose that total and incurable blindness may be termed a 'visual disturbance,' and my only object in writing is to point out to your readers the possible gravity of that 'visual disturbance' and to put them on their guard against such a disastrous occurrence."

The history of the commercial exploitation of "atoxyl" and "soamin" cannot be viewed by the physician with any satisfaction; yet it is unfortunately being repeated almost daily. A writer[1] in THE JOURNAL, Aug. 14, 1909, p. 497, selected this history as an example of the unsatisfactory conditions prevailing in the introduction of new drugs. To quote from this article:

> "That physicians have been content and have received but half-truths concerning important matters is too well known to need much discussion. One illustration of recent date may, however, be given. Reference has already been made to a class of organic arsenic compounds which are attracting much attention. As they seem destined to attract still more interest in the future, and as many new compounds of the same class are being investigated, it was especially desirable that the first information given

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[1] Hunt, Reid: "What the Individual Physician Can Do to Improve the Materia Medica."

> concerning them should be correct and complete. Yet the very first one, under the name atoxyl, was brought to the attention of the physician with an incorrect statement even as to its composition. Professor Puckner, secretary of the Council on Pharmacy and Chemistry, seems to have been the first to discover the discrepancies between the manufacturer's statement and the truth. His results were soon confirmed by Ehrlich."
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> "New names for old drugs are often introduced in a manner to lead the physician to suppose that a new drug is being introduced. For example, I recently received a circular on 'soamin' from a leading English firm. In this it is stated that 'the arylarsonate, "soamin," was first introduced at the end of 1907,' and there is nothing in the circular to indicate that the same substance had been introduced by another firm several years previously under the name 'atoxyl,' or that the compound itself had been made in 1863 by Béchamp. A little further on in this circular I read: 'The toxic symptoms noticed by continental physicians when using other arylarsonates have not been observed with soamin.' As a matter of fact, most of the toxic symptoms noticed by continental writers were due to the same substance but under a different name."

There are certain points of resemblance between this history and that of the blindness from wood alcohol which shocked the public a few years ago. Certain dealers in wood alcohol represented that their product was harmless on account of its purity and a number of manufacturers were persuaded to use it, with most disastrous consequences not only to many innocent parties who lost their lives or sight but to themselves. The medical profession is now in somewhat the position of these manufacturers: dealers in all sorts of new drugs are representing that their purified products are harmless and the consequences are too often similar to those described above.

The physician is learning (reluctantly and regretfully, for he likes to feel that the manufacturers who express so much solicitude for his success in practice are dealing with him perfectly frankly) that the only safe way is to be profoundly skeptical of the statements of those who have something to sell; unfortunately this skepticism is necessary in regard to the products of the "great manufacturing houses" and some of the German professors as well as in regard to many of the humbler proprietaries.

It is probably a utopian dream but we still hope that a time will come when the contributors to the materia medica will come from well endowed medical schools and hospitals.

## Micajah's Medicated Uterine Wafers

*To the Editor:*—We have read with interest the report of your committee on pharmacology [Contribution from the Chemical Laboratory.—Ed.] recently published in The Journal, on the subject of Micajah's Medicated Uterine Wafers, and your comments thereon.

We are of the opinion that, in your laudable efforts to reform the practice of pharmacology, it is not your desire or intention to act other than justly and fairly, and therefore, with this belief, we submit the following statements for your consideration, with the hope that you will see fit to publish them.

1. We do not seek by word or deed the patronage of the laity, and what few sales are made to the public are not of our contriving, nor should we be held responsible for them, any more than is the manufacturer of quinin to be blamed for the universal use of that drug.

2. Our literature should not be considered extravagant, for it is for the most part made up of clinical reports received from physicians and based on the unsolicited testimonials in our possession from hundreds of practitioners, many of whom have used Micajah's Wafers in practice from five to twenty years and they are therefore as well grounded as are the clinical reports concerning any preparation.

3. In the past year we have endeavored to place our preparation on a higher ethical basis by stating in our advertisements what our wafers contain, and by eliminating whatever seems to us open to criticism.

4. That the ingredients of the preparation are "simple" is no reason for considering them valueless. H. A. Kelly, in his work on medical gynecology, page 266, recommends these ingredients in a variety of conditions. Bandler also made important recommendations bearing on this subject in his "Medical Gynecology," 1909 edition, page 472. We feel we have the right to recommend this preparation for these and similar conditions, especially when our statements are backed up by the clinical experience of numerous general practitioners.

5. That the owner of Micajah's Wafers holds stock in a corporate firm which manufactures proprietary medicines and toilet articles, advertised to the laity, should not militate for or against our right to market a meritorious preparation on strictly ethical lines to the medical profession, inasmuch as many of the largest drug houses cater to both the doctor and the proprietary interests, and several are actively engaged in exploiting so-called nostrums.

6. We enclose a recent advertisement which has been accepted after investigation of our methods by careful medical journals, and we now believe we are conducting our business in entire conformity with the best interests of the medical profession and we feel certain of the true merits of our article. Micajah & Company, Warren, Pa.

[Comment: This letter brings out still more strongly the points raised in the article which appeared in The Journal, March 26, 1910. Being unable to analyze motives we must perforce, accept Micajah & Co.'s statement that they "do not seek by word or deed the patronage of the laity." In the comments on the laboratory's report it was very explicitly stated that this nostrum was advertised only in medical journals and not directly to the public. Inasmuch, however, as the container in which this product comes has printed on it the various diseases in which the "wafers" are indicated, as, moreover, within the container there is a leaflet which describes in detail the use of the preparation in a list of pathologic states varying from "enlargement of the womb" to "gonorrhea in the male," and, finally, as the name "uterine wafers" would seem in itself to be a plain bid to the public, we still maintain that "one might imagine that it was put up absolutely for the layman."

The proposition that advertising matter should not be considered extravagant because it is largely "made up of clinical reports received from physicians" is an argument that is as old as the nostrum business itself—and as fallacious as it is old. Unfortunately, as our files show, the most extravagant statements made for proprietary products frequently emanate from men who legally are entitled to write M.D. after their name. Because a Buffalo physician details the marvelous results from the use of Micajah's Medicated Uterine Wafers in forty-three cases comprising no fewer than thirty-six pathologic conditions from "otitis media" to "injured toe," and from "bunion" to "ophthalmia neonatorum," does not exempt such "literature" from the charge of being not merely extravagant, but ridiculously so.

As Micajah & Co. say, because the ingredients of their preparation are simple is no reason for considering them valueless. On the contrary, if the "wafers" were truthfully exploited for what they are and what they will do, their very simplicity would be a virtue. But such has not been done. And therein lies the viciousness of nostrums. Simple mixtures of well-known drugs are foisted on the medical profession with no hint as to their composition and with claims made that are not only false, but would immediately be recognized as absurd, if their actual composition were known.

That a mixture of borax and alum may be of value in some of the simple ailments of the female genital tract can easily be granted. That relief might follow the use of suppositories made of these ingredients—especially when supplemented by an increased attention to simple cleanliness—can also be admitted. To say, however, that such medicaments will quickly and permanently cure gonorrhea, urethritis, endometritis, etc., is foolish, false and vicious.]

## Additional List of Pharmacopeial Delegates

Dr. Murray Galt Motter, secretary, Washington, D. C., sends the following supplementary list of delegates to the Pharmacopeial Convention of 1910. Previous lists appeared in The Journal, February 26, page 719, and March 12, page 890. He states that these names are offered for publication "without prejudice," it being understood that such publication does not of necessity mean that these delegates will be received and seated by the convention, as their credentials have not as yet been passed on by the Committee on Credentials and Arrangements.

Attention is invited to a ruling of the Committee on Credentials and Arrangements, that it can "not recognize the right of any one individual to represent more than one organization or institution."

College of Physicians and Surgeons, San Francisco.—John H. Flint, P. A. Dubois, J. E. Barbat.

University of California, California College of Pharmacy, San Francisco.—Franklin Theodore Green, Albert Schneider.

Connecticut State Medical Society.—Charles C. Beach, Samuel M. Garlick, Charles J. Foote; alternates, Thomas F. Rockwell, John E. Loveland, Elias Pratt.

Indiana University School of Medicine, Indianapolis.—C. Richard Schaefer, John N. Hurty, A. D. Thorburn; alternates, Samuel E. Earp, Charles R. Sowder, A. C. Kimberlin.

Indiana Pharmaceutical Association.—Fred W. Meissner, Leo Eliel, J. R. Francis; alternates, William H. Rudder, O. L. Hackett, W. O. Gross.

University of Notre Dame, School of Pharmacy.—James A. Burns; alternates, William Maloney, Louis Kelley.

Bennett Medical College, Chicago.—Walter Franz von Zelinski, George Louis Secord, Richard Jay Lambert; alternate, W. F. Waugh.

Kansas Medical College, Topeka.—Elvenor A. Ernest.

Kentucky State Medical Association.—J. W. McCormack, Virgil E. Simpson, A. T. McCormack; alternates, William Bailey, H. K. Adamson, Archibald Dixon.

Medical and Chirurgical Faculty of Maryland.—John D. Blake, Elmer B. Freeman, C. Urban Smith.

College of Physicians and Surgeons, Baltimore.—John Ruhräh, S. J. Fort, Harvey G. Beck.

University of Maryland, School of Medicine, Baltimore.—Thomas E. Satterthwaite, John C. Hemmeter, Joseph E. Gichner; alternates, Charles W. Mitchell, Arthur M. Shipley, J. M. Craighill.

University of Maryland, Department of Pharmacy.—David M. R. Culbreth, Henry P. Hynson, Charles Caspari, Jr.; alternates, Daniel Base, H. A. Brown Dunning, Evander Frank Kelly.

University of Minnesota, College of Medicine and Surgery.—E. D. Brown, W. A. Jones, Burnside Foster; alternates, George D. Head, J. P. Sedgwick, Haldor Sneve.

St. Louis University, School of Medicine.—G. C. Crandall, Jacob Friedman, E. Marsh Williams.

Missouri Pharmaceutical Association.—William Mittelbach, Charles Gietner, H. M. Pettit; alternates, Francis Hemm, D. V. Whitney, Charles L. Wright.

Kansas City (Mo.) College of Pharmacy and Natural Sciences.—Charles H. Stocking, James H. Southwell, Ferd L. Crampton.

Kansas City (Mo.) College of Pharmacy.—J. M. Good, Charles E. Caspari, O. F. Claus; alternates, Francis Heuun, Solomon Boehm, William K. Ilhardt.

University of Nebraska, College of Medicine, Lincoln.—Rufus Ashley Lyman.

Columbia College, College of Physicians and Surgeons, of New York.—S. W. Lambert, C. A. Herter, W. A. Bastedo; alternates, W. J. Gies, W. R. Williams, C. C. Lieb.

New York Homeopathic Medical College and Flower Hospital.—Royal S. Copeland, Rudolph F. Rabe, Edward W. Runyon; alternates, Stuart Close, J. Wilford Allen, Spencer Carlton.

Syracuse University, College of Medicine.—William Dewey Alsever, Frank P. Knowlton, H. L. Taylor.

New Hampshire Medical Society.—Edward H. Currier, Charles D. Howard, C. H. Bowker.

North Carolina Pharmaceutical Association.—E. V. Zoeller, F. W. Hancock, W. H. Weaver; alternates, W. W. Horne, E. V. Howell, C. A. Rayson.

Western Reserve University, Medical Department, Cleveland.—John P. Sawyer, J. W. Kerr, Richard Dexter.

Cincinnati College of Pharmacy.—Charles T. P. Fennel, John C. Otis.

Oklahoma Pharmaceutical Association.—George E. McLaurine, F. M. Weaver, J. C. Johnson; alternates, Harry Mitchell, F. R. Giteau, H. D. Kinseley.

University of Pennsylvania, School of Medicine.—John Marshall, Alfred Stengel, David L. Edsall; alternates, E. T. Reichert, Joseph Sailer, George E. de Schweinitz.

Temple University, Pharmacy Department, Philadelphia.—H. Evert Kendig, Henry Fisher, John R. Minehart; alternates, H. H. Boom, James C. Attix.

Rhode Island Pharmaceutical Association.—Howard A. Pearce, A. W. Fenner, Jr., Frank A. Jackson; alternates, James E. Brennan, P. J. Gaskin, E. P. Anthony.

Vanderbilt University, Department of Pharmacy, Nashville.—E. A. Ruddiman, J. T. McGill, William R. White; alternates, Max Bloomstein, Hardee D. Neil, E. F. Trolinger.

University of Tennessee, School of Pharmacy.—Charles O. Hill.

University of Wisconsin, School of Pharmacy.—Edward Kremers, Arthur S. Loevenhart; alternates, Richard Fisher, Rollin H. Denniston.

### RAILROAD RATES

Inquiry of the Trunk Line Association has developed the fact that a fare and three-fifth concession, on the certificate plan, offers no material advantages over the less troublesome mileage rates and excursion rates, which can always be obtained for trips to Washington.

# Correspondence

## Gutta-Percha Tissue in Surgery

*To the Editor:*—The article in The Journal, March 19, 1910, by Dr. Jacob Frank on "Gutta-Percha Tissue in Surgery," is very useful and suggestive. I venture to add a few points regarding this substance which seem to have escaped his notice.

Dr. Frank makes the epigrammatic distinction between rubber and gutta-percha that "though one is elastic the other is plastic." Yet I cannot find in his article any evidence that he has utilized the plastic qualities of this substance. These are developed by heat. Under warmth, layers and folds of gutta-percha tissue stick together and fuse into a nearly homogeneous mass—which on cooling does not, like rubber, remain sticky, but resumes its normal state of glossy stiffness.

For many years I have been availing myself of this quality of gutta-percha tissue. In its simpler forms it may be used to cause folds of tissue to adhere thus avoiding pins or sutures. It is never needful to sew gutta-percha tissue to itself or indeed to anything else, as is done in Dr. Frank's illustrations. Hot water applied by a swab of cotton—drawn along the line of union causes the surfaces instantly to adhere, and cold water will harden and set the junction immutably. This is useful in making cigarette drains, covering splints for discharging compound fractures, enclosing dry or moist dressings, etc.

The plastic qualities of gutta-percha find their neatest expression in use about the hand. Take, for example, a smashed infected finger from a factory accident—a dry dressing will result in spreading infection—clean it up the best you may—it will need a moist dressing. For years, I have applied this as follows: Envelope in gauze bandage wet in saturated boric acid solution. Apply two or threee thicknesses of gutta-percha over this; warm over a flame, but not too near it, whereon the gutta-percha will coalesce. Wind on another layer or two, warm as before. Smooth the dressing till it becomes a homogeneous mass, and cool under cold water faucet. The rest of the hand can be washed at any time without prejudice to this dressing.

The thicker the dressing is made the more of a splint it becomes. Compound fractures of fingers can be well treated by moist gauze covered by gutta-percha tissue thick enough to immobilize the fingers. Similarly, finger cots of any desired size and thickness can be improvised, and find a field of usefulness in treating onychia, paronychia and any infection of fingers or nails.

William S. Cheeseman, M.D., Auburn, N. Y.

## No Yellow Fever in Philippines

*To the Editor:*—Dr. A. P. Goff, chief, San Lazaro Hospitals Division, of the Bureau of Health for the Philippine Islands, calls attention to the health report in The Journal, Jan. 8, 1910, page 148. He says:

"In this report Manila is credited with 11 cases of yellow fever from Oct. 30 to Nov. 6, 1909, and the provinces with 160 cases of the same disease. This is, of course, simply a mistake in printing [caused by a line of type being transposed.—Ed.]—the cases mentioned being cholera cases that occurred during period mentioned, but the islands have enough to contend against without any one getting it into his head that we have yellow fever here also."

I respectfully ask that the necessary corrections be made.

Victor G. Heiser, Director of Health.

## Fracture of Thigh in the Newborn

*To the Editor:*—In The Journal, Jan. 8, 1910, p. 169, is a reference to a contribution on the treatment of fracture of the thigh in the new-born, by Dr. G. Zancarini, published in the *Münchener medizinische Wochenschrift*, Nov. 16, 1909, p. 2353.

In 1887 I practiced this method in the case of a fracture at the lesser trochanter in a child just born. There had been a breech presentation, and the accoucheur had fractured the thigh in making traction with the finger inserted in the flexure of the groin. The case was treated by flexion of the thigh on the abdomen, placing it in the identical position it had occupied *in utero*, enveloping the thigh and abdomen of the child in a complete investment of plaster of Paris. To this I arranged a valise handle so that the infant was carried, for the three weeks in which it remained under treatment, as one would carry a dress suit case, by the handle.

The method was entirely original with me, and was made public in the Transactions of the New York Surgical Society, and in the second edition (1890) of my work on surgery.

John A. Wyeth, New York.

### Sugar and Rice as Transmitters of Cholera

*To the Editor:*—The letter in The Journal, March 26, regarding "The Late Dr. James Sykes and a Cholera Epidemic," was read with great interest by me. The trouble no doubt lay in the raw sugar, possibly brought from the Philippines or Java. I have known of cases where two hundred coolies died of cholera on the docks in Bangkok in one day, and you can easily see how bags of rice and of sugar could become contaminated by the discharges of those ill with cholera.

Charles S. Braddock, Jr., New York.
Late Chief Medical Inspector Royal Siamese Government.

### President Welch, General Sternberg and the Yellow-Fever Commission

*To the Editor:*—In the all-too-generous appreciation of my work in the editorial in The Journal, April 9, it is intimated that my advice may have led to the creation of the Yellow-Fever Commission. As all that relates to the history and work of this commission is highly important, permit me to say that the credit for the creation of this commission belongs solely to General Sternberg, who had previously so completely exhausted the purely bacteriologic study of yellow fever that it was possible for the commission to follow the new direction which proved so fruitful in results.

William H. Welch, Baltimore.

### The Importance of a Department of Health

*To the Editor:*—The present bright outlook for the early establishing of a national Department of Health should awaken the profession to active effort on behalf of Senator Owen's Bill 6049, and for the securing of efficient seconding of the movement in the House. It seems to me there should be no thought or talk of a subordinate bureau, for in no other work of the government is free and untrammeled action so essential.

In an article on "Medicine and the State," published in The Journal, Feb. 19, 1898, I urged the vital necessity of a government department, analogous to the National Health Service of Germany, the Directory of Public Hygiene of France, and the Government Health Board of England. The profession has been working for such a department for near a century; had it been established a dozen years ago what incalculable evil would have been averted in the one matter of the bubonic plague, as Senator Owen so forcibly points out![1]

Now that the public is being awakened let us bend every energy to securing a national sanitary organization with the needed power. The view you express that in case a department should seem to be out of our present reach we should work for a bureau as better than nothing seems to me to be at least questionable. To establish a bureau, besides causing harmful and troublesome jealousies, would be to put the department a long way in the future, and I believe Senator Owen is entirely correct in holding that a department with full powers "is absolutely essential in order to comply with the international (and interstate) sanitary obligations of the United States," and that "the health and the welfare of the world" demand its establishment.

C. H. Preston, Davenport, Iowa.

[Comment: The present prospects for a national Department of Health are in every way brighter than ever before. A large number of members of Congress, in both the Senate and the House, have expressed themselves favorably and some enthusiastically regarding the proposed legislation. The public, in every instance in which it has had an opportunity to express itself, is favorable. The public press with but few exceptions endorses the movement. What is now needed is to let Congress know in unmistakable terms that there is a widespread, intelligent and insistent popular demand for largely increased health activities in the form of a national department of health. It is especially advisable that every physician and every medical society take immediate steps to acquaint their senators and representatives with their views, and especially that every effort be made to secure as general an expression of public opinion as possible.—Ed.]

## Book Notices

Modern Methods of Street-Cleaning. By George A. Soper, Ph.D., Member American Society of Civil Engineers. Cloth. Price, $3. Pp. 201, with illustrations. New York: The Engineering News Publishing Company, 1909.

In the increasing attention given to public health matters the sanitation of cities of course occupies a large and important position. The disposal of waste, the cleaning of streets and the prevention of dust are matters intimately related. Dust is an agency in the transmission of disease as important as water and milk, or even more so, and causes far more universal annoyance and discomfort. This book deals with this phase of city sanitation in a theoretical as well as practical way, discussing such subjects as city dust, streets as receptacles for refuse, the aim of sanitation, sanitary ordinances and the police, necessity of cooperation in preventive work, physical properties of street dirt, chemical and microbic ingredients of street dirt, general methods of cleaning, disposal of refuse, etc., and gives the history and development of these sanitary measures in New York, perhaps the best example in this country, and in European cities, such as London, Paris, Berlin, Hamburg and Cologne. Soper finds these measures more efficiently and more cheaply carried out in Europe than in this country. The work here is done in a more or less haphazard and unsystematic way, while over there a deliberate intention exists to develop and control the growth of cities along lines which make for order, convenience, comfort, safety, health and beauty, and in no direction has greater progress been made than in sanitation. The book is an interesting presentation of this phase of city sanitation, and although Soper is unable, on account of the nature of the work and the information available, to formulate principles of general application, a wide circulation of the book among sanitarians and health authorities would do much to help along the propaganda for better hygiene and sanitation in our cities.

Appendicitis and Other Diseases of the Vermiform Appendix. By Howard A. Kelly, M.D. Cloth. Pp. 502, with illustrations. Price, $6. Philadelphia: J. B. Lippincott Co.

The volume before us is a condensed edition of the work on "The Appendix Vermiformis and its Diseases," by Drs. Howard A. Kelly and Elizabeth Hurdon, published in 1905. The preface of the present edition calls attention to the purpose of the authors of the earlier work to make it "a great storehouse of well-digested facts relative to the protean diseases of this little organ." In this they were successful. The present book is the result of an attempt on the part of its accomplished author to meet better "the daily needs of the great army of general surgeons throughout the country" by the preparation of "a compact résumé dwelling with especial care on the practical side of the subject." Although the present edition is smaller by over 300 pages than its predecessor, it remains a book of large bulk. As a volume for reference on the subject of the diseases of the appendix it is encyclopedic in character. The historical part of the work has been prepared with great thoroughness; hardly anything, having the slightest relation to the diseased appendix, has failed to receive consideration. The sections on pathology, clinical history and the differential diagnosis of appendicitis are complete. Our author's teaching on the indications for operation and in favor of early operation is surgically sound and in accordance with the best practice of to-day. Neoplasms and specific infections of the appendix are fully discussed, as is also the complication of pregnancy and gynecologic conditions by appendicitis. The final chapter of the book on the medicolegal aspects of appendicitis, disposes of the subject in a fair and judicial manner. The book is well written throughout, profusely and beautifully illustrated, and of the highest value for reference and study.

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[1] The Journal A. M. A., April 2, 1910, p. 1159.

ROTTER'S TYPISCHE OPERATIONEN. Kompendium der Chirurgischen Operationslehre. Mit besonderer Berücksichtigung der topographischen Anatomie, sowie der Bedürfnisse des praktischen u. Feldarztes. 8 Auflage. Pp. 362, with illustrations. Herausgegeben von Dr. Alfred Schönwerth, K. Bayr. Oberstabsarzt und Privatdozent für Chirurgie. Cloth. Munich: J. F. Lehmann's Verlag, 1909.

This is a small volume that can be put in an ordinary coat-pocket. The surgical anatomy involved in an operation is briefly referred to and then the operation clearly but briefly described. Very little, if anything, is said about the indications for or results of operations and usually but one method of doing an operation is described. The book therefore is not one for the advanced surgeon but for the student beginning in operative work.

THE QUEST. By Thomas A. Stoddard. Cloth. Pp. 167, with illustrations. Price, $1.50. New York: Cochrane Publishing Co., 1909.

This is the story of a beloved country doctor who meets with an injury, is accused of a terrible crime and disappears from the community in which he lived. The death-bed confession of the real criminal, and a long and successful quest to find a mysterious "city by a lake" in South America, involving many perilous adventures, result in clearing up the mystery and restoring the doctor, who was innocent of all blame, to his wife and family. The book contains the views of the author on ethics and religion. It is a story about a physician, written by a physician, and should be interesting to physicians.

# Medical Education and State Boards of Registration

## COMING EXAMINATIONS

ARKANSAS: Regular; Little Rock, May 10-11. Sec., Dr. F. T. Murphy, Brinkley.

FLORIDA: Eclectic; Tampa, May 2. Sec., Dr. Hiram J. Hampton, 1805 Florida Avenue.

GEORGIA: Regular; Augusta, May 2-3, Atlanta, May 4-7. Sec., Dr. I. H. Goss, 297 Hancock Avenue, Athens.

LOUISIANA: Regular; New Orleans, May 19-20. Sec., Dr. Felix A. Larue, 211 Camp Street. Homeopathic: New Orleans, May 2. Sec., Dr. Gayle Aiken, 1102 St. Charles Avenue.

MASSACHUSETTS: State House, Boston, May 10-12. Sec., Dr. E. B. Harvey, Room 159, State House.

MISSISSIPPI: State Capitol, Jackson, May 10. Sec., Dr. S. H. McLean, Jackson.

NEBRASKA: State House, Lincoln, May 11-12. Sec., Dr. E. Arthur Carr.

NEVADA: Carson City, May 2. Sec., Dr. S. L. Lee.

NEW YORK: Albany, May 24-27. Chief of Examinations Division, Mr. Charles F. Wheelock, Albany.

TENNESSEE: Memphis, Nashville and Knoxville, May 3-4. Sec., Dr. C. A. Abernathy, Pulaski.

## College of Physicians and Surgeons Moves to Columbia University Campus

Recognizing the advantage of a closer contact of its medical school with the other departments of the university, Columbia University has taken advantage of recent donations by William K. Vanderbilt, George J. Gould, Frank A. Munsey and others to move its medical school from Fifty-ninth street to the university campus at Morningside Heights, where over three million dollars is to be expended for the new medical school.

For more than a century this college has been in the forefront in medical education in this country. It has furnished to the medical profession many famous practitioners and investigators; men of high ideals and of unselfish devotion to the public good. The entire medical profession as well as its thousands of alumni may well rejoice in the continued progress and rare good fortune of this century-old medical school.

# The Public Service

## Medical Department of the Army

Changes for the week ended April 9, 1910:

Walkup, Joseph O., 1st lieut., M. R. C., assignment to duty in the Philippines Division revoked.

Heterick, R. H., 1st lieut., M. R. C., left Fort Oglethorpe, Ga., with 11th Cavalry, for duty at Target Range, Catoosa Springs, Ga.

Northington, E. C., 1st lieut., M. R. C., left Fort McPherson, Ga., with 2nd Battalion, 17th Infantry, en route to U. S. Rifle Range, Waco, Tex., for duty.

DeLaney, M. A., capt., will proceed to Philadelphia, on official business pertaining to the Medical Department.

Hoff, John Van R., col., will proceed to certain posts in the Department of the East, for the purpose of making an inspection of the medical department and of the sanitary condition at these posts.

Stark, Alexander N., major, relieved from duty at Vancouver Barracks, Wash., and ordered to Fort Adams, R. I., for duty.

Wheate, J. M., 1st lieut., M. R. C., granted leave of absence for 3 months and 15 days.

Reno, William W., major, granted leave of absence for 1 month.

Howell, Walter O., 1st lieut., M. R. C., will proceed from Presidio of San Francisco, to Fort Miley, Cal., for temporary duty.

Freeman, Charles E., capt., will report to Capt. John W. Moore, 1st Cavalry, Presidio of San Francisco, for duty with and to accompany the troops to be stationed in the Yosemite National Park, Cal.

Scott, Minot E., dental surgeon, reported for temporary duty at Fort Stevens, Ore.

Rand, I. W., major, left Fort Hancock, N. J., for 7 days' leave of absence.

DeLoffre, Samuel M., capt., leave of absence extended 1 month and 9 days.

Crissinger, Jay W., capt., granted leave of absence for 3 months.

O'Connor, R. P., major, granted leave of absence for 2 months.

Clarke, Howard 1st lieut., M. R. C., recently appointed, will proceed to Fort Thomas, Ky., for duty.

Dawe, C. W., 1st lieut., M. R. C., relieved from Fort Thomas, Ky., and ordered to Plattsburg Barracks, N. Y., for duty.

Davis, Oscar F., 1st lieut., M. R. C., now on leave of absence, will proceed on May 1st to Fort Mackenzie, Wyo., for duty at that station.

Hollingsworth, R. M., dental surgeon, on arrival at San Francisco, will proceed to his home and on arrival report by telegraph to the Surgeon General of the Army, for annulment of contract.

Woodson, Robert S., major, retired from active service on account of disability incident thereto. He will proceed to his home.

Bratton, Thomas S., major, granted 3 months' leave of absence about July 1, 1910. Relieved from duty at Fort Des Moines, Iowa, at expiration of leave of absence, and ordered to proceed to Manila, P. I., for duty, about Oct. 5, 1910.

## Medical Corps of the Navy

Changes for the week ended April 2, 1910:

Lovering, P. H., medical director, commissioned Medical Director from Feb. 5, 1910.

Butts, H., P. A. surgeon, commissioned Passed Assistant Surgeon from June 1, 1910.

Kite, I. W., surgeon, placed on the retired list from March 23, 1910. Detached from Navy Yard, Norfolk, Va., and ordered home.

Blackwood, N. J., surgeon, detached from the Navy Yard, Washington, D. C., and ordered to the Naval Hospital, New York.

Hibbett, C. T., medical inspector, detached from the Naval Recruiting Station, Baltimore, and ordered to the Navy Yard, Norfolk, Va.

Wieber, F. W. F., medical inspector, ordered to the Naval Recruiting Station, Baltimore.

Smith, G. T., surgeon, detached from the Naval Hospital, New York, and ordered to the Naval Station, Hawaii.

Johnson, T. J., acting asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered home; appointment revoked as Acting Assistant-Surgeon April 2, 1910.

Munson, F. M., P. A. surgeon, detached from the *Chattanooga* and ordered to the *Monterey*.

Noble, D. H., asst.-surgeon, detached from the *Monterey* and ordered to the *Charleston*.

Kelley, H. L., asst.-surgeon, detached from the Naval Hospital, Canacao, P. I., and ordered to the *Cleveland*.

## Public Health and Marine-Hospital Service

Changes for the week ended April 6, 1910:

Wertenbaker, C. P., surgeon, detailed to represent the Service at the meeting of Conference Charities, to be held in Charlottesville, Va., April 5, 1910.

Young, G. B., surgeon, directed to attend the meeting of the Lake Michigan Water Commission, to be held in Milwaukee, Wis., April 1, 1910.

Blue, Rupert, surgeon, directed to proceed to Valparaiso, Chile, and Callao, Peru, on special temporary duty, and to represent the Service at the International Congress on Medicine and Hygiene, to be held in Buenos Ayres, May 25, 1910.

Oakley, J. H., surgeon, leave of absence for 2 months from March 1, 1910, amended to read 2 months from March 25, 1910.

Holt, J. M., P. A. surgeon, granted 6 days' leave of absence from April 26, 1910.

Vogel, C. W., P. A. surgeon, relieved as recorder of board of medical officers convened to meet April 4, 1910.

Collins, G. L., P. A. surgeon, detailed as recorder of board of medical officers convened to meet April 4, 1910.

Herring, R. A., asst.-surgeon, granted 2 days' leave of absence from March 22, 1910, under paragraph 191, Service Regulations.

Kolb, L., asst.-surgeon, granted 1 day's leave of absence in March, 1910, under paragraph 191, Service Regulations.

Stiles, C. W., Chief Division of Zoology, Hygienic Laboratory, directed to proceed to Wilmington, N. C., on special temporary duty.

Bailey, C. A., acting asst.-surgeon, directed to proceed from St. John, N. B., to Quebec, Canada, for duty.

Blanchard, J. F., acting asst.-surgeon, granted 2 days' leave of absence from March 30, 1910.

Deerhake, Wm. A., acting asst.-surgeon, granted 2 days' leave of absence in March, 1910, under paragraph 210, Service Regulations.

Thornton, M. J., acting asst.-surgeon, granted 2 days' leave of absence, March 7 and 16, 1910, under paragraph 210, Service Regulations.

Brinckerhoff, W. R., asst. director, Leprosy Investigation Station, resignation accepted, effective April 15, 1910.

## Marriages

S. Curtis Johnson, M.D., to Miss Carolyn A. Shaw, both of Chicago, April 12.

Charles Moore Robertson, M.D., to Mrs. Jessie B. Arundell, both of Chicago, April 7.

Edward William Quick, M.D., to Miss Georgia Hall, both of Appleton, Wis., March 30.

A. Elmer Austin, M.D., to Miss Anne Tyrrell Christy, both of New York City, March 29.

Arthur Barnett Eustace, M.D., to Miss Florence Frances Mix, both of Chicago, Dec. 26, 1909.

Edwin L. Thirlby, M.D., Traverse City, Mich., to Miss Elsie Thirlby, of London, Eng., March 28.

Josiah S. Tyler, M.D., Tagle Bend, Minn., to Miss Clara May Monroe, of Hudson, Wis., March 26.

Charles Richard Bates, M.D., to Miss Marian Gerard Alexander, both of Camp Point, Ill., April 4.

Robert Wellesley Bailey, M.D., to Miss Pearl Waller, both of Germantown, Philadelphia, March 29.

William Patrick Morse, M.D., Farmersville, Ky., to Miss Lena Mae Smith, of Princeton, Ky., March 30.

Joseph Emile Heidingsfelder, M.D., Lobdell, La., to Miss Armentine Allain, of West Baton Rouge, La., March 29.

Wyllys S. Walkley, M.D., U. S. P. H. and M.-H. Service, Grand Haven, Mich., to Miss Louise Lillie of Lowell, Mich, March 30.

## Deaths

**Gordon King, M.D.** Tulane University, New Orleans, 1897; a member of the American Medical Association, and French Laryngological Society; fellow of the American Laryngological Association; surgeon-in-chief of the ear, nose and throat department of the New Orleans Eye, Ear, Nose and Throat Hospital; professor of diseases of the ear, nose and throat in the New Orleans Polyclinic; one of the most prominent young specialists of the South; was thrown from his horse while playing polo, March 26, and suffered a fracture of the base of the skull by a kick from his pony, and died a few hours later, aged 34. At a special meeting of the executive committee of the hospital, memorial resolutions regarding the death of Dr. King were unanimously adopted.

**John Pierrepont Codington Foster, M.D.** Yale University, New Haven, 1875; a member of the American Medical Association and American Climatological Association, and director of the National Association for the Study and Prevention of Tuberculosis; formerly surgeon in the U. S. P. H. and M.-H. Service; a member of the consulting staff of New Haven Hospital; executive chairman of the Gaylord Farm Sanatorium, Wallingford, Conn.; chairman of the State Tuberculosis Commission; a specialist on tuberculosis of international reputation; died at his home in New Haven, April 1, from pneumonia, aged 63.

**William Jacob Points, M.D.** Washington University, Baltimore, 1852; a practitioner of Mount Crawford, Va., until 1865, when he adopted the profession of law; clerk of the circuit court of Albemarle county, from 1869 to 1870; clerk of the federal court, Staunton, Va., till 1875; United States commissioner from 1871-1883; and for several years thereafter commissioner in chancery of the circuit court of Rockingham county; for several terms a magistrate for the central district of Harrisonburg; died at his home in that city, March 25, from cerebral hemorrhage, aged 78.

**John Barr Learned, M.D.** College of Physicians and Surgeons, New York City, 1865; a member of the American Medical Association, Mississippi Valley Medical Association, American Public Health Association and British Medical Association, and formerly president of the Hampshire County (Mass.) Medical Society; died at his home in Florence, Mass., January 24, from nephritis, aged 71.

**Robert H. Harvey, M.D.** University of Nashville, 1868; a Confederate veteran; for several terms justice of the peace; at one time a representative in the Tennessee legislature; proprietor of the Lawrenceburg Mill Company; and president of the Lawrence Bank and Trust Company; died at his home in Lawrenceburg, March 28, from cancer of the face, aged 68.

**Herbert Morton Eddy, M.D.** Geneva (N. Y.) Medical College, 1868; College of Physicians and Surgeons, New York City, 1870; a member of the American Medical Association; physician to the Geneva (N. Y.) City Hospital; since 1893, a trustee of Hobart College; city physician of Geneva; died suddenly at his home, March 27, from cerebral hemorrhage, aged 64.

**John H. Horn, M.D.** University of Louisville, 1886; a member of the State Medical Association of Texas; visiting physician to All Saints' Hospital, Fort Worth; surgeon in charge of the Rescue Home; secretary of the board of trustees of Fort Worth University; died at his home in that city, April 1, from septicemia, due to an autopsy wound, aged 49.

**Penn Walker Ransom, M.D.** Northwestern University Medical School, Chicago, 1879; a member of the American Medical Association; superintendent of the Ransom Sanitarium, Rockford, Ill.; a specialist in nervous and mental diseases; was instantly killed by the overturning of his automobile, near Rockford, April 2, aged 52.

**Henry Shaw, M.D.** Harvard Medical School, Boston, 1854; a member of the Massachusetts Medical Society; a member of the legislature in 1861; surgeon in the Navy during the Civil War; for ten years clerk of state aid in the State House, Boston; died at his home in Beachmont, Revere, March 28, from pneumonia, aged 80.

**William Russell, M.D.** Cincinnati College of Medicine and Surgery, 1875; University of Michigan, Ann Arbor, 1877; for ten years a member of the medical staff of Battle Creek Sanitarium; physician in charge of the Russell Hospital, Minneapolis, Minn.; died at his home in that city, April 2, from general debility, aged 78.

**Calvin May Fitch, M.D.** University of Vermont, Burlington, 1849; New York University, New York City, 1852; for more than half a century a practitioner of Chicago; a life member of the Chicago Pathological Society; died at his country home in Twin Lakes, Wis., April 6, from nephritis, prostatitis and bronchitis, aged 81.

**Charles F. H. Freiberg, M.D.** Saginaw Valley Medical College, Saginaw, Mich, 1902; a member of the Michigan State Medical Society; formerly health officer of Bay City; and secretary of the board of health; died at the home of his father in Bay City, April 1, from heart disease, aged 29.

**Edward Wooten, M.D.** University of Maryland, 1861; surgeon of White's Cavalry, C. S. A., during the Civil War; for two terms a member of the Maryland House of Delegates; and from 1889-1893 state senator; died at his home in Poolesville, April 1, from pneumonia, aged 70.

**Susie May Lewis, M.D.** Bennett Medical College, Chicago, 1903; of Milwaukee; a member of the State Medical Society of Wisconsin; formerly a member of the American Medical Association; was killed in the wreck of a Rock Island train at Green Mountain, Iowa, March 21, aged 52.

**Clarence Hillman Beetle, M.D.** Cooper Medical College, San Francisco, 1908; a member of the American Medical Association; house physician of the Roosevelt Hospital, Berkeley, Cal.; died in that institution, March 26, a few hours after an operation for strangulated hernia, aged 29.

**John Frank Shaffner, Jr., M.D.** University of Pennsylvania, 1899; a member of the Medical Society of the State of North Carolina, and formerly a member of the American Medical Association; of Winston-Salem; died in Richmond, Va., March 22, from septicemia, aged 35.

**William A. Tichenor, M.D.** Washington University, St. Louis, 1879; of Chicago; formerly superintendent of the Missouri State Hospital for the Insane, No. 3, Fulton; was found dead in a hotel in Chicago, April 8, from heart disease and narcotic poisoning, aged 50.

**Charles Wells Whitcomb, M.D.** Philadelphia Medical College; surgeon of the Fifteenth Missouri Volunteer Infantry during the Civil War; died at his home in Myrtle Creek, Ore., February 17, from hypostatic pneumonia, following fracture of the femur, aged 77.

**S. Joseph Collins, M.D.** University of Louisville, 1861; (license, Texas, years of practice, 1907); a surgeon in the Confederate service throughout the Civil War; died at his home in Lovelady, Texas, March 21, from cancer of the stomach, aged 74.

**Jesse J. Wright, M.D.** Pennsylvania Medical College, Gettysburg, 1859; a member of the Medical and Chirurgical Faculty of Maryland; formerly president of the Cecil County Medical Society; died at his home in Warwick, March 26, from pneumonia, aged 73.

**George W. Newman, M.D.** Washington University, St. Louis, 1858; of Mount Vernon, Mo.; died in St. Thomas Hospital, Marshalltown, Iowa, March 28, as the result of injuries received in a train wreck in Green Mountain, Iowa, a week before, aged 76.

**Thomas D. Spencer, M.D.** New York Homeopathic Medical College, New York City, 1878; of Rochester, N. Y.; formerly president and a member of the staff of the Rochester Homeopathic Hospital; died in that institution, March 31, aged 53.

**Samuel S. Miller, M.D.** Jefferson Medical College, 1876; of Stoyestown; one of the oldest practitioners of Somerset county, Pa.; died in the Memorial Hospital, Pittsburg, March 28, after an operation for hemorrhage of the bladder, aged 70.

**William W. Coleman, M.D.** University of Louisville, 1883; a member of the Kentucky State Medical Association; and of the board of health of Mount Washington, Ky.; died at his home in that place, April 1, from pneumonia, aged 54.

**Frederick C. Windecker, M.D.** Denver and Gross College of Medicine, Denver, 1905; for a time a member of the staff of the Phipps Sanatorium, Denver; died at his home in Little Falls, N. Y., March 24, from tuberculosis, aged 25.

**Cornelius A. Covert, M.D.** Western Reserve University, Cleveland, 1869; for half a century a practitioner of Greensburg, Ind.; died at his home in that place, March 29, from dilatation of the heart, aged 79.

**George Runk, M.D.** American Medical Missionary College, Chicago, 1906; of Alma, Neb.; died on a train near Chariton, Iowa, March 17, while en route to his home, from miliary tuberculosis, aged 31.

**Jefferson Kinney, M.D.** Medical College of Virginia, Richmond, 1888; a specialist on diseases of the eye, ear and throat, Roanoke, Va.; died at his home in that city, March 27, from nephritis, aged 41.

**Charles T. Wall, M.D.** Marion-Sims College of Medicine, St. Louis, 1899; surgeon of the Wall Sanitarium, Washington, Ind.; died at his home in Washington, March 28, from pneumonia, aged 33.

**David Thomas Long, M.D.** Eclectic Medical Institute, Cincinnati, 1882; for several years superintendent of the Baptist Hospital, Topeka, Kan.; died at his home in that city, March 20, aged 63.

**Fred A. Brennan, M.D.** McGill University, Montreal, 1902; a member of the Vermont State Medical Society; died at his home in Georgia Center, Vt., March 26, from heart disease, aged 35.

**George John Robinson, M.D.** Jefferson Medical College, 1882; a member of the Medical Society of the State of North Carolina; died at his home in Smithfield, N. C., March 30, aged 64.

**Charles Monroe Carter, M.D.** Kentucky School of Medicine, Louisville, 1861; a veteran of the Civil War; died at his home in Kansas City, Mo., March 26, from pneumonia, aged 70.

**Joseph Warren Odell, M.D.** Harvard Medical School, Boston, 1855; a surgeon in the Federal service during the Civil War; died at his home in Greenland, N. H., March 24, aged 79.

**Joshua Baker Conaway** (years of practice, W. Va.); for forty years a practitioner of Bristol, W. Va.; died at his home in Clarksburg, March 17, from nephritis, aged 76.

**Philander B. Taylor, M.D.** University of Michigan, Ann Arbor, 1885; a member of the Michigan State Medical Society; died at his home in Clio, March 30, aged 69.

**John B. Woodward** (license, Mich., years of practice, 1900); for forty-three years a practitioner of Michigan; died at his home in Ravenna, April 4, aged 63.

**Albert Terry Bryan, M.D.** Rush Medical College, Chicago, 1882; died at his home in Forest City, Iowa, March 28, from cancer of the kidney, aged 57.

**Charles Louis King, M.D.** Vanderbilt University, Nashville, 1909; of Louisville; died in Hot Springs, Ark., March 31, from heart disease, aged 23.

**Lindley Park Cornell, M.D.** Louisville Medical College, 1877; died at his home in Knoxville, Iowa, March 29, from heart disease, aged 55.

**W. M. Pitts, M.D.** Medical College of Georgia, August, 1849; died at his home in Thomson, Ga., March 24, aged 86.

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# *Society Proceedings*

## COMING MEETINGS

Alabama, Medical Association of State of, Mobile, April 19-22.
Amer. Assn. of Genito-Urinary Surgeons, Washington, D. C., May 3-4.
Amer. Assn. of Pathologists and Bacteriologists, Washington, May 3-5.
American Climatological Association, Washington, D. C., May 3-5.
American Dermatological Association, Washington, D. C., May 3-5.
American Gynecological Society, Washington, D. C., May 3-5.
American Laryngological Association, Washington, D. C., May 3-5.
Am. Laryn., Rhin. and Otol. Society, Washington, D. C., April 28-30.
Amer. Medico-Psychological Association, Washington, D. C., May 3-5.
American Neurological Association, Washington, D. C., May 3-5.
American Ophthalmological Society, Washington, D. C., May 3 4.
American Orthopedic Association, Washington, D. C., May 3-5.
American Otological Society, Washington, D. C., May 3-5.
American Pediatric Society, Washington, D. C., May 3-5.
American Surgical Association, Washington, D. C., May 3-5.
American Therapeutic Society, Washington, D. C., May 5-7.
Arizona, Medical Association of, Phoenix, April 20-21.
Association of American Physicians, Washington, D. C., May 3-5.
California, Medical Society of State of, Sacramento, April 19-21.
Conf. State and Prov. Bds. of Health, Washington, April 28-29.
Congress of Amer. Phys. and Surg., Washington, D. C., May 3-5.
Connecticut State Medical Society, New Haven, May 25-26.
District of Columbia, Medical Association of, Washington, April 26.
Georgia, Medical Association of, Athens, April 20-23.
Illinois State Medical Society, Danville, May 17-19.
Iowa State Medical Society, Des Moines, May 20-21.
Kansas Medical Society, Topeka, May 4-6.
Louisiana State Medical Society, New Orleans, May 3-5.
Maryland, Med. and Chirurgical Faculty of, Baltimore, April 26-28.
Missouri State Medical Association, Hannibal, May 3-5.
Montana State Medical Association, Hunter's Hot Springs, May 11.
Nebraska State Medical Association, Lincoln, May 10-12.
New Hampshire Medical Society, Concord, May 12-13.
North Dakota State Medical Association, Grand Forks, May 10-11.
Ohio State Medical Association, Toledo, May 11-13.
Oklahoma State Medical Association, Tulsa, May 10-12.
South Carolina Medical Association, Laurens, April 19-21.
Texas, State Medical Association of, Dallas, May 10-12.

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## PHILADELPHIA PEDIATRIC SOCIETY

*Special Public Meeting Held March 22, 1910*

### SYMPOSIUM ON MENTALLY DEFECTIVE CHILDREN

### Obstetric Accidents Causing Mentally Defective Children

DR. EDWARD P. DAVIS: We may consider this subject under first, the accidents of pregnancy; second, the accidents of labor. Experiments show that continuous or violent disturbance of an impregnated ovum results in malformation and the production of monstrosities. Maternal impressions from fright or physical violence are undoubtedly followed by the birth of individuals malformed, and in many respects with altered minds. The coincidence is too widely observed to admit of doubt, but the precise manner in which the effect is produced is not clearly demonstrated. Sufficient is known to make it of the most importance that, in the interest of her offspring, the pregnant woman be not subjected to sudden or violent mechanical force or to great nervous shock. Great disturbance in maternal metabolism may result in the birth of malformed and defective children. Hereditary peculiarities of metabolism may influence the development of the fetus, and disturbances in fetal metabolism may also result in the production of defective offspring. Children born during maternal eclampsia may perish from eclampsia or suffer permanent injury to the nervous system. Race degeneration from alcoholism and syphilis furnish familiar examples of the birth of deficient offspring. The accidents of labor affect the fetus through birth pressure and asphyxia. Strict enforcement of the proper hygiene of pregnancy will protect the fetus from the accidents which threaten its intrauterine existence. Clinical experience and a better knowledge of pathologic chemistry enable us to detect maternal and fetal toxemia before eclampsia results and to save the lives of mothers and children. Essential improvement in fetal mortality and morbidity is one of the most striking results of the development of modern obstetric surgery. Still further improvement can only be obtained by applying to all complicated labors the principles and practices of modern surgical technic.

### Relation of Ocular Defects to Defective Mentality in Children

Dr. W. T. Shoemaker: Defective mentality is here considered only as applied to children who are deficient or backward, but withal tractable, and offering promise of betterment or standardization. In the examination of the eyes of such children nothing is seen which is not found often enough in children of normal mentality, nor are the deviations from the normal of a strikingly high degree; they are, however, more constant. The relationship between ocular defects and defective mentality is not one of cause and effect; both mental and ocular deflections are equally related to some other common cause. The observed phenomena belong as a rule to that class designated by Walton as deviations, in contradistinction to the so-called stigmata of degeneracy, and children so affected are better classed as deviate or deviates than as degenerates. The ocular deviations may be noted in any part of the ocular apparatus. Errors of refraction have received more attention and more condemnation than all other eye defects combined. Backward children do not as a rule suffer from eyestrain. Ametropia is not a cause of mental deficiency in children but is a serious obstacle in the way of mental development. In dealing with defective children, all obstacles must first be removed, and it must be remembered that all knowledge of the outside world must reach a child through the special senses. There should be secured to the child the best possible vision with the least possible effort. Parents, guardians and teachers should be instructed in the status of the backward child, taught the possible significance of the outward signs of backwardness, and should search for peripheral irritations and obstructions, particularly for those connected with the organs of special sense.

### Hearing and Speech of the Backward Child

Dr. G. Hudson Makuen: Three important cerebral faculties are suggested in the title of my paper, those of hearing, speech, and intellectualism, and they are so closely interwoven in respect to their functional activities that no one of them can reach its highest point of efficiency without a corresponding development of the other two. The cortical centers representing these faculties have a close physical interrelationship in their structural development, and each one may be thought of as training or educating the other two. For practical purposes, at least two classifications of defective children should be made. In the first class I would put all those whose defects are of organic origin; in the second class, those whose defects are of functional origin. The classification is not always easy to make and it is my custom to treat all doubtful patients as if they had a structurally normal brain and nervous system until treatment fails to produce the results expected under such conditions. The three avenues by which impressions of speech are carried to the brain are the auditory, the visual and the tactile; and if for any reason one of these avenues becomes closed or is undeveloped, the other two may be trained, up to a certain point, to perform the function of the third; and, as has been strikingly proved in the one case of Helen Keller, two of the avenues may be closed and yet great efficiency acquired by the individual in the use of speech and language. The teacher who does not possess sufficient knowledge of the psychophysical conditions underlying deafness and feeble-mindedness to enable him to determine, to some extent at least, the nature of the difficulties to be overcome, can scarcely be expected to have the necessary patience and skill for the practical application of successful remedial measures.

A little girl of 11 was practically a deaf mute when brought to me three years ago. She has no relative similarly affected. She has never been very strong and had whooping cough when 2½ years old. Her health is now fairly good and she is mentally alert and physically active. I removed her tonsils and adenoids in July, 1907. For the past three years she has been under treatment for deafness and defective speech. In addition to the ordinary treatment for her hearing I have been trying to teach her to make use of the hearing which has been developed and which she seems to have in somewhat latent form. She is now attending one of the special public schools and is getting on very well. She has learned to read the lips readily and speaks very well. The case illustrates some of the advantages of keeping deaf children in their homes and associated with hearing people. The credit of this case belongs largely to the child's mother who has acted on the suggestions which have been given her. Another patient is a boy of 8 whose speech was almost unintelligible. He has been under treatment for about a year in the home of one of my assistants and has made progress.

### Possibilities of Development for Mental Defectives and the State's Care of Them

Dr. Martin W. Barr, Chief Physician, Pennsylvania Training School for Feeble-Minded Children, Elwyn, Pa.: Building on Itard's methods for the awakening of the emotions through the exercise of the senses, adding to it Locke's theory of the connecting link between sensation and idea, Seguin gradually formulated a program which, verified in Paris, he later brought to America, and lived to see the fundamental principle governing the development and training of mental defectives throughout the world. It involves the careful diagnosis of physiologic and psychologic conditions, the development and strengthening of faculties and aptitudes or, as necessity may indicate, the restraining of certain instinctive and moral tendencies. Thus a study of functions and aptitudes, and the enlisting of the emotions, has revealed manual training to be a superlative motor in the development of mental defectives, while a prolonged observation of instinctive and moral tendencies shows a predominance of the former over the latter, amounting in many cases to absolute exclusion of the moral sense necessitating constant and life-long surveillance and protection. As schools for the feeble-minded have multiplied, individuals of similar aptitudes have been massed, the trainable being separated from the untrainable until a clear-cut grouping, according to ability and with corresponding occupations provided, has become the natural result. From this experience, an educational classification has been formulated meeting the needs of every known form of mental defect. From the classification it is obvious that a correct diagnosis is of primary importance. It is absurd to speak of cure. Defect is not disease as is insanity, and even when brought to its best condition, that irresponsibility—the unfailing characteristic of this perpetual childhood—precludes permanent success in anything. The influence of our methods on public education is evidenced in the recognition of backward children and the special schools furnished by boards of education. It is estimated that there are about 10,000 avowed cases of mental defect in Pennsylvania. Of these, the state provides for only 2,479. It is greatly to be desired that more adequate provision for both protection and prevention of mental defectives may be made and that, too, along lines of massing and grouping such as experience has already proved most practical and economical, giving asylums for the idiots and helpless classes, custodial institutions for moral imbeciles with suitable occupations; and training schools from which laborers and artisans may be drafted. These provisions should be accentuated and strengthened by the two essentials, asexualization and permanent sequestration.

### How to Get the Best Results in Training the Mentally Deficient Child

Mr. E. R. Johnstone, Vineland, N. J.: The first thing to do is to make a careful inquiry concerning the results of the training in the past. The mentally deficient child is actually trainable to a noticeable degree only through a space of a very few years. The most important factor in training is the selection only of those things which will lead to knowledge and power such as the pupil is likely to want to use and to have the opportunity to use. The mentally deficient child if actually defective should be under custody somewhere all his life. He will never earn his living by head work and, therefore, will need only enough of the "three R's" to teach him the simplest things. We must begin with the child and try first to ascertain those things which make him happy. If he is quite low-grade he likes to do things near or with the people who will give him much attention. There should be more direct connection of activities between the home and the school. The teacher of the defective child must train him through things which he understands, must begin on known ground.

Mentally defective and mentally deficient children will always be found in the public schools. These should be placed in special classes and the teachers should be the best obtainable who will hold before themselves always this question: Will this particular child ever use, or ever be able to use this thing I propose to teach it? To help answer this question there should be careful investigation of what has become of the children who were slow in going through the primary classes and those pupils who leave school over age but far behind. The class rooms for these children should be large, light and well ventilated. The regular desks should give way to tables and chairs which can be removed to one side and so give a large floor space for games, etc. There should be work benches and all ordinary needful tools and supplies. Window boxes, gardens, etc., lead to practical nature study which should be a direct step toward farming. Most of the girls may become good house girls and the boys will be assistants to carpenter, plumber. painter, etc. I am not asking that these children be made mechanics or artisans, but that realizing their deficiencies they be prepared in every way for the life they will probably lead.

### Discussion

**Dr. William Burks**, Bureau of Muncipal Research: We need very much some rough-and-ready test to indicate somewhat definitely the degree of departure from the normal of a given individual. The importance of that from a non-scientific point of view is that most of the mental defectives are not known. Such children are known to be queer, or stupid, or asinine, but no one knows just what the trouble is. I suspect that there are several hundred children in the schools of Philadelphia who do not belong there; they are in the way of other children, of the teachers, and of themselves, worrying along, becoming more nervous and more backward. We want the right thing done for the children, and if segregation and asexualization of defective children are proper methods, they ought to be carried out. That will not be done, however, until the people are educated to look for a test separating the defective from the normal. We ought not to be talking so much about curing or treating backwardness as about preventing it.

**Dr. James Thorington**: In my experience of sixteen years in examining the eyes of children at Elwyn and Vineland, I have noted much improvement from the proper adaptation of glasses to bring up the visual acuity. In a number of cases marked change was noted in the dispositions of the children.

**Dr. Walter S. Cornell**: In asking for a rule by which any one can diagnose these defective children it must be remembered that inherent feeble-mindedness is essentially a medical subject. A diagnosis can best be made from the sociologic, physiologic and pedagogic points of view. In the doubtful case one must subtract or add for the child according to its mentality or environment.

**Dr. S. D. Risley**: I think we should have another chair in our medical schools which should be specifically devoted to the study of sociologic medicine. It seems to me that the only person qualified to make such a classification as has been asked for is the expert. Such a classification is important not only for the teacher but for those members of the medical profession who are studying how they may benefit the backward child. It seems to me that the so-called backward child should be separated from the defective child in the sense in which this term has been applied by Dr. Barr and Mr. Johnstone. The former can be helped. The latter is helpless and hopeless from the cradle to the grave. It is of little value to put spectacles on a child who is essentially an imbecile. Many of those placed by Dr. Barr in the high grade can be helped very materially by removing some defects of their special senses, but their mentality is not such as to make them useful citizens aside from the training and care given in an institution. The backward child may be backward because of defective eyes, which is quite different from being mentally defective.

**Dr. Ernest Laplace**: The diagnosis of mental deficiency is no more to be treated in a haphazard manner than is the diagnosis of fever. Without knowing the cause we are not likely to know the remedy. From the surgical standpoint I find that a child is often backward because of adenoids or phimosis, or because of tongue-tie. There is also the general condition of backwardness in a child because the brain retains a certain amount of pathologic results of a former disease that the child has acquired or inherited. Sometimes a child is backward and the cause may be found in mother, father or grandfather. Congenital syphilis may not manifest itself until later years and sometimes in an obscure form. There is necessity for another chair in our medical schools, a chair of eugenics. The question must be thrown back to the source of medical education and the medical schools must take up the question and furnish means whereby a child can be located in a school for backward children and given a prescription. As in nervous diseases, we give massage, etc., so also there must be treatment according to the prescription of the professor of eugenics.

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## ASSOCIATION OF AMERICAN MEDICAL COLLEGES

*Twentieth Annual Meeting, held at Baltimore, March 21-22, 1910*

*(Continued from page 1229)*

### The Five-Year Course

**Dr. John W. Scane**, McGill University: That the medical course should be extended beyond the four years seems pretty well agreed both in this country and in Canada. The problem seems to be to decide whether the added year be devoted to the primary branches, including the preliminary scientific subjects, or to increased clinical work in the hospitals. Many schools have solved the problem to their own satisfaction by demanding a high standard of preliminary education. From the standpoint of time, is it not possible to ask the student to spend too many of the most valuable years of life within the four walls of a college. One, or, at most, two years in the academic course should be sufficient, and most of that time should be spent in the study of science subjects. The ordinary work of the academic course in the science subjects is not, as a rule, extensive enough, nor is it suited to the special needs of the medical student. Therefore, courses should be arranged with a definite purpose of emphasizing their bearing on the basic subjects of anatomy and physiology. At McGill it is felt that the first year of the five-year course is as much a part of the medical course and as necessary to the student's future success as is the final year, which is spent in the study of clinical subjects in the hospital. The object has been to increase the number of hours devoted to the preliminary science subjects and to give as much of the additional time as possible to bedside work in the hospital. Most of the fifth year is devoted to hospital work. During the first year, biology, embryology, general chemistry, physics, anatomy, histology, and elementary bacteriology are taught. The second year work includes histology (up to Christmas), anatomy, physiology, organic and biologic chemistry, and pharmacy; the third year physiology (including physiologic chemistry), pharmacology, pathology, bacteriology, clinical microscopy and clinical chemistry are taught; the student also begins to visit the hospital, and is instructed in physical diagnosis, surgical methods and minor surgery. The fourth year takes up therapeutics and materia medica, medicine, surgery, obstetrics, gynecology, medical and surgical anatomy, and pediatrics. Hygiene, medical jurisprudence and mental diseases are taught in the fifth year. In Canada one of the provinces requires five years in medicine, a second province has just made this requirement, and four of the western provinces will follow suit.

DISCUSSION

**Dr. Eli H. Long**, University of Buffalo: Several institutions in this country have had an optional fifth year, but, on the whole, this has not been satisfactory. I believe that if the fifth year is made obligatory we are on the right track. Some colleges have made the fifth year a hospital internship year. It seems as though the fifth year will be inevitable, but it must be compulsory. Even now, most graduates enter a hospital after graduation, so that the best students voluntarily add a fifth year to their training. In adding the fifth year we must not think of overcrowding the student by adding extra work to the curriculum.

**Dr. A. Ravogli**, Ohio State Medical Board: I would advocate making the fifth year an obligatory hospital internship or, as is done in some countries, a year spent in practice under the guidance of a preceptor.

**Dr. Egbert Le Fevre**, University and Bellevue Hospital Medical College: I think the Canadians have solved this problem in a very practical way. We must remember, however, that it is the function of the medical school to make physicians but not the finished product. If a man does not get his theoretical training in a medical school, the probability is that he will never get it, so that we must have enough time for theory. When he comes to the five-year course we must decide whether it shall be purely a hospital training, or scientific training. I hope in the near future to see this association arrange a five-year curriculum so that when the time comes we will be ready for it.

**Dr. J. W. Holland**, Jefferson Medical College: When the curriculum committee of the Council on Medical Education of the American Medical Association prepared its schedule, the hours numbered 4,600, which was considered at least 600 hours too many. When the respective chairmen of the different groups were asked to cut down on their hour requirement. each one protested. I then proposed lengthening the course, as that seemed to be the only alternative, but the proposal did not meet with approval because it would give 400 hours to the biologic subjects that had been pushed out into the state universities. There is a vast difference between work done in the college and that done in the medical school. Not enough time is given to medical instruction. That forces the students at the expense of the final product. The majority of the students in many of the eastern schools take five years in medicine now. From 60 to 80 per cent. of the graduates in Philadelphia take hospital work for from 12 to 18 months after graduation. The hospital supports these students during that time, so that the item of expense is eliminated. If a sufficient number of colleges got together and agreed that at the beginning of the 1911 course they would demand five years in medicine, it could be carried out.

**Dr. E. P. Lyon**, St. Louis University: I favor demanding five years in the medical school rather than a preliminary year in the literary college because the literary colleges on which we are dependent for students are not prepared to give the students adequate training in one year in chemistry, biology and physics. Even if they were prepared, these subjects would be taught better in the medical school. Therefore, our school will make the preliminary year definitely one in the medical school.

**Dr. Isadore Dyer**, Tulane University: At Tulane 10 per cent. of the students remain in the Charity Hospital for two years, making a six-year course. Many more would take advantage of this if opportunity were offered.

**Dr. W. B. Hill**, Marquette University: If we could lengthen the annual course, shortening the vacation period by, say, one month, we could easily cover the ground. The children in the public schools have a ten months' session, practically forty weeks, and there is no reason why the medical student, who is better prepared to study than these children are, cannot do as much.

## The Medical Curriculum

**Dr. William H. Welch**, Johns Hopkins University: The object of medical education is to make good physicians. A given course that has no bearing on such training has no place in the medical curriculum. It is impossible to impart all of medical and surgical science to the student in four or five or even more years. The most we can expect to do is to give the student a fair knowledge of the principles of the fundamental subjects in medicine, the power to use the instruments and the methods of his profession, and to appreciate his attitude toward his patients and toward the fellow members of his profession. Put him in a position to carry on his education himself, because his education is only begun in the medical school. Of course, much depends on the teacher. No one could sit under John Dalton and men of his type without getting an education, an inspiration and a stimulus for the rest of his life. I think there is great danger in attempting to standardize the curriculum, because our methods of education are by no means final. We are only in a transitional stage in medical education. We should not attempt to set up anything in the way of a rigid uniform curriculum and, above all, it is nothing short of a calamity for state boards to indicate in their requirements for licenseship to practice what the standards of the curriculum should be. As to what shall be the context of the medical curriculum, I think the seven principal subjects still remain the backbone of medical education: Anatomy, physiology, pharmacology, pathology, medicine, surgery, and obstetrics and gynecology. Of course, every medical school must be in the position to offer elective work in the so-called specialties in medicine. It is impracticable to give the student thorough training in any specialty during his undergraduate life. I hope the time has come for nearly all schools to exclude from the medical curriculum studies which should be preparatory to the study of medicine, such as general chemistry and physics. They have no place in the medical curriculum. If educational conditions are not such as to include proper training in general chemistry, I dare say it is still necessary that it be taught in the medical school, but we must look on that as an impediment.

It is also important that the curriculum should not be too crowded. The student should have time for reading, exercise, and the digestion of knowledge. Courses in the specialties should be more or less optional, although there should be a minimum requirement in each subject. In the ideal curriculum there should be certain subjects which are optional, and others which are obligatory. Students should also be given the opportunity to take major and minor courses in the essential subjects. Only a very few medical schools can at present construct a curriculum on this basis, but it is none the less the ideal course. At Johns Hopkins this plan is pursued on the trimester system, and it is working out beautifully. As regards the arrangement of the curriculum, the so-called laboratory subjects are given during the first two years, and the practical subjects during the last two years. It is a question whether the student should not be given the opportunity to come in contact with patients as early as his second year in college. It would be a very decided improvement.

The character of the curriculum will depend a good deal on the methods of teaching. Laboratory teaching is, of course, ideal, but it must be supplemented by quizzes, recitations, and outside reading, so that the student will have a broader and more comprehensive view of the subject. It is certain, however, that we can devote more time than we do to-day to laboratory methods. We must improve the curriculum in the clinical department. The great thing to-day is a proper relation of the medical school to the hospital. It is a difficult thing to establish such a relation. If hospitals saw their interests, I think they would establish closer relations. The ideal is for the school to have its own hospital, and that, I think, is the most urgent need of medical education to-day.

My plea is for a flexible curriculum and not for a uniform, standardized, rigid curriculum. The state boards have had their influence on the character of the medical curriculum. State board examinations have been of great value to medical education; they have crowded the poorer schools to the wall and raised the standards of those that survived. At the same time, the character of these examinations is not such as is adapted to the best sort of a medical curriculum, because they are not practical examinations.

## State Boards and High Entrance Requirements

**Dr. Herbert D. Harlan**, Maryland State Board of Medical Examiners: State boards, while far from perfect, have done, are doing and will continue to do good and effective work. There ought to be a few richly endowed medical schools taking high ground, admitting only students who are well-advanced, and giving them every possible advantage. But the boards and this association are not concerned with these. It is our duty to fix and maintain minimum standards of medical education. The maximum should have no limit. It is my opinion that no one thing will do as much to raise the standard of a medical school as a high entrance requirement. It is also my opinion that a good four-year high-school course is at this time a sufficient requirement, and that boards and associations, councils and committees on medical education will have full scope for all their energies if they devise an effective way to enforce strictly the present standards of entrance requirements.

### DISCUSSION

DR. AUGUSTUS S. DOWNING, New York Board of Regents: There are two standards. The first is the local standard, which is determined by the legislature, and interpreted by the state board in the interest of the people, and not in the interest of institutions. The second standard is the institutional standard. The former should be made just as high as possible to the best interests of the people of the state, while the institutional standard should be made as high as the institution can carry. Before determining what a standard is, however, one must know where it comes from. There are high schools and high schools. Some high schools, four-year schools, are not doing any more work than would entitle them to be considered one-year schools. In New York high schools are rated on that basis. Every state should know what the instruction of every secondary school in the state is worth. Some colleges, for instance, give an A.B. degree when in reality the work done has not been that of a two-year high school. So when we come to talk about standards, we must bear in mind what the work of these secondary schools is. Wherever a locality can put up a standard to one year of college work, wherever the law will bear it out, wherever the condition of the institution will warrant it, by all means put it up; but remember that a general rule cannot be asked for in this country. When a school has the means and the power to do university work in medicine, it should do so.

### Teaching of Ophthalmology

DR. A. R. BAKER, Cleveland College of Physicians and Surgeons: If all medical schools taught their students how to refract, the family physician would be in a position to do this work, the optometrist would pass out of vogue, and we would not have to fight optometric legislation. The teaching of ophthalmology is not carried out properly in most medical schools, the average teacher is contented to do a few cataract operations, to exhibit a few cases of obscure diseases of the eye, to point out the difficulties of diagnosis, and to impress on his students not to meddle with the eye, but to send all these patients to the specialist. I would advise teaching anatomy, histology and embryology of the eye to the freshmen, physiologic optics to the sophomores, refraction, retinoscopy and ophthalmology to the juniors, and practical work to the seniors

### Economic Value of Refraction by Family Physicians

DR. LEARTUS CONNOR, Detroit: Family physicians as a class lack a working knowledge of simple refraction. Recognizing the value of the possession of such knowledge, a number of state boards are now requiring as a prerequisite for licensure a practical test in refraction. At present, very little of this work is being done by the family physician because of his inability, and yet we are all agreed that the income of the family doctor would be increased very considerably if he were able to do refraction work. It would form a point of contact with the specialists. The simple cases would be taken care of by the family doctor; the complicated ones by the ophthalmologist. There would be no need for opticians and optometrists. The interests of the patient would be concerned, the relationship of the physician to the patient would be strengthened, and in every way conditions would improve. Hence, if the study of refraction enables the family physician to place more correct lenses before the eyes of his patrons, there is an increased economic value to be credited to ophthalmology. There is no more reason for sending every refractive case to a specialist than for sending every obstetric, surgical or nervous case to a specialist.

## *Medical Economics*

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

### Legislation in Kentucky

The medical profession in Kentucky has been remarkably fortunate in securing from the state legislature during the past session the enactment of all the measures which it desired. H. B. 108, which provides for the punishment of any person procuring a miscarriage on a pregnant woman by any means whatever has become a law. Section 4 of the law provides that the woman herself shall be a competent witness in any prosecution and shall not be considered an accomplice. Senate Bill 26, establishing a bureau of vital statistics and providing for the reporting of births, deaths, etc., has also been passed. The annual appropriation bill contains provision for an appropriation of $30,000 for the use of the State Board of Health and $10,000 for a hospital for incurables. This is certainly a creditable record and the enactment of these laws will do much for the cause of public health in Kentucky.

The *Kentucky Medical Journal*, for April, says editorially: "The General Assembly adjourns just as the *Journal* goes to press, and we have only time to announce that, thanks to an united profession and its lay friends, and especially to the devoted brother physicians in the legislature, every one of whom is a member of his county and state society, every measure for which the profession stood was passed by a practically unanimous vote. . . . Far more was done to protect the health and lives of the people of Kentucky by this legislature than was ever done by any other in the history of the state, and if we continue to prove worthy of it, the possibilities of the future are without limit."

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### POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

### Ninth Month—First Weekly Meeting

SUBJECT FOR THE MONTH: DISEASES OF THE NOSE AND THROAT

ANATOMY

NOSE: External nose; bony arch, cartilaginous arch, alæ, septum. Nasal cavities, Schneiderian membrane, turbinated bones, meati, nerves, blood-vessels. Accessory sinuses.

PHARYNX: Divisions, attachments, muscles, nerves, blood-vessels, lymphatics.

LARYNX: Shape, position, attachments, cartilages, ligaments, muscles, vocal cords, blood-vessels, nerves.

PHYSIOLOGY

NOSE: Smell, warming air, resonant cavity, filtration of air.
LARYNX: Voice production, function of pharynx.

EXAMINATION OF UPPER AIR PASSAGES

LARYNGOSCOPY: Physical laws involved, illumination, instruments.

ANTERIOR RHINOSCOPY: Pharyngoscopy, posterior rhinoscopy. Digital examination of nasopharynx. Laryngoscopy.

DISEASES OF THE NOSE

ACUTE RHINITIS: Etiology, treatment.
SIMPLE CHRONIC RHINITIS: Diagnosis, treatment.
PURULENT RHINITIS: Symptoms, treatment.
HYPERTROPHIC RHINITIS: Pathology, diagnosis, treatment. Use of galvanocautery, chromic acid, snare.
ATROPHIC RHINITIS: Etiology, symptoms, treatment.
NASAL HEMORRHAGE: Etiology, treatment.

REFERENCE BOOKS FOR THE NINTH MONTH.—Works on Diseases of the Nose, Throat and Ear, by Packard, Shurly, Coakley, Kyle (D. B.), Gleason and Bosworth.

## Medicolegal

### Physician's Claim Not Kept Alive by Payments by Patient's Wife—Admissibility in Evidence of Diaries

The Third Appellate Division of the Supreme Court of New York says that, in the case of Mott vs. Ingalsbe, as executor of one Northrup, deceased (120 N. Y. S. 151), the plaintiff, a physician, was awarded by a referee $170 on a claim of $1,744 for professional services rendered to said Northrup during a period extending over 21 years prior to his death. The referee decided that the statute of limitations of the state of New York was a defense to so much of the claim as accrued more than six years prior to the death of the said Northrup, and permitted a recovery for whatever services the plaintiff was able to prove had been rendered within such period of six years. The court considers that the referee correctly applied the statute of limitations. The payments claimed to have been made on account of the services were made by Mr. Northrup's wife, without his knowledge or consent; nor were they, so far as appeared, authorized or ratified by him, so that they did not remove the bar of the statute, or keep the rejected portion of the claim from being outlawed.

But the referee, the court holds, erroneously excluded from evidence some of the plaintiff's books of account. These consisted of divers small books or diaries containing original entries of his professional visits. If admitted in evidence they would have tended to show that he had rendered more professional services within the six years prior to Mr. Northrup's death than he was able to demonstrate without the aid of such books. Two witnesses testified that they had previously employed the plaintiff from time to time, and that they had settled their accounts with him from his books, and on such settlements found his books to be correct. The accounts thus testified to by these witnesses were contained in four books. The referee found that the accounts of these witnesses as contained in the books were correct, and that the said four books were honestly and fairly kept, but excluded the remainder of the books because they contained no entries of the accounts which were settled by these witnesses. It appeared that the plaintiff kept no clerk, and some of the services indicated by the books had been in fact rendered to Mr. Northrup as found by the referee. The preliminary proof necessary to make the books admissible in evidence was thus brought squarely within the rule declared in Vosburgh vs. Thayer, 12 Johns. 461, and many times reiterated. If these accounts had all been kept in one book, unquestionably such book, after the preliminary proof here made, would have been competent evidence. The fact that they appeared in various books was an unimportant circumstance. What was required within the rule of the Vosburgh case was proof that the plaintiff kept "fair and honest accounts, and this by those who have dealt and settled with him." The purpose of this requirement is to raise a presumption of the accuracy of the bookkeeping methods, and such presumption, when established, is not necessarily limited to the books containing the accounts of the witnesses called to establish the fairness of such accounts.

The judgment must be reversed, the referee discharged, and a new trial granted.

### School Not "Regularly Conducted" if Incorporated Only in Another State

The First Appellate Division of the Supreme Court of New York has rendered a decision of general importance and interest in People vs. Reid (119 N. Y. S. 866), although the application in the case was but for a license to practice osteopathy in the city of New York. The "college" from which the applicant for the license claimed to be a graduate, it appeared, was located in the city of New York, but was incorporated under the laws of the state of West Virginia, as a stock concern, and had not been given permission by the regents of the state of New York to assume the name "college" or to confer diplomas or degrees, and had not obtained from the secretary of state a certificate authorizing it to do business within the state of New York. The evidence, the court holds, made the question as to whether this was a school or college regularly conducted, within the purview of the statute, one of law, which is decided in the negative.

The legislature of the state of New York evidently intended, the court says, to provide for licensing osteopaths who are graduates in good standing of a school or college of osteopathy duly organized, existing, and conducted under the laws of any state or territory within the United States; but it was not intended to provide that graduates of schools or colleges of osteopathy conducted within the United States, but without the sanction of the law of the state in which they are conducted, which is presumed to provide for proper supervision, should be licensed to practice osteopathy. Surely the legislature did not intend to recognize a school or college which was being conducted in violation of the laws of this state (New York), nor did it intend to recognize a school or college conducted in any other state or territory in violation of the laws of that state or territory.

It will not do to give to the words "regularly conducted school or college" the limited meaning for which counsel contended, namely, that they have reference only to the regularity of the sessions and continuity of the course of study at the school or college. The word "regularly," as used in legal proceedings and statutes, has a much broader meaning, and is ordinarily used in the sense of "duly," which means "lawfully," or "legally;" and such, the court thinks, is the meaning that the legislature intended by the use of those words in the provision of the statute involved here.

### Qualification of Physicians as Expert Witnesses

The Supreme Court of Florida, Division B, says, in Copeland vs. State (60 So. R. 621), a homicide case, that a physician as witness was allowed to testify to the physical symptoms produced by strychnin poison, and to the exaggeratedly congested condition of the abdominal viscera of the deceased which he found to exist on an autopsy made by him of her body shortly after her death, and to state that the conditions that he found might have been produced by strychnin or ergot poisoning. He also stated that he had never had any personal experience with a case of strychnin poisoning; that all that he knew about it was derived from the study of medical books. A motion was made to strike out this evidence on the ground that the witness showed by his testimony that he had not had any personal experience or personal observation in cases of strychnin poisoning, but the motion was denied, and the court does not think that there was any error here, the rule being that, to give an opinion on medical questions, one may be qualified by study without practice, or by practice without study.

## Current Medical Literature

### AMERICAN

Titles marked with an asterisk (*) are abstracted below.

### Medical Record, New York

*March 26*

1 The Sense of Contact and the Genesis of Pleasure and Pain. E. B. Bronson, New York.
2 *Diagnosis and Treatment of Intestinal Protein Indigestion. A. E. Thayer and R. C. Turck, Jacksonville, Fla.
3 Nuclein by Intravenous Injection in the Treatment of Tuberculosis. E. P. Ward, St. Louis.
4 Personal Experiences with a Few Cases of Pellagra. P. V. Anderson, Morgantown, N. C.
5 Sinus Thrombosis Complicated by Cerebellar Abscess and Purulent Leptomeningitis. A. Braun, New York.
6 Salivary Calculi. G. T. Welch, Passaic, N. J.

*April 2*

7 *Visceral Sarcomata: Sarcoma of the Stomach, Heart, Mediastinum, etc. W. G. Thompson, New York.
8 The Surgical Management of Urethral Stricture and its Complications. E. Fuller, New York.
9 Freud's Views of the Mechanism of Hysteria. J. Smith and M. L. Neff, Brooklyn.
10 The Athletic Life in its Relation to Degenerative Changes in the Cardiovascular System. R. E. Coughlin, Brooklyn.
11 Acute Hemorrhagic Pancreatitis: Autopsy. J. C. Calhoun, Buffalo.
12 Uro-ureter from Neoplasm. B. Robinson, Chicago.
13 Cataract Operation on the Insane. F. M. Fernandez, Havana, Cuba.

2. **Intestinal Protein Indigestion.**—Thayer and Turck claim that intestinal indigestion of proteins is very frequent. Tryptophan is split off in the course of protein digestion, from which are produced indican and indolactic acid, which appear in the urine. They are the cause of symptoms of autointoxication. The clinical symptoms due to protein indigestion are manifold. Any of the great systems of the body may become deranged through them. For a long time the trouble is functional, but organic disturbances may result. Patients with enterotoxemia are frequently treated for long periods for anemia, headache, neurasthenia, disease of the skin, the liver, or the kidneys, or for "dyspepsia" of undefined type, with but transient, if any; relief, and frequently drift from one physician to another in habitual invalidism. Almost without exception they are self-medicators, repeatedly prescribing cathartics and other drugs for themselves, for experience has shown them that a brisk purge gives relief for a day or two. A patient may be in apparently good condition with no marked loss of weight, and without pallor, and may have a fair appetite; or there may be severe anemia, marked decrease in weight, lassitude, mental weariness, insomnia, melancholy, constipation, scanty urine and albuminuria. As a rule, the history covers periods of months or even years, and often includes an unwise use of proteins in the diet. Cases of protein enterotoxemia are more common among adults, but they may also be found among infants. It is very important to observe that this condition of protein enterotoxemia is almost without exception secondary to some other condition. The treatment includes cleansing of the bowels by laxatives, administration of ferments, removal of much protein material from the diet, intestinal disinfection, treatment of gastric secretions, and tonics.

7. **Visceral Sarcomata.**—In forty-three cases of sarcomata seen by Thompson, the disease showed the usual predilection for the jaw, pelvic bones and thigh. There were also seven cases involving lymph nodes in the neck. The growths were multiple, but there was no tendency to visceral or cutaneous metastases. One visceral case involved the kidney and one the occipital lobe of the brain, without metastases. There was one case of lymphosarcoma of the intestine in a patient 53 years of age, but there was no involvement of the other viscera or skin. In two cases the tumor was situated in the right orbit, without metastases to the liver or other organs. There were two cases of melanosarcoma of the skin with multiple growths which were very numerous. They were also without metastases, apart from the skin, at the time at which they were under observation. One of these cases involved the trunk and lower extremities, the other the trunk and upper extremities. This series of cases emphasizes the comparative frequency of visceral metastases, even when the local growths had attained to considerable size, whereas in the four cases of Thompson's personal series, the visceral extension was the most serious part of the disease. In one of these cases the primary tumor was in the eye, the metastases in the liver appearing three years after the eye tumor began. In the second case, a rapidly growing mediastinal lymphosarcoma caused sudden death from pressure. The third case, a melanosarcoma, showed 185 skin tumors appearing after the removal of a pigmented mole. The lung of the left side was almost solid. In the last case a sarcoma of the stomach involved also the heart and kidneys.

### Boston Medical and Surgical Journal

*March 31*

14 *The Treatment of Infections of the Urinary Tract with Bacterial Vaccines. H. F. Hartwell and E. C. Streeter, Boston.
15 Ectopia of the Kidney: Report of Cases. J. C. Munro, Boston.
16 *Correlation of Respiration and Heart Beat During Exercise. E. A. Wright, Boston.
17 *Growing Pains: Possible Mechanical Explanation. L. T. Brown, Boston.

14. **Treatment of Infections of the Urinary Tract with Bacterial Vaccines.**—Hartwell and Streeter report in detail cases of urinary infection in which urinary antiseptics, irrigations, and vaccines were used alone or in combination. They reached the following conclusions: Bacterial vaccines are efficient in relieving symptoms in mild forms of cystitis, but have less marked effect on pyuria. They are without value in severer forms of cystitis. They probably hasten recovery in pyelitis. They have no influence on bacteriuria.

16. **Correlation of Respiration and Heart Beat.**—Wright believes that the correlation between respiration and heart beat during exercise is determined, in part, indirectly, through the cause leading to increased respiratory activity, but not at the beginning of exercises, but mainly by independent causes acting in harmony with each other.

17. **Growing Pains.**—It is said by Brown that strained or relaxed sacroiliac joints may be a marked factor in causing "growing pains" in children; that the treatment consists in giving support, combined with systematic exercise to these joints until they are strong enough to carry out their functions without causing any symptoms in the rest of the body; that the treatment is important not only from the point of view of the present day comfort, but equally so in regard to the health and efficiency of the child when it grows up to take its part in the world's work.

### New York Medical Journal

*April 2*

18 *The Dissemination of Disease by the Fly. H. G. Beyer, Washington, D. C.
19 *Methods of Controlling the House-Fly and Thus Preventing the Dissemination of Disease. E. P. Felt, Albany.
20 *The Relation of Medicine to Pharmacy. M. Barbour, Philadelphia.
21 The Ideal Tonsillectomy. J. A. Pratt, Aurora.
22 Milk Intoxications by Ergotic Flora. C. R. Fitzpatrick, New York.
23 Present Status of the Treatment of Diffuse Peritonitis. A. E. Hertzler, Kansas City.
24 Modern Conception of Immunity to Diseases. J. V. May, Binghamton, N. Y.
25 Transfusion in Obstetrics and Gynecology. C. C. Sichel, New York.

18. **Dissemination of Disease by the Fly.**—The diseases discussed by Beyer in which the house-fly is a highly important etiologic factor are: Tuberculosis, leprosy, cholera, plague, summer diarrhea of children, carbuncle, frambesia, oxyuris, tenia, swine plague and typhoid.

19. **Controlling the House-Fly.**—We should not assume, says Felt, that the house-fly will entirely disappear in the near future. It is a remarkably persistent form and it is probable that the housekeeper will feel compelled for some years to come to use screens and other devices to prevent this insect gaining free access to the home. It is frequently necessary to supplement screens by the employment of sticky fly paper. This, though somewhat disagreeable, is much to be preferred to the use of poisonous preparations likely to result in dead flies dropping into food. The elimination of house-flies and their part in the dissemination of disease can be accomplished only through an understanding of the conditions necessary for the existence of the pests, and a general appreciation of the practicability of eliminating them to a very large extent. We should first take care of all materials known to produce large numbers of the insects and, with the knowledge thus gained, proceed against other breeding places until the flies are practically annihilated. Experience has demonstrated the possibility of this latter undertaking, and Felt sees no reason why equally successful results should not follow a determined campaign against the house-fly—an enemy of the human race responsible for the destruction of many lives and one allowed to exist because of our failure to recognize the relation of insects to sanitation.

20. **Medicine and Pharmacy.**—The druggist, says Barbour, should attend to his own business and to nothing else. By acting "physician," he endangers the health of the people, degrades his own professional standing, and loses the confidence and patronage of the physician. Barbour states that he would not trust a prescribing druggist. For a man who allows himself to practice a profession which he never studied, purely for material gain, is dishonest enough to commit all forms of substitutions and even to replace ingredients should it suit his financial purpose. Let each one attend to his own vocation, the one which he has chosen as his life's study, and become qualified and proficient. Let neither usurp the other's practice with subsequent injury to both and to the public. But let each, says Barbour, work in his own prescribed sphere with mutual interest to their respective professions and to the public at large.

### Lancet-Clinic, Cincinnati

*March 26*

26 Requirements for Entrance into Medical Colleges. E. O. Smith, Cincinnati.
27 Medical Education of the Laity. H. Alburger, Bloomington, Ind.
28 Intraperitoneal Exploratory Hysterotomy. B. M. Ricketts, Cincinnati.

### Philippine Journal of Science, Manila

*October, 1909*

29 *An Unusual Case of Amebic Dysentery. H. T. Marshall, Charlottesville, Va.
30 Sixth International Congress on Tuberculosis. F. Calderon and V. G. Heiser, Manila.
31 *The Cutaneous Reaction in Leprosy. O. Teague, Manila.
32 The Nastin Treatment of Leprosy. O. Teague, Manila.
33 Filtration of Immune Serums. E. H. Ruediger, Manila.
34 The Reaction of Culture Media in Relation to the Morphology of the Cholera Organism. Y. K. Ohno, Manila.
35 Immunizing Cattle Against Anticattle-Plague Serum. E. H. Ruediger, Manila.
36 Cholera in Children. A. J. McLaughlin, Manila.
37 Cattle Plague in the Philippines and the Methods Employed in Combating it. E. H. Ruediger, Manila.

29. **Unusual Case of Amebic Dysentery.**—In Marshall's case the acute course of the disease with the abundant hemorrhages and a peculiar nodular form of ulceration were unusual, although several similar cases have been recorded in the literature. The large intestine contained a large amount of dark red, almost black, pasty material in which amebas were numerous. From the ileocecal valve to the lower part of the rectum the mucosa was studded with nodular elevations which varied from 6 to 12 millimeters in diameter and which rose about an equal distance above the level of the mucosa. In most cases the elevation was surmounted by a mass of necrotic tissue which could be scraped off, leaving a deep crater-like ulcer extending well down through the mucosa. Only one or two small typical, irregular amebic ulcers were observed. Many active amebas were found in the detritus taken from the crater-like ulcers.

31. **Cutaneous Reaction in Leprosy.**—Four different extracts were made by Teague as follows: (1) From nodules taken from living lepers; (2) from the nodulous skin of a dead leper; (3) from the spleen of a dead leper; (4) a control from the skin of a cholera corpse. The material thus obtained was cut into small pieces or ground in a mortar, in the case of the spleen, and extracted in 5 per cent. glycerin. It was then heated on the water bath until the volume was reduced to about one-tenth of the original. Fifty lepers were vaccinated with these extracts, a control vaccination with the extract of skin from the cholera cases being made in each instance.

In 2 or 3 cases there was a doubtful reaction, but otherwise the vaccinations were in all respects like the controls. Further attempts will be made to secure a more concentrated extract of the leprosy bacilli. Owing to the low resistance of the tissues of lepers, it was not thought advisable to use the ocular reaction until the cutaneous reaction had been given a thorough trial.

### Kansas City Medical Index-Lancet

*March*

38 A Famous Case Recalled (continued). J. Punton, Kansas City.
39 Subcutaneous Hemorrhages: Enuresis of Neuropathic Origin. F. C. Neff, Kansas City.
40 Personal Investigation into the Dietetic Theories of America. A. Bryce, Birmingham.
41 The Health of Chicago for 1910. W. A. Evans, Chicago.

### Vermont Medical Monthly, Burlington

*March*

42 Paranoia. W. L. Wasson, Waterbury.
43 Pelvic Inflammation. G. M. Sabin, Burlington.
44 Anterior Poliomyelitis. E. J. Melville, St. Albans.
45 Fevers from Cold. W. C. Abbott, Chicago.

### West Virginia Medical Journal, Wheeling

*March*

46 *Sterilization of Confirmed Criminals and other Defectives. J. R. Bloss, Huntington.
47 *What can the Medical Profession do to Prevent Crime? G. D. Lind, Richwood.
48 Influence of Physical Defects of Personalities, Moral Obliquities and Crime. G. H. Benton, Chester.
49 Eclampsia; a Summary of its Treatment. J. H. Steenbergen, Huntington.

46. **Sterilization of Criminals and Other Defectives.**—Huntington believes that the defective classes are multiplying much more rapidly in proportion than the total population. Stringent marriage laws will not control the increase of defectives, for marriage is not necessary to procreation, and especially among irresponsibles. Vasectomy, which does not impair the sexual powers, fulfils every requirement for sterilizing males (other than rapists) and should be provided for by law. Salpingectomy should be provided for among defective females.

47. **Prevention of Crime.**—Lind favors vasectomy as the most efficient means for the prevention of crime.

### Southern California Practitioner, Los Angeles

*March*

50 Rabies—Report of Cases from Skunk Bites. C. E. Yount, Prescott, Ariz.
51 Hydrophobia—Report of a Los Angeles Case. J. R. Colburn, Los Angeles.
52 Uncinariasis: A Los Angeles Case. J. M. King, Los Angeles.
53 Ptomain Poisoning—Eleven Fatal Cases. G. W. Peck, Sawtelle.
54 Medical Expert Testimony. A. S. Lobingier, Los Angeles.

### Albany Medical Annals

*March*

55 *Specialization in Medicine. A. S. M. Chisholm, Bennington, Vt.
56 Epiphyseal Fracture of the Upper End of the Humerus. J. M. Berry, Troy, N. Y.
57 Treatment of Tuberculous Adenitis. A. F. Holding, Albany, N. Y.
58 Electric Treatment. H. M. Imboden, Clifton Springs, N. Y.
59 Radiotherapy. H. W. Van Allen, Springfield, Mass.

55. **Specialization in Medicine.**—Chisholm believes that specialization, while impoverishing the individual, has enriched the profession. What the specialists have lost, medicine has gained. The artists have become smaller but the art greater. The individual has sacrificed scope to depth, "comprehensiveness" to "profundity;" that is, he has sacrificed himself to his profession, but such a sacrifice ennobles the specialist.

### Journal of Ophthalmology and Oto-Laryngology, Chicago

*February*

60 Acute Mastoiditis: Its Etiology, Diagnosis and Treatment. R. J. Tivnen, Chicago.
61 Recovery of Vision in an Amblyopic Eye after Four and a Half Years of Blindness: Contribution to the Question of Amblyopia Ex-Anopsia. C. M. Harris, Johnstown, Pa.

### California State Journal of Medicine, San Francisco

*March*

62 Uses of Bacterial Vaccines in Urinary Diseases. G. MacGowan, Los Angeles.
63 Treatment of Genitourinary Tuberculosis with Tuberculin. F. M. Pottenger, Monrovia.
64 Radical Treatment of Genitourinary Tuberculosis. G. S. Whiteside, Portland, Ore.
65 The Dull or Backward School Child. R. W. Musgrave, Hanford.
66 *Value of Examinations of the Cerebrospinal Fluid in Diagnosis of Chronic Nervous Disease. H. C. Moffitt, San Francisco.
67 Congenital Dislocation of the Hip. H. M. Sherman and G. J. McChesney, San Francisco.
68 Pellagra in California. R. Blue, U. S. P. H. and M.-H. S.
69 Tropical Medicine. C. Wellman, Oakland.
70 Alkaptonuria. J. C. Spencer, San Francisco.

66. **Value of Cerebrospinal Fluid Examination.**—Moffitt examined the cerebrospinal fluid in 25 cases by means of the Nonne and Apelt globulin test or by the Noguchi reaction. He found that the tests are of most value in doubtful cases of general paralysis, tabes or cerebrospinal lues, in which either symptoms or signs are equivocal; or, they may help decide the importance and gravity of many functional nervous symptoms in patients with a history of lues who are suspicious of beginning tabes or general paralysis. Together with the Wassermann reaction in the blood serum and cerebrospinal fluid, they may help in determining the nature of apparent idiopathic epilepsy or in distinguishing brain tumors from syphilitic disease. They must be used, of course, only in conjunction with the general clinical picture, and their value can only be properly judged after the lapse of sufficient time to accumulate many more cases than are now on record. Moffitt emphasizes that it is unwise to practice lumbar puncture indiscriminately, as it is a procedure not without disagreeable sequelæ at times, particularly in neurotic patients with unstable vasomotor systems. There may be severe headache and dizziness for some days following puncture.

### Long Island Medical Journal, Brooklyn

*March*

71 Low-Nitrogen Diet in Typhoid. H. A. Houghton, Bayside, L. I.
72 Traumatic Diseases of the Knee-Joint. R. Hazen, Brentwood, L. I.
73 Surgical Treatment of Gonorrheal Epididymitis. H. H. Morton, Brooklyn.

74 Use of Formidin in Chronic Suppurative Inflammations of the Middle Ear Complicated with Deafness. J. C. Warbrick, Chicago.
75 Tuberculosis of the Peritoneum, Uterus and Adnexa. F. J. Shoop, Brooklyn.

### New Orleans Medical and Surgical Journal

*March*

76 Impetigo—Its Nature and Complications. A. J. Delcourt, Houma, La.
77 Resistant or Neglected Club-Foot in Adolescence. J. D. Bloom, New Orleans.
78 *Blood Findings in Twenty Cases of Pellagra in the Insane Asylum of the State of Louisiana. H. Daspit, New Orleans.
79 Poverty in Relation to Disease. H. D. King, New Orleans.
80 Infantile Scurvy: Two Recent Cases. E. D. Fenner, New Orleans.
81 Medical Aspects of Anterior Poliomyelitis. L. R. DeBuys, New Orleans.
82 Anterior Poliomyelitis: Etiology and Pathology. C. W. Duval, New Orleans.
83 Nervous Manifestations of Anterior Poliomyelitis. E. M. Hummel, New Orleans.
84 Obstetric Surgery. E. M. Williams, Patterson, La.
85 Abdominal Cesarean Section. S. M. D. Clark, New Orleans.
86 Indications for Vaginal Cesarean Section. C. J. Miller, New Orleans.
87 Surgery of Pregnancy, Complicated by Pelvic Tumors. C. N. Chavigny, New Orleans.
88 Curettage: Its Abuses and Indications. W. E. Sistrunk, Lake Charles, La.
89 High-Frequency Currents in Skin Diseases. L. L. Cazenavette, New Orleans.

78. **Blood Findings in Pellagra.**—The blood picture in 20 cases of pellagra examined by Daspit was fairly constant and deviated but little from the normal. There was a slight falling off in the total leucocytes and a relative lymphocytosis, more marked in the small mononuclears. The hemoglobin was consistently good, and the red blood count showed nothing abnormal. These findings may be said to be comparatively negative and to offer nothing of value from a diagnostic standpoint.

### Bulletin Johns Hopkins Hospital, Baltimore

*March*

90 *Isoagglutinins and Isohemolysins. W. L. Moss, Baltimore.
91 *Clinical Experience with the Wassermann Reaction in the Johns Hopkins Hospital. P. W. Clough, Baltimore.
92 Etiology of Movable Kidney. F. W. Griffith, Baltimore.
93 *Nephrotomy by the Silver-Wire Method. E. H. Richardson, Baltimore.
94 *Antityphoid Vaccination, the Immediate Results of the Administration of 3,600 Doses. F. F. Russell, U. S. Army.

90. **Isoagglutinins and Isohemolysins.**—Moss' findings may be summarized as follows: Isoagglutinins occur in the serum of about 90 per cent., and isohemolysins in about 25 per cent., of adult human beings. They have no diagnostic significance. In a number of healthy individuals whose blood was repeatedly tested at varying intervals of time the agglutinating action was found not to vary, while in some cases the hemolytic which was present in earlier tests was absent in subsequent tests. There are at least three different isoagglutinins and three isohemolysins in human sera and three different isoagglutinophilic and three isohemolysinophilic receptors possessed by human red blood corpuscles. There are human sera which contain no isoagglutinin and isohemolysin but whose corpuscles possess receptors for isoagglutinin and isohemolysin. No individual serum appears to contain more than one of the three kinds of isoagglutinin or isohemolysin. The corpuscles of a given individual may possess no isoagglutinophilic or isohemolysinophilic receptors or they may possess two, or all three kinds of these receptors. Human beings can be divided into four groups according to the ability of their serum to cause isoagglutination and of their corpuscles to be isoagglutinated. The serum of members of any one group will not agglutinate or hemolyse the corpuscles of other members of the same group, but will agglutinate and may hemolyse the corpuscles of members of any other group except one. Autoagglutination was not observed in any of the 212 cases investigated and autohemolysis was observed only once. Isoagglutination may occur independently of isohemolysis but isohemolysis is probably always preceded or accompanied by isoagglutination. All the sera investigated contained an antihemolysin which protected the homologous corpuscles, and those of members of the same group from solution by any other serum. This antihemolysin is an anti-amboceptor which acts by uniting with the cytophilic group of the hemolysin thus blocking it off from the red blood cell; and probably consists of receptor groups of the red blood cells which have been cast off from the cells or set free by the physiologic or pathologic destruction of the corpuscles. Isoagglutinin is thermostable. Isohemolysin consists of two components: one, thermostable (amboceptor), the other thermolabile (complement). The antihemolysin is thermostable. The origin of isoagglutinins and isohemolysin has not yet been satisfactorily determined. It probably cannot be referred to the destruction and resorption by an individual of his own blood.

91. **The Wassermann Reaction.**—In 99 cases examined by Clough in which syphilis could be excluded the Wassermann reaction was negative in all. In 51 doubtful cases in which clinically, syphilis was not probable, the reaction was positive in 4; in 50 in which syphilis was probable, a positive reaction was obtained in 33, or 66 per cent. In 45 cases which were certainly syphilitic, a positive reaction was obtained in 33, or 73 per cent. Excluding patients who had recently received thorough mercurial treatment, positive reactions were obtained in about 82 per cent. of those showing active syphilitic lesions. Positive reactions were obtained in 40 per cent. of 15 cases of tabes, and in all of the 7 cases of general paresis, which were tested.

93. **Nephrotomy by the Silver-Wire Method.**—The silver-wire method was used by Richardson with results that demonstrate two points: First, the value of the silver-wire method of nephrotomy in certain cases; and second, that the method very clearly has a limited field of application, and should not be employed in every case in which nephrotomy is indicated. Whenever abscesses, fibrous tissues or other pathologic conditions in the kidney render it necessary to exert strong traction on the wire in order to bisect the organ, many vessels will be lacerated, and consequently both the damage to the kidney parenchyma and the hemorrhage will be greater than if a knife were employed. The pulmonary complications in the second case following operation, show conclusively the dangers of omitting compression of the vessels at the hilum, and thus permitting free renal circulation while doing a nephrotomy on an infected kidney. Richardson feels sure that in this case an infected embolus was swept into the renal vein, thence to the vena cava, right heart, and finally lodged in the right lung, where it produced a localized pneumonia.

94. **Antityphoid Vaccination.**—The following conclusions by Russell are based on an extensive and intensive study of this subject:

1. Vaccination against typhoid undoubtedly protects to a very great extent against the disease.
2. It is an indispensable adjunct to other prophylaxis among troops and others exposed to infection.
3. It is very doubtful if there is an increase of susceptibility following inoculation.
4. Vaccination during the disease, for therapeutic purposes, fails to reveal any evidence of a negative phase.
5. The statement that vaccination should not be carried out in the presence of an epidemic is not justified by the facts at hand.
6. The procedure is easily carried out and only exceptionally does it provoke severe general reactions.
7. No untoward results occurred in this series of 3,640 vaccinations.

### Journal of Cutaneous Diseases, New York

*March*

95 Pemphigus Vegetans; Special Reference to the Cellular Elements Found in the Lesions. M. B. Hartzell, Philadelphia.
96 Case of Pemphigus Foliaceus. H. H. Hazen, Washington, D. C.
97 Case of Pellagra in New Jersey. E. D. Newman, Newark.

### Mississippi Medical Monthly, Vicksburg

*March*

98 Remarks on Pellagra with Report of a Case. A. W. Rhyne, Beulah.
99 Nasopharyngeal Diseases. H. Flowers, Brookhaven.
100 The Indiscriminate Use of Diuretics. S. W. Glass, Dublin.

### Annals of Surgery, Philadelphia

*March*

101 An X-ray Study of Bone Atrophy. E. R. Corson, Savannah, Ga.
102 The Radical Extirpation of Pharyngo-Esophageal Pressure Diverticula. D. Stetten, New York.
103 *The Technic of Lung Resection with the Application of Both Forms of Differential Pressure. F. Sauerbruch and S. Robinson, Boston.
104 Functional Diagnosis of Renal Disease; Specially by Experimental Polyuria. E. L. Keyes, New York.
105 Infections of the Urinary Tract due to Bacillus Coli and Allied Organisms. L. S. Dudgeon and A. Ross, Philadelphia.
106 *Intraperitoneal Division of one Ureter. J. D. Barney, Boston.
107 *Perinephric Abscess. M. B. Miller, Philadelphia.
108 Genital Canal Block Following Neisser Coccus Infection. C. E. Barnett, Fort Wayne, Ind.

103. **Technic of Lung Resection.**—The experiments of Sauerbruch and Robinson have practical bearing in human surgery. They demonstrate that the removal of one lung, or a large portion of the same, can only be accomplished successfully when the cavity persisting after the operation is diminished in size as soon as possible, in order thereby to avoid the accumulation of a transudate. This reduction in pleural capacity is best accomplished by the crowding in of the neighboring organs. They have likewise been able to demonstrate under what conditions this displacement of organs is possible. An operative reduction in the capacity of the pleural space is possible through the mobilization and displacement of the chest wall. If the mediastinum become stiffened by chronic inflammation, the thoracoplasty which we perform may be an extensive one, without dangerous disturbances to the heart or remaining lung. It must be limited to the removal of a few ribs if the mediastinum is a movable one and easily displaced. Suturing the bronchus to the chest wall, which in certain conditions may be indicated, must be done in such a way that tearing of the mediastinum is avoided—that is to say, the chest wall must be approximated as nearly as possible to the mediastinum by means of the mobilization and displacement of the former.

106. **Intraperitoneal Division of One Ureter.**—The evidence derived by Barney from his experimental work, and from the clinical observations of others, is that the abdomen may bear without damage, and even, in some cases, without severe reaction, the effusion of a certain amount of sterile urine, and that it is able to guard itself promptly and efficiently against this effusion by the formation of adhesions. It is also evident, especially in animals, but probably more often than we realize in man, that a divided ureter soon becomes harmless by occluding adhesions or blood clot. It is in those cases in which this prompt occlusion does not occur, seen oftenest in dogs, or when the urine is septic from the start, that a general peritonitis sets in. The first and only sign of injury to the ureter which we may have is the appearance of urine in the laparotomy wound, or in the vaginal vault. In certain other cases accumulating fluid within the abdomen, with or without the formation of a urinary abscess, may be the first sign of the accident. Occasionally a general and severe peritonitis intervenes at once, and the injury is discovered only at autopsy or during the course of a secondary laparotomy.

107. **Perinephric Abscess.**—Of the 36 cases seen by Miller, 25 were males and 11 were females The age of the oldest patient was 60 and the youngest was 10, with the general average of 31 years, omitting the cases of preexisting renal infection, the average age was 28 years, showing clearly that the disease is one of early adult life. The right side was affected in 23 cases, the left in 13. The source of infection was unknown in 20 cases, in 2 there was pyonephrosis, 2 others were probably of renal origin, there was urethral infection in 2, influenza preceded 2, 3 were possibly derived from pelvic disease, peripheral suppurations probably caused 2, and trauma was prominent in 3 instances. Postural changes were noted in 10 cases, in the main being a tendency to flex the corresponding thigh, though in several cases there was some spinal curving and in one with sciatic pain flexion of the thigh was resented. Pulmonary phenomena were seen in 13 cases, varying in intensity from a simple cough to a fatal septic pneumonia; in 3 cases cystitis was present; 1 case developed subsequently a prostatic abscess; 1 patient had otitis media, and 1 had femoral phlebitis; in 1 there was a fatal cardiac dilatation, due to myocarditis; and in 1 the perinephric suppuration occurred in the course of parenchymatous nephritis. The urine was normal in 15 cases, practically normal in 5, having a trace of albumin with casts, etc., in 12, and showing pus in 4. The bacteriologic examination of the pus from the abscess was made in 23 cases and gave sterile results in 2 cases, colon bacillus in 6, staphylococci in 5, *Staphylococcus aureus* in 4, *S. albus* 2, *S. aureus* and *S. albus* in 1, streptococci in 2, and streptococci and pneumococci in 1. Thirty-five abscesses were evacuated and 1 patient declined operation and was discharged; 30 patients recovered and 5 died. This gives a total mortality of 14.3 per cent., or omitting the cases of recognized renal origin, 2 of the 4 patients dying, there is a mortality of 9.7 per cent. The cause of death in the 2 kidney patients was exhaustion in one and cardiac dilatation in the other, but both were probably uremic. In the other cases, one patient died of pleuropneumonia, another of peritoneal extension of the suppurative process, and the third of septic pneumonia. The death-rate is lower than in any previously reported series and compares most favorably with the 34 per cent. mortality of Küster's tables; this is doubtless due to the early recognition of the disease and the adequate drainage without unwise interference with the kidney.

### Journal of Abnormal Psychology, Boston

*February-March*

109 Dreams and their Interpretations as Diagnostic and Therapeutic Aids in Psychopathology. B. Onuf, New York.
110 Conception of the Subconscious. B. Hart, Epsom.
111 Personal Impressions of Sigmund Freud and his Work: Special Reference to his Recent Lectures at Clark University (concluded). J. J. Putnam, Boston.

### Buffalo Medical Journal

*March*

112 Nervous and Mental Manifestations due to Arteriosclerosis. F. H. Stephenson, Syracuse, N. Y.
113 Appendicitis. A. L. Beahan, Canandaigua, N. Y.
114 Necessity for the Filtration of a Polluted Public Water Supply. M. P. Conway, Auburn, N. Y.
115 Melanotic Sarcoma. W. L. Wallace, Syracuse.

### Northwest Medicine, Seattle

*March*

116 Flexner's Antimeningitis Serum. G. B. McCulloch and P. V. von Phul, Seattle.
117 Varicocele of the Broad Ligament. J. E. Else, Pullman, Wash.
118 Social Hygiene. L. W. Hydc, Portland, Ore.
119 Abdominal Purpura and Appendicitis in Childhood. W. Gellhorn and K. Winslow, Seattle.
120 Transverse Incision in Operations for Appendicitis. A. E. Rockey, Portland.
121 Carcinoma of the Rectum—A Plea for Thorough Examination of the Lower Bowel by the General Practitioner. E. K. Scott, Boise, Idaho.
122 Pathology of Tumors of the Bladder. R. V. Dolbey, Vancouver, B. C.
123 Some of the Evils of Medical Practice. H. H. McCarthy. Spokane, Wash.

### Archives of Internal Medicine, Chicago

*March*

124 *Blood Spots: A Medicolegal Study. C. J. Bartlett and S. J. Goldberg, New Haven.
125 *Effect on the Kidneys of Temporary Anemia, alone and Accompanied by Perfusion. C. C. Guthrie, Pittsburg.
126 A Study of Pneumoperitoneum with a Means for Its Diagnosis. W. W. Herrick, New York.
127 *Heart-Block with Infectious Diseases. F. W. Peabody, Baltimore.
128 Bacteriologic Studies on Parathyroid A and Parathyroid B. B. F. Proescher and J. A. Roddy, Pittsburg, Pa.
129 *Quantitative Estimation of Albumin in the Urine. A. F. Mattice, Baltimore.

124. **Blood Spots.**—The following are the conclusions which Bartlett and Goldberg regard warrantable: A blood drop falling only a few inches usually makes a round spot with a smoother border, though even here if the surface on which it falls is rough it may have an irregular border with spatters. When a blood drop falls vertically, whether from a height of only 1 or 2 feet or as much as 6 feet, the height is of only secondary importance in determining the size or shape of the drop or the amount of spattering. Within the limits just mentioned the character of the surface on which the blood drop falls, particularly as to its roughness or smoothness, is the chief factor in determining the amount of spicule formation and the degree of spattering. A blood drop falling vertically 5 or 6 feet on a smooth non-absorbent surface may form almost no spicules or spatters, but irregularities of the surface may cause marked spicule formation and spattering even when the height has been much less than this. The size of the main blood spot made by a drop falling from 3 to 6 feet depends more on the original size of the drop than the height from which it fell. The thickness of the layer of blood in dried blood spots, on surfaces which are non-absorbent or only slightly absorbent, is somewhat less the greater the height from which the blood fell. The height from which blood has fallen cannot be determined by the length of spicules, the elongation of spatters, the distance which spatters have fallen, or by the thickness of the layer of blood, except within wide limits. In general, conclusions as to the height from which blood drops fell, based on any of the appearances of the dried spot, should be made very guardedly.

125. **Effect on the Kidneys of Temporary Anemia.**—The method employed by Guthrie consists in temporarily shutting off the circulation in a segment of the aorta, including the origin of the renal arteries and then perfusing the kidneys by injecting the solution to be tested into this segment by means of a small trochar (or needle) thrust through the wall of the aorta, the instrument being connected by means of a rubber tube with a reservoir connecting the solution. On withdrawing the needle the puncture in the wall of the aorta is closed by several simple stitches which penetrate all the coats of the vessel. The clamps (serrefines) are then removed from the aorta and the abdominal wound closed. The animal is then bandaged and placed in the hospital. Guthrie found that anemia alone is apparently much less harmful than when accompanied by perfusion of any of the commoner salt solutions. The commoner salt solutions do not seem to differ greatly in toxicity. Attempts thus far to devise a non-toxic solution for profusing, *e. g.*, salt-starch solution, have received no encouragement from the results. Anemia with perfusion of the kidneys as a rule is followed by death of the animals within a few months—the majority dying in a few weeks. The cause of the differences in time of death of the animals are unknown. Individual peculiarities may be (and probably are) an important factor. Metabolic disturbances, seemingly in the direction of increased protein metabolism especially, occur. Decrease in urinary secretion preceding death is probably an important factor to consider in interpreting the final symptoms, which are those of uremic poisoning. Structural changes of a hemorrhagic and degenerative character occur in the perfused kidneys. Guthrie's results show conclusively that renal and adrenal anemia, coupled with perfusion with all the solutions tried, is much more harmful than anemia alone. Anemia alone is certainly not to be looked on as being without effect, but it seems that for cats, under the conditions of these experiments, short periods of occlusion are not incompatible with permanent recovery of the animal.

127. **Heart Block with Infectious Disease.**—Peabody holds that disturbances of the function of conduction in the heart muscles are at least occasionally encountered after infectious diseases. They probably occur oftener than is generally recognized, and are perhaps more frequently seen in cases of the "rheumatic series." The disturbance may be either complete or partial. Complete block is due in most instances to an organic lesion of the conduction fibers, but may, apparently, be due in part to nervous influences. Partial block is usually transient, and is probably due to the action of the vagus nerve on a poisoned myocardium. The prognosis depends chiefly on whether the underlying cause is organic or functional.

129. **Albumin in the Urine.**—Mattice regards the phosphotungstic method as being very much more accurate than the Esbach for a comparative quantitative estimation of albumin in the urine. Tsuchiya's reagent should, therefore, supplant the Esbach solution. The method can be relied on to indicate a slight rise or fall in albumin output, which is not true of the Esbach method. Readings are not influenced by changes in temperature to the same extent as with the Esbach test. Foaming or floating of the precipitate is rarely seen, and the precipitate settles much more evenly than with the Esbach reagent. The solution is lighter than water, and when added to urine does not mix until shaken but rises as a clear supernatant fluid, enabling one to read the meniscus accurately at the R mark on the Esbach tube. Because of its low specific gravity the urine needs no further dilution. The method can be used for large amounts of albumin as well as for small amounts. Tsuchiya's reagent is applicable in urines in which albuminuria and glycosuria coexist. Phosphotungstic acid in alcoholic solution is easily prepared, keeps well, and does not stain hands or clothes as does the Esbach reagent. Normal urines treated with Tsuchiya's reagent yield a slight precipitate. The method of Goodman and Stern in Mattice's experience has proved to be very inaccurate.

## Gulf States Journal of Medicine and Surgery and Journal of the Southern Medical Association, Mobile, Ala.

*March*

130 Importance of Recognizing Mild Cases of Pellagra. G. Dock, New Orleans.
131 Early Symptoms of Pellagra. C. C. Bass, New Orleans.
132 Nervous and Mental Manifestations of Pellagra. J. M. Buchanan, Meridian, Miss.
133 Pathologic Findings in Nine Cases of Pellagra. O. L. Pothier, New Orleans.
134 Physiologic and Clinical Results of, and Indications for, Gastroenterostomy. S. Harris, Mobile.
135 Early Diagnosis of Gall-Stone Disease. J. E. Cannaday, Richmond, Va.
136 Delirium Tremens—New Plan of Treatment. G. E. Pettey, Memphis.
137 Personal Experiences with Hysteria. S. T. Rucker, Memphis.

## Therapeutic Gazette, Detroit

*March*

138 *The Futility of Administering Antirheumatic Remedies in Certain Patients Suffering from Painful Joints. H. R. M. Landis and C. H. Muschlitz, Philadelphia.
139 Causes and Treatment of Vesical Irritability. C. W. Bonney, Philadelphia.
140 Indications for Therapeutic Abortion; Consideration of the Rights of the Unborn Child. W. Krusen, Philadelphia.
141 The Teaching of Therapeutics. H. A. Hare, Philadelphia.
142 *Contusions of the Back and their Complications. W. Lathrop, Hazleton, Pa.

138. **Painful Joints.**—Landis and Muschlitz emphasize the fact that only rarely, if at all, does prolonged pain in a joint mean chronic rheumatism; therefore salicylic acid and allied drugs have no place in the treatment of these conditions; at best their use affords but temporary relief. To treat these patients properly, a thorough physical examination is essential in order to determine whether the pain is dependent on a functional or an anatomic defect, and in the latter event to ascertain, if possible, whether the joint trouble is secondary to a chronic suppurating focus.

142. **Contusions of Back.**—The most common result of a severe contusion of the back, whether high or low, is extravasation of blood, the separation of the skin from underlying tissues, and the formation of a large fluctuating mass. Pain is present to a greater or less degree, usually being aggravated by any attempt at moving. Accompanying the extravasation mentioned, if the injury be severe, there may be laceration or crushing of muscles, or fracture of the scapula, while severe contusion of the ribs is not uncommon, and Lathrop has seen three cases in which hemorrhage in the lung occurred from a blow on the back, with fatal outcome. In the lumbar and sacral regions we may have contusion of the kidney and retention of urine, with blood in the same when withdrawn. Further, there may be a so-called concussion of the spine, causing temporary paralysis while in some cases complete use of the limbs may require weeks of rest and treatment, even when bladder symptoms have disappeared. A severe contusion low down may involve the sciatic nerve through injury of the gluteal muscles, which are sometimes badly bruised; while in one case the muscles were completely ruptured. A degeneration of a nerve is not impossible after a severe contusion. The treatment advocated by Lathrop is the following: In simple contusions of soft parts the absorption of extravasated blood should be promoted by cold, elevation, and pressure; but if at all extensive, or with marked fluctuation, immediate incision under aseptic conditions will give the best results. Rest is of paramount importance and massage of contused parts, such as elbow, shoulder, knee, ankle and hip, is of great value, after the acute stage is past. Lead and opium, arnica, alcohol and bichlorid applications are all used more or less, and no doubt with benefit. In severe injury involving not only the skin, but the muscles beneath, and possibly the bony structures as well, the best treatment is thorough examination under anesthesia, and treatment of the case as indicated—careful cleansing, suturing of any torn muscles, and provision for drainage. When sloughing occurs, and it does in many instances, the area should be well protected and treated as any other granulating surface. In regard to the spine, a traumatism must be very severe to injure the contents of the spinal canal, and must be regarded as serious; it will require time for repair or improvement, and must be treated largely symptomatically. The prognosis should be guarded at all times.

## Providence Medical Journal

*March*

143 Fractures of the Lower End of the Radius. F. E. Peckham, Providence.
144 Use of Bacterial Vaccines in Therapeutic Immunization. W. G. Dwinell, Pawtucket.
145 Child Life. S. S. Burton, Providence.
146 Chronic Constipation. C. F. Peckham, Providence.

### The Proctologist, St. Louis

*March*

147 The Anal Canal and its Diseases. G. S. Hanes, Louisville.
148 Advancements in Proctology. J. M. Mathews, Louisville.
149 A New Anal Speculum. D. Roberts, Brooklyn.

### Journal Michigan State Medical Society, Battle Creek

*March*

150 Diagnosis and Treatment of Prostatitis and Seminal Vesiculitis. M. A. Fechheimer, Detroit.
151 Suprapubic Prostatectomy. A. McLean, Detroit.
152 Major Amputations. R. H. Spencer, Grand Rapids.
153 *Landmarks in Diagnosis of Incipient Consumption. E. F. Otis, Battle Creek.
154 Emergency Surgery. H. B. Garner, Traverse City.

153. Abstracted in THE JOURNAL, Oct. 9, 1909, p. 1220.

### Journal of the Medical Society of New Jersey, Orange

*March*

155 The Present Status of Hypnotism. W. H. Hicks, Newark.
156 Cows' Milk and Infant Feeding. H. Chavanne, Salem.
157 Artificial Infant Feeding. F. F. Bowyer, Jersey City.
158 Personal Equation in Infant Feeding. A. MacAlister, Camden.
159 Infant Feeding not Generally Recognized. J. F. Bell, Englewood.

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## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### Lancet, London

*March 19*

1 *The Streptotrichoses and Tuberculosis. A. G. R. Foulerton.
2 Use of the *X*-Rays in Skin Diseases and other Affections. A. H. Pirie.
3 *Treatment of Labor in Contracted Pelves: With Special Reference to the Justifiability of Pubiotomy. G. F. Blacker.
4 The Circulatory System. H. Campbell.
5 *Further Evidence of the Homogeneity of the Resistance to the Implantation of Malignant New Growths. E. F. Bashford and B. R. G. Russell.
6 The Contrast in the Reactions to the Implantation of Cancer after the Inoculation of Living and Mechanical Disintegrated Cells. M. Halland.
7 *Chorioepithelioma of the Testicle. O. C. Gruner.
8 Crepitations Heard in Third Left Intercostal Space in Cases of Mitral Stenosis. C. W. Cunnington.
9 Hemorrhage Due to Erosion by Soft Chancres. J. Rae.

1. **Streptotrichoses and Tuberculosis.**—There is no doubt in Foulerton's mind but that at one stage of its growth the bacillus of Koch is represented by branching mycelial threads of the streptothrix type. And this being so, he says, the common "bacillary" forms represent persistent rod-segments of the streptothrix, which reproduce themselves under some conditions directly, and without the intervention of a mycelial stage; but from a morphologic point of view there is no essential difference, beyond such as may depend on relative rapidity of growth, between Koch's bacillus and a typical streptothrix, such as Eppinger's, when growing on solid media.

Speaking of the varieties of tuberculosis, Foulerton regards it as certain that in avian tuberculosis the parasite is ingested with food. While the food of poultry kept under domestic conditions is not confined to vegetable products, Foulerton has seen isolated cases of tuberculosis occurring in fowls under conditions such that the only possible sources of infection were either human beings or food in the shape of grass or grain. But the human parasite is probably incapable of infecting fowls; and, infection from other poultry being in these isolated cases practically impossible under the existing circumstances, vegetable food appeared to be the only possible source of infection remaining. With regard to tuberculosis of the ox, while it is quite certain that infection is often conveyed by dust infected from a previous case, it would appear equally certain that in many cases infection occurs through the mucous membrane of the intestinal tract and is conveyed with vegetable food. While this frequent association of acid-fast organisms with herbage is remarkable, it cannot be suggested that any such direct association can be traced for the parasite of human tuberculosis. Nevertheless, it is of interest to note that the human parasite may be not far removed on the scale of evolution from some species of streptothrix parasitic for herbage.

3. **Treatment of Labor in Contracted Pelves.**—Blacker believes that the right solution of the problem is this: In any case in which it is considered inadvisable to perform Cesarean section, or in which this operation is rejected by the patient, and in which the induction of premature labor has been followed by the birth of a still-born child on one or more occasions, the patient may be allowed to go to full term, and, if necessary, pubiotomy may then be performed. An additional advantage of this plan of treatment would be that in many cases the necessity for pubiotomy would not rise, since spontaneous delivery might occur, a result which is attended with the minimum of risk to both mother and child. It must be remembered that although it is quite true that in the average pregnant woman the operation of Cesarean section is an easy and safe one, yet pregnancy does occur from time to time in women in whom any abdominal section would be an extremely dangerous operation, and such a patient might, if it were necessary, prefer pubiotomy to the destruction of her living child.

If the patient is in labor when seen and the head fails to engage or is arrested at the brim, then, if moderate traction with high forceps fails, in place of the forcible delivery with forceps of the head through the brim (an operation which entails a fetal mortality of at least 40 per cent.) or the performance of version (which entails even a higher fetal mortality), Cesarean section should be performed; while if the case is considered unsuitable for the performance of late Cesarean section, then pubiotomy certainly may be substituted for craniotomy of the living child. Pubiotomy should, however, only be practiced if it is certain that the child's life has not been in any way imperiled, and in view of the serious complications which may follow it is not an operation suitable for private practice, and should only be performed in a hospital.

5. **Malignant New Growths.**—The authors' experiments seem to demonstrate that after inoculation of a given dose of mouse tumor into a rat there is produced between the sixth and ninth day an active immunity which leads to a rapid destruction of any mouse tumor cells subsequently introduced. Further, it can be inferred that the production of this active immunity contributes to terminating the transitory growth of mouse cancer cells in rats. The cessation of these growths is due largely to active immunity concomitantly induced and to other influences directly injurious to them. The immunity induced in the rat against mouse cancer is very different from the active resistance of a mouse to inoculation of tumor of its own species, for, as demonstrated in 1908, mouse tumor cells can live and divide for eight or ten days in a resistant mouse, but they are incapable of eliciting the stroma reaction necessary for their establishment as a fresh tumor.

7. **Chorioepithelioma of the Testicle.**—The patient, aged 25, had pain in the left testicle, which was found to be enlarged. Though the swelling was soft at first it had become hard and he had noticed little knobs on it. Examination of the testicle showed a hard swelling partly involving the organ, but mainly occupying the epididymis. The cord was not thickened and there were no adhesions between the swelling and the skin. Syphilis and tuberculosis were excluded, so that castration was performed. Recovery was uneventful. The character of the cells strongly recalls that of deciduoma malignum. Close examination reveals a similarity on the one hand to sarcoma cells and on the other to the cells of spheroidal-celled carcinoma, so that the tumor might be called sarco-carcinoma.

### British Medical Journal, London

*March 19*

10 Gastric and Duodenal Ulcer. F. J. Smith.
11 Dysmenorrhea. R. A. Gibbons.
12 The Surgeon, the Patient, the Student, and the Nurse. W. Mills.
13 Carcinoma of the Kidney. K. Monsarrat.
14 Peritoneal Pseudomyxoma Originating from the Vermiform Appendix. W. Trotter.
15 Pelvic Hematoma of Ovarian Origin. T. Holmes.
16 *Case of Family Albuminuria. J. N. Fergusson.

16. **Family Albuminuria.**—For over 20 years Fergusson's patient had been passing large quantities of albumin in the urine, three grams per liter. Microscopic examination revealed no casts or corpuscles, and there was nothing to suggest renal trouble. The heart was normal in size, the sounds were normal, blood pressure was in the limits of the normal, and there was little or no arterial thickening. There had never at any

time been any edema of the eyelids or legs, or any other sign of renal disease. At many examinations Fergusson always found albumin present, and he thinks that he is justified in believing that it has been constantly present, at any rate since it was first detected in 1886, by the fact that, since then, the patient has frequently had the urine examined, always with a positive result, and that three insurance companies refused him on that ground between 1886 and 1889. The patient has maintained his usual high standard of health, and although he has always been thin and spare, he is very tough. The most remarkable feature of the case, however, is that all the members of the patient's family exhibit the same peculiarity. They are all perfectly well, and, considering the age the parents have attained (87 and 78 respectively), such a case as this should have an important bearing on the question of rejection or "loading" of candidates for life insurance.

### Glasgow Medical Journal

*March*

17 Significance of Certain Changes in the Composition of the Urine. D. N. Paton.
18 *Acute Pneumonia and its Treatment. A. Napier.
19 Addison's Disease. R. B. Ness.

18. **Acute Pneumonia and Its Treatment.**—In 20 years Napier has had 460 cases of acute pneumonia. Of the 460 cases, 335 patients recovered and 125 died—a recovery rate of 72.82 per cent., and a death rate of 27.17 per cent. This includes absolutely every case, with no omissions whatsoever. If we deduct 18 patients who died within 12 hours after admission there remain 442 cases—335 recoveries and 107 deaths—a mortality of 24.20 per cent. and a recovery-rate of 75.79 per cent. If we similarly cut out those, 34 in number, who died within 24 hours after admission, there remain 426 patients—335 recoveries and 91 deaths—a death rate of 21.36 per cent. and a recovery rate of 78.63 per cent. Lastly, if, as is usually done with infirmary statistics, we drop out of account those patients, 49 in number, who died within 48 hours after admission, there remain 411 cases—335 recoveries and 76 deaths—a mortality of 18.49 per cent., and a recovery rate of 81.50 per cent. It may well be assumed, Napier says, that if a patient survives for 48 hours after admission he has become fairly under the influence of the treatment adopted, and his case serves as a fair test of the value of such treatment.

Two hundred and nine patients were males, 45.43 per cent., and 251 were females, 54.56 per cent. Of 460 cases, 209 were males, and the deaths among these numbered 68, a percentage of 32.53; the recoveries were 141, a percentage of 67.46. Of the total of 460 (excluding no case, however soon death occurred after admission), 251 were females of whom 194 recovered; 77.29 per cent., and 57 died, 22.70 per cent. These figures indicate that pneumonia is a much more deadly disease in men than in women. Of the 49 patients who died within 48 hours after admission, 31 were men and only 18 were women, and this, notwithstanding the fact above noted, that the male patients numbered only 209, as against 251 female.

The patient is kept absolutely in bed; he is fed hourly while he is awake, his diet during the febrile period consisting of fluids, such as milk and well-thickened beef-tea or chicken soup, about 4 fluidounces on each occasion, the milk being sometimes given in the form of curds. No poultice or other form of external treatment is used; no opiates or hypodermic injections of morphin. Pain, usually pleuritic, was found to be best relieved by the application of a firm binder, 4 or 5 inches broad, pinned round the lower ribs below the nipples. Napier cannot recall any cases in which he had occasion to order the administration of morphin hypodermically, or in which the firm binder failed to ease pain. In the way of medicines, Napier's sheet anchor has been a combination of chloral and digitalis, given every three, four or six hours; 7½ to 10 grains of chloral hydrate with 10 minims of the tincture or 1 or 2 drams of the infusion of digitalis. Strychnin he gives when heart failure seems to threaten. It should be given freely, if given at all. Oxygen also he has found of much value when cyanosis begins to be evident; it also has to be given lavishly if any good is to be expected from its use. He has used stimulants very sparingly—probably not at all in at least one-half of his cases.

### British Journal of Children's Diseases, London

*February*

20 Cyclic or Recurrent Vomiting Associated with Hypertrophic Stenosis of the Pylorus. A. E. Russell.
21 Purpura Fulminans. J. D. Rolleston and T. McCririck.
22 Occurrence of Adenoids in Three of the London County Elementary Schools. M. Yearsley.
23 Spasmus Nutans with Nystagmus. J. B. Barrett.

### Indian Medical Gazette, Calcutta

*February*

24 Circulatory Diseases in India. F. J. Drury.
25 Occurrence of an Epizoötic of Fowl Septicemia in Calcutta and Prophylactic Treatment of the Disease by Vaccine. G. C. Chatterjee.
26 Medicolegal Practice in the Mofussil. W. D. Sutherland.
27 Extraordinary Series of Outbreaks of Plague in Cape Colony, due to Case to Case Infection. E. N. Thornton.
28 *Ventrofixation of the Uterus: A Protest. R. H. H. Goheen.
29 *Death from Intraspinal Injection of Novocain and Strychnin. W. Gabbett.

28. **Ventrofixation of the Uterus.**—Goheen believes that this operation still has a useful place in gynecologic surgery. In cases of prolapse in old multipara, in which pregnancy is almost certainly not to be expected, ventrofixation of the uterus may be permissible, but in young women he regards it as unjustifiable and dangerous to correct malpositions of the uterus by a fixation to the abdominal wall.

29. **Death from Intraspinal Injection of Novocain and Strychnin.**—Gabbet's patient, aged 40, had a large elephantiasis of the scrotum, weighing 31 pounds. An injection of 3 c.c. of distilled water containing one milligram of strychnin hydrochlorid and one decigram of novocain was given between the eleventh and twelfth dorsal vertebræ. Onset of anesthesia was rapid and in 5 minutes had reached the level of the nipples. Ten minutes later it was noted to be 3 inches above the level of the nipples. The patient sat up for 1 minute after receiving the injections and then lay down with his head on a pillow.

About half an hour after receiving the injection, he complained of difficulty in breathing and attributed it to the weight of the tumor which was being turned up over the abdomen in order to complete the incision below. After lowering the tumor he still seemed to have difficulty in breathing, but as he attempted to vomit slightly, Gabbett considered that it was due to nausea and faintness and would pass off. At this stage the skin flaps had been reflected, penis and testicles enucleated, and everything was ready for the final severing of the pedicle. No undue amount of blood had been lost; indeed, the pulse showed no sign of shock. The patient at this stage stopped breathing. Artificial respiration was commenced at once and it was noticed that the arms were rigid from spasm, so much so that at first they could only be moved with difficulty. The most energetic attempts failed to resuscitate the patient. There was no doubt that death was due to respiratory failure, whether as a result of spasm from the action of the strychnin on the medulla or from partial paralysis due to the action of the novocain Gabbett says is difficult to determine. Judging from the stiffness of the arms, he would attribute it to the former cause.

### Annales des Maladies des Org. Génito-urinaires, Paris

*February, XXVIII, pp. 289-384*

30 *Resistance of Animals to Destruction of the Kidneys. F. Putzu.

30. **Resistance of Animals to Destruction of the Kidneys.**—Putzu reports experiments on dogs and rabbits, the outcome demonstrating that the animals may survive even when part of the remaining kidney is removed after a nephrectomy. The limit of tolerance seems to be about three-fourths of the total supply of kidney substance. Removal of more than this is fatal sooner or later.

### Annales de Médecine et Chirurgie Infantiles, Paris

*February 15, XIV, No. 4, pp. 109-142*

31 *Infantile Quadriplegia with Pneumococcus Infection of the Meninges. E. Gaujoux and F. Maillet.
32 Latent Tuberculous Peritonitis in Ten-Months Old Infant. L. Tixier and J. Trolsier.
33 Prognosis of Appendicitic Abscess. M. Savariaud.

31. **Acute Infantile Paralysis from Pneumococcus Infection of the Meninges.**—Gaujoux and Maillet report a case of infantile quadriplegia and pneumococcus infection of the meninges, in which the total flaccid muscular paralysis, the absence of tendon phenomena and the abnormal movability of the joints suggested Oppenheim's congenital muscular atony

in some respects, but the sudden onset of the symptoms and their retrogression exclude this diagnosis. The infection of the meninges demands repeated lumbar puncture and modifying injections, possibly of antimicrobian serum. For this, he says, physical. chemical, cytologic and bacteriologic tests may be necessary in each case.

### Archives des Maladies de l'App. Digestif, Paris

*February, IV, No. 2, pp. 49-112*

34 Spontaneous Chronic Ulcer in Six Dogs after "Isolation" of the Stomach. (Etude de pathologie comparée.) F. Moutier.
35 *Experimental Research on Pathogenesis of Gastric Ulcer. A. Bauer.

35. **Pathogenesis of Gastric Ulcer.**—Bauer has been repeating the experiments of F. B. Turck as reported in The Journal. June 9, 1906, but he states that his results and his conclusions from the findings seem to contradict those of Turck.

### Bulletin de l'Académie de Médecine, Paris

*February 22, LXXIII, No. 7, pp. 185-212*

36 Coloring Matters Used in Articles of Food. Béhal and committee.
37 *Successful Treatment of Epithelioma of the Face with Pure Formalin. H. Hallopeau and P. Fumouze.

37. **Formalin in Treatment of Epithelioma of the Face.**—In the 2 cases reported, the liquor formaldehydi was applied on a wad of cotton after the ulceration had been softened with moist dressings. The application was repeated four days later and after the thick eschar had been thrown off the lesion healed, leaving a smooth scar. There was no reaction in the surrounding tissues. The method is now being applied in a case of verrucous lupus with, the authors state, promising results to date.

### Archives de Médecine des Enfants, Paris

*March, XIII, No. 3, pp. 161-240*

38 *Epidemic Cerebrospinal Meningitis. J. Comby.
39 Infantile Pseudoleucemic Anemia. (Maladie de Jaksch.) D. Kiroff.

38. **Epidemic Cerebrospinal Meningitis.**—Comby relates his experiences with 31 cases of cerebrospinal meningitis in children, including 8 young infants; 5 were between 1 and 2 years old, 9 between 2 and 4, and the others between 5 and 15. The symptoms and course varied widely but serotherapy gave excellent results; he injected the serum through the same needle puncture after withdrawal of cerebrospinal fluid. Hot baths at 38 C. (100.4 F.), repeated three or four times a day, proved a useful adjuvant, with ice to the head and sedatives.

### Grèce Médicale, Syra, Greece

*XI, Nos. 15-16, pp. 33-36. Last indexed August 28, 1909, p. 747*

40 Anemia of Renal Origin. G. D. Sykiotis.
41 *Familial Angiocholitic Cholemia. P. N. Divaris.

*Nos. 17-18, pp. 37-40*

42 Oriental Sore in Greece. (Leishmanioses en Grèce.) J. P. Cardamatis. Commenced in No. 13.
43 The Condition Preceding Arteriosclerosis. (La présclérose.) G. D. Sykiotis.
44 *Malaria in Children. (La malaria infantile.) J. P. Cardamatis.

*XII, Nos. 1-2, pp. 1-4*

45 Influenza Affecting Almost Exclusively the Nervous System. (Formes nerveuses de la grippe.) P. N. Divaris.
46 *Experimental Research on Transplantation of Testicles, Kidneys, Spleen and Eyes. (Transplantation des testicules.) S. Zervos. Commenced in No. 19.

41. **Familial Angiocholitic Cholemia.**—Divaris refers to the presence of bile in the blood as liable to occur in several members of a family, following inflammation of the gall-bladder. The syndrome includes hyperchlorhydria and a special form of sudden uncontrollable diarrhea. Among the secondary symptoms are a tendency to hemorrhoids, to mucomembranous enteritis and to appendicitis. The abdominal wall may be relaxed, the intestines distended, the spleen enlarged, the kidneys irritated as evidenced by intermittent or orthostatic albuminuria; pruritus and urticaria are frequent and there may also be a tendency to gastric hemorrhage, to headache, recurring bronchitis, pleurisy, rheumatism, epistaxis and mild joint affections. The temperature is highest in the morning and the patient generally develops neurasthenia or even pronounced melancholia. Some cases are entirely free from all these secondary symptoms. He summarizes the treatment as bed rest, exclusive skimmed milk diet—three liters in the twenty-four hours—which aids in throwing off the bile pigments in excess in the blood, abstention from fats as they fatigue the liver cells, and a glass of mineral water before breakfast.

44. **Malaria in Children.**—Cardamatis has noticed that infants less than three months old in Greece are rarely affected with malaria and all seem to be comparatively immune up to the end of the first year. But between the ages of 2 and 7 children are particularly liable to acquire malaria, especially during their third year. The malaria in the mother does not seem to influence the general condition of the fetus in any way; it seems probable that certain antibodies develop in the fetal blood or in the fetal portion of the placenta which injure the malaria germs and destroy them as they enter the placenta. In both nurslings and older children he has demonstrated an organic resistance to the toxic products of the hematozoa, this natural immunity, however, varying widely in degree. A natural immunity seems thus to occur in Greece similar to that observed among the blacks in Africa. This immunity has been demonstrated even in children who most certainly have never had malaria and it thus differs from the immunity described by Koch, Plehn and v. Pirquet, and is also entirely different from that observed by Celli in the Roman campagna. Malaria in both children and adults in Greece seems to assume predominantly the tertian estivo-autumnal type. Children are more apt to develop the chronic than the acute form.

46. **Experimental Transplantation of Testicles, Spleen and Eyes.**—Zervos reports over 412 different experiments in this line with rabbits, monkeys, dogs, cats and guinea-pigs, this experience showing that the testicle from one animal can be transplanted into another of the same species and even of another species, and replace the normal testicle. The transplanted testicle may continue its functioning and produce normal spermatic fluid, but finally is absorbed by the end of a year. The implantation of several testicles induced priapism in the male animals and nymphomania in the females, persisting for about a year, by which time the organs in their subcutaneous bed had been completely absorbed. During the process of absorption there is intense stimulation of the genital apparatus. Zervos states that the practice of castration is still so common in the East that it is a most important medical problem how to aid the eunuchs who implore the physician for some means of relief from their condition. He is convinced that the results of his experiments open a promising outlook in this line, and also for the treatment of impotency. He took some of the animals to Budapest to demonstrate his method and the results before the recent international medical congress. Some were dissected by Waldeyer at Berlin and he cites the latter's report. He also announces that he is soon to make another trip to Europe to demonstrate in the medical centers a number of his engrafted animals, his methods, results, etc. He offers to present his material before any scientific society or university and submit the animals to every possible test and means of control. The transplanted testicles, kidneys and eyes resumed functional activity when derived from a young animal; those from older animals do not display this power of continuance of functioning. Kidneys and spleens are absorbed more rapidly than testicles. He is now engaged in research to determine whether other vital organs, lungs, liver, uterus, heart, etc., can be replaced by others transplanted from another individual, and remarks that the outlook already is promising.

### Lyon Chirurgical, Lyons

*March, III, No. 3, pp. 257-352*

47 Leucoplasia in the Bladder Probably of Neoplastic Origin. (Leucoplasie vésicale.) Rochet and Murard.
48 Fracture of the Malleolus. III. (Fractures malléolaires recentes.) E. Destot. Continued.

### Lyon Médical, Lyons

*February 20, XLII, No. 8, pp. 393-440*

49 *Tuberculous Paroxysmal Tachycardia and Arrhythmia. J. Bertier.

*February 27, No. 9, pp. 441-492*

50 *Actinomycosis of Tissue Around the Kidney. (Phlegmon périnéphrétique de nature actinomycosique.) Leclerc-Montmoyen.

49. **Tuberculous Paroxysmal Tachycardia.**—Bertier has encountered two new cases since the one he reported in 1905 in which paroxysmal tachycardia was observed during the course of pulmonary tuberculosis. Nothing could be discovered during life or at autopsy to explain the attacks except the tuberculosis. He has found two similar cases on record, and adds a report of a case in which paroxysmal arrhythmia, evidently a latent tachycardia, was accompanied by gastric disturbances and vomiting. The rapid heart action observed was in every respect like that of the so-called essential tachycardia. In all the cases the tachycardia was arrested at once by vomiting induced by ipecac. In every case of tachycardia, he says, search should be made for possible underlying tuberculous infection if such is not already clinically evident. In most of the cases mentioned there were advanced lesions in the lungs, but one patient was in an early stage of pulmonary tuberculosis.

50. **Actinomycotic Phlegmon near the Kidney.**—In the case described the patient was a butcher, 40 years old, who refused to permit evacuation of the abscess until it had assumed very large proportions. For a long time the diagnosis had been pleurisy without effusion. The wound did not heal properly after the abscess had been opened, and the general condition grew rapidly worse. The pus was examined under the microscope 16 days after the operation, and on the discovery of the ray fungus potassium iodid was given. In less than three days the whole syndrome was arrested and complete recovery soon followed. Another tumor developed later in the hypochondrium, but retrogressed on resumption of the potassium iodid.

### Obstétrique, Paris

*February, III, N. S., No. 2, pp. 105-200*

51 The Muscles and Ligaments Connected with the Coccyx. (L'appareil musculo-ligamenteux du coccyx.) L. Devraigne and P. Descomps.
52 *Treatment of Genital Tuberculosis. A. H. M. J. van Rooy.
53 *Treatment of Extrauterine Pregnancy. (Traitement de la grossesse extra-utérine.) E. Essen-Möller.

52. **Tuberculosis of Genital Apparatus.**—Van Rooy reviews his experience with several cases of severe tuberculous processes in the ovary or throughout the genital apparatus, the results confirming the advantage of operation. Even if surgery does not cure completely, it relieves and permits long survival. If the patient does not improve under the ordinary measures, he advises hysterectomy. In one such case the debility of the patient and an evident latent pulmonary process did not deter him from doing abdominal hysterectomy. The woman rapidly convalesced and the general condition improved beyond anticipation. It is surprising, he remarks, how well a major operation is borne by such patients.

53. **Treatment of Extrauterine Pregnancy.**—Essen-Möller has operated in 47 out of 48 cases of extrauterine pregnancy. All the patients recovered. In the one non-operative case the patient was confined to her bed for six months and the hematocele was not entirely absorbed until after two years. In another case he did not operate until the non-absorption of the hematocele after nine months compelled it. In the operative cases the patients were dismissed in three weeks. His experience is all in favor of prompt operation.

### Presse Médicale, Paris

*March 9, XVIII, No. 20, pp. 169-176*

54 *Pseudotumors of the Brain and Serous Meningitis in the Ventricles. (Pseudo-tumeurs cérébrales et méningite séreuse ventriculaire.) F. Raymond.

*March 12, No. 21, pp. 177-184*

55 Indications and Technic for Bronchoesophagoscopy. M. Guisez.
56 Syphilitic Chronic Atrophy of the Aorta. M. Letulle.
57 Spontaneous and Experimental Autoinoculation of Syphilitic Chancres. M. Pinard.

54. **Pseudotumors in the Brain.**—Raymond describes two cases, dating from 1900, to illustrate the importance of an early diagnosis as prompt mercurial treatment, even in the absence of syphilis, may have a beneficial action in serous meningitis. If this fails, decompressive measures may aid in the spontaneous cure or may cure alone. The sudden onset of the meningeal and optic symptoms is characteristic. In his first case the patient had an inherited syphilitic taint: at the age of 23 a subacute meningeal syndrome developed with amaurosis, but very slowly and gradually all the symptoms subsided and by the end of three or four years there was none left except that vision was never recovered in one eye. Exophthalmic goiter developed later. In the second case also the syndrome simulated a brain tumor except that the symptoms gradually subsided in the course of two years, except the amaurosis, which still persists.

### Archiv für Kinderheilkunde, Stuttgart

*LII, Nos. 4-6, pp. 241-484. Last indexed January 22, p. 327*

58 *Pediatrics in Medical Curriculum in Germany. (Die Kinderheilkunde im Universitätsunterricht Deutschlands.) E. Feer.
59 *Orthostatic—Lordotic—Albuminuria. R. Fischl.
60 Cerebrospinal Meningitis; Clinical Observations and Serum Treatment in New York. L. Fischer (New York).
61 Improved Technic for Developing Nipple and Drawing Milk. (Zur Technik des Stillens.) S. Weiss.
62 *Tuberculosis and Tuberculin Treatment in Young Children. (Tuberculose und Tuberkulintherapie im Säuglings- und frühen Kindesalter.) P. Röhmer.
63 Clinical and Biologic Study of the *Streptococcus enteritidis.* M. Pincherle.

58. **Pediatrics in the Medical Curriculum in Germany.**—Feer comments on the growing interest in pediatrics, not only in medical circles but in official headquarters. One of the signs of the times is that societies for internal medicine in Vienna and Berlin have recently added pediatrics to their official title. He urges that every medical college should have a hospital for children's diseases and an infant department connected with it, a special dispensary for children, all in charge of a professor who is a specialist in pediatrics. If this is not possible, there should at least be a special infants' ward, with at least 20 beds. He also urges examination in pediatrics by a specialist in the examination for license to practice.

59. **Orthostatic Albuminuria.**—Fischl expatiates on the increasing acceptance of the mechanical theory of orthostatic albuminuria, the pressure from lordosis being responsible for the development of the albuminuria. He regards this mechanical explanation as great progress, but adds that besides the lordosis there must be some predisposition on the part of the kidney or the albuminuria does not follow. He suggests as a better term, "lordotic albuminuria in the predisposed"—*Lordotische Prädispositionsalbuminurie.* Treatment, he states, should be based on this mechanical conception and everything avoided that is liable to induce lordosis, long standing or much bending of the spine. A correcting corset may be useful.

62. **Tuberculin Treatment in Infants.**—Röhmer reports three cases of tuberculous infants in whom reparatory proliferation of connective tissue seemed to have been induced by systematic tuberculin treatment. Such reparatory processes are rare in children.

### Archiv für klinische Chirurgie. Berlin

*XCI, No. 4, pp. 803-1059. Last indexed March 5 and 19, pp. 824 and 1012*

64 *Ileus in Children. (Der Darmverschluss der Kinder.) H. Alapy.
65 Transplantation of Muscles for Defects in Abdominal Wall. (Ueber Muskeltransplantation bei Defecten der Bauchdecken.) I. I. Grekow.
66 By-Injuries and Complications in Operating for Rectal Cancer. (Nebenverletzungen und Complicationen bei der Operation des Mastdarmkrebses.) W. Kohn.
67 *Aseptic Stomach and Intestinal Operations. (Ueber aseptische Magen- und Darmoperationen.) L. Moszkowicz.
68 *Recovery from Cerebrospinal Meningitis after Trephining the Skull. (Fall von Cerebrospinalmeningitis, durch Trepanation des Schädels geheilt.) E. Tscherniachowski.
69 Infection of Firearm Wounds. (Zur Frage der Infection der Schussverletzungen.) W. v. Reyher.
70 Diagnosis and Treatment of Carcinoma of the Large Intestine. T. Wette.
71 Cecal Tuberculosis. Id.
72 *Postoperative Thromboembolism. (Studien über Thrombo-Embolie, insbesondere nach Operationen.) G. Kelling.

64. **Ileus in Children.**—Alapy has encountered 45 cases of ileus in children from a few weeks to 14 years old. In the older children, conditions and syndrome resemble those in adults but in the younger ones more may be learned from palpation than in adults. Megacolon and invagination are easily recognized and occur almost exclusively in children. There were only 5 cases which did not belong in either one or the other of these categories. Ileus for which preceding

appendicitis was responsible was observed in ten different forms, but the invagination syndrome is always alike, being notable for the absence of rigidity of the abdominal walls. Prompt operation, doing as little harm as possible, is often indispensable; enterostomy should be done more readily, perhaps, than in case of adults. This is not a mere palliative operation; with only 2 exceptions the children treated by enterostomy were cured. Resection is rarely required for invagination. If it is difficult to reduce, the trouble is not on account of adhesions but of defective technic. He succeeded in reducing the invagination in every case, even with ileocecal invagination; solid adhesions were practically never encountered. In many forms of occlusion of the intestine in children medical measures alone may be given a trial, but only for a short time. The ileus must be speedily corrected as children have less resisting power than adults. The particulars of his 45 cases are given in detail. With strangulation ileus, an opening above does not restore the circulation in the parts below. But enterotomy, allowing the escape of gases and feces, and then suturing the incision at once, may give great relief and turn the scale in favor of recovery. Even with supposed strangulation ileus an enterostomy may cure as there may have been a blunder in diagnosing; the child should be given the benefit of the chance. In one such case the course of the case later first revealed that the trouble had been merely obstruction from adhesions instead of the assumed strangulation. The permeability of the intestines became spontaneously restored after enterostomy in all the cases of ileus from adhesions, without even the necessity for separation of the adhesions. The ileus in these cases is generally the result of some gross error in diet, and the enterostomy permits the removal of the articles causing the mischief.

67. **Aseptic Operations on Stomach and Intestines.**—Moszkowicz gives an illustrated description of his method of suturing the stomach or intestines before opening the lumen, and also adds the details of 37 operations, the results commending, he says, the advantages of this technic.

68. **Cerebrospinal Meningitis Cured by Trephining.**—In the case reported, a student presented a syndrome diagnosed as suppurative streptococcus meningitis of otitic origin. The mastoid process was incised but no focus found, and the skull was trephined in the posterior cranial fossa to permit of drainage. The dura was found congested and taut; three punctures released about 10 c.c. of blood-stained fluid. The needle probably entered the lateral ventricle to allow so much fluid to escape. The dura was incised and tampons introduced between it and the pia. The temperature dropped the same evening and recovery was soon complete. The disease was evidently a sporadic case of cerebrospinal meningitis, the meningococcus having found its way to the meninges through the existing chronic otitis media.

72. **Thromboembolism.**—Kelling's experimental research has confirmed the fact that thrombi may develop in consequence of stasis, of increased secretion from changes in the composition of the blood, or from infection. Prophylaxis should therefore strive to avoid compression of veins and thus avert stasis, with measures to combat the increased tendency of the blood to clot, and ensure asepsis. The persons most liable to thrombosis seem to be those who have lost much blood or are cachectic from cancer or tuberculosis, patients with infectious processes or heart disease and the corpulent inclined to sedentary habits. Digitalis may tide some patients past the danger point. In patients with heart disturbances, respiratory exercises may help to ward off danger. Even with existing infectious processes, much can be done to avoid thrombosis, care being exercised to refrain from any injury or even manipulation of the veins, the incision being made at a point where large veins are not encountered. By having the patient stand up and strain, the superficial veins become prominent and they can be marked so that the incision can avoid them. It has been his experience that by avoiding the superficial veins the deep ones also escape. If a large vein has to be severed, he ligates before cutting, and cuts the vein as far from the actual field of operation as possible, avoiding dead spaces and everything tending to compress the vein. Compression from tamponing must have an injurious influence in this line, as also any tendency to tympany which in turn compresses the veins. Special care is necessary in removing existing compression from a vein, as in evacuating an abscess that has been compressing the adjacent organs. It is well to tap the patient before undertaking omentopexy to ensure that the circulation in the region is working well before doing the Talma operation. Patients who have just been operated on should not be given milk, nor those with internal diseases with a tendency to thrombosis, such as typhoid; raw milk in particular, he says, should be avoided as its lime salts promote coagulation. Copious water-drinking does not ward off thrombosis; he lost two patients from fatal embolism notwithstanding that they had been drinking very freely. Better results may be anticipated from continuous irrigation of the rectum with salt solution, which promotes circulation in the pelvic veins. Kelling ascribes to Ries (The Journal, Aug. 19, 1899, page 454), the suggestion that thrombosis may be prevented by getting the patients up early. This certainly tends to prevent stasis, but it is not an infallible preventive of embolism; he lost one patient from embolism who was allowed to get up early after an operation for incarcerated inguinal hernia. He regards frequent change of the position in bed as more important for prophylaxis than letting the patients get up soon. Special care must be taken that the buttocks do not sink deep into the mattress; it may be advisable to raise the foot of the bed when danger from pelvic thrombi is anticipated. He advises changing from the back to the side and even to the ventral decubitus at times. Massage of the legs four or five times a day is useful, he believes, to prevent thrombosis in the veins of the legs, but femoral thrombosis developed not only in convalescence from operations but also in typhoid in some of his cases, although the legs had been systematically massaged. There is no reliable premonitory sign of impending embolism but the "step pulse," *Treppenpuls*, in which the pulse increases while the temperature persists unchanged or the pulse remains high although the temperature has declined, is significant, as also slight sensations of dyspnea and pain in the side warning of embolism. In all such cases the patients should be kept unconditionally in bed for three weeks and the veins constantly supervised. He noticed that in two of his six cases of fatal embolism there was some venous bleeding in the granulations when the dressings were changed, demonstrating the stasis in the veins. Pains in the veins in the legs are also a sign that they are becoming unduly distended. Thrombosis in the veins in the small pelvis can be palpated through the vagina. An obstructing thrombus in the hypogastric vein sometimes causes a swelling at the nates; if bilateral, the genitals may swell. With thrombosis in the azygos vein edema may develop in the corresponding region in the back. The aim should be to discover new means for detecting incipient thrombosis and then if necessary to remove the thrombus from the periphery.

### Deutsches Archiv für klinische Medizin, Leipsic

*XCVIII, Nos. 4-6, pp. 301-614. Last indexed January 29, p. 418*

73 Mountain Climate and Blood Production. (Höhenklima und Blutbildung.) E. Masing and P. Morawitz.
74 Action of Injections of Serum on Eosinophiles and Mast Cells in Human and Animal Blood. H. Schlecht.
75 The Adams-Stokes Syndrome and the Atrioventricular Bundle of His. G. Herzheimer and H. Kohl.
76 The Blood in Pulmonary Tuberculosis. (Blutbefunde bei Lungentuberkulose.) L. Steffen.
77 The Urine Sediment in Athletes and in Nephritis. (Untersuchungen des Urinsedimentes von Sportsleuten und Nephritikern.) H. B. Christensen.
78 Production and Action of Antityphoid Serum. (Gewinnung und Wirkung von Typhusheilserum.) H. Lüdke.
79 *Lines to Aid in Topography of the Anterior Thorax. (Ueber die vorderen thorakalen Richtlinien.) P. Hampeln.
80 Absorption and Biologic Behavior of Different Kinds of Sugar in the Large Intestine. (Die Resorption und das biologische Verhalten der verschiedenen Zuckerarten im Dickdarme.) A. v. Halasz.
81 *Method for Determining Pressure in Superficial Veins. (Ueber eine Methode, beim Menschen den Druck in oberflächlichen Venen exakt zu bestimmen.) F. Moritz and D. v. Tabora.
82 Mode of Elimination of Albumin after Brief Ligation of the Renal Vessels. (Ueber den Ausscheidungsort des Eiweisses bei kurzdauernden Gefässligaturen der Niere.) W. Telemann.
83 Registration of Heart Sounds and Murmurs. (Registrierungen von Herztönen und Herzgeräuschen beim Menschen.) G. Joachim and O. Weiss.
84 Pathology of Nuclein Metabolism. (Zur Pathologie des Nucleinstoffwechsels.) H. Rotky.

85 Determination of Histidin, Arginin and Lysin in the Autolysate of Pneumonic Lungs. G. Boehm.
86 Occurrence of Cleavage Products of Nucleinic Acid in the Autolysate of the Pneumonic Lung. (Auftreten von Spaltungsprodukten der Nucleinsäure bei der Autolyse der pneumonischen Lunge.) M. Mayeda.
87 *Finger-Nail Palpation of Artery Walls. (Die Nagelpalpation der Arterienwand.) J. K. A. Wertheim-Salomonson.
88 Ultimate Outcome of Case of Peculiar Intestinal Concrements. (Nachtrag zu Band LXXXIV, 1.) B. Naunyn.
89 Comparison of Gas Content of Arterial and Venous Blood as Functional Heart Test. (Ueber Schlagvolum und Herzarbeit des Menschen.) J. Plesch.

79. **Lines for Topography of the Chest.**—Hampeln urges the discarding of the terms mammary line, axillary, etc., as the anatomic conditions vary so widely in different persons. He suggests as more reliable and exact the use of the vertical median line through the sternum and a horizontal line through the base of the ensiform process. Measurements from these, he declares, are much more reliable for comparison.

81. **Method of Determining the Pressure in Superficial Veins.**—This article gives an illustrated description of a method by which communication is established through a cannula between a manometer and the blood in the median vein. Moritz and Tabora have applied this phlebotonometer about 300 times during the last eight months and on 100 patients, and describe the findings in normal and pathologic conditions. In some cases they kept up the examination for over an hour; they regard the technic as entirely harmless with ordinary precautions.

87. **Finger-Nail Palpation of Artery Walls.**—Wertheim-Salomonson has found that when the artery is palpated not with the pulpa of the finger but with the finger nail, perpendicular to the surface of the skin, it is possible to feel the artery wall alone; the contents of the vessels and the pulse are not felt with this technic, but the wall is palpated as distinctly as if the artery were dissected out. The wall is felt even in small children almost as well as in adults and with a little practice it is soon easy to tell whether the wall is thickened or not. We feel the little hill over which the finger-nail glides, thus estimating the diameter of the artery and the size of the wall when the current is shut off and other data can thus be readily learned. The entire innervation of the nail bed is called into play. A hard background is necessary for the finger-nail palpation to be most instructive. It is proving useful also for direct examination of nerves.

### Deutsche medizinische Wochenschrift, Berlin

*March 10, XXXVI, No. 10, pp. 441-488*

90 *Treatment of Uremia. C. Bäumler. Commenced in No. 9.
91 *General Symptomatology and Treatment of Brain Tumors. (Hirngeschwülste.) Z. Bychowski.
92 *Tuberculous Meningitis in the Elderly. J. Jaquet.
93 *Hysterical and Spastic Intestinal Occlusion. (Hysterischer und spastischer Darmverschluss.) O. Nordmann.
94 *Diagnostic Tests of Kidney Functioning. (Zur funktionellen Nierendiagnostik.) J. Vogel.
95 Recovery after Severe Stab Wound of Heart. (Stichwunde des Herzens.) L. Renner.
96 *Mediate Contagion of Syphilis, and Prophylaxis. (Fall von "Syphilis insontium," zugleich ein Beitrag zur Lebensdauer der Spirochæta pallida.) O. Scheuer.
97 Radium Treatment of Nevi. (Zur Strahlenbehandlung der roten Muttermale.) H. E. Schmidt.
98 Drug Eruptions. (Arzneiexantheme.) K. Bendix.
99 Authentic Works of Hippocrates. (Echte Hippokratesschriften.) H. Schöne.

90. **Treatment of Uremia.**—Bäumler emphasizes the difficulty of differentiating the true cause of the disturbance when the patient is first seen after the onset of coma; the history of preceding scarlet fever, diphtheria or pregnancy and the existence of a tendency to edema or enlargement of the heart or albuminuria may give the clue. Even in a person known to have a chronic kidney disease, a sudden attack may be due to uremic intoxication or to apoplexy or other causes. The trouble in uremia is probably due to the action of various poisons and their effect on the most diverse organs and tissues. He warns against saline infusions when there is reason to suspect kidney derangement. In chronic kidney disease the patient should be under the constant supervision of his family physician; the specialist may give good advice but the patient may misunderstand and misapply it, so that continual oversight by the family physician is indispensable for prevention and postponement of exacerbations and mishaps. It is especially important to keep the skin working well by systematic warm baths. Douches and other sudden powerful measures are unadvisable. If there are warning signs of uremia, such as muscular twitching, adhesion and drowsiness, even the milder sweating measures may prove disastrous. Many disturbances in the circulation in nephritis are not pathologic but are merely the effort of the circulatory apparatus to maintain the compensation. In uremic poisoning, as also in diabetics, the tissues become less resistant and more susceptible to infection. Hence it is especially important to be on the lookout to prevent intertrigo or decubitus, and to insist on the patient's breathing through the nose and keeping the mouth shut during sleep.

91. **General Symptomatology of Brain Tumors.**—Bychowski found headache one of the most frequent complaints in patients with brain tumors, noticeable in that it became more intense when the patient suddenly changed his position or made a rapid movement with his head or these changes of position first elicited the headache. The lack of or subsidence of headache, however, is no evidence against the existence of a brain tumor. Slow, high tension pulse and absence of the tendon reflexes were occasionally found as manifestations of the high pressure in the brain. Another important sign is the change in the electric conductibility of the skull in case of a brain tumor. In one case this sign contradicted the other local symptoms but the operation confirmed the precision of the electric findings. The article is based on comparison of the clinical history with the autopsy findings in a number of cases in Warsaw. Many of the patients presented disturbances in the sexual sphere, arrest of menstruation, impotency, sexual infantilism with hypophysis tumors, and precocious sexual development with tumors of the pineal gland. Careful review of the history, examination of the fundus of the eye and analysis of the different symptoms will almost always differentiate brain tumor from other lesions except from hydrocephalus and serous meningitis. An acute onset with rising temperature and frequent fluctuation in the intensity of the clinical picture suggest rather the latter affections, while a constantly progressive clinical picture speaks more for a true tumor although the latter may be accompanied by hydrocephalus with fluctuation in the symptoms due to the latter. If mercury is given a trial it must be only under the control of an ophthalmologist, especially if the fundus of the eye is no longer normal. If the stasis in choked disc increases and vision continues to diminish, mercurial treatment should be suspended at once. He bases this warning on several mishaps in such cases in which absolute blindness developed under mercurial treatment. This occurred even in one case in which the disease was evidently merely a serous meningitis. One patient with a tumor in the cerebello-pontine recess lost vision in one eye during a course of specific treatment. A second course was instituted a few months later during which the sight in the other eye also was lost. The mercurial treatment not only wastes time, he asserts, but also reduces the patients' resisting power so that they are unable to bear the necessary operation later. Lumbar puncture is seldom necessary with brain tumors, and if done not more than 15 or 20 c.c. of fluid should be withdrawn. Trephining gives better results than is generally recognized, and he is convinced that the progress of surgery will reduce its dangers still more.

92. **Tuberculous Meningitis in the Elderly.**—Jaquet has encountered 9 cases of tuberculous meningitis in patients between 17 and 37 years old and 7 others between 41 and 68. In the latter group, the trouble was more a tuberculous basal meningitis. Stupor was the one symptom common to all, rapidly leading to unconsciousness and complete cerebral paralysis. Vomiting did not occur in most of the cases and headache in only 2; the abdomen was not retracted but rather inclined to tympany. Only 3 of the patients presented rigidity of the back of the neck and Kernig's sign was apparent in only a few, as also the characteristic cerebral pulse. The pupil symptoms were merely a slight sluggishness, with myosis in one case and transient strabismus in another. In 3 cases there was retention of urine, incontinence in another. The meningitic syndrome was the termination of pulmonary tuberculosis and the patients succumbed in from 5 to 20 days after the first meningeal symptoms. He is convinced that terminal tuberculous meningitis has escaped recognition in many cases.

93. **Hysterical and Spastic Intestinal Stenosis.**—Nordmann reports three cases; in one the trouble was hysterical ileus, in another spastic ileus, both patients recovering, but in the third case a long stretch of the lower segment of the ileum was contracted and the resulting disturbances proved fatal. This case shows that the paralysis of the intestines which may accompany the spasmodic contraction may prove fatal but otherwise when a nervous affection is the cause of the spasm the prognosis is not unfavorable. Treatment of the nervous contraction should be conservative so long as the general condition remains good. If the patient becomes worse, enterostomy is indicated. On suspicion of ileus from spasmodic muscular contraction the patient should be taken at once to a hospital for constant supervision.

94. **Functional Kidney Tests.**—Vogel follows palpation, percussion and chemical and bacteriologic examination of the urine with cystoscopy and this with injection of indigocarmin. The phloridzin test is then applied and the freezing point of urine and blood determined. If the findings with the latter are repeatedly abnormal he advises against an operation. The final test is the combination of the indigocarmin with catheterization of the ureters.

96. **Prophylaxis of Syphilis Insontium.**—Scheuer reports a classical example of syphilis in the innocent in which a married woman of about 40 with four children, the entire family healthy, suddenly developed a typical syphilitic chancre on the labium majus. Infection was traced to a housemaid who had used her mistress' bath sponge during the latter's absence, the housemaid having secreting papules on the genitals. The interval between this use of the sponge and the mistress' bath later was an hour and a half. Scheuer instituted research to determine how long the spirochetes retain their vitality on a wet sponge and found that they were still motile after two hours when examined in the ultramicroscope. On the other hand, he found that the spirochetes entirely lost their motility in an hour on dry substances, especially on a dried sponge. This fact that spirochetes retain their vitality over two hours in moist media explains the relative frequency of extragenital infection and also suggests prophylactic precautions. He cites a number of other typical cases of syphilis in the innocent which confirm the special danger from wet sponges, wet glasses, etc.

### Medizinische Klinik, Berlin

*March 6, VI. No. 10, pp. 371-410*

100 Hemorrhagic Nephritis with Chronic Ulcerative Endocarditis. (Embolische nichteiterige Herdnephritis.) M. Löhlein.
101 Advantages of Combination of Anesthetics. (Zur kombinierten Narkose.) Otto.
102 Wrong Interpretation of Roentgen-Ray Findings with Concrements in Urinary Passages. (Irrtümer der Röntgendiagnostik bei Konkrementen der Harnwege.) M. Roth.
103 Value of Tuberculin in Treatment of Pulmonary Tuberculosis. F. Schultze and von Starck.
104 *Physical Measures in Treatment of Sciatica. (Die physikalische Behandlung der Ischias.) A. Fürstenberg.
105 *Experimental Production of "Goiter Heart." (Zum Kropfherz.) E. Bircher.

104. **Treatment of Sciatica.**—This communication issues from the official hydrotherapeutic institute connected with the university of Berlin and states that a complete cure or material improvement was realized in 85 per cent. of cases of sciatica. The course of treatment averaged from 6 to 8 weeks, with 4 weeks for the milder cases. The hydrotherapeutic measures strengthen the patients and render them more resistant to injurious temperature influences and chilling. Hydrotherapy or injection of fluid to detach the nerves from adhesions is the most effectual treatment in sciatica, and one may succeed where the other has failed. The article is based on 150 new cases in the last few years, all given ambulant treatment; this series follows a former one which included 114 cases.

105. **Experimental Production of "Goiter Heart."**—Bircher's report of the experimental production of goiter was mentioned in The Journal, March 26, 1910, page 1094. He here relates that the heart in the animals with induced goiter presented the anomalies common with goiter in man. It seems evident that the injurious influence causing the goiter has at the same time a direct injurious influence on the heart. The cloudy swelling and fatty degeneration in some of the animals confirm the assumption of a toxic chemical injury. Exophthalmic goiter is rather frequent, he says, in the rare cases of goiter found in places where goiter is not endemic, while in the endemic foci the Basedow syndrome is extremely rare. Only 2 mild cases were discovered in a group of 400 goiter patients in his district in Switzerland.

### Münchener medizinische Wochenschrift

*March 1, LVII, No. 9, pp. 442-504*

106 *History of the Munich Surgical Institute for Army Surgeons. (Geschichte des Operationsskurses für Militärärzte.) Leitenstorfer.
107 *Treatment of Typhoid. (Wandlungen und den heutigen Stand der Typhustherapie.) v. Vogl.
108 *Operability of Tumors in Pleura and Lungs. K. Seydel.
109 Training for Disinfection Service in the Army. (Ausbildung von Desinfektoren in der Armee.) A. Dieudonne.
110 Three Cases of External Esophagotomy for Extraction of False Teeth. Mandel.
111 *Treatment of Wound from Bullet Grazing the Stomach. (Verletzungen des Magens durch Streifschuss.) A. Schönwerth.
112 Epileptic Dream-like Mental Distraction in Two Soldiers, with "Wandering" Mania. (Beiträge zu den epileptischen Bewusstseinsstörungen mit Wandertrieb.) Glas.
113 *Importance of Schwabach's Test for Diagnosis of Intracranial Changes. (Verwertung des Schwabachschen Versuches bei der Diagnose intrakranieller Veränderungen.) Hasslauer.
114 Advantages of Moist Precipitates of Mercury Iodids in Eye Lesions. (Hydrargyrum jodatum pultiforme und Hydrargyrum bijodatum pultiforme in der Augenheilkunde.) L. v. Ammon.
115 Impairment of Fitness for Military Service by Loss of Teeth Preventing Adequate Mastication. (Einfluss des Zahnverlustes auf die Militardiensttauglichkeit.) A. Neuner.
116 Epidemic Cerebrospinal Meningitis in Munich. (Genickstarre in München.) G. Mayer and A. Waldmann.
117 Diagnostic Tuberculin Tests in the Army. O. May.

106. **Courses for Army Surgeons.**—This number of the *Wochenschrift* is dedicated to the Munich Surgical Institute for army surgeons on the occasion of its fiftieth anniversary, and all the 16 articles are on subjects of special interest to them.

107. **Treatment of Typhoid.**—Vogl reviews the history of typhoid in the last fifty years especially at Munich and urges the importance of very cold baths in treatment in army hospitals.

108. **Operability of Tumors in Pleura and Lungs.**—Seydel has been analyzing the material of the Munich pathologic institute and cases on record striving to determine from the autopsy findings whether an operation might have been successful, also how large a part of the lung can be resected, conditions in regard to metastasis, etc. Among 10,829 autopsies in the last 10 years he found records of 1,342 tumors and 184, that is, 13.7 per cent., were in the lungs or pleura. In 73.4 per cent. the tumors were metastatic; in 9.8 per cent. tumors starting in other organs invaded the lungs, and in 31 cases, that is, 16.8 per cent. the tumors were primary in the lungs. In this last group the tumors were all malignant, and he has found 92 similar cases in the literature. He thus has compiled a total of 123 cancers of the lungs and pleura. This does not include the 150 cases of lymphosarcoma in the bronchial glands in miners in the Schneeberg mines reported by Auke in 1884, observed among less than 700 miners. He found in the 31 cases only 7 cases in which an operation might have offered a chance for recovery. In 11 cases of primary sarcoma of the pleura, 3 seem to have been operable. There were 20 cases of primary carcinoma of the lung in his material and he reviews 35 others on record; only 4 could possibly have been resected. There were 2 cases of primary carcinoma in his material, and he has found 27 on record; in only 2 cases were conditions favorable for operative removal of the growth.

111. **Firearm Wound with Bullet Grazing the Stomach.**—Schönwerth advises in such a case bed rest with close supervision, permitting an operation at the first threatening symptoms, opening the abdomen and suturing serosa over the injured portion or resecting the latter if necessary. This treatment was applied in the case reported but the patient succumbed to the loss of blood from hemorrhage into the pleura.

113. **Importance of the Schwabach Test for Diagnosis of Intracranial Changes.**—Hasslauer has found the Schwabach test for determining the condition of the sound-conducting and sound-perceiving apparatus extremely useful in differentiation of intracranial disturbances in soldiers. The test is the measurement of the time during which a series of tuning forks

are heard by air conduction and by bone conduction. Both subjective and objective findings with the test should be considered. In his 22 cases the patients complained of headache during exercise, the pain increasing until it became intolerable in some of the cases. Some of the patients had vertigo and occasional nausea while on duty. No objective findings were obtainable and the soldiers were suspected of malingering until the Schwabach test confirmed their statements, revealing unsuspected lesions inside the skull. In most of the cases there was a history of some trauma affecting the head.

### Wiener klinische Wochenschrift, Vienna

*March 10, XXIII, No. 10, pp. 347-843*

118 *Importance of Functioning of Peripheral Blood Vessels with Failing Compensation. (Bedeutung der Funktion der peripheren Blutgefässe beim inkompensierten Kreislaufe, und die sogenannte periphere Kompensation: Incompensatio et Compensatio peripherica.) M. Franke.
119 *Morbid Susceptibility of Thyroid for Iodin in Certain Families. (Ueber die Empfindlichkeit des Kropfes gegen Jod.) F. Pineles.
120 Concentration of Hydroxyl Ions in Pathologic Blood and Influence of Mercury. C. Kreibich.
121 *Experimental Nephritis under Influence of Chilling or Mechanical Factors. (Erkältungsnephritis.) B. Polak.

118. **The Peripheral Circulation.**—Franke discusses the various theories prevailing in regard to the functional importance of the peripheral blood vessels. His conclusions reaffirm, he asserts, that the peripheral vessels have an independent pressure and suction action similar to that of the heart; this assumption is sustained by their anatomic structure, physiologic experiments, direct observation of the blood vessels in living animals and in certain pathologic conditions in man. At the points where there is the greatest resistance to the circulation Nature has placed a system of especially powerful blood vessels like a second peripheral heart, as in the portal and intestinal vessels. Compensation may fail from disturbances in the peripheral vessels as well as in the heart itself, and the peripheral system may compensate the heart at need; the vessels in the abdomen especially are the last resort of all means to maintain the balance in the circulation. These views, he considers, explain the beneficial effect of gymnastics, massage and baths.

119. **Special Susceptibility of Certain Thyroids to Iodin.**—Pineles reports 6 cases in which unusually small doses of sodium iodid in patients with goiter induced symptoms of intoxication, the patients all presenting the familiar picture of hyperfunctioning on the part of the thyroid instead of the anticipated benefit. The total amount given in the course of the treatment ranged from 1 to nearly 7 gm. (15 to 100 grains) in the course of from 10 to 45 days, the daily dose being from 0.09 to 0.33 gm. In one patient the thyroidism developed after 10 daily doses of 0.1 gm. (1½ grains). Analysis of the cases showed that the patients were all from families with a tendency to exophthalmic goiter or diabetes or neuropathies. It is evident that the thyroid in these families was peculiarly susceptible to intoxication from iodin. The practical conclusion is evident that extreme caution is necessary in patients belonging to families with a tendency to exophthalmic goiter, diabetes or a neuropathic taint.

121. **Mechanical Origin of Nephritis.**—Polak has been trying to reproduce the experiments recently reported by Siegel in which nephritis followed exposure to cold. But Polak was unable to detect any tendency of the kind in his 11 dogs and in 13 tests on human beings. He concludes from these experiences that Siegel was mistaken in ascribing the albuminuria observed to the preceding exposure to cold; it is far more likely, Polak declares, that the albuminuria was the result of the way in which the dogs were fastened. making them stand upright on their hind legs and thus mechanically inducing lordosis responsible for the albuminuria.

### Zentralblatt für Chirurgie

*March 12, XXXVII, No. 11, pp. 401-432*

122 *Fracture of the Neck of the Femur in the Young. (Coxa vara traumatica und ihre Behandlung.) R. Whitman (New York).
123 Celluloid Drains as Unbreakable Substitute for Glass Drains. R. Mühsam.

122. **Injuries of the Neck of the Femur in Early Life.**—Whitman's views in regard to treatment of traumatic coxa vara, etc., from fracture of the neck of the femur were described in THE JOURNAL, Jan. 16, 1909, page 248, and Feb. 20, 1909, page 656.

### Zentralblatt für Gynäkologie, Leipsic

*March 12, XXXIV, No. 11, pp. 370-400*

124 *Prevention of Peritonitis after Abdominal Hysterectomy for Cancer. (Zur Verhütung der Peritonitis nach der abdominalen Exstirpation des karzinomatösen Uterus.) F. A. Scheffzek.
125 *Osteomalacia and Internal Secretion of the Ovaries. O. Falk.

124. **Prevention of Peritonitis After Abdominal Hysterectomy for Cancer.**—Scheffzek reviews the various measures in vogue to prevent postoperative peritonitis, showing that most of them fail of their purpose, and then describes a technic which he considers has proved more effectual. In preparing the cancer for removal he has found cauterization with the solid iron ball far preferable to the Paquelin cautery; the action is deep and intense. The cicatricial shriveling with an inoperable carcinoma is sometimes so extensive that the growth can scarcely be recognized. The vagina must be protected with a wooden speculum against the steam. When the abdomen is opened he separates the uterus from all attachments except from its connection with the vagina, then pushes the uterus down to the floor of the pelvis, aiding by traction applied below by forceps seizing the vaginal portion. The reflexion of the peritoneum from the bladder and that from the rectum are fastened to the fundus of the uterus with a single suture. Then the peritoneum is sutured together above, to roof over the small pelvis, leaving merely a small opening in the center through which a strip of gauze is drawn and laid on the suture in the peritoneum. The abdomen is then closed and the operation completed by way of the vagina. The uterus can then be pulled outside, as the vagina is loose; the uterus almost drops out of itself, and is easily resected. The peritoneum fastened to the fundus is then detached and sutured to the raw edges in the vagina and the lower end of the gauze drain is drawn into the vagina.

125. **Osteomalacia and the Internal Secretion of the Ovaries.**—Falk's article was found among his papers after his recent death. In it he discussed the present theories in regard to the action. of castration in osteomalacia, concluding that as yet we have no experimental grounds for the assumption of an internal secretion of the ovaries, although it is highly probable.

### Zentralblatt für innere Medizin, Leipsic

*March 12, XXXI, No. 11, pp. 273-296*

126 *Elimination of Phosphates in Tuberculosis and Chlorosis. (Phosphatausscheidung bei Tuberkulösen und Chlorotischen.) Zickgraf.

126. **Elimination of Phosphates in Tuberculosis and Chlorosis.**—Zickgraf has examined 50 patients to determine the influence of these affections on the elimination of phosphates. The difference between the average in these and in health is so slight, he declares, and the variations in health so wide, that these findings cannot be considered of much importance for differentiation.

### Gazzetta degli Ospedali e delle Cliniche, Milan

*February 22, XXXI, No. 23, pp. 241-248*

127 Technic for Operations on the Ureter in Conservative Treatment of Kidney Lesions. (Note di tecnica negli interventi ureterali per la cura conservativa renale.) R. Cassanello.

*February 27, No. 25, pp. 257-272*

128 *Injurious Influence of Concomitant Helminthiasis in Typhoid. P. Barabaschi.

*March 6, No. 28, pp. 289-304*

129 Pathogenesis of Congenital Talipes Equinovarus. G. Frattin.

128. **Helminthiasis and Typhoid.**—Barabaschi states that he found helminths in only 26 per cent. of 50 patients with various affections other than typhoid while he found the trichocephalus, sometimes associated with ascarides, in all but one of 26 typhoid patients, and in the case with negative findings possibly repeated examination might have revealed helminths. Guiart found the trichocephalus in 91.66 per cent. of his typhoid patients. These facts suggest, he says, the importance of such parasites not only in treatment of typhoid but also in prophylaxis. Barabaschi commends the practice of thorough purging at the onset of typhoid fever as aiding in expelling helminths. He is also an advocate of generous

feeding, believing that many of the serious symptoms in typhoid are due to the inanition rather than to the infection itself.

### Policlinico, Rome

*March 6, XVII, No. 10, pp. 291-322*

130 *Convoluted Uterus. (Utero a lumaca.) L. M. Bossi.
131 Iodin in Surgical Disinfection. (Un nuovo metodo di disinfezione del campo operativo.) A. Grossich.

*March 13, No. 11, pp. 324-354*

132 *Relaxation of Masseter as Sign of Complete Anesthesia. (Alcune osservazioni sulla ossigeno-cloroformionarcosi e sulla tecnica della narcosi in generale.) L. Fiori.

130. **Convoluted Uterus.**—Bossi's communication on the form of uterus with which the lower segment curls around like the convolution of a snail-shell, was mentioned in THE JOURNAL, July 4, 1908, page 88, as also the technic which he proposes to remedy the condition and promote the normal development of the uterus.

132. **Relaxation of Masseter in General Anesthesia.**—Fiori calls attention to the fact that the muscles of the jaw seem to feel the effect of the anesthetic before any other muscle, and thus the relaxation of these muscles is the sign that the desired effect is just being realized. The cessation of the contraction in this muscle is a much more reliable index, he thinks, than the sensory signs and changes in the reflexes, as the relaxation of the muscles indicates that the muscles in the field of operation are likewise relaxing which is not always the case when only the reflexes are abolished. The early effect of poisons on the mastication muscles is especially marked in the trismus of tetanus, in the action of strychnin, and in the appearance and disappearance of cadaveric rigidity. For the anesthetic he prefers a mixture of chloroform and oxygen; the latter, from an ordinary oxygen tank, comes bubbling through the chloroform into the mouth-piece.

## Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

HEALTH-EDUCATION SERIES. No. 17, Health in Labor Camps, by E. H. Richards. Price, 3 cents. Pp. 10. No. 18, Tuberculosis, by E. O. Otis, M.D. Price, 5 cents. Pp. 24. No. 19, When to Call the Physician, by G. W. Gay, M.D. Price, 4 cents. Pp. 15. No. 20, Habits of Health, by P. W. Goldsbury, M.D. Price, 4 cents. Pp. 24. No. 21, Wastes and Their Disposal, by H. J. Barnes, M.D., Professor of Hygiene, Tufts College Medical School. Price, 4 cents. Pp. 17. Paper. Special prices in quantities. Boston: Health-Education League (1910).

THE PROLONGATION OF LIFE. Optimistic Studies. By Elie Metchnikoff, Subdirector of the Pasteur Institute, Paris. English Translation Edited by P. Chalmers Mitchell, M.A., Secretary of the Zoological Society of London. Popular Edition with an Introduction by Charles S. Minot, LL.D., President of Boston Society of Natural History. Cloth. Price, $1.75 net. Pp. 343, with 27 illustrations. New York: G. P. Putnam's Sons, 1910.

THE SEXUAL LIFE OF WOMAN IN ITS PHYSIOLOGICAL, PATHOLOGICAL AND HYGIENIC ASPECTS. By E. Heinrich Kisch, M.D., Professor of the German Medical Faculty of the University of Prague. Only Authorized Translation into the English Language from the German by M. Eden Paul, M.D., Cloth. Price, $5. Pp. 686, with 97 illustrations. New York: Rebman Company [1910].

THE DISEASES OF THE NOSE, MOUTH, PHARYNX AND LARYNX. A Text-Book for Students and Practicians of Medicine. By Dr. Alfred Bruck (Berlin). Edited and Translated by F. W. Forbes Ross, M.D., Late Civil Surgeon, His Brittannic Majesty's Guards Hospital, London. Assisted by Friedrich Gans, M.D. Cloth. Price, $5. Pp. 615, with 217 illustrations. New York: Rebman Company [1910].

STUDIES IN IMMUNITY. By Professor Paul Ehrlich, Privy Councilor and Director of the Royal Institute for Experimental Therapy, Frankfurt, Germany, and his Collaborators. Collected and Translated by Charles Bolduan, M.D., Bacteriologist, Research Laboratory, Department of Health, City of New York. Second Edition. Cloth. Price, $6. Pp. 712. New York: John Wiley & Sons, 1910.

THE SURGERY AND PATHOLOGY OF THE THYROID AND PARATHYROID GLANDS. By Albert J. Ochsner, M.D., Professor of Surgery in the Medical Department of the University of Illinois, and Ralph L. Thompson, M.D., Professor of Pathology in the St. Louis University School of Medicine, St. Louis. Cloth. Price, $6. Pp. 391, with 97 illustrations. St. Louis: C. V. Mosby Company, 1910.

CLAIMS ARISING FROM RESULTS OF PERSONAL INJURIES. The Relation Injury Bears to Disease and Disease to Injury. W. Edward Magruder, M.D., Associate Professor of Clinical Medicine, College of Physicians and Surgeons. Cloth. Price, $2.50. Pp. 266. New York: The Spectator Company (1910).

HANDBOOK OF DISEASES OF THE EAR. For the Use of Students and Practitioners. By Richard Lake, F.R.C.S., England, Surgeon, Diseases of Ear, etc., London School of Clinical Medicine. Third Edition. Cloth. Price, $2.75 net. Pp. 238, with 66 illustrations. New York: William Wood & Company, 1910.

RHINOLOGY. A Text-Book of Diseases of the Nose and the Nasal Accessory Sinuses. By Patrick W. Williams, M. D., Lecturer on Diseases of the Nose and Throat at the University of Bristol. Cloth. Price, $4.20. Pp. 273, with illustrations. New York: Longmans, Green & Co., 1910.

ESSENTIALS OF MEDICAL ELECTRICITY AND RADIOGRAPHY. By Edward R. Morton, M.D., Vice-President, Electro-Therapeutical Section, Royal Society of Medicine. Second Edition. Cloth. Price, $1.75. Pp. 343, with 140 illustrations. Chicago: Chicago Medical Book Co., 1910.

ANATOMY AND PHYSIOLOGY OF THE FEMALE GENERATIVE ORGANS AND OF PREGNANCY. By Arthur E. Giles, M.D., Gynecologist to the Prince of Wales' General Hospital. Third Edition. Price, $1.50 net. Paper. Pp. 24, with illustrations. New York: Paul B. Hoeber, 1910.

CLINICAL OBSTETRICS. By Robert Jardine, M.D., Edin., Professor of Midwifery in St. Mungo's College, Glasgow. Third Edition. Cloth. Price, $6.50 net. Pp. 716, with 112 illustrations. New York: William Wood & Co., 1910.

POCKET THERAPEUTICS AND DOSE-BOOK. With Classification and Explanation of Actions of Medicines, etc. By Morse Stewart, Jr., M.D. Cloth. Price, $1 net. Fourth Edition. Pp. 263. Philadelphia: W. B. Saunders Co., 1910.

THE SIMPLE CARBOHYDRATES AND THE GLUCOSIDES. By E. Frankland Armstrong, D.Sc., Associate of the City and Guilds of London Institute. Cloth. Price, $1.20. Pp. 112. New York: Longmans, Green and Co., 1910.

A SYNOPSIS OF SURGERY. By Ernest W. H. Groves, M.D., Assistant Surgeon to Bristol General Hospital. Second Edition. Cloth. Price, $3.25 net. Pp. 579, with illustrations. New York: William Wood & Co., 1910.

THE PRACTICAL CARE AND FEEDING OF CHILDREN. By Mary A. Duns, Graduate of Woman's Hospital, Chicago, Ill. Second Edition. Cloth. Price, $1.50. Pp. 150. Chicago: Chicago Medical Book Co., 1909.

SOME COMMON REMEDIES AND THEIR USE IN PRACTICE. By Eustace Smith, M.D., Fellow of the Royal College of Physicians. Cloth. Price, $1.25 net. Pp. 112. New York: Paul B. Hoeber, 1910.

ANNUAL REPORT OF THE CANTON HOSPITAL AND THE SOUTH CHINA MEDICAL COLLEGE. For the Year 1909. Paper. Pp. 25.

## New Patents

Recent patents of interest to physicians:

940775. Shoulder brace. J. U. Adams, Cincinnati.
940921. Disinfecting apparatus. W. M. Byer, Jersey City, N. J.
940958. Bed-pad. J. P. Duval, Kansas City, Mo.
941245. Water-bag. F. A. Gordon, Nogales, Ariz.
941197. Artificial hand. W. A. Hennessey, Ashland, Wis.
941036. Causticizing tank. E. F. Parker, Fairfield, Me.
940894. Optical cystoscope system. M. von Rohr, Jena, Germany.
940735. Apparatus for developing the lungs. V. J. Schaffer and J. M. Dempsey, Chicago.
940991. Syrup-pump for soda fountains. H. L. Snediker, Kansas City, Mo.
940831. Aseptic lamp for dental, medical or surgical purposes. D. Stern, Cincinnati.
941905. Liquid tight dosing device. E. M. Bajon, Paris, France.
941608. Instrument and medicine case. C. B. Benson, Tippecanoe City, Ohio.
941489. Medicine dispenser. F. M. Beverly, Marion, Ohio.
941673. Electrovibratory couch. W. A. Church, Los Angeles.
941620. Invalid bed. J. H. Comer. Comers Rock, Va.
941785. Producing a mineral oil emulsion. S. Knopf, Vienna. Austria-Hungary.
941423. Making preventive and curative lymph. S. Krafft, Munich, Germany.
941888. Antiseptic. A. Liebrecht, Frankfort-on-the-Main, Germany.
942015. Syringe. J. W. Short, Geneva, N. Y.
941434. Hair tonic. C. Tsorones, Minneapolis.
40377. Design, reservoir for fountain syringes. D. W. Keith, Plankinton, S. D.
942046. Generating and storing ozone. F. M. Ashley, New York.
942700. Condensation product of phenol and formaldehyde and making same. L. H. Baekeland, Yonkers, N. Y.
942699. Making insoluble products of phenol and formaldehyde. L. H. Baekeland, Yonkers, N. Y.
942538. Antiseptic soap. W. A. Beatty, New York.
942547. Sanitary ware. J. J. Cosgrove, Scranton, Pa.
942206. Massage apparatus. J. W. Jones, New York.
942093. Joint for artificial limbs. F. W. Merrick, Chicago.
942521. Artificial foot. J. F. Rowley, Chicago.
942590. Rectal apparatus. J. P. Sanborn, Cleveland, Ohio.
942523. Irrigating syringe. W. S. Sawyer, Camden, N. J.
942596. Vibrator. A. J. Stecker, Detroit.
942299. Massage device. H. Wiking, Gottenborg, and B. J. Bengtsson, Kallered, Sweden.
943132. Producing nitrids. C. E. Acker, New York.
943180. Inhaling apparatus. P. H. Cherry, Los Angeles.
943003. Device for handling invalids. E. Cleaves, Searsport, Me.
943399. Making and recovering ammonia, etc. W. J. Dunnachie, Coatbridge, Scotland.
943015. Apparatus for detecting and indicating gases in the atmosphere. T. Groesbeck, Cincinnati.
948263. Surgical forceps. E. Moraweck, Louisville, Ky.
943453. Obstetrical bed. W. B. Peak, Pinhook Landing, Tenn.
942976. Exercising or massage apparatus. R. Reach, Philadelphia.
942935. Apparatus for disposing of noxious gases. W. H. Sartaln, Columbus, Ohio.
943163. Agar-agar-cascara product. A. Schmidt, Dresden, Germany.
943608. Apparatus for forming capsules. B. W. Scott, Detroit.
943620. Vibrator. A. J. Stecker, Detroit.
943578. Digitalis extract. R. Tambach, Ludwigshafen-on-the-Rhine, Germany.

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## Original Articles

# SYPHILITIC DISEASES OF THE NERVOUS SYSTEM

## THEIR RELATIONSHIP TO INADEQUATE AND IMPROPER TREATMENT OF SYPHILIS

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The object of this communication is to point out that: 1. The occurrence of nervous diseases due to syphilis indicates that present-day treatment of syphilis is inadequate. 2. The teachings which promulgate the belief that such treatment is adequate are pernicious and far-reaching in their injuriousness. 3. Iodid of potassium is not in the strict sense an antisyphilitic agency, in so much as it has not been shown to have a specific action on the pale spirochete.

There are certain diseases of the nervous system, such as tabes, general paresis, a variety of myelitis, meningitis, endarteritis and neuritis, that are due directly to syphilis. This fact is so universally conceded that no attempt will be made here to give it statistical support, nor shall I debate the question whether or not certain of these diseases, such as tabes and general paresis, are ever due to other causes than syphilis. It is generally admitted that an antecedent infection of the blood by the spirochete of syphilis is the essential preparation for these diseases.

Until recently, much time and pains have been expended to prove that tabes and paresis were not syphilitic diseases in the strict sense of the term. That is, that the morbid process in the spinal cord and brain is not structurally of syphilitic material, that they are what were, and are still, called parasyphilitic diseases. It has been assumed that the syphilitic poison in the system causes a characteristic histologic reaction evidenced by what is known as the syphilitic exudate, and by the formation of tissue of extremely simple organization.

This assumption is purely gratuitous; and one of the results of the chemicopathologic investigations initiated by Bordet and Gengou and carried on by means of the procedures suggested by Wassermann, Noguchi and others, has been to demonstrate that the syphilitic poison is active in the system of the individual whose tissues are the seat of so-called primary degenerative disease such as tabes. It may legitimately be held, then, that syphilis is the cause of such degeneration.

Soon after I first became interested in the study of nervous diseases, being then in the way of observing a large number of cases of organic diseases, I was struck by what seemed to me a most inexplicable state of affairs relative to syphilitic and so-called parasyphilitic nervous diseases, *viz.*, that such diseases developed as soon after infection, and as virulently, if I may use that term, in those who had received what is considered to be adequate treatment for syphilis, as they did in those who had received little or no treatment. At that time I published a study of this subject.[1] This paper was never widely noticed or commented on. Some of the views that were expressed therein concerning the advisability of antisyphilitic treatment of the so-called parasyphilitic nervous diseases are now no longer held by me, but many of the facts which that investigation developed have been corroborated by further experience.

The only conclusion that I could draw from the facts set forth in that paper was that so-called adequate treatment of syphilis was in many instances inadequate, otherwise diseases of the nervous system due to syphilis would not develop. Since that time I have sought to inquire carefully into the treatment that has been given to patients who have come under my observation seeking relief from syphilitic diseases, especially tabes, general paresis, syphilitic spinal paralysis, pachymeningitis, disseminated cerebrospinal syphilis and cerebral and spinal thrombosis at the time of and soon after infection. It has astonished me to find that nearly all had been given potassium iodid often in large doses in the early stages of the disease, and that in the majority of cases the mercury given was administered in pill form.

In 100 consecutive cases of tabes there was a distinct history of syphilitic infection in 74. The average age of infection was 25; the average age when symptoms of tabes developed was 37; the average duration of treatment at the time of infection was 5 months. These figures are not of much value in estimating the adequacy of treatment to prevent post-syphilitic disease, for a few patients who had had no treatment at all bring the average duration of treatment down very low.

On the next page is a tabulated study of the 24 patients of this series who denied syphilis; it is interesting because it shows that in many of them there were incontestable evidences of syphilis.

It is impossible to determine the treatment which patients with general paresis have had with as much accuracy as one can determine it in tabetics. The mental state of many of them is such that slight reliance can be placed on their statements. This accounts also for the fact that a history of syphilis is not obtained so often as in tabetics. In 100 consecutive cases seen in hospital and private practice acknowledgement or history of syphilitic infection was obtained only in 63 instances. In many of those in whom there was no history of syphilis a positive Wassermann reaction was obtained.

In 38 cases of that form of subacute and chronic myelitis known as syphilitic spinal paralysis, a history of infection was given in 31 instances. The Wassermann reaction was positive in 5 of the remaining 7 cases, and in 3 cases the diagnosis was made though there was no history of syphilis, this before the Wassermann test was discovered.

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[1] The Post-Graduate, July, 1896.

Of these 38 individuals, 19 had received treatment for nearly a year, 7 had received no treatment after the local manifestations had disappeared and 5 had had treatment for a few weeks. In every instance in which an intelligent account of the treatment given could be obtained, it was learned that iodid of potassium had been taken. In many cases the iodid was administered from the day that the patient put himself under the physician's care. To cite a few instances:

| Sex. | Age. | Age When Symptoms Developed. | Remarks. |
|---|---|---|---|
| Male | 45 | 42 | Death from tabo-paresis at 50. |
| Male | 45 | 43 | Spinal cord fluid shows marked lymphocytosis. |
| Male | 37 | 36 | Marked improvement under mercurial injections. |
| Male | 44 | 40 | Optic type of tabes. |
| Female | 46 | 46 | Ten miscarriages—improvement under injections. |
| Male | 53 | 45 | Death from exhaustion at 57. |
| Male | 43 | 40 | Wife had had several miscarriages—no living children. |
| Male | 55 | 40 | Marked improvement from taking mercurial injections. |
| Male | 44 | 42 | Improved while taking mercury. |
| Male | 47 | 39 | Heavy smoker and sexually intemperate. |
| Female | 42 | 40 | Severe attack of malarial fever at 24—congestion of brain. |
| Female | 32 | 32 | Said to have developed after shock in car accident—died at 37. Coroner's case. |
| Male | 49 | 32 | Heavy smoker. |
| Male | 49 | 44 | Wassermann reaction positive. |
| Male | 43 | 38 | Heavy smoker and drinker. Arteriosclerosis. |
| Male | 55 | 51 | Influenza at 48. |
| Male | 38 | 35 | Wassermann reaction positive. |
| Male | 40 | 35 | Wassermann reaction negative. |
| Female | 30 | 27 | Sexually intemperate—At 35 greatly improved. |
| Male | 34 | 31 | Wassermann reaction positive. |
| Male | 43 | 42 | Reported improved. |
| Male | 43 | 40 | Improved. |
| Male | 35 | 32 | Wassermann reaction positive. |
| Male | 40 | 33 | Wassermann reaction positive. |
| Female | 38 | 34 | "Malaria" when first married. "Shingles" at 28. |
| Female | 24 | 21 | Has symmetrical scars on body. |

Case 1.—Mr. X. was seen at the request of Dr. J. F. Erdmann for symptoms of brachial neuritis.

When 22 years old he had syphilitic infection, the ordinary local lesion, for which he consulted his physician in Mobile. The physician cauterized the lesion, gave him pills, one to be taken 3 times a day, and a "salt-tasting" medicine 10 drops in a dose, which was to be increased to 60 drops 3 times a day. This was continued for 6 months, the medicine being diminished or interrupted when disagreeable symptoms arose. At the end of that time he was advised to continue the medicine for another 6 months. When he was 38 years old, he was operated on for an acute inflammation around the cecum; the wound did not heal. Dr. Erdmann was asked to give an opinion concerning his condition, and suspecting that the antecedent syphilis had something to do with the retardation of his recovery, advised mercurial injections, and soon after asked me to see him, because of the symptoms mentioned above. The Wassermann reaction was positive though he had had intense mercurial treatment. Within 6 months the man recovered, and now, a year later, the Wassermann reaction is negative, and there is no evidence of disease of any kind.

Case 2.—A man now 30 years old, became infected with syphilis when 24. Almost from the beginning he displayed phenomena of great depression and self-concern. Within a year he tried to commit suicide, and within two years he had evidences of tabes with such mental symptoms that it was thought that the disease was in reality tabo-paresis. His mental symptoms subsided, and now he is an example of true tabes. His physician stated he had treated him for the original infection with mercury and iodid and had him more or less constantly under such treatment but it could not be determined that any manifestation of such medication had occurred save iodism.

Case 3.—The patient is a young man with syphilitic spinal paralysis. He contracted syphilis during his college days. He consulted a physician at once, who, he writes, gave him "mixed treatment" for nearly two years. Symptoms of subacute myelitis developed when he was 29 years old. He has practically completely recovered under intensive mercurial treatment.

Case 4.—A man, aged 44, consulted me in October, 1906, seeking relief from epilepsy which had developed during his forty-second year. He had no pupillary or mental symptoms to suggest general paresis, and no detectable arterial sclerosis. When he was 18 years old he contracted syphilis and was treated by a physician in his native city in Iowa. This physician gave him one dose of mercury, and iodid of potassium for one year. At the end of that time he told him that he was cured and that he was permitted to marry. He married, his wife had one child and six miscarriages.

This patient is a man of unusual intelligence, the director of a large business, and his statements are to be relied on. When he was seized with symptoms of epilepsy he apprised his physician of his previous disease and he was given tablets of biniodid of mercury, 1/30 grain, 3 times daily and iodid of potassium, 20 grains 3 times a day, increased to twice this amount. As this medication did not control his attacks, he was sent from the state of Washington, in which he now lives, to New York. He was put under intensive mercurial treatment, injections of bichlorid of mercury, which were kept up for 4 months, and this was followed by vigorous tonic treatment. During the year following this treatment he had two slight attacks. Since then he has had none. The Wassermann test made Jan. 20, 1910, gave a negative result.

I could cite a great number of such instances as these. In fact, I may say that I have been forced to conclude that syphilis has been and is treated in this country to-day not with mercury, as practically all teachers of this branch of medicine say it should be treated, but with mercury and iodid of potassium, the former administered in a desultory and inadequate manner, and if I may be permitted an opinion based on an experience with patients from all parts of the country more reliance is placed on the iodids as a curative agency than on mercury.

"Students are very rarely well instructed in syphilis; they are almost never thoroughly instructed," say Osler and Churchman.[2] If this is true, it may account for the fact that syphilitic nervous diseases seem to be increasing rather than decreasing. It would seem to me that the chief explanation of the occurrence of syphilitic nervous diseases is that the specific action of mercury in syphilis is not generally accepted or believed, and that there is an inherited and acquired belief that potassium iodid has a specific action in syphilis; and this in face of the fact that most modern syphilographers of the present day, especially in this country, are emphatic and direct in maintaining that the former is the real specific in the disease. Among these, Piffard is the most conspicuous example. As early as 1876 he pointed out that mercury was the agent that cured syphilis, while iodid of potassium was the vehicle which removed some of the manifestations of syphilis. It would seem now to be proved experimentally by Roux and Metchnikoff, who have succeeded in inoculating anthropoid apes, that the effects of the inoculation could be prevented before the virus gained entrance to the general system by the application of mercury. In other words, mercury applied locally destroys the spirochetes. They even go so far as to say that mercury is a greater specific against the local disease than against the general disease.

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[2] Osler: Modern Medicine, iii, 503.

I cannot enter into a discussion of this subject here, because it would necessitate citation of the experiments of Neisser which seem to show that injections of mercury immediately after the inoculation of the syphilitic virus prevents neither the development of a chancre nor the general distribution of the virus throughout the body. It would also necessitate opening that interminable inquiry whether the chancre is a local or a constitutional manifestation; or put in another way: when does it cease to be the former and become the latter? Finally, it would necessitate review of a similarly unanswered question: When shall the treatment of syphilis be begun? It would be fortunate if we could forget and unlearn all we have been taught by tradition concerning these matters, and begin with our present-day means of acquiring information concerning them. I assume that it is admitted to-day that the organism of Schaudinn may gain entrance to the system in various ways, and that at the point of entry, neither the chancre, chancroid, preputial herpes, venereal wart or gonorrheal inflammation need exist. Furthermore, it is admitted that one of these and more particularly the sore known as chancre not only marks the focus of infection but that its secretions contain the spirochetes which can be detected by suitable examination. This being a fact, the time to begin the treatment of syphilis is when the spirochetes are found and the substance with which to treat it is that which has a specific action on the spirochetes—mercury. Now, so far as I am able to determine by examination of the work of the authorities it has not been shown that iodid of potassium has any specific effect on the microorganisms. Since the days when its use was first popularized by Ricord, it has been stated and restated that it is mercury which cures syphilis, potassium iodid which erases the symptoms. When I state that the iodid of potassium is not an antisyphilitic agency, I do not mean to contend that it is not useful in the treatment of syphilis and of wondrous efficacy in overcoming some of the manifestations of syphilis, particularly so-called gummatous formations. It would be folly to deny what is not only common knowledge of all physicians, but what is every day being demonstrated anew. No more do I mean to deny that in certain cases of malignant precocious syphilis the disease does not yield to treatment until iodid of potassium is added to the medication. But the fact that iodid of potassium is a most potent and sometimes marvelous agency to cause absorption and dispersal of an exudate which is pathognomonic of the existence of spirochetes is no evidence that iodid of potassium has any action on the spirochetes themselves. Though a certain chemical may, for example, negative the action of, or dissolve and dissipate, a substance which is formed in a reservoir, polluting the water to the detriment of all who drink thereof, it does not follow that that same chemical scattered lightly on the soil of forest and hillside from which the reservoir drains its supply will prevent the formation of the deleterious substances.

I venture to believe that iodid of potassium is not an antisyphilitic agency in the strict sense of the term. There is no evidence that I have encountered to indicate that it has destructive effect on the spirochetes. I am aware that there are certain cases in which the Wassermann test continues to give positive reaction until iodid of potassium has been added to the medication, but that does not prove that the drug is inimical to the life of the spirochetes. Nor am I aware that satisfactory evidence has been offered to prove that antibodies disappear under the use of iodid of potassium alone, although I have read the article of Lesser on this subject.[1] Furthermore, I am of the opinion that not infrequently the use of iodid of potassium during the early stages of syphilis is deleterious in so much as it impairs the patient's vitality and interferes with that condition on which the cure of syphilis is dependent—the reaction which takes place in the patient's tissues through the administration of the curative agency, mercury.

The other point that I wish to make is that so long as it remains the custom, which it would seem is now well nigh universal, to administer mercury by the mouth, we cannot hope to know whether or not a sufficient amount of mercury is absorbed to combat successfully the action of the spirochetes and to annihilate them. The occurrence of ptyalism and other disturbances of the digestive tract is no indication that mercury is being taken in doses adequate to combat the disease. Many individuals present indications of the toxic effects of the drug before any considerable quantity is taken. An idiosyncrasy to the drug or an intolerance of it, does not signify that the system is impregnated, yet how often we find in the history of a given case that on the occurrence of such symptoms the amount of the drug was materially diminished or some other substance substituted for it. We cannot possibly know how much mercury is absorbed into the system unless we rub it through the skin or introduce it hypodermatically. In that way alone can we judge how much mercury is being put into the system, and satisfy ourselves that a sufficient amount has been absorbed to cure the disease or to kill the *Spirochæta pallida*.

The adequate treatment of syphilis is not the administration of so many grains of mercury and so many ounces of iodid of potassium, nor yet is it encompassed by "taking mercury for a year and potash for six months." It is encompassed by getting an amount of mercury into the system that will prevent the propagation of the specific organisms and the formation of the antibodies, and the way to tell if this is being accomplished is by the application of the Wassermann test. Not until we get repeated negative reactions are we justified in discontinuing mercurial treatment.

Finally, the individual who has syphilis is an important factor to consider if it is our ambition to cure syphilis and to prevent syphilitic nervous diseases. How many of these patients, even the most intelligent, appreciate that it is of vital importance to receive prolonged, and often debilitating and distressing treatment? Now that we have a safe therapeutic test in the Wassermann reaction, every patient should be urged imperatively to submit himself for such examination at least once a year for five years after he is discharged by his physician.

In conclusion, I wish to state my belief based on my entire experience and the consideration which I have given to the disease and its sequelæ from a theoretical standpoint, that we shall be able materially to diminish the occurrence of syphilitic nervous diseases by advocating the use of mercury as a specific for syphilis and depreciating the use of iodid of potassium save as an absorbefacient of gummatous tissue. Thoroughness of mercurial treatment is our only safeguard against diseases of the nervous system that flow out of syphilis.

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[1] Lesser: Deutsch. med. Wchnschr., 1909, xxv, 379.

It is no part of my purpose to decry the therapeutic property of the salts of iodid. Were it so, I could marshall an array of facts to prove their injuriousness when given in comparatively small doses (from 40 to 60 grains a day) for a protracted time. I appreciate the therapeutic possibilities of the iodid, but I am convinced that the therapy of organic nervous diseases, save gummatous formation on and within the nervous system, would be more satisfactory if the salts of iodin were no longer in use.

37 West Fifty-fourth Street.

# STANDARDS IN MEDICAL EDUCATION AS RELATED TO STANDARDS IN GENERAL EDUCATION *

HON. ELMER ELLSWORTH BROWN
United States Commissioner of Education
WASHINGTON, D. C.

It is not necessary to remind you that American education in general is just now on a rising tide of interest in our scholastic standards. How long that tide has been rising was shown to me a few weeks ago when I was present, by invitation, at a meeting of the senate of the Methodist Episcopal Church. I found there a body of men, engaged in fixing, at a high level, the standard for collegiate institutions to be recognized and in a measure supported by that religious society, and I learned that the far-reaching action of this senate at its latest meeting is the culmination of labors in which the same body has been engaged for twenty years.

There are, of course, other endeavors of a somewhat similar character which have been in progress over much longer periods. Good movements do not begin and end. They arise through a redirection of earlier movements and take their new turn and impetus under the pressure of new needs. In education we have always sought for the better as against the worse. But there are new needs at this time which demand that we discriminate more sharply than has hitherto been done. We are seeking the best, and sometimes we must look on even the good as among its dangerous enemies.

The work that the Council on Medical Education is doing for medical education is all bound up with the movements of our time in general education, and in education of every type and grade. It is because you have recognized this fact so clearly and because in its special field you have done so immensely difficult and significant a work, that, in spite of being a mere layman among physicians, I have come, to-day, with the keenest anticipation, to the meeting of this Council.

## STANDARDS OF EDUCATION

The considerations which have given new vitality to the standardizing movement are of various kinds. In the end and summing up, they are chiefly moral considerations. This fact calls for emphasis. It is bad for our moral standards, unspeakably bad, that we should be content with low or doubtful standards in our education. The recognition of this fact, more than anything else, lends poignancy to the demand that the educational offerings of different institutions shall have an ascertainable value. The finest values in education, to be sure, can never be measured or compared. And that is not attempted. The demand is only that the measurable elements of education shall be submitted to measurement. One of the keenest moral twinges of this demand comes with the thought that only by such standardizing can we assure to our people everywhere that they are getting full measure in education, or expose the cheat if the measure has been scanted.

But there are other considerations that are not to be ignored. Some of these are financial. It has become apparent, by slow degrees, that light weights and cheap adulterations do not pay in education any more than they pay in trade. An artificial providence has hastened the recognition of this fact, by rewarding, on the spot, those institutions which measure up to its prescribed levels, and withholding payment from those who do not. Where public authorities have failed to act and the vague demands of public opinion have failed to do their work, two or three private individuals with money in their hands have accomplished wonders in a very little time.

Then, there are purely academic influences which have had great weight. A new university, in which high attainments and high requirements are predominant, wins the attention and commands the confidence of the public over some great section of our land. Its standards displace the lower ideals of an earlier time. The educational level of a whole region is raised, and insensibly the public has become more discriminating in its sense of educational values. Such an influence, in recent years, has centered here in Chicago and has spread abroad throughout the middle west. And other examples, not a few, might be enumerated.

Along with these considerations and influences have been others which have centered in the several professions. Professional pride, professional advantage, and the sense of professional responsibility, have led engineers, lawyers, teachers, and those of other crafts and guilds, to make higher demands on their own members than were made by law or by public opinion. As the most scientific of the older professions, we look to the medical fraternity to lead in such a movement. And the leadership already displayed by this Council has helped to advance the standards of education in general.

## A HISTORY OF MOVEMENTS FOR STANDARDS IN EDUCATION

Before passing on to speak of the considerations to which I should like particularly to direct attention to-day, let me mention a comprehensive review of the standardizing movement which is now in preparation. I refer to that undertaken by President MacLean, of the University of Iowa, which is to be published some months hence by the Bureau of Education. So great progress has been made of late in the determination of scholastic standards over disconnected but not unrelated fields, so chaotic, after all, is the present situation, that the time seems opportune for a setting forth of the history and results of the movement in all of its principal ramifications. It is such a survey, or at least a first draft of such a survey, that President MacLean has undertaken. There is reason to hope that his bulletin may prove an indispensable handbook for those who are concerned with the determination of standards in all parts of the educational field.

The preparation of such a handbook is one small part of what the federal government can contribute to this movement. Let me now speak briefly of certain other governmental aspects of this matter; for it is the public and patriotic considerations entering into the case which I should like to bring to the front at this time.

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* Read before the Joint Conference of the Council on Medical Education and the Committee on Medical Legislation of the American Medical Association, Chicago, Feb. 28-March 2, 1910.

### WORK AND LIMITATIONS OF VARIOUS AGENCIES

Professional and private agencies have a great part to perform in the bettering of educational and professional conditions. Besides their services of a more permanent character, they must do a great part of the necessary pioneering. But when they have blazed the way, when they have cleared the ground, it is the part of governments, municipal, state and national, to fix and confirm, and perhaps to modify, a part of the gains which they have made, in the forms of law and of administrative procedure. Those results of private initiative which are the most widely applicable and useful are likely to be found suitable for embodiment in the fabric of government. While government must stop short of many good acts, because they do not yet represent the will and purpose of the people as a whole, the popular will, when it can be brought to approve of some part of a program of betterment, serves by its laws and regulations to encourage the labors of those who are working for betterment far out beyond the range of legislation.

All of this is doubtless obvious enough. But the real difficulties of the situation often arise in this country from the multifarious requirements of our many states. Foreigners who seek to report fairly concerning education and the professions in this country often find themselves baffled by the diversities which the requirements of the several states present. Now, we do not think it necessary to apologize for the independence of action which our American states enjoy. We have faith in the American form of government. We would even go to the length of believing confidently that the very diversity and lack of coherence which the states display, in their regulation of the practice of the several professions and in many other particulars, bears in it the promise of unusually rich developments within these several fields. We have no desire for enforced uniformities in these matters. But we do wish to see the inherent advantages of the American system fully realized.

A certain loss of prestige we have certainly suffered in the estimation of the civilized world because we have not been able to present a united front and to show that high professional requirements are everywhere maintained and enforced in these United States. Our physicians and dentists, who seek in considerable numbers to engage in professional practice in foreign countries, still suffer material disadvantage because of such conditions. The files of the Department of State at Washington contain appeals for action to relieve this situation. And the cases are innumerable in which our own citizens, who merely pass from one state to another in the home land, suffer serious inconvenience and even personal loss because of incongruous requirements touching their professional training. Yet even in the face of these facts, we do not say to our critics, "Yes, the system is wrong and should be replaced by a better." We may say instead, "Our system is not yet working smoothly, so far as these interests are concerned. But it has within itself the remedy for these evils, and even now it is on the way to better things than a purely centralized system could hope to accomplish."

We have here some fifty experiment stations for trying out all manner of regulations, and selecting those which shall prove to be best, with due regard for incidental variations to meet local and sectional needs. We are now engaged in the trying out. We have hardly begun as yet to scrutinize the results of our fifty experiments and determined which plan of all is best. We shall not stop even at that, but when our comparative studies have yielded their full result they will have shown what is best as regards both unity and diversity. They will have taught us concerning the things in which the several states may profitably act in unison, and also concerning the things in which, without conflict or disharmony, they may profitably act on independent lines.

### EFFORTS TOWARD UNIFORMITY

From this point of view, the study of comparative legislation and administration looms large in the near future. A national policy, as regards educational and professional standards, does not depend on federal action alone. It may be determined, and quite as effectively, through free cooperation of the several states—the chief rôle of the federal government in this case being to promote the needed cooperation.

This mode of governmental procedure in the United States was definitely launched by the assembling of the first Conference of Governors, at the White House, in 1908. Some weeks before that conference was held the state superintendents of public instruction had held their first conference, also in the City of Washington. During the first week in March, 1910, at Indianapolis, the state officers of education will hold their fourth conference. The topic which they will have under discussion will be "Desirable Uniformity and Desirable Diversity in the Educational Legislation of the Several States."

What has thus far been said points, I think, to this conclusion: That the time has come for a new effort to secure concerted action on the part of the several states touching professional and educational standards, and that professional and educational bodies should work in unison to that end.

A fresh evidence that men are turning to the thought of uniform legislation has recently appeared in the action of the National Civic Federation, which is entering on a general campaign in behalf of uniformity. Many other indications point in the same direction.

Let me emphasize again the fact that I am not in love with governmental uniformity, for its own sake. It is unity in variety which most appeals to me. But I think we have now pushed variety far in advance of unity. It is in the interest of a just balance that we should hereafter endeavor to give to unity its fair chance of realization.

Consider, for example, a single instance, in which educators and other professional men are equally interested, the appalling diversity as regards our standards in higher education, particularly as represented by requirements for the bachelor's degree. A pioneering work of incalculable value has been performed by the Carnegie Foundation, in setting a mark below which collegiate institutions may not fall without bringing their educational standing into question. It would be hard to overestimate the value of this service. But the American people will not rest with a condition under which its collegiate standards, and even its standards in secondary education, are determined by an institution under purely private control. The greatest work of the Carnegie Foundation is to be that of calling public attention to the need of radical improvement at this point in our educational system. It has called up questions which must eventually be dealt with by the educational establishments of the several states, backed by legislative authority.

It is of the greatest moment that hasty and ill-advised action touching such vital and difficult questions shall not be taken by the state authorities. The responsibility for definitive action rests with them. Such action should be taken in any given state only after full consideration of whatever related action may be under way in other states, and full consideration of the matured judgment of educational and professional bodies representing the country at large.

### COOPERATION OF MEDICAL AND GENERAL EDUCATION

The Council on Medical Education stands at a focal point in this undertaking. It represents fundamental interests of our people, outside of the purely academic field. On the other hand, every step that it may take depends on educational conditions. Educational and professional concerns, indeed, are so closely bound together that professional societies, and particularly those having to do with medical affairs, should be found working in close accord with the great body of educational workers. Such cooperation is for the good of both. It is also for the good of those overshadowing public interests which are served alike by teachers and physicians.

### NEW HOPE IN UNITED EFFORTS

With full cooperation between the educational and the professional forces of this country, we may enter with new hope on the old campaign for high and consistent standards. It would give point to this new cooperative effort if the Council on Medical Education might be represented at the Conference of State Superintendents of Public Instruction. Inasmuch as the Conference meets on the call of the Commissioner of Education, I may venture to extend to you a cordial invitation to be so represented.

Medical education must be grounded in the general system of education. It will come to its best only when it can rest on a sound and ample system of secondary schools and be backed against the scientific and literary greatness of a true university. Our educational leaders, on the other hand, will be nerved up to their best endeavors when they see clearly the connection between their scholastic undertakings and those technical and professional pursuits through which education comes into its most direct service of the public good.

The combination of these related interests broadens out into the widest reaches of practical patriotism. Education and medicine are to be fellow-servants in much of the great work of the coming civilization. Together they are to increase our prestige and influence abroad as well as our happiness at home. In more ways than have yet been worked out they are to be a strong support of our federal government in assuring to this nation its rightful place and influence among the nations of the earth. That the representatives of these two great national interests, many of whom are educators and physicians, both in one—that they shall together see both sides of this problem with which the Council on Medical Education is dealing, and shall together work for the great ends which you have proposed, is a consummation, not too great to be hoped for, but one to be furthered by every means within our power.

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**Value of Disease Statistics.**—It is only by a separation of the severe from the milder cases, together with a detailed report of each case on which statistics are based that an adequate comparison between the clinical and the laboratory findings can be made. The mere publication of numbers cannot further the study of abdominal inflammation unless accompanied by exact data. Such articles can be regarded merely as expressions of opinion and are of no great value as evidence to workers in surgical science.—A. E. Hertzler, in *New York Medical Journal*.

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# PELLAGRA: TRANSFUSION IN ELEVEN CASES

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Confining ourselves to a consideration of the theories, experiments and facts bearing on the nature and action of the toxic substances of pellagra, no matter what be their origin, we suggest the possibility of combating these toxins *in vivo* by antagonistic substances existing in the body as the result of a natural or acquired immunity.

As evidence of the existence of specific toxic and antitoxic bodies the following facts may be noted:

Tizzoni[1] has produced typical pellagrous symptoms in animals by injection of pellagrous human blood.

Lombroso[2] claims to have produced typical pellagrous manifestations by the administration of an alcoholic extract of impure maize by mouth.

Babes[3] and other workers have found in the serum of pellagrins a substance antagonistic to extracts of damaged maize, that is a specific antibody.

Giovanni and Gatti,[4] from their work on pellagrous serum, conclude that the serum of pellagrins has a hemolytic action much above normal, suggesting the presence of an antibody. They further claim to have demonstrated precipitative properties in pellagrous blood. D'Ormea, working independently, likewise concludes that there is a definite specific antibody developed in pellagrins.

Antonini and Marianni[5] claim that a definite immunity is developed in cured pellagrins and that the serum exhibits specific antitoxic action against the maize poisons. They have developed an artificial immunity in rats, rabbits and goats against pellagrous toxins. Finally, they conclude that a serum therapy can be instituted in grave pellagra cases.

The work of these investigators warrants the following belief:

1. Pellagra is an intoxication, the toxic principles existing in the blood of pellagrins.

2. The production of pellagrous symptoms by the injection of blood from pellagrins, the definite precipitative, hemolytic and antitoxic action of the serum, the artificial immunity produced in animals and the immunity acquired in patients recovered from pellagra, are all suggestive of a serum treatment as the solution of the pellagra problem.

The curative value of pellagrous serum in man has been tried by Antonini and Marianni,[6] who, using the serum of recently recovered typhoid pellagrins, noted cures in several instances. Their work was most carefully performed, the potency of the serum being tested on animals before its hypodermic administration to patients. Lombroso, in a personal communication to us, commenting on the work of these investigators, states that he believes that serum injection is of undoubted value in the treatment of pellagra.

Transfusion of blood from a recovered pellagrin would possess all the curative properties exhibited by the serum alone, as administered hypodermatically, and in addition would tend to improve the anemia in the severe cases.

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1. Tizzoni: Quoted by Wood in THE JOURNAL A. M. A., July 24, 1909, liii, 274.
2. Lombroso: Quoted by Watson in New York Med. Jour., May 8, 1909.
3. Babes: Quoted by Lavinder in Pellagra; a Précis, Rep. P. H. and M.-H. S., 1907.
4. Giovanni and Gatti: Richerche sulle proprietà emolitiche e citoprecipitante del siero de sangue de pellagroso, 1909.

5, 6. Antonini and Marianni: Contributo allo studio dello sieroterapia nella pellagra, 1904.

In many of the cases transfused we have been unable to obtain donors recovered from pellagra. In these cases we have selected relatives who have lived on the same diet and in the same environment, in this way hoping to find donors who possess a certain degree of natural immunity.

Transfusion has been resorted to only in patients resisting all forms of medical aid. The operation has been done in all instances as a last resort. Several of the patients were apparently in the last stages of the disease. The high mortality rate in the patients so far transfused, we can but feel, is largely due to the fact that many of the patients operated on were in a practically hopeless condition at the time of operation. We believe that earlier operation will give decidedly better results than those so far obtained.

None of the patients who recovered received any post-operative medical treatment other than a gastric tonic and occasionally carbonate of iron. Most careful attention has been given to the post-operative diet in all the cases. The operation of transfusion consists in uniting the radial artery of one individual to any forearm vein of the patient, either by the suture method of Carrel or the cannula method of Crile, and allowing the blood to flow from the first to the second person. This is, at best, a delicate operation and should be performed with a full knowledge of the dangers to both the donor and the recipient.

The dangers to the recipient are (1) transmission of disease, (2) hemolysis, (3) agglutination, (4) acute dilatation of the right heart. These conditions are guarded against by careful selection of the donor and by careful test-tube experiments for hemolysis and agglutination. At the operation careful observation of the recipient's pulse and general condition ward off acute dilatation of the heart. Postural treatment together with bleeding are of value in treating the condition when present.

The rate of blood-flow is controlled by means of rubber-covered clamps and the fingers. This, with careful observation of the donor's blood-pressure and pulse, control the sole danger to the donor, that of exsanguination.

There are many small factors on which the success of the operation depends. Only repeated experimentation on animals would justify one in attempting the procedure on human beings. Without technical knowledge of the operation and without careful selection of the cases this procedure will surely fall into an undeserved ill repute.

The first transfusion performed in pellagra[7] was performed on Aug. 3, 1908, through the kindness and assistance of Drs. McCafferty and Tisdale at Mt. Vernon, Ala. The result was so suggestive that other patients were transfused. We present the short histories of 11 cases in which transfusion was employed.

CASE 1.—The patient, a negress, aged 25, had acute pellagra of three weeks' duration. At examination she presented a marked stomatitis, profuse diarrhea, and incontinence of feces. Nourishment had been practically *nil* for several days because of gastro-intestinal condition. There was a characteristic pellagrous rash over arms and hands, face and legs, and marked emaciation and asthenia. Hemoglobin was 70 per cent. The patient was *in extremis* at time of operation (August 3, 1908, Mount Vernon, Ala.); pulse 140. Transfusion was performed from a young negress who recovered from a definite attack of pellagra one year before. The patient made a remarkable recovery, the skin lesions rapidly disappearing, the stomatitis improving and a marked increase in weight and general condition ensuing in the first week. Within a week the patient was up and about the ward. She went on to recovery and has had no relapse; it is now nineteen months since the operation. Strangely enough, the donor developed an attack of pellagra a few months ago and succumbed. The results in this case were so suggestive as to warrant further trials of the procedure.

CASE 2.—The patient, a white woman, aged 22, referred by D. D. Armstead, Campbell, Ala., with chronic pellagra of four years' duration, had had attacks of stomatitis, indigestion and diarrhea of six months' duration every spring for the last four years. Fourteen months before coming under observation she had had a cutaneous eruption over the backs of both hands, and in the past few weeks marked mental and nervous symptoms, increasing in severity, and sensory symptoms of head and feet. At examination she was found to be markedly emaciated; weight 60 pounds, average weight over 100 pounds. Asthenia was marked. There was a pellagrous eruption over the backs of both arms and hands. Asthenia was marked. There was a pellagrous eruption over the backs of both arms and hands. Stomatitis, diarrhea, and marked mental symptoms (those of depressive melancholia) were present; reflexes increased. Pulse-rate was out of proportion to the temperature; hemoglobin, 70 per cent. Transfusion was performed July 3, 1909, at Mobile, Ala. The donor had never had pellagra. Four days after the operation the skin lesions began to desquamate, the nervous and mental symptoms rapidly disappeared. Within a week the diarrhea had disappeared. The patient gained 8½ pounds in the first ten days. She went on to recovery and has had no signs of relapse. It is now over eight months since the operation.

CASE 3.—The patient, a woman, referred by Dr. P. A. Trice of Morvin, Ala., had chronic pellagra. One year before coming under observation she had an attack of diarrhea lasting six months. There was a history of pellagrous eruption, marked asthenia, emaciation and pronounced nervous symptoms at that time, but no mental symptoms. At examination the patient presented signs of the old eruption, increased reflexes, asthenia, nervous excitability and anemia. Hemoglobin was 70 per cent. The patient had lost 30 to 40 pounds in weight. Transfusion was performed at Morvin, Ala., on July 18, 1909. The donor had never had pellagra. Three days after the operation the patient showed definite signs of improvement. Twelve weeks afterward, she had gained 15 pounds, the anemia was much improved and she stated that she felt stronger than in three years. She went on to a perfect recovery and has had no relapse; it is now eight months since the operation.

CASE 4.—The patient, referred by Drs. Hand and Bailey, Demopolis, Ala., had acute pellagra. Pellagrous erythema developed over the backs of both hands six weeks before the patient came under our observation, and spread to forearms, elbows, sides of neck and face. There was marked stomatitis, asthenia, emaciation and anemia. The stomatitis and diarrhea had been so severe as to interfere seriously with feeding in the past three days. At examination, the patient was seen to be markedly wasted, the eruption present as above, a deeply pigmented mask now extending over the entire face. The lips were ulcerated, a swollen and blackened tongue protruded, and from the mouth drooled forth a slimy, fetid discharge. The patient was in a moribund condition. Hemoglobin was 60 per cent. Pulse was 160. Transfusion was considered practically useless, but was performed July 11, 1909, at Demopolis, Ala. The first donor had recently recovered from an attack of pellagra. On account of the weakened condition of the donor this transfusion was ended in the first fifteen minutes. Transfusion was then reestablished from the husband, who had never had pellagra. There were some symptoms of acute dilatation of the right heart in the patient. This patient died three hours after the operation, the condition not improving after the operation. The prolonged operation may have had some influence on the early death, though death was but a matter of a few hours otherwise.

CASE 5.—The patient, a white woman, aged 53, referred by Dr. Bondurant, Mobile, Ala., with chronic pellagra, had had persistent diarrhea for two years; and one year before coming under our observation, a pellagrous eruption over the backs of both hands. The eruption reappeared six months later. A few weeks before operation the patient developed marked mental and nervous symptoms, sensory symptoms in the head and feet. At examination she was found markedly emaciated; a desquamating skin lesion was present over both hands and forearms. Constant involuntary muscular tremors, low muttering delirium and at times hallucinations were present, with asthenia and increased reflexes. Hemoglobin was 60 per cent.; weight 70 pounds; average weight over 100 pounds. Transfusion was performed July 17, 1909. The donor had never had pellagra. Within twenty-four hours the nervous and mental condition was markedly improved. The patient rapidly improved, gaining 8½ pounds the first week and 34 pounds in the first eleven weeks after the operation and is still gaining. Every symptom of pellagra has disappeared; the mental condition is perfect. There has been no recurrence. Strangely enough, the patient has no recollection of several weeks of her illness during which time the transfusion was performed.

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[7] Cole: The Transfusion of Blood as a Therapeutic Agent with Report of Transfusion in a Case of Pellagra, Southern Med. Jour., April, 1909, p. 631.

Case 6.—The patient, a white woman, aged 50, referred by Dr. Sarah A. Castle, Meridian, Miss., with chronic pellagra, had had several attacks of persistent diarrhea for the past two years. Four months before coming under observation the patient had a severe attack of diarrhea followed by a severe stomatitis. Four weeks before examination a pellagrous eruption appeared over the hands and spread to the forearm, face and legs. There had been marked nervous and mental symptoms for the past six weeks. This approached acute delirium at times. Sensory symptoms at times were severe. At examination the patient was found to be markedly emaciated, asthenic, with desquamating skin lesion over the arms, face and legs. There was incontinence of stools, a marked stomatitis and a fetid, drooling discharge from the mouth. Transfusion was performed at Meridian, Miss., on July 22, 1909. The donor was an arteriosclerotic individual. The marked atheroma of the donor's radial artery prevented a successful anastomosis. Little if any blood was transfused at this time. The patient showed no signs of improvement and was again transfused, Aug. 17, 1909. The donor employed at the second operation had recovered from a definite attack of pellagra two years before. There was no definite sign of improvement and the patient died four weeks after the second transfusion. A successful anastomosis at the first operation might have resulted in improvement, though the patient was in a very serious condition even at that time.

Case 7.—The patient was a white man, aged 30, referred by Dr. J. L. Bryan, Greenville, Ala., with chronic pellagra. Six months before examination the patient had a severe and persistent diarrhea and developed a pellagrous eruption over the hands and forearms. On examination the patient was found to be profoundly emaciated, with pronounced nervous and sensory symptoms; the reflexes were increased. The diarrhea and stomatitis, while still present, were not severe at this time. There was a desquamating skin lesion over the backs of both hands and forearms. Hemoglobin was 60 per cent. Transfusion was performed July 25, 1909, at Greenville, Ala. The donor was a restless 14-year-old boy. The anastomosis was not entirely successful owing to the restlessness of the donor and the operative surroundings. The operation was attempted by the light of a single oil lamp. Very little blood was transfused. The patient showed no signs of improvement and died twenty-six days after the operation.

Case 8.—The patient, a white woman, aged 30, referred by Dr. Armstead, Nanafalia, Ala., with chronic pellagra, had had a severe attack of pellagra one year before examination, with diarrhea, stomatitis, marked mental and nervous symptoms; duration two months. Three weeks before examination a pellagrous eruption developed over the backs of both hands and wrists. A severe stomatitis developed and there was marked exacerbation of the mental symptoms. At examination stomatitis, diarrhea, pellagrous eruption, increased reflexes, severe mental symptoms, and a severe degree of emaciation were present. Hemoglobin was 70 per cent. Transfusion was done July 24, at Mobile, Ala. The donor never had had pellagra. Within twenty-four hours the patient showed marked improvement in mental condition. The eruption, diarrhea and nervous symptoms rapidly disappeared. She gained 20 pounds in ten weeks and at that time stated that she felt better than she had in five years. The patient made an uninterrupted recovery and has had no return. It is now eight months since the operation.

Case 9.—The patient, a white woman, aged 36, referred by Dr. McMillan, Jones Mills, Ala., with chronic pellagra, had had severe attacks of diarrhea every spring for six years. Eighteen months before coming under our observation the patient developed a pellagrous eruption over the backs of both hands, associated with stomatitis. Four months before examination there was another attack of severe diarrhea associated with stomatitis and marked mental symptoms. Four weeks before examination the diarrhea and stomatitis reappeared, and the mental and nervous symptoms became exaggerated to a mild form of dementia. On examination the patient presented a desquamating skin lesion over the backs of both hands and forearms. There were asthenia, marked emaciation and anemia. Reflexes were increased; mental depression and at times hallucinations were present. Weight was 74 pounds; average weight over 100 pounds; hemoglobin, 70 per cent. Transfusion was done Oct. 18, 1909. The donor had never had pellagra. Twenty-four hours after the operation the patient showed marked improvement in the mental condition. The symptoms of pellagra rapidly disappeared and the patient gained 7½ pounds in the first week. The patient went on to a perfect recovery and has constantly gained in weight. There have been no return of pellagra symptoms; it is now four months since the operation.

Case 10.—The patient, a white woman, aged 43, referred by Dr. Eley, Merrill, Miss., with acute pellagra, had had an acute attack of diarrhea two months before coming under our observation; this proved intractable and was soon followed by stomatitis and a pellagrous eruption over the backs of both hands. There was a progressive emaciation and anemia. The eruption spread to the face. Severe mental symptoms developed ten days before examination. On examination the patient was found to be profoundly emaciated. An eruption extended over the backs of both arms and hands. Stomatitis, mental depression and delirium were present. The reflexes were increased; there was a severe diarrhea. Hemoglobin was 60 per cent. Transfusion was performed Nov. 3, 1909. The donor had never had pellagra. Although there was a good flow of blood there were no signs of improvement and the patient died seven days after the operation.

Case 11.—The patient, a white woman, aged 51, referred by Dr. Haley, Houston, Texas, with chronic pellagra, had complained of indigestion eight months before the operation. There was progressive loss of weight, profuse diarrhea, and anemia. Hemoglobin was 60 per cent. three months before the operation. Four months before coming under observation a stomatitis appeared. Shortly afterward a pellagrous eruption appeared over the backs of the hands. At this time there was a profuse diarrhea. The mental condition was that of a depressive melancholia. Reflexes were increased. At examination, marked emaciation, asthenia, increased reflexes a depressive melancholia, signs of myocarditis, and remains of a pellagrous eruption were present. Hemoglobin was 60 per cent. Transfusion was performed Dec. 22, 1909, at Houston, Texas. The donor had never had pellagra. Although there was a good transfusion of blood the patient showed no signs of improvement and died nine days after the operation.

## CONCLUSIONS

1. In certain severe cases of pellagra resisting all forms of medical treatment, transfusion has been followed by recovery with no relapse.

2. The patients recovering showed marked improvement from the first; in the fatal cases there was no benefit from transfusion.

3. Transfusion is of undoubted value in certain severe and apparently hopeless cases, but without a thorough knowledge of the technic of transfusion and without a careful selection of the cases and donors it will be brought into an undeserved ill repute.

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# ANIMAL EXPERIMENTATION IN RELATION TO PROTOZOAN TROPICAL DISEASES[*]

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The investigations of Pasteur[1] proving that the disease of silkworms known as pebrine is due to infection by a living agent had the immediate practical result of restoring the languishing silk industry of France and Southern Europe, and also produced the greatest interest by the demonstration that disease can be produced in animals by infection with a microbe. The fact that the infectious agent is a protozoon received little attention, and for many years following Pasteur's discovery bacteria furnished the main object of medical investigation; only recently have numerous researches begun to reveal the frequency with which protozoa occur as parasites in man and the lower animals.

But if the expansion of the subject of parasitic protozoology is recent, the recognition of the tropical diseases, as a separate group, is even newer, and, in spite of the extremely rapid growth of our knowledge of these diseases, we must still regard the subject as relatively undeveloped. This being the case, the results obtained from experiments and investigations in tropical protozoology are to be regarded as hardly more than foreshadowing what may be expected from further research.

### ANIMAL STUDY UNAVOIDABLE

In considering the part played by animals in the development of our knowledge of tropical diseases of protozoan origin, several lines of thought present themselves. In the first place, the parasites causing these diseases are themselves members of the animal kingdom, and the study of any of them involves a measure of animal experimentation. In the second place, in many instances the protozoan parasites causing diseases are carried from one individual to another by insects. The study of the insect carriers of disease and of the life history of the parasite in the insect again involves a certain sort of animal experimentation, the insect being the subject of experiment. Furthermore, most of our information concerning the protozoan parasites has been acquired from studies of protozoa spontaneously infecting the lower animals, and studies of these infected animals may be classed as animal experimentation. Finally, laboratory inoculations of protozoa into healthy animals have been made with varying success. This article will deal mainly with the two last-mentioned groups of animal studies, but it will be necessary to include clinical and zoologic researches in order to give a connected account of the progress in our knowledge.

The tropical protozoan diseases have become recognized as a group only after many independent and apparently unrelated studies. The circuitous course of these studies may be suggested by mentioning a few of the important ones, such as those of Pasteur, in France, on pebrine; of Lösch, in Russia, and Kartulis, in Egypt, on amebic dysentery; of Laveran, in Africa, on malaria; of Smith and Kilborne, in the United States, on ticks as carriers of Texas fever; of Evans, in India, and Bruce, in Africa, on trypanosomiasis in animals; of Ross, in India, on the transmission of malaria by mosquitoes; of Dutton and Todd, in Africa, on sleeping sickness, and of Schaudinn, on the identification and properties of numerous protozoa.

### AMEBIC DYSENTERY

The principal facts relating to amebic dysentery with which we are acquainted have been learned from clinical and pathologic studies. Owing to the difficulties encountered in growing the amebas and in reproducing the disease in lower animals in a manner which excludes the possible action of bacteria, there are a few who still find room for doubt as to the exact relation of amebas to human disease, although most authorities accept it as proved that at least one type of ameba produces dysentery in human beings.

Lambl observed amebas in human fecal matter, but they were not regarded as pathogenic until Lösch[2] described the ameba and the disease now known as amebic dysentery. After administering amebic discharges to four dogs, by mouth and rectum, Lösch found amebas in the stools of one of them, in whose rectum also there were numerous amebas accompanying inflammatory and ulcerative changes. Lösch could not assign a specific etiologic rôle to the amebas, but thought it probable that they played a secondary part in producing the disease. The intestinal bacteria complicated the experiments, which were all the more difficult, since the amebas could not be grown in pure culture and their specific action be observed.

Clinical and pathologic reports, such as those of Osler,[3] Stengel, Musser, Dock, and Councilman and Lafleur,[4] established amebic dysentery as a clinical entity, but amebas were nevertheless frequently found in the stools of persons free from any symptoms of dysentery. Kartulis,[5] stimulated by certain observations made during Koch's cholera expedition to Egypt, made a careful study of the dysenteric conditions in Alexandria. From a study of over 500 cases, he concluded that amebas are responsible for a characteristic form of dysentery, and that they are also the cause of the liver abscesses often complicating the disease. Kartulis did not succeed in his early attempts to produce experimental amebic dysentery in monkeys, cats, dogs, rabbits and guinea-pigs, but later produced typical forms of the disease by giving to young cats rectal injections of amebic discharges. He also claims that he grew amebas from liver abscesses in pure cultures in straw infusion, and with these cultures successfully inoculated cats, the animals dying from a typical amebic dysentery. Inoculation with bacteria and with dysenteric stools freed from amebas never caused dysentery in his experimental animals. No other experimenters have been able, however, to repeat Kartulis' experiment of growing amebas in pure culture, although Kruse and Pasquale have produced dysentery by injections of ameba-containing pus from liver abscesses.

### MODE OF INFECTION

Although human beings probably never receive infection through the rectum, Kartulis' experiments at least placed the subject on a more substantial basis, and subsequent experiments have shown that amebic dysentery can result after swallowing amebas. The ordinary, free and unprotected amebas fail to produce the disease after being swallowed, as they are destroyed in the upper part of the digestive tract by the digestive juices. Under certain conditions, however, the amebas become encased in cysts, which protect them from the digestive juices and other injurious agents. In this encysted condition amebas can pass through the stomach and upper intestine unharmed, and on arriving at the lower part of the intestine can grow out into the usual free form and give rise to amebic dysentery. That encysted amebas taken by mouth can set up amebic dysentery was shown, in the case of human beings, by Calandruccio, and, in the case of animals, by Quincke and Roos,[6] Kruse and Pasquale,[7] H. F. Harris,[8] Jürgens,[9] Musgrave and Clegg,[10] and others. As a further proof of the specific action of amebas, Harris, in dogs, and Marchoux,[11] in cats, which survived the infection for fifteen or sixteen days, observed the development of liver abscesses—a very dangerous and characteristic complication met with in human beings suffering from chronic dysentery.

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[*] This article is one of a series issued in pamphlet form by the Council on Defense of Medical Research of the American Medical Association for circulation among the public. Twelve of these pamphlets are now ready, taking up the relations of animal experimentation to ethics, diagnosis, cancer, vaccination, the live stock industry, tuberculosis, typhoid, dysentery, rabies, internal secretions, surgery, protozoan tropical diseases, etc.

1. Pasteur, L.: Rapport, etc., relativement a la maladie de vers à soie, Paris, 1868; Pasteur, L.: Etude sur la maladie de vers à soie, Paris, 1870

2. Lösch: Virchows Arch. f. path. Anat., 1875, xlv, 196.
3. Osler: Bull. Johns Hopkins Hosp., 1889, i.
4. Councilman and Lafleur: Johns Hopkins Hosp. Rep., 1891, ii.
5. Kartulis: Centralbl. f. Bakteriol., 1891, ix, 365.

Although clinical and pathologic observations and the experiments referred to would seem to establish the fact that the ameba is a disease-producing agent, the question was far from being closed. Many experimenters failed to confirm the results just outlined, and in addition the conditions of some of the experiments were too severe to make the positive cases convincing. Moreover, forms of infectious dysentery occur in which amebas are not present. Light was thrown on this group of cases by Shiga's demonstration of a bacillus as the cause of numerous cases of epidemic dysentery. The widespread occurrence of dysenteries of bacterial origin has been shown by reports of Flexner, Strong, Lentz, Kruse and many other writers all over the world.

Again, it has been found that amebas are frequently present in the stools of persons who have no symptoms of dysentery; Schaudinn finding them in the stools of from 20 to 66 per cent. of non-dysenteric persons. This has led to the view that there are various kinds of amebas, or that there is at least one pathogenic ameba and at least one harmless type. Most writers hold to the view that there are at least two types, and, while many believe that the types can be differentiated by their microscopic appearance,[12] Musgrave and Clegg maintain, as the result of their experiments, that there is no ready means of distinguishing harmless amebas from those that produce disease, and intimate that all amebas are pathogenic. Schaudinn[13] has helped to clear up the situation by showing that there are at least two types of intestinal amebas, distinguished by differences in their manner of growth and reproduction, and his classification and conclusions based on the differences in the life of the two amebas are the ones generally accepted at the present day.

### FURTHER STUDY OF AMEBAS

The anatomic changes produced by amebas have been studied in man, but the early and significant stages of the diseases can be seen only in experimental animals. The manner in which the amebas penetrate into the intestinal glands and lead to destruction of the tissues has been described by Jürgens, Quincke and Roos, H. F. Harris and Kruse and Pasquale.

While studies on man and animals indicate that the ameba produces a dangerous disease, there are still many problems remaining unsolved. The conclusions of Schaudinn must be confirmed; the various pathologic and non-pathologic conditions in which amebas occur need further study; although amebas have been found in the mouth and in abscesses of the jaw, and spontaneous amebic disease has been found in animals (Strong), the characteristics of these parasites and the number of species of pathogenic amebas should be established. We know very little at present of methods of protection against this infection and very little of the life of parasitic amebas outside of the body. In the elucidation of such problems—all connected with the welfare of human beings—animal experimentation will almost certainly be necessary.

### TEXAS FEVER AND ALLIED DISEASES

In 1891-2 Smith and Kilborne[14] discovered and proved that Texas fever, a destructive disease of cattle, is due to infection of the blood by a minute pear-shaped parasite, often occurring two by two in the blood corpuscles, and named by them *Pyrosoma bigeminum*.[15] Smith and Kilborne performed a work of epochal importance. Not only did they discover the cause of Texas fever, but they explained how it happened that the disease was spreading gradually northward over an ever-widening area. At a time when the relation of insects to disease was hardly suspected, they proved that the parasite of Texas fever is taken up by ticks which bite the diseased animal. The tick, when gorged with blood, drops off and lays an enormous number of eggs which harbor the infection. The eggs develop into young forms of tick, which die unless a chance is offered to suck blood. If the larval ticks have a chance to feed on cattle which have come from a region free from Texas fever, the disease is transmitted to the cattle. It was through the agency of infected ticks' eggs that Texas fever was slowly being carried northward over the country. This series of experiments furnished the first proof that blood-drawing vermin, such as ticks, can be carriers of a microbic disease, and thereby brought to light a method of infection hardly dreamed of previously, but now known to be characteristic of a large group of protozoan diseases.

Several other diseases caused by parasites of this genus have been discovered in sheep, in dogs, in horses, in rats, in monkeys, in goats and asses, and a similar disease in man has been described. A great many experiments have been undertaken with the parasites of these diseases in attempts to gain a clear knowledge of the different stages in their development and of the peculiar mechanism by which the diseases are spread, but the problems have not yet been thoroughly elucidated.[16] These parasites have been grown by Miyajima[17] and Martini;[18] nevertheless their characteristics must be studied in the living body, and it is clear that progress in understanding diseases of this type and in combating them cannot be expected except through the employment of animal experimentation. Without referring to the direct bearing of Smith and Kilborne's experiments on the cattle-raising industry, it may be pointed out that their work furnished a clue of crucial importance in a flood of investigations on other diseases, which already have been, literally, of inestimable value to human welfare.

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[6] Quincke and Roos: Berl. klin. Wchnschr., 1893, xxx, 1089.

[7] Kruse and Pasquale: Ztschr. f. Hyg. u. Infectionskrankh., 1894, xvi, 142.

[8] Harris, H. F.: Virchow's Arch. f. path. Anat., 1901, lxvi, 67.

[9] Jürgens: Ztschr. f. exp. path. u. Therap., 1907, iv, 769.

[10] Musgrave and Clegg: Pub. of the Bureau Govt. Lab., Biol. Lab., Manila, P. I., 1904, No. 18; Musgrave and Clegg: Philippine Jour. Sc., November, 1906, i, 909-950. [Musgrave and Clegg have found that amebas can be grown in cultures, if suitable bacteria are growing on the same culture media. They obtained growths of amebas from raw vegetables, water, and dysenteric discharges, and report that they produced abscesses and various amebic infections with cultures from all sources.]

[11] Marchoux: Ann. d'hyg. et de méd. coloniales, 1900, iii, 129.

[12] Craig: Jour. Infec. Dis., 1908, v, 324.

[13] Schaudinn: Arb. a. d. k. Gsndhtsamte., 1903, xix, 547.

[14] Smith and Kilborne: 8th and 9th Ann. Rep. of Bur. An. Indust. U. S. Dept. Agric., 1891, 1892, pp. 177-305.

[15] There has been much discussion over the name of this parasite. It is most widely known as *Piroplasma bigeminum*, but it is now claimed that according to the rules of nomenclature, *Babesia bovis* displaces the name given by Smith.

[16] The recent works on this subject are excellently reviewed in Calkins' Protozoology, 1909.

[17] Miyajima: Philippine Jour. Sc., Sec. B, May, 1907, No. 2, ii, 83.

[18] Martini: Philippine Jour. Sc., Sec. B, June, 1909, No. 3, iv, 147.

### MALARIA AND ALLIED DISEASES

In order to gain any conception of the immense change that has been brought about by studies on malaria it is necessary for us to contrast the prevalence of the disease to-day with that of twenty-five or thirty years ago, and to take note particularly of the attitude of mind which commonly prevailed in regard to it. The present improved state of affairs, in which malaria is being successfully combated and has been made a preventable disease, is the outcome of protracted studies of apparently disconnected matters, such as microscopic studies of the blood of malarial patients; inoculation experiments on animals, and even on man; the study of blood diseases in birds, field mice and other animals; the study of the classification, anatomy, distribution, habits, breeding-places and life-histories of mosquitoes. From such varied sources contributions have accumulated until most of the former mysteries connected with malaria have disappeared, and there are now few diseases concerning whose origin and spread we have such clear knowledge.

### LAVERAN'S DISCOVERY OF PARASITES

When Laveran[19] first described the malarial parasites, in 1880, the attention of the medical world was beginning to focus on bacteria as disease-producing agents, and it was several years before the importance of Laveran's discovery was recognized and its accuracy established. However, the work of the Italians, led by Marchiafava and Celli and Grassi, and of American clinicians such as Osler and Thayer, soon placed beyond question the fact that the bodies described by Laveran are parasites and that they are present in the red-blood corpuscles of patients suffering from malaria. In the flood of investigations made on the blood of malarial patients, it was soon learned that healthy human beings can be infected by inoculating them with malarial blood,[20] and that there are several types of malarial parasite, producing different effects in man. One, the parasite of tertian malaria, causes chills every other day; a second causes chills at 72-hour intervals (quartan malaria); a third causes irregular chills and is responsible for what is known as pernicious or tropical malaria. These types can be distinguished from each other by microscopic examinations.

### LIFE CYCLE OF PARASITE

Golgi,[21] during 1885-6, traced the stages in the growth of the quartan and tertian parasites from the time that the minute form enters the red-blood corpuscles, through different periods of development, up to maturity, when the full-grown form divides into segments, each of which enters a fresh red corpuscle to repeat the process. He showed that the malarial chill corresponds to the time when one generation of full-grown parasites is simultaneously segmenting. In 1891 Marchiafava and Celli made a similar study of pernicious malaria. About this time Danilewsky[22] investigated a number of warm-blooded and cold-blooded animals and found several kinds of blood parasites, among them one in birds which resembles that of human malaria.

### MOSQUITO AS A CARRIER

The works referred to established a relationship between the parasite found in the blood of human beings and the disease, and the occurrence of a similar parasite in birds, but there was no clue to indicate where the parasite came from nor how it got into the blood, nor was there any generally accepted explanation of the mode of infection.[20] It is true that Laveran supposed that the mosquito was concerned in some way in this transfer, and that this idea occurred independently to Manson, who had found mosquitoes active in the spread of a blood disease caused by a minute parasitic worm (*Filaria bancrofti*).[23] Manson suggested that the malarial parasites were carried by mosquitoes from malarial patients; that the mosquitoes infected drinking-water, which in turn carried the parasite to susceptible persons. Bignami also supposed that the malarial organism passed part of its life in the external world, where mosquitoes in some way picked it up and inoculated the human being in the act of biting him. The mosquito hypothesis, however, lacked support until 1895, when Major Ronald Ross,[24] a medical officer in the Anglo-Indian service, observed that the malarial parasites, taken from a patient into the stomach of a mosquito, underwent interesting changes, with the production of flagellated and spherical forms, which were subsequently found by MacCallum[25] to be sexual forms of the protozoon. In many attempts to continue the study Ross failed until he employed a special type of mosquito, now known to be the *Anopheles*, with which he confirmed his previous finding. Directing his attention to bird malaria, Ross discovered that if certain types of mosquitoes suck blood from infected birds, the parasite, *proteosoma*, enters the mosquito, passes through an elaborate cycle of changes, and after about 9 days develops into forms which accumulate about the proboscis of the mosquito and are discharged into the next bird attacked by the insect, to reproduce the disease afresh. Ross succeeded by this means in infecting healthy birds.

The bearing of Ross' discovery on the problem of human malaria was apparent, and immediately the study was taken up by the Italian workers who proved that the mosquito plays the same rôle in this disease as in bird malaria. In arriving at this result, the study of malarial diseases of field mice and lower animals and a painstaking study of mosquitoes by Grassi, played a part. The chief workers among the Italians were Grassi, Bignami and Bastianelli.[26]

### CYCLES OF GROWTH AND REPRODUCTION

From these investigations it developed that the malarial parasites have two cycles of growth and reproduction: in the warm-blooded animal reproduction is asexual; in the mosquito sexual reproduction occurs. Both cycles are necessary for the perpetuation of the malarial parasite. At this point in the investigations it became urgently necessary to determine whether any other animal resembles man in its capacity to harbor the malarial parasites. Experiments on this point were perfectly uniform in their results:[26] neither by inoculation of animals nor by having them bitten by infected mosquitoes was it possible to cause the parasites of human malaria to grow in their blood. The uniformity of these results gave assurance that the lower animals do not suffer from human malaria and that they are not concerned in the spread of the disease. It may be remarked, however, that diseases resembling malaria, but specific for certain types of lower animals, have been observed by Kossel, Ziemann, Koch and Vassall.

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[19] Laveran: Bull: de l'Acad. de med., Paris, Nov. 23, 1880, ix, 1235; Laveran: Compt. rend. Acad. d. sc., 1881, xciii, 627.

[20] Thayer and Hewetson: Johns Hopkins Hosp. Rep., 1895, v, 35-39 and 53.

[21] Golgi: Arch. p. le sc. med., 1885, No. 4; Golgi: Gaz. d. osp., 1886, No. 53.

[22] Danilewsky: Ann. de l'Inst. Pasteur, 1890, No. 7, pp. 427, 753.

[23] King: Insects and Diseases; Mosquitoes and Malaria, Pop. Sc. Month., 1883, xxiii, 644.

[24] Ross: Lancet, Dec. 18, 1897, and Feb. 26, 1898; Ross: Ann. de l'Inst. Pasteur, 1899, No. 2.

[25] MacCallum: Jour. Exper. Med., 1898, No. 1, iii, 125.

[26] Grassi: Bignami, Bastianelli, Dionisi, etc., Rev. Acad. dei Lincei, Nov. 28, 1898 to May 1899; Reviewed by Ziemann: "Malaria" Mense's 'Handb. d. Tropenkrankh.,' iii, Parts 1 and 2.

### ANOPHELES MOSQUITO

The adjustment of the malarial parasites to their environment is very delicate; a certain stage of the parasite of human malaria will survive and multiply in mosquitoes of the genus *Anopheles,* but will not survive in other mosquitoes; the parasite of bird malaria will not survive in *Anopheles* mosquitoes, but survives and multiplies in *Culex* mosquitoes. The parasites of bird malaria do not live in human blood, even if introduced artificially or by an infected *Culex* mosquito, and the parasites of human malaria cannot live in other animals. Various other mosquitoes have been found to be capable of carrying malaria to human beings, nearly all being of the genus *Anopheles,* and it is now known that many genera of mosquito are quite incapable of carrying the disease.

It has been proved that the mosquito is not simply a passive carrier of the malarial parasite, but that the parasite invades the tissues of the mosquito and passes through certain complicated stages of development before arriving at a condition in which it is capable of infecting a fresh human subject. The changes which the parasite undergoes in the mosquito are apparently essential to the continued existence of the parasite, and we must conclude that the malarial organism is regularly parasitic for two living creatures—man and the *Anophelès* mosquito, and that it can continue to live and multiply only when it can occasionally pass from one of these hosts to the other and back.

The complicated and elaborate stages in the development and reproduction of the malarial parasite, both in man and the mosquito, have been worked out step by step. Grassi,[26] in 1901, studying pernicious or estivo-autumnal malaria; Schaudinn,[27] in 1901, the form causing tertian malaria. Schaudinn observed the parasites obtained from the proboscis of the mosquito enter human red-blood corpuscles, and thereby completed the chain of evidence required to prove conclusively that the mosquito parasite is the cause of human malaria.

### DISAPPEARANCE OF MALARIA

The application of the facts learned by these studies has led to most remarkable changes in modern life. As soon as it became clear that man cannot acquire malaria except through the bite of a mosquito, and that the mosquito can become infected only by biting a malarial patient, the prevention of malaria and its eradication at once became a problem to be attacked by exterminating *Anopheles* mosquitoes and by preventing them from gaining access to malarial patients.

The salutary effect of the antimosquito campaign in decreasing the death-rate and sick-rate from malaria has quite fulfilled all predictions. The banks of the Suez Canal have become habitable; the Roman Campagna is losing its terrors; the construction of the Panama Canal has been made possible, and life in the tropics has been robbed of one of its greatest dangers, largely through the works of Laveran, Ross and Grassi. Moreover, the knowledge acquired has not only led to an intelligent campaign against malaria, but it has been of value in understanding other dangerous diseases carried by insects.

### YELLOW FEVER

It will be recalled that up to a very short time ago the southern and eastern ports of this country frequently were in danger from epidemics of yellow fever. The cause of the disease was unknown, its manner of spread mysterious, its mortality high, and the dread of its appearance was constantly recurring. In 1900, five years after Ross discovered that malaria of birds is transmitted by mosquitoes, an American commission[28] made an elaborate investigation of yellow fever. The disease could not be conveyed by contact, nor by the ordinary channels through which bacterial diseases spread, and experimental animals could not be infected. The blood from patients was inoculated into non-immunes and they promptly developed yellow fever. Mosquitoes of the genus *Stegomyia* were allowed to bite susceptible persons after sucking blood from yellow fever patients, and the disease was transmitted after a number of unsuccessful attempts. The first person on whom this experiment succeeded was Dr. Carroll, one of the members of the commission, and a few days later Dr. Lazear, also a member of the commission, allowed himself to be bitten, contracted yellow fever and died. In spite of numerous and careful attempts, no other method could be found which could be supposed to play a part in the natural spread of yellow fever, and the commission concluded that victims regularly are inoculated from infected *Stegomyia* mosquitoes, a conclusion which has been abundantly confirmed. It has since been shown by Marchoux and Simond that the offspring of infected mosquitoes can transmit a mild form of yellow fever.

The most painstaking investigations have failed to demonstrate the virus of yellow fever, and there is reason to believe that it is too small to be seen even with a microscope. In spite of the fact that the germ of the disease is unknown, the work of the American commission has demonstrated that yellow fever will not spread in a community unless infected *Stegomyia* mosquitoes occur. The truth of this theory has been tested on a grand scale. In Havana the destruction of mosquitoes and the screening of yellow fever patients have relieved the town of the scourge. The same measures proved sufficient in New Orleans some five years ago, and have given equally satisfactory results at Panama.

### TYPHUS AND DENGUE

Typhus fever and dengue, two diseases whose virus is still unknown, have been studied in much the same manner. In the case of dengue, Ashburn and Craig[29] concluded that the disease is transmitted by the ordinary *Culex* mosquito; in the case of typhus, Vassall finds that the blood of patients will convey the disease if inoculated into susceptible individuals, but he has not yet determined what biting insect is the carrier.

In 1903 minute bodies were found in the cells of victims of one of the obscure fevers of India, known as "kala-azar,"[30] or "dum-dum fever." This disease, confused with malaria for many years, was finally recognized as one of the scourges of India, where it has practically destroyed villages by its widespread and high mortality. The bodies found by Leishman[31] and Donovan[32] in kala-azar patients appeared to be the infectious agent causing the disease. The studies of Rogers and Patton[33] have shown that this disease also is carried by an insect. It has been found that bedbugs which have bitten patients with kala-azar have the protozoon in their stomachs, and it has been learned that the parasite undergoes development in the insect. Up to the present time the complete life history of the parasite has not been traced, and we do not know what becomes of it, nor how it gains entrance into human beings. The fact that the disease cannot be given to experimental animals increases the difficulties of study.

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[27] Schaudinn: Arb. a. d. k. Gsndhtsamte., 1902, xviii, 169.

[28] Reed, Carroll, Agramonte and Lazear: Philadelphia Med. Jour., 1900, vi, 796; Reed, Carroll, and Agramonte: The Journal A. M. A., 1901, xxxvi, 431.

[29] Ashburn and Craig: Philippine Jour. Sc., Section B, 1907, No. 2, ii, 128.

[30] Leishman: System of Medicine, Allbutt and Rolleston, Part 2, ii, 226.

### RESULTS OBTAINED

It can be seen from this brief review that an enormous amount of research work has been devoted to the study of malaria and related subjects during the last thirty years. There can be no doubt that our ideas concerning the nature of malaria and yellow fever, and our practices in dealing with them, have been profoundly modified by the discoveries of research workers. It is equally certain that the workers have been justified by the results attained; waste places have been made habitable; the conditions of human intercourse, welfare and health have been improved, and there has already been an incalculable saving in human life through the preventive measures now so well known. It would be as improper to assert that these results could have been attained just as readily without animal experimentation as to claim that they resulted solely from such experimentation. The use of experimental animals was, however, necessary—just as necessary as the study of sick patients; just as necessary as the study of mosquitoes. It is highly probable that the mastery over malaria and yellow fever would not have been obtained if studies on animals had been done away with thirty years ago.

### SLEEPING SICKNESS AND ALLIED DISEASES

As far back as 1841 Valentin described motile protozoa in the blood of salmon. Similar actively moving bodies were found in frogs by Meyer and received from Gruby the name *"Trypanosoma sanguinis."* Little attention was paid to these parasites for forty years, and, although found in the blood of various lower animals, they were not regarded as disease-producing agents. In 1879 Lewis reported the occurrence of trypanosomata in the blood of Indian rats. A short time later Evans discovered parasites of the same character in the blood of animals suffering from the fatal Indian epizootic "surra," and, as the result of his studies, concluded that surra is caused by the trypanosoma. The disease proved uniformly fatal for horses, mules and dogs; camels were much less susceptible, while oxen could recover after inoculation with the parasite.

About 1895 Bruce[34] was sent to study "nagana," a highly destructive disease of animals in South Africa, and found the animals infected with a parasite like that described by Evans in surra. He inoculated horses and dogs with the blood of cattle suffering from nagana and reproduced the disease.

### TSETSE FLY THE CARRIER

In attempting to trace the manner in which animals became infected, Bruce was impressed by the fact that nagana has a very definite localization, occurring with frequency in certain regions, being absent from others. It prevailed in regions inhabited by a stinging fly, the "tsetse" fly (*Glossina morsitans*), but did not develop elsewhere. Bruce carried healthy horses, oxen and dogs from the mountains, where there is no nagana, to the tsetse fly country, where some became infected with tsetse fly disease. From these animals he established the fact that fly disease and nagana are the same. Bruce then brought tsetse flies up from the lowlands to the mountains, allowed them to sting animals sick with nagana, and found that for forty-eight hours thereafter the flies could infect healthy animals by stinging them. The importance of the tsetse fly as the agent transmitting nagana was emphasized by finding that the disease could not be conveyed by water, food, contact with sick animals, or other usual channels of infection. In attempting to discover where the disease arises Bruce examined the blood of the wild animals and found that many of them, although apparently in good health, are infected with the parasite of nagana; in other words, the wild animals are a permanent reservoir of infection.

Bruce also concluded that the tsetse fly acts mechanically in carrying trypanosomata, the parasite not developing while within the fly. In his experiments the trypanosoma of nagana proved fatal for most types of monkey, and for horses, mules, donkeys, cattle, dogs, cats, guinea-pigs, rabbits, rats and mice.

### OTHER PROTOZOAN DISEASES

Since this discovery trypanosomata have been found to cause a number of widely prevailing diseases in the domestic animals, and experiments show that these diseases can be transferred to many other animals. Furthermore, protozoa of this type have been found widely spread in other animals, fish, etc., in which corresponding diseases have not been established. Of the diseases may be mentioned "dourine," discovered in 1896 by Rouget in African horses; "mal de caderas," discovered in South American horses by Elmassian and Voges in 1901; "Galzickte," discovered by Theiler in African cattle in 1902; and "coast trypanosis of Kamerun," discovered by Ziemann in 1902.[35]

In a surprisingly large number of these diseases it has been established by careful experiments, reinforced by a study of the conditions of spontaneous infection, that the parasite is carried from a sick animal and inoculated into a new victim by the bite of an insect. In the majority of trypanosomatic infections the insect is a biting fly belonging to the genus *Stomoxys* or *Tabanus* or *Glossina.*

Even after diseases caused by trypanosomata were well recognized in the lower animals the parasite was not found in man before the observation of Forde, and in his case there was at the time no proof that disease resulted from its presence. Proof was furnished, however, by Castellani, who found the same parasite in the spinal fluid drawn from a patient suffering from a fatal disease of Africa, known as "sleeping sickness," a discovery soon confirmed and extended by Dutton and Todd.

### EXPERIMENTAL STUDY OF SLEEPING SICKNESS

It is impossible here to review the overwhelming amount of experimental work that has been performed in connection with sleeping sickness and trypanosomata during the last few years. Expeditions sent from England, France and Germany, and independent investigators, have been busily occupied with the subject.[36] As the result of investigations in this field it has already been established that trypanosomata are the cause of sleeping sickness; that the human being is infected through the bite of a fly of the tsetse fly type, *Glossina palpalis;* that the fly carries the parasite for five days or more after biting a patient or animal infected with trypanosomata, but can transmit the disease for only two days; that practically all the Glossina flies captured around certain lakes in dangerous districts contain trypanosomata; that the trypanosoma of sleeping sickness is fatal for some lower animals, especially for monkeys, dogs and cats, and can be transferred to them experimentally, while other animals are more highly resistant to the human trypanosoma.

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[31] Leishman: Brit. Med. Jour., May 30 and Nov. 21, 1903, i.

[32] Donovan: Brit. Med. Jour., July 11, 1903, ii, 79.

[33] Patton: Scientific Memoirs by the Officers of the Medical and Sanitary Departments of the Government of India, 1907, No. 27.

[34] Bruce: Osler's Modern Medicine, 1907, i, 460.

[35] Lühe: Mense's Handb. d. Tropenkrankh., 1906, iii, Part 1,

[36] Thimm, C. A.: "Bibliography of Trypanosomiasis," London, 1909.

In addition to the facts just stated, researches have been made to determine what changes are produced in the tissues as the result of trypanosomatic infection, and studies into the mechanism of protection and immunity are already beginning to appear.

### PROBLEMS TO BE SOLVED

Many experiments have been made to discover drugs with which to combat this type of disease, with an encouraging degree of success, and already two drugs, trypanred and atoxyl, have become recognized as having a definite value in the treatment of trypanosomatic infections. Other investigations have been made to make clear the complicated changes which trypanosomata pass through during their growth and reproduction; Schaudinn's work deserves special attention in this connection. Upward of a hundred trypanosomata have been described, which differ among themselves, either in structure or habits. It is important to determine how many species we have to deal with; to establish the specific differences; to gain information regarding the variations; so far as possible to determine the conditions under which variation occurs, and especially to obtain a clear knowledge of the manner in which these protozoa live when they are not parasitic in the blood of animals. Many experimental studies have been made which have in view some of the objects mentioned above, and among other important results already achieved a method has been devised by Novy and his colleagues for growing trypanosomata in cultures.

### TRYPANOSOMATA WIDESPREAD

Enough has been said to show that diseases caused by trypanosomata are widespread and fatal for many lower animals, and that in Africa this protozoon is exceedingly dangerous to human beings. The problem of conquering these diseases is an immediately pressing problem. The interests involved are enormous, often national or even international. Success in preventing and eradicating these diseases can be hoped for only when preventive measures are based on accurate and detailed knowledge of the parasites and of the insect carriers. In attaining this knowledge it is necessary to study the sick animals, the climatic and geographical peculiarities, the distribution and habits of insects, and, above all, to study the parasites themselves. It is folly to assert that this knowledge can be gained equally well without animal experimentation. There is hardly a line of research on trypanosomata that does not require animal experimentation at one point or another. Without animal experimentation, progress in combating diseases of this group would practically cease.

### CONCLUSION

It may be well, in conclusion, to try to stand to one side and view critically the experimental work that is briefly summarized in this article; to face frankly the possible charge of inhumanity and cruelty and to face equally frankly the obvious motives of the experimenters, and the results aimed at and actually accomplished. Without doubt, to one not interested in zoology and out of touch with the ideals of investigation and research, it might seem wanton cruelty to capture field mice and wild birds and to study the blood of these creatures for parasites. There might well have been no obvious connection whatsoever between such examinations and human progress. But if studies like those of Danilewsky, MacCallum and Ross had been prohibited on the ground of cruelty, it is not improbable that the ravages of malaria would be yet unchecked. The wonderful revolution brought about by the discovery that yellow fever is carried only by the mosquito was almost directly a sequel to the malaria work, and it requires no great stretch of the imagination to suppose that if animal experimentation had been forbidden the world would to-day be as powerless as ever in the fight against these two scourges.

Again, there is no question that many animals have been sacrificed in experiments connected with Texas fever, surra, nagana and similar diseases. These diseases do not even attack human beings, and, therefore, in this group of cases, we do not have to balance the value of a human life against that of an animal. The motive animating the experimenters is perfectly clear and cannot be interpreted except in one way by any one who chooses to weigh the evidence. For example, no flight of imagination could go to the point of supposing that Bruce was sent out to South Africa in order to perform brutalizing experiments, or that he would have gone for any such purpose. It is so obvious that it sounds puerile to state that Bruce's mission was to learn to master nagana and to put a stop to its ravages among live stock. The question may be raised, "Was Bruce justified in sacrificing some animals in his experiments on the chance of thereby gaining information that might be used in saving the lives, or of improving the condition of great numbers of other animals?" There can be only an affirmative answer to this question, so far as economic interests are concerned, and even from the viewpoint of a strict opponent of animal experimentation it might seem proper to save the lives of many animals by the sacrifice of a few. The opposite attitude would, in fact, be both foolish and cruel, as it would disregard the welfare of the great majority of the animals. And yet if once it be admitted that animals may be sacrificed for the welfare of other animals the whole attack against animal experimentation collapses, for surely human progress and human welfare are objects as worthy as the welfare of the lower animals.

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# ARTIFICIAL VAGINA BY INTESTINAL TRANSPLANTATION

J. F. BALDWIN, A.M., M.D.
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COLUMBUS, O.

In the *Annals of Surgery* for September, 1904, I described an operation which I had devised, and the feasibility of which I had demonstrated on the cadaver, for the establishment of an artificial vagina in cases of acquired or congenital absence of that organ, by transplanting a loop of intestine. A very thorough examination of the literature of artificial vagina had been made for me by an expert connected with the Library of the Surgeon General's Office, and the operation suggested was found to be entirely unique.

Three years later, having had an opportunity to employ this method, I reported[1] the case in full at the twentieth annual meeting of the American Association of Obstetricians and Gynecologists. I have now had four of these cases and can recommend this method of operating to the profession with very great confidence.

*Patient.*—My fourth case was in a young woman, aged 18. She had always enjoyed excellent health, but had never menstruated, nor had she experienced any menstrual molimen. She was brought to me in the spring of 1909, but as she had just graduated from high school I made no examination but encouraged the mother to delay, thinking that the amenorrhea would disappear with improved nutrition; and I directed outdoor life and vigorous exercise. This failing to accomplish the desired result the patient was again brought to me, August 20, and I then made an examination. (I had previously operated on this patient, once for appendicitis, making the usual McBurney operation, and once for left inguinal hernia, the hernia containing the ovary. The ovary was replaced, and the parts closed in the usual way, but the patient was a mere child and no examination of the pelvic organs was thought of.)

*Examination.*—There was found complete absence of the vagina, its presence not being indicated even by so much as a dimple. Rectal examination was somewhat unsatisfactory, but was absolutely negative as to the existence of uterus or ovaries. I advised examination under an anesthetic, and this was done on the following morning. I could then by the rectum make out an irregular mass in the right side of the pelvis, but the character of this could not be determined. I supposed it to be either the right ovary or an imperfectly developed uterus. It was considerably larger than a normal uterus, so that if it represented that viscus it would probably be found that the increased size was due to retained blood. The deformity was carefully explained to the patient and her mother, and the possibilities of making an artificial vagina were discussed at some length. They were both very anxious that the operation should be made, and it was accordingly undertaken August 23.

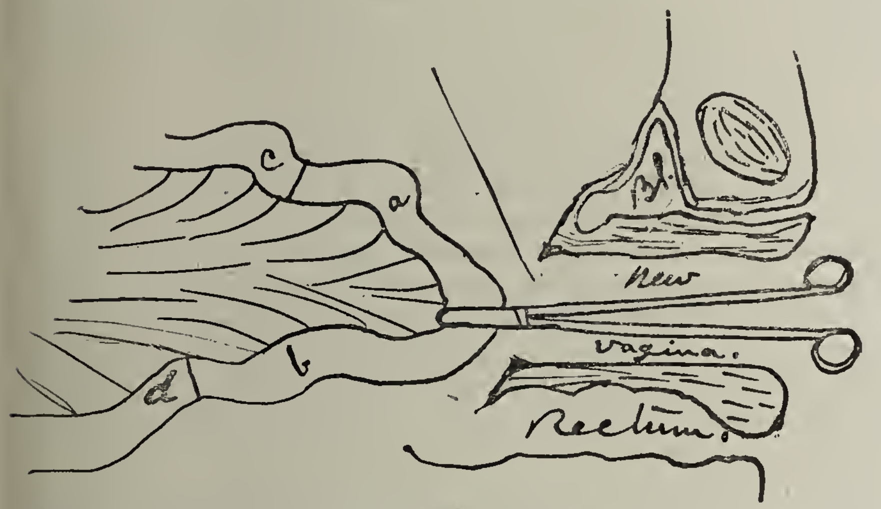

Fig. 1.—Bowel seized by hemostat through opening for new vagina; a, b, sigmoid or ileum; c, d, points for section and anastomosis.

*Operation.*—The perineum and lower abdomen having been prepared, the patient was placed in the lithotomy position and a transverse incision made in the perineum at a point corresponding to the normal opening of the vagina. With an indexfinger in the rectum and a sound in the bladder, I carried this dissection forward until the peritoneum was reached. This opening was made amply large, and then lightly packed with gauze pressed in around a large hemostat, which was introduced so as to expedite the second step of the operation. The patient was then placed in the horizontal position, and the abdomen opened in the median line. It was then found that the mass in the pelvis, which had been previously made out, was behind the peritoneum. I at once passed my hand up and found, as suspected, an entire absence of the right kidney, and then a little more investigation showed that this tumor was the kidney congenitally misplaced. Not a trace of the uterus could be found. (In two other cases which I have had of congenital absence of the vagina the uterus was represented by a small bit of tissue, about the size of the end of the little finger, on each side in close proximity to the ovaries.) The ovaries were normal, but were found on each side much higher up than usual. To each one was connected a small bit of Fallopian tube, like a plume on a lady's hat. On the right side was a very imperfect round ligament, but no trace of any on the left. The field of operation having been protected by gauze sponges, the lower end of the ileum was brought up, the intestinal contents displaced for about 12 inches, and this portion of bowel resected but with careful preservation of the mesentery. The ends of the resected section of bowel were inverted with pursestring suture, and the other ends connected to each other by a Murphy button so as to reestablish the continuity of the canal. I had left just enough of the lower end of the ileum attached to the colon to enable me to make this anastomosis. The peritoneum over the vagina was then opened, exposing the hemostat, which was then pushed on into the pelvis by an assistant. The detached bowel was caught at its middle by the hemostat and drawn down into the artificial vagina. The peritoneum was carefully brought together over and around the ends of this piece of bowel, so as to make a smooth floor. The abdomen was then closed in layers in the usual way. The patient being then placed in the lithotomy position, the bowel was opened where it had been caught by the hemostat, each leg of the loop wiped out carefully, and then packed with iodoform gauze so as to press it snugly against the walls of the artificial opening. The edges of the opening into the bowel were caught to the edges of the new vulva, and a small drainage wick introduced at the very bottom so as to take care of any oozing which might take place. (The accompanying illustrations will serve to make clear the text.)

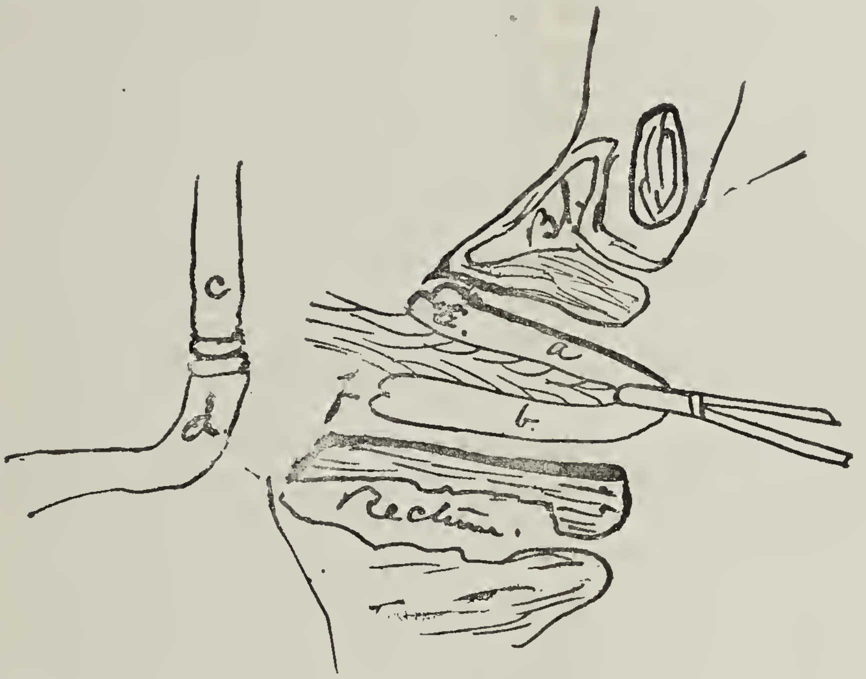

Fig. 2.—Section of bowel (a, b) with mesentery intact, drawn into new vagina; c, d, anastomosis; e, f, closed ends.

*Postoperative History.*—The patient went through the operation very nicely and made an absolutely uneventful recovery, the button coming away in two weeks. She returned to the hospital some weeks later, when the septum was removed in the usual manner, and at this time an ordinary examination would fail to reveal anything abnormal about the vagina, except the absence of a uterine cervix.

While studying the technic of this operation from a theoretical point of view, I took pains to examine the ileum and sigmoid in a large number of patients on whom I was making ordinary abdominal operations. Several hundred patients were thus examined, and in all I found that there would be no difficulty in drawing down such a loop of ileum into the vagina, or a loop of sigmoid if for any reason the ileum should not be found satisfactory. With either there would be plenty of slack of the mesentery so that the circulation would not be interfered with. I have always used, however, a loop of ileum because resection of the ileum is safer than resection of the sigmoid. In all of my cases operative recovery was absolutely smooth, and the new vagina seems to take the place very satisfactorily of the natural organ. I was induced to use the bowel for this purpose because a very extended study of the literature of artificial vaginas had shown that in cases of entire absence all other methods resulted in almost complete failure, although full of promise in many cases when the patient left the operating-table. The favorite method of operating had been by transplantation of pieces of skin, to line the artificial canal. In all of these cases, however, to the reports of which I had access, the ultimate results had been very unsatisfactory owing to cicatricial contraction. By the use of the bowel a normal mucous membrane is provided, surrounded by normal connective and muscular tissue, and with an ample blood-supply. Theoretically and practically, therefore, such a vagina would seem to fulfil to the highest degree all the requirements.

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[1] Am. Jour. Obst., lvi, No. 5.

The dangers of operation are simply those inherent to any other deliberate resection and anastomosis of intestine; but the operation is one which should certainly not be undertaken by a tyro in surgery. My first operation took over two hours, the last one about half that time, and I think that in an uncomplicated case the operation should be made within the hour. There is, of course, no hemorrhage to amount to anything, and if the field of operation is carefully protected there should be no shock. The danger, therefore, would be merely the danger of a possible infection from the intestine, and that danger in the hands of an expert is very slight. Nevertheless, the danger should be fully explained to the patient, who would then decide whether the operation would be worth while.

In addition to the four cases of my own, a successful operation has been reported by Mueller[2] and one by Mori.[3] Thus we have six successful cases with no mortality. (So far as I can learn neither Mori nor Mueller refer in any way to my own previous work, although my publications preceded theirs by several years. I understand, however, that such a failure to give credit is in certain foreign medical circles not looked on as either unetheical or dishonorable).

115 South Grant Avenue.

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# TORSION OF THE GREATER OR GASTROCOLIC OMENTUM

## COMPLICATED BY ACUTE APPENDICITIS

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NEW YORK

So very little is really known of the mechanical cause of the twisting of the omentum that the report of this case is interesting and may serve to throw some light on the subject.

Less is known of the symptom-complex leading to a correct diagnosis of such torsions. This is demonstrated by the fact that in some sixty odd cases recently collected, extending over a period of twenty-seven years since 1882, when the first report was made by Oberst, only one case was diagnosed as such before the operation.

Corner and Pinches lead one to be satisfied with a diagnosis at the operating table and not a differential one beforehand.

Fuller points out the difficulty of diagnosis and says that it is not at all remarkable or strange for a torsioned omental tumor to escape detection even during a laparotomy, unless the incision happened to be made directly over the tumor.

Richardson suggests an anatomico-pathologic classification according to the point of twisting, and asks for a report of all cases with an explicit statement as to the location of the tumor and the point of torsion. He thinks that if the possibility of torsion of the omentum be kept in mind in all cases of abdominal symptoms pointing to a strangulation a preoperative diagnosis of torsion of the omentum would become more frequent.

Weiner offers the very practical suggestion that if we cut down on a hernia that produced symptoms of strangulation and find only a strand of omentum in the canal we should investigate the intra-abdominal portion of the omentum to make sure that there is no torsion present.

*Patient.*—H. P. F., foreman by occupation, 32 years old, was admitted to my service at the Harlem Hospital, June 14, 1906.

*Previous History.*—The patient had an attack similar to the present one two years ago, from which he recovered. He was operated on ten years ago for right inguinal hernia.

*Present Illness.*—Two days previous to admission he was seized with very severe pains in the right iliac region, which continued unabated up to that time. He had been constipated since the beginning of the attack. There was no vomiting. He was in great pain on admission. His temperature on admission was 103 F., pulse 120, respiration 26.

*Physical Examination.*—General appearance—a well-developed, conscious male, very obese. Eyes—pupils contracted but reacted naturally; mucous membrane red and dry; lips scarlet; pulse regular in force and frequency; very rapid; respiration shallow and jerky; abdomen rigid and tense, general tenderness, tympanitis, pain more marked on right side. Urine—albumin with casts, hyalin, granular and epithelial. Arteriosclerosis was present. An indistinct mass could be made out to the right of the umbilicus, reaching down into the right iliac region. A cicatrix in the right inguinal region indicated that an operation for hernia had been performed. The wound had apparently healed by primary union, and there was no signs of recurrence. A diagnosis of appendicitis was made. A high leucocytosis and differential blood-count, with the mass and other symptoms suggested abscess.

*Operation.*—A long incision was made through the deep fascia on the outer edge of the right rectus muscle over the tumor. A quantity of bloody fluid escaped and a large mass of congested and partially strangulated omentum immediately presented itself in the wound, and was found to be adherent beneath the hernial cicatrix by the small thin band of adhesion at the lower end of the specimen seen in the illustration. This and several other small bands of newly formed inflammatory adhesions were easily broken up; as they were so small they were not ligated. The omentum was delivered through the wound and excised near the transverse colon. The appendix, which was found to be very markedly congested, was removed. There were, however, no adhesions between the omentum and the appendix. The abdomen was closed without drainage, and the patient left the operating room in good condition. June 18, four days after the operation, the wound was dressed and was found dry and clean. June 30 the patient was up and well.

*Examination of Specimens.*—The specimen of the appendix was small; there were no adhesions, though it was markedly congested, but probably not enough to account for the high temperature, pulse and leucocyte count, and surely not for the general congestion and the fluid in the abdomen.

The specimen of the omentum (see illustration) was 17 inches long, weight 9¾ ounces, and had 27 distinct complete twists or turns, the reverse to the thread of a right-hand screw. When partly untwisted it was found that the small band of adhesion to the peritoneal side of the hernia cicatrix probably came off from the lower right-hand corner of the omentum. The twists or turns as counted commenced near the attachment of the omentum to the transverse colon and ran all the way down the entire length of the omentum to the small band of adhesion to the hernial cicatrix.

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[2] Mueller, A.: Formation of Vagina from Loop of Small Intestine, München med. Wchnschr., Dec. 21, 1908; abstr. in The Journal A. M. A., Jan. 29, 1910, liv, 419.

[3] Mori M.: Zentralbl. f. Gynäk., Jan. 1, 1910; abstr. in The Journal A. M. A., Feb. 12, 1910, liv, 577.

With a few more twists the small band of adhesion would have parted and I should have reported this case as a pure intra-abdominal torsion without adhesions or the presence of a hernia. The result of the hernia operation ten years ago was perfect, and excepting the small spot to which the band was attached the peritoneum beneath the hernia scar was perfectly smooth, as demonstrated by palpation within the abdomen. Evidently a small tip of the omentum had either been ligated with the hernial sac, or the omentum had subsequently become adherent at this point, thus affording a diagonal line from the upper left corner of the omentum at the transverse colon to the lower right hand corner of the omentum, around which the free lower left irregular triangle could and probably did revolve. If the adhesion played a rôle in the torsion it does not seem possible for such adhesion at the lower right border of the omentum to have been present for ten years without giving rise to an earlier twisting. Surely the torsion could not have been present for ten years, for there would have been adhesions between the twists that would have prevented the untwisting, which was fairly easily accomplished. If the adhesion was present for ten years without torsion, then some other force was necessary for its production. Was it the acute attack of appendicitis? The omentum has a habit of enfolding the appendix during certain inflammations. Was it making violent efforts to get to the appendix, or was the twisting a result of a purely exterior force such as the peristaltic wave of the intestines particularly imparted by the ileum, over which the omentum lay, just before it entered the cecum? The ileum at this point being more or less fixed, the propulsive effort is constantly in the same direction from the left to the right, and the direction of the twists in my specimen of omentum are the same as would be expected if this was the case. Now, the twists once started and the resulting inflammation in the omentum commenced, the increasing length of the inflamed veins would themselves tend to wrap around a line between two more or less fixed points. The swelling, edema and extravasation of the blood-cells would for the same reason also augment the twisting force.

Specimen showing torsion of omentum and small band of adhesion at one end.

Now let us go a step further. Nearly every case of reported torsion of the omentum was accompanied by some form of inflammation, either within or without the abdomen, as in a hernia. Was the inflammation the cause or the result of the torsion? The structure of the omentum has for its chief framework its vessels, long thin arteries that come off for the most part from the gastro-epiploic arteries at the great curvature of the stomach, and run downward to the lower border of the omentum, and then turn upward in the posterior layer to anastomose with the arteries of the colon. The veins are about the same. Enlarged full veins have been characteristic of the specimens of torsion of the omentum. Now the veins increase in size and length more rapidly in inflammation than the arteries, and would have a natural tendency to wrap around the latter and carry the loose mesothelium, and may perhaps be the chief factor in the production of torsion of the omentum; and I think also that we can add to this the force of the pulsations of the omental arteries.

I have suggested the foregoing, for I have long felt that the torsion of the omentum was not due wholly to exterior forces, and I believe that we must look for a cause within the omentum itself that would produce or is capable of producing torsion, because in pure hernial torsion of the omentum where the omentum is in contact with only the smooth wall of the sac it seems as if the possibility of an exterior force is negative.

112 West One Hundred and Nineteenth Street.

# A DUODENAL TUBE

## SECOND COMMUNICATION

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NEW YORK

In my first communication on this subject[1] my principal object was to show that a method had been found to pass over the pyloric ring and to reach the upper part of the small intestine. The present communication serves to present the method in greater detail.

The stomach-tube devised by me in 1894 requires only a few special alterations to answer the purpose of obtaining the duodenal contents.[2]

*Apparatus.*—This is shown in Figure 1.—A perforated round metal ball, twice the size of a pea and enveloped by the tube, serves as the end-piece. Attached to the end-piece is a thin rubber tube, not easily collapsible, about 0.2 cm. in diameter 125 cm. in length and graded in divisions of 10 cm. To this is attached a glass receptacle, which is connected by a length of tubing with a mouth-piece to be used by the operator if he aspirates himself, as I prefer doing; otherwise this part can be replaced by an aspirating bulb.

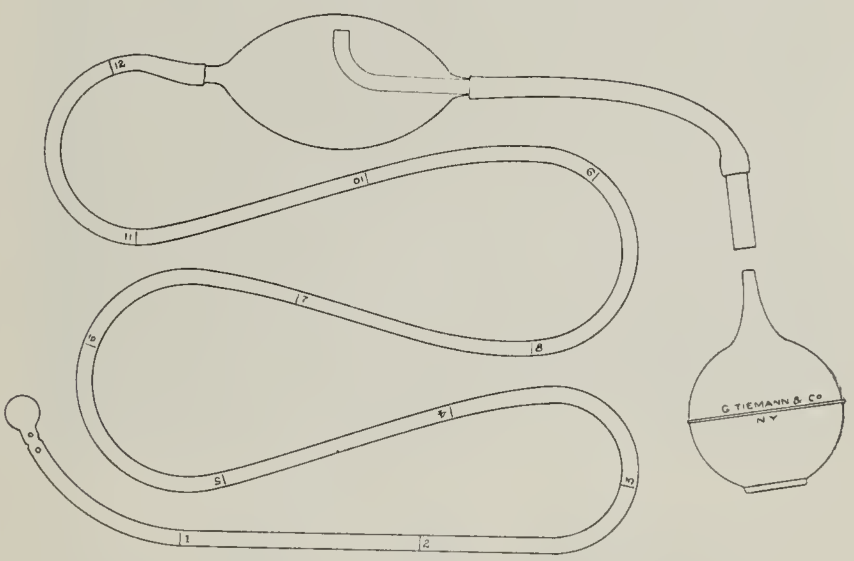

Fig. 1.—Duodenal tube

*Anatomy.*—Figure 2 speaks for itself, but a few facts concerning the position and size of the duodenum will be in order. The duodenum is the shortest and widest portion of the small intestine and is situated deeper than all the other parts of the intestinal canal. It is not quite 20 cm. long, the ascending portion measuring 4

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1. Gross, M.: New York Med. Jour., Jan. 8, 1910.
2. Einhorn (Med. Rec., Jan. 15, 1910) uses a similar tube, arranged on the same principle, which he calls a duodenal pump. He, however, employs a somewhat different method of inserting it.

to 5 cm., the descending about 7, and the horizontal part 6 to 7 cm. Its diameter is 3 to 3.5 cm. except at the pyloric ring, where it is a little less. The direction of the so-called ascending and superficially situated part is left inferior to right posterior. The descending part, which encircles the head of the pancreas in the shape of a semi-circle, receives at its concave side and near the transition into the horizontal part, the common duct of pancreas and liver. The horizontal part rests on the third lumbar vertebra and is the most firmly fixed part of the duodenum, so that in a prolapse of the stomach the pylorus and the descending duodenum will participate most, causing a kinking at the transition point into the horizontal section of the duodenum. The first section of the duodenum is not provided with the folds, the valvulæ conniventes; they are not clearly marked in the descending part, while toward the jejunum they are denser and more prominent. On and between these folds there are the so-called villi intestinales. These villi and the entire mucosa of the small intestine are covered with epithelium which belongs to the cylindrical epithelia and consists of cylindrical and goblet cells. The glandular apparatus of this portion of the intestine consists of Brunner's glands, which are found exclusively in the duodenum, and Lieberkühn's glands, which are found in all parts of the small intestine.

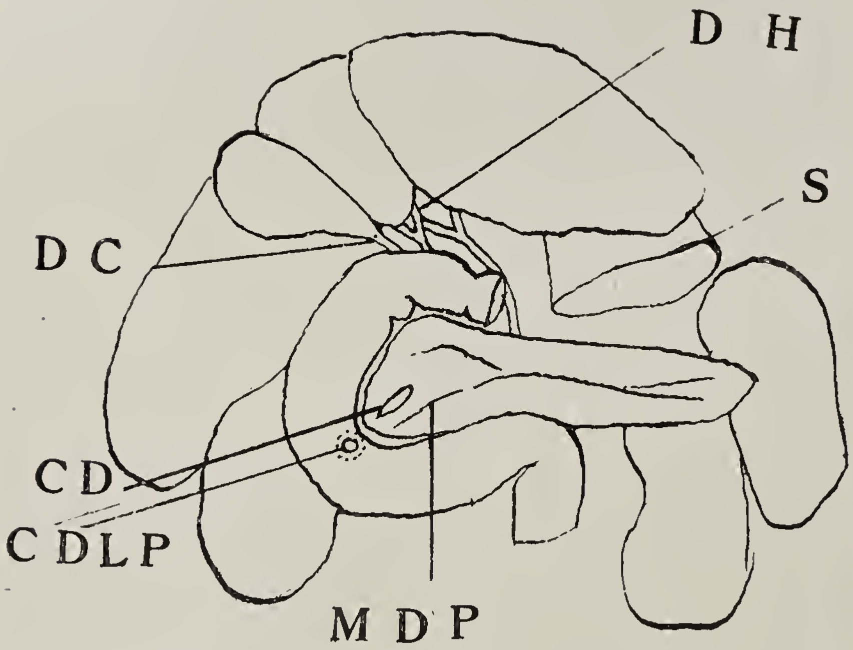

Fig. 2.—Duodenum in relation to other organs; D H, ductus hepaticus; S, stomach; M D P, main duct of pancreas; C D L P, common duct of liver and pancreas; C D, common duct; D C, ductus cysticus.

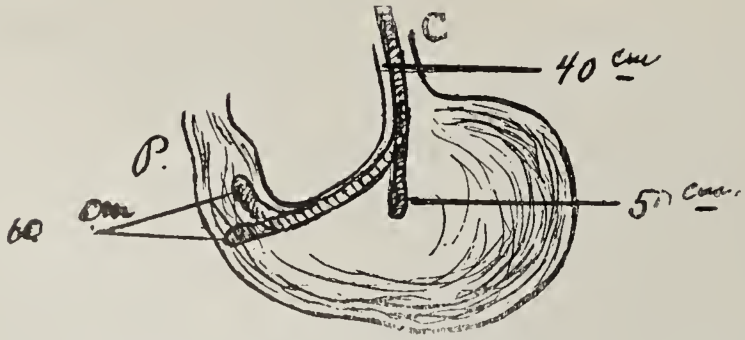

Fig. 3.—Stomach, showing insertion of tube; C, cardia; P, pylorus.

*Test Meal.*—In the morning the patient is given a test meal consisting of a tumbler (250 gm.) of milk and water in equal parts. This mixture, which cannot cause a great flow of hydrochloric acid, contains enough fat and water to produce an irritation of the mucosa of the duodenum. Half an hour later the duodenal tube is introduced.

*Principles of Action.*—The fact that the pyloric ring may be reached and passed by the tube is due to the adaptability of the small metal ball, which gradually leads the tube to conform to the lesser curvature of the stomach, and in continuous movements glides into the antrum pyloricum.

*Technic of Insertion.*—1. Patient swallows the little ball, smoothed with saliva, until the division of 45 cm. has reached the lips. If the patient is accustomed to taking stomach-tubes, there will be no difficulty whatever.

2. Lightly blowing several times into the stomach will smooth it out, so that the tube will hang freely in the cavity (Fig. 3).

3. Patient lies down and slowly turns over on his right side.

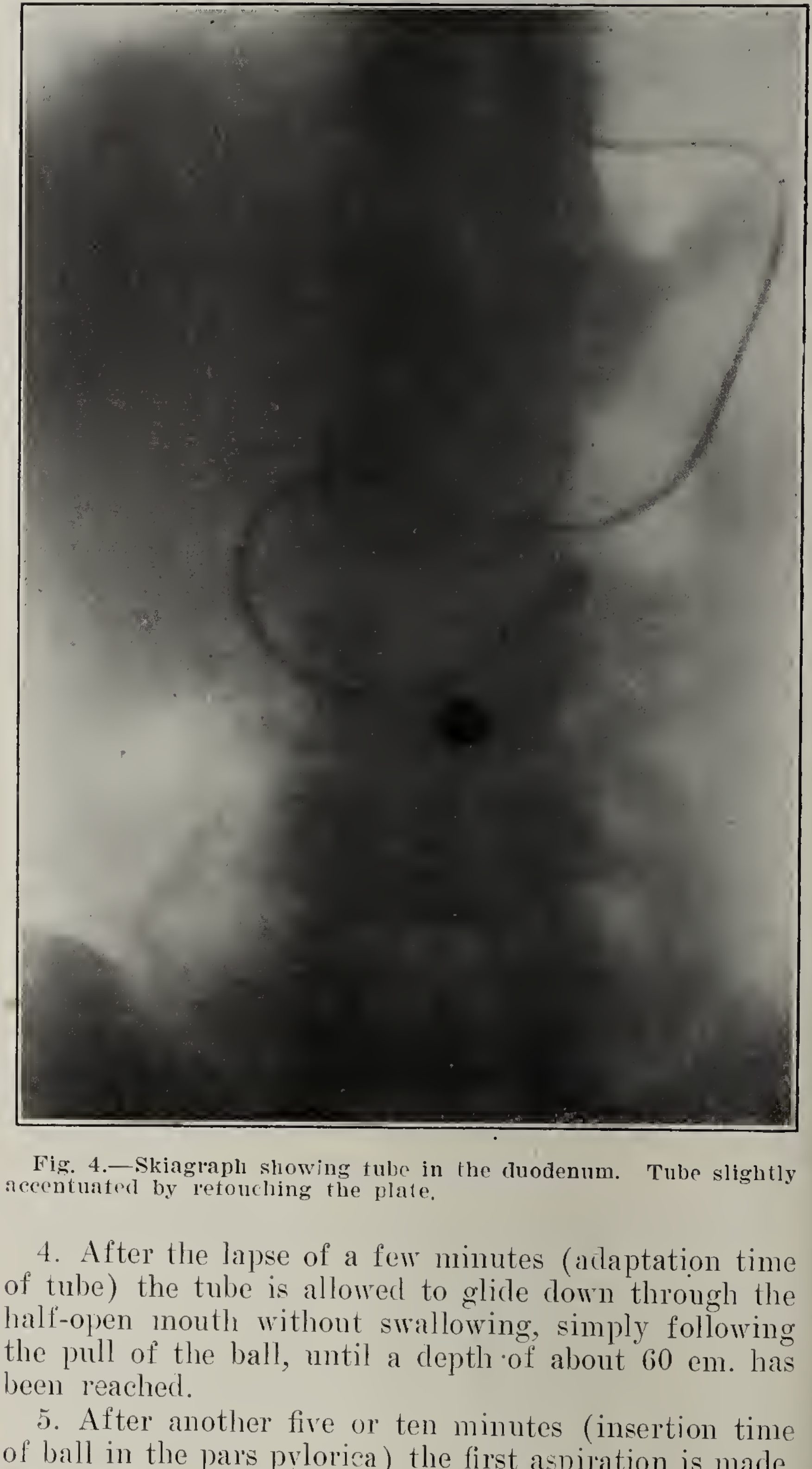

Fig. 4.—Skiagraph showing tube in the duodenum. Tube slightly accentuated by retouching the plate.

4. After the lapse of a few minutes (adaptation time of tube) the tube is allowed to glide down through the half-open mouth without swallowing, simply following the pull of the ball, until a depth of about 60 cm. has been reached.

5. After another five or ten minutes (insertion time of ball in the pars pylorica) the first aspiration is made, which will show that already now the gastric contents have a slightly yellowish tint as a sign of the accomplished insertion. The patient, whose mouth is still half-open, is warned more strongly than before not to make any deglutition movements, in order to give the tube an opportunity of being drawn in still further. After a time the tube will show that 65 or 70 cm. have been inserted.

6. Another aspiration is made and in nearly every case there will be a uniformly turgescent fluid of egg-yellow tint, which is no longer interspersed with casein flakes of the milk and gives an acid or weakly acid reaction.

7. After waiting a little longer and with occasional aspirations it will be possible in normal cases to obtain the characteristically yellow aqueous contents of the duodenum, which sometimes display a greenish-yellow fluorescence and are of neutral or alkaline reaction.

8. Now that there is a certainty of the pyloric ring having been passed, the patient may be allowed to sit up, there being no further danger of the ball falling back against the wall of the stomach.

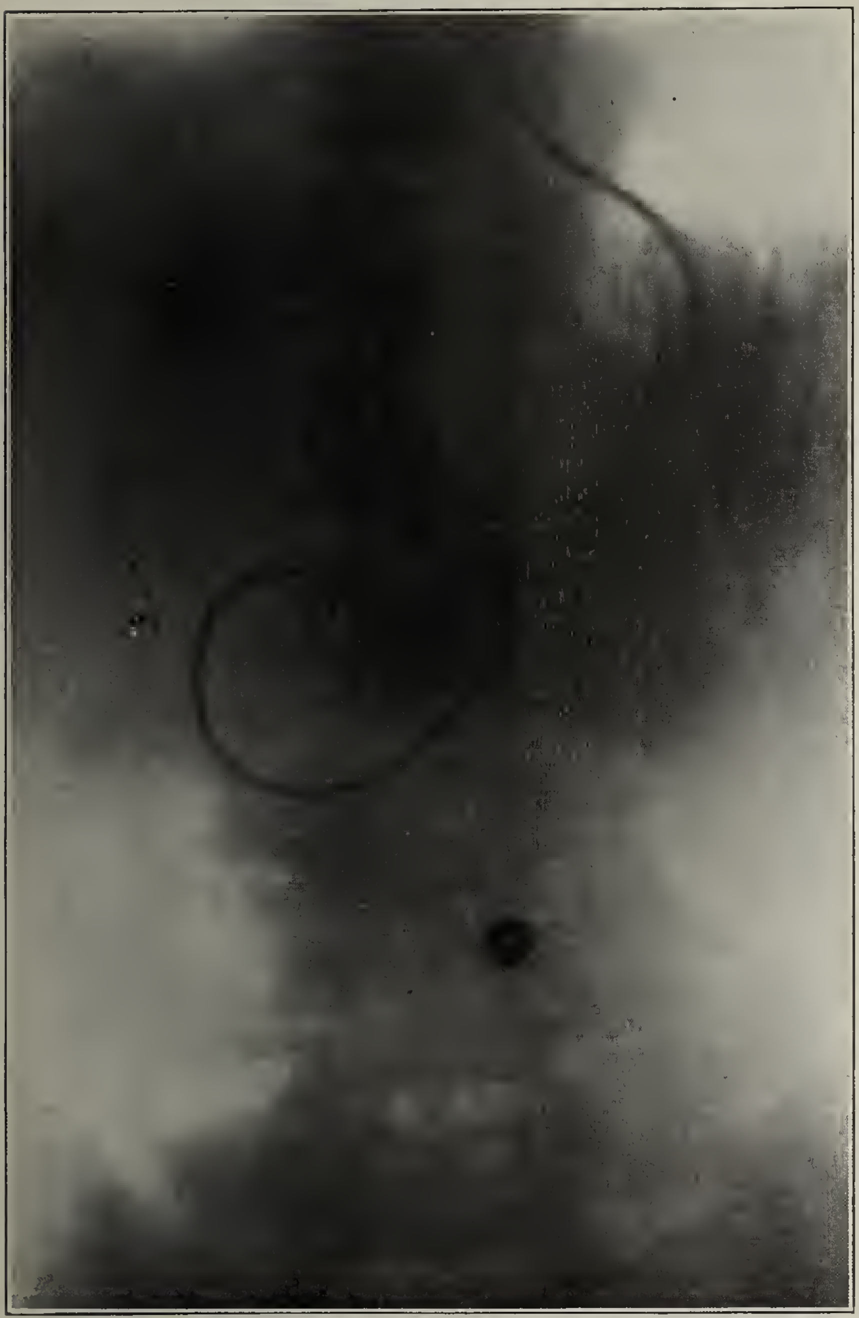

Fig. 5.—Skiagraph showing tube in the duodenum; bismuth used, showing outline of stomach. Tube accentuated by retouching.

On withdrawing the tube, a resistance may be felt at the pyloric ring (in the case of my achylic patient I did not find one) which can be overcome without difficulty. A constriction at the esophagus will be overcome by a few movements of deglutition.

The causes which may make it difficult or impossible to introduce the tube are very various, and sometimes cannot be ascertained. Practice and patience, however, will do much to ensure a favorable result in time. Whenever there is a delay or impediment in the insertion of the tube, the first thought should be of the "repulsion mechanism" of the pylorus, the "door-guard", the function of the pars pylorica being to throw back the chyme against the gastric wall and by mechanically breaking it up, render it more assimilable to the gastric juice, and thus representing a kind of sorting apparatus. Hand in hand with this process goes the closing and subsequent opening of the pylorus, and to this repulsion mechanism our little ball is also subjected—a fact which explains the occasional difficulty of inserting it rapidly.

In consideration of these facts it appears necessary (1) to introduce the tube at the climax of digestion, or half an hour after the test meal, at a time when the opening of the pylorus takes place oftener and more extensively; (2) to keep the tube "short" at a length of about 60 cm., until the ball has been definitely located at the pyloric ring. As to this point I refer to Paragraph 4 of the "Technic of Insertion". Besides, there may be stenoses and tumors of the pylorus which make it impassable, or there may be long-continued spasms of the pylorus after hypersecretions, a condition which may be relieved by alkalies or previous lavage of the stomach. In one of my patients the ball could not even get through the cardia and an operation disclosed carcinoma of the head of the pancreas, of the lesser curvature, probably also involving the cardia. In another patient I found it impossible, after repeated attempts, to introduce the tube into the duodenum, and operation divulged carcinoma of the pylorus.

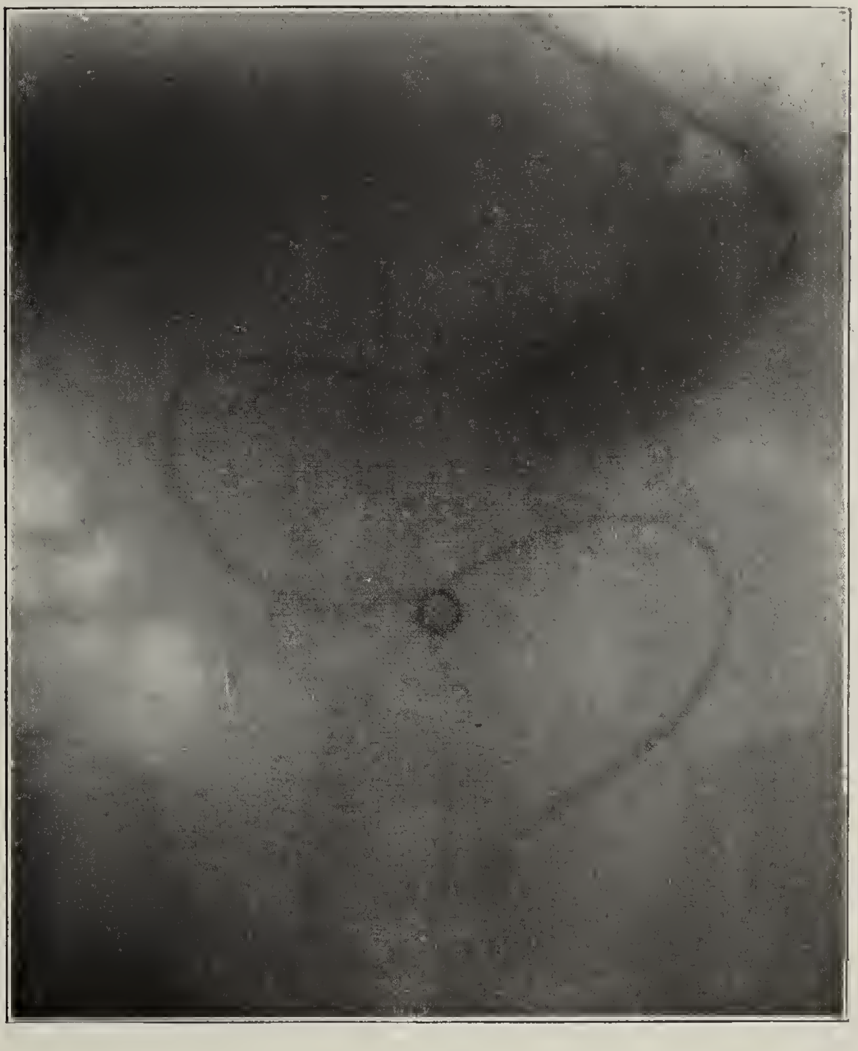

Fig. 6.—Skiagraph showing duodenal tube within the intestine low down. Tube accentuated by retouching.

*Reaction of Fluids Obtained.*—Sometimes the fluids lose only slowly, or not at all, their acid reaction, although otherwise the aspirated fluid proves both microscopically and chemically that it originates from the duodenum. The causes may vary considerably. In hypersecretions, for instance, it might be assumed that the neutralization takes place only lower down in the intestine. In these cases the possibility suggests itself that the pyloric ring has never been passed and that the aspirated fluid had been regurgitated from the duodenum into the stomach. This, however, can be decided by repeating the aspiration, doing one while the ball is supposedly in the duodenum and one after withdrawal of the tube to 50 cm. This should be done after a cup of black coffee has been ingested, on which the difference in color of the two fluids taken successively will dispel any doubt. In the case of my achylic patient no difference in reaction could be obtained, and since there was also regurgitation, I administered a weak solution of tartaric acid and was then able to demonstrate beautifully the reverse process of an alkaline reaction turning into acid.

Without indulging in enthusiasm it may be said to-day that the duodenal tube has come to stay. It will require further patient work to perfect the method and when this has been satisfactorily accomplished, we shall be able to derive the full benefit from it.

315 Second Avenue.

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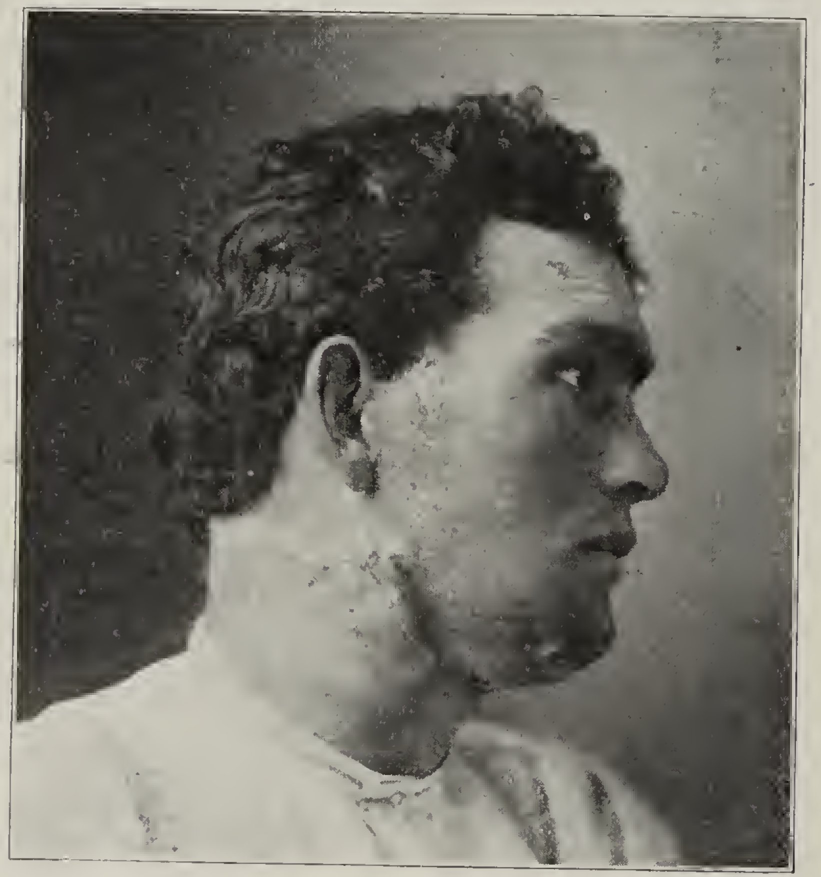
# ACTINOMYCOSIS OF SKIN

E. GARD EDWARDS, M.D.

LA JUNTA, COLO.

This case is reported on account of the rarity of the disease and the especial rarity of primary infections of the skin from the ray fungus.



Lesions in actinomycosis of the skin.

*History.*—The patient was a cowboy, aged 26. The lesion had started as a hard nodule near the angle of the jaw, which rapidly increased in size to that of a filbert and which at the same time showed in the skin covering it the peculiar dark red color of actinomycosis. Several other nodules formed and all, at the time the patient consulted me, were in a stage of softening and discharging a purulent matter. The disease had been in progress some weeks and had been variously diagnosed and treated but without success as to a cure or even amelioration.

*Diagnosis.*—The patient denied syphilitic taint, nor did he show it. Tuberculous conditions were eliminated. One of the nodules was incised and a microscopic examination made of the discharge. The ray fungus was found without difficulty.

*Treatment.*—Under chloroform anesthesia, every accessible nodule and sinus was opened, curetted and wiped with pure phenol, followed, after the characteristic whitening of the tissues, with 95 per cent. alcohol. The dressings were ordered kept moist with 50 per cent. alcohol, and every other day, so long as the incised parts were open, full strength iodin was applied. No internal medication was given.

*Result.*—The tissues healed readily inside of three weeks. No return of the disease had occurred the last time the patient was seen, two years later.

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# A CASE OF FILARIAL HEMATOCHYLURIA

## TREATED AFTER THE METHOD OF WHERRY AND MCDILL WITH APPARENT RECOVERY *

CREIGHTON WELLMAN, B.A., M.D.

AND

EDWARD von ADELUNG, B.S., M.D.

OAKLAND, CAL.

Numerous remedies have been tried in the treatment of filarial hematochyluria, and there is considerable literature on the subject. Lawrie,[1] in 1891, seemed to get good results from the administration of thymol, and Flint,[2] in 1895, thought he had a cure in methylene blue, but subsequent writers have failed to confirm their results. In 1905 Wherry and McDill[3] reported a case treated by thorough cinchonization and subsequent exposure to the $x$-rays.[4] We quote from their report as follows:

> She (the patient) was given 80 to 90 grains of quinin sulphate during forty-eight hours, followed by $x$-ray exposures of five minutes, with the tube 18 inches away. Quinin having been administered daily, these exposures (over the lumbar region) were performed at 2 to 3 p. m. on September 8, 10, 11. 12, 14, 16, 17, 18, and again after cinchonizing as before at 9 p. m. on September 29 and 30. On October 2 the skin over the chest and abdomen became reddened and hot. A chill and left pleurisy developed. Paracentesis produced about 600 c.c. straw-colored fluid on October 8. Skin scarlet all over body. All this time the urine remained thick and bloody, but on October 10 became normal and has remained so. The temperature throughout, except during the attack of pleurisy, remained about normal, 97 to 99.4 in the morning and 98 to 99.4 in the evening. Until the pleuritic attack the patient had gained 25 per cent. in weight and general appearance, and although an evening temperature of 1 to 3 F. persisted until October 22, she regained her strength so rapidly that on October 29 and 30 the $x$-ray was again applied for fifteen minutes, after quinin, with the bulb five inches away. Although the patient has been at home and walking about for the last two months her chyluria has not returned. The living embryos still persist in her blood.

About four years later the authors report again as follows on the case:

> The hematochyluria cleared up on Oct. 10, 1904. Two months later filarial embryos were still present in the peripheral blood, but repeated examinations since, made about once a year, have failed to reveal the embryos. The last examination was made one year ago, 1908. The patient is now in Nagasaki and said to be in good health.

The writers of the present paper wish to record a similar case treated with quinin and $x$-rays, resulting in apparent recovery. While it is too soon to say more than we have indicated in the title to this report, yet the recovery is up to the present date (Jan. 24, 1910) complete and so far may be regarded as a confirmation of Wherry and McDill's observation. The history of our case is as follows:[5]

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* Published under the imprimatur of the American Society of Tropical Medicine.

* From the Laboratory of Tropical Medicine, Oakland College of Medicine, Oakland, Cal.

1. Lawrence: Lancet, London, Feb. 14, 1891, p. 364.
2. Flint: New York Med. Jour., June 15, 1895, p. 737.
3. Wherry and McDill: Jour. Infect. Dis., June 24, 1905, p. 412.
4. In a footnote the authors add: "Unfortunately we are unable to state the exact hardness of the $x$-ray bulbs. In order to obtain a clear radiograph of the bones of the pelvis with this apparatus (the one used) an exposure of fifteen minutes with the bulb at a distance of five inches from the skin is necessary. Filarial embryos in a thin layer of blood, collected after cinchonizing, exposed to the rays for five minutes with the bulb 16 inches away are not killed but they squirm about in a very excited manner.".

*Patient.*—H. U., aged 26, single, Japanese, came to San Francisco six years ago from Japan, stopping at Hawaii three months on the way. He has been a resident of Oakland for three years; went to Alaska four years ago and on his return to California had hematochyluria for two months in August and September. In 1908 he had another attack which began in August and lasted up to the date when first seen by us (Dec. 14, 1909). He was not very strong but had no pain to speak of except a slight pain below right scapula on rising.

*Examination.*—The patient was a fairly well-nourished Japanese with no symptoms except the character of the urine and weakness. Pulse 100, temperature 98. An examination of his blood at midnight showed considerable numbers of a sheathed filarial embryo. The urine was almost as turbid as milk and had a decided bloody tinge. It was examined on December 12, with the following results: Specific gravity 1,028, reaction slightly acid, albumin about 0.3, no sugar, no fat. A differential leucocyte count on the same date revealed the following findings:

| | |
|---|---|
| Polymorphonuclear neutrophiles | 46 per cent |
| Lymphocytes | 29 per cent |
| Large hyaline mononuclears | 14 per cent |
| Eosinophils | 11 per cent |

Transitionals counted with polymorphonuclears.

*Treatment.*—The patient was put on the treatment suggested by Wherry and McDill. We give the details of the treatment, as these are important in a purely empirical question like the present in which we have no idea of the principles involved.

The quinin was given as follows: December 27, 6 a. m., one capsule,[6] 10:30 a. m. two capsules.

December 28, 2 a. m., 2 capsules; 6 a. m., 2 capsules; 9:30 a. m., 2 capsules; 1 p. m., 2 capsules; 4:30 p. m., 2 capsules; 8 p. m., 2 capsules.

December 29, 1:15 a. m., 2 capsules; 7 a. m., 2 capsules, 10:25 a. m., 2 capsules; 1:30 p. m., 2 capsules; 4:45 p. m., 2 capsules; 8 p. m., 2 capsules; 11:20 p. m., 2 capsules.

December 30, 2:30 a. m., 2 capsules; 5:45 a. m., 2 capsules; 9 a. m.. 2 capsules; 12:30 p. m., 2 capsules; 3:35 p. m., 2 capsules; 7 p. m., 2 capsules; 10:15 p. m., 2 capsules.

December 31, 1:45 a. m., 2 capsules; 5:15 a. m., 2 capsules; 9 a. m., 2 capsules; 1 p. m., 2 capsules; 6 p. m., 2 capsules; 11 p. m., 2 capsules.

Jan. 1, 1910, 4 a. m., 2 capsules; 8 a. m., 2 capsules; 12 p. m.. 2 capsules; 5 p. m., 2 capsules; 9 p. m., 2 capsules.

January 2, 1:30 a. m., 2 capsules; 5:30 a. m., 2 capsules; 9:30 a. m., 2 capsules; 1 p. m., 2 capsules; 6:30 p. m., 2 capsules; 10 p. m., 2 capsules.

January 3, 1:30 a. m., 2 capsules; 11 a. m., 2 capsules; 2:30 p. m., 2 capsules.

January 4, 9 a. m., 2 capsules; 12:45, 2 capsules; 4:30 p. m., 2 capsules; 8 p. m., 2 capsules; 11 p. m., 2 capsules.

January 5, 7 a. m., 2 capsules; 10:30 a. m., 2 capsules; 2 p. m., 2 capsules; 5:30 p. m., 2 capsules; 9 p. m., 2 capsules.

January 6, 1 a. m., 2 capsules; 6 a. m., 11:30 a. m., 2 capsules; 3:30 p. m., 2 capsules; 7 p. m., 2 capsules.

January 7, 2 capsules; 7 a. m., 2 capsules; 11 a. m., 2 capsules.

From this on to Jan. 12, 1910, the patient took three capsules per day.

The patient complained considerably of the symptoms of cinchonism at first and was with some difficulty persuaded to continue the quinin.

The *x*-ray exposures were given as follows:[7] December 14, one and a quarter minute exposure.

December 22, one minute exposure.

December 31, one minute.

January 7, forty-five seconds.

January 12, thirty seconds.

The report of the patient was as follows: December 28, 29, 30, he suffered considerably from the quinin and was very weak.

December 31, patient felt weak but improved.

January 3, he felt stronger.

January 7, he felt stronger than he had felt for a long time; was losing in weight; weighed 126 pounds, the last time he had been weighed previously; now weighed 115½ pounds, in the same clothing.

January 11, he felt better; had gained slightly in weight.

January 12, he felt and looked much better.

The report on the urine now follows: December 8, reddish milky, reaction acid; albumin present by heat and acid tests, no sugar.

December 12, as above.

December 22, urine the same. On standing several days it appeared as shown in Figure 1.

December 27, urine was much clearer; no white upper layer, lower layer much less, a markedly improved urine. Red and white corpuscles present, also epithelium, no casts.

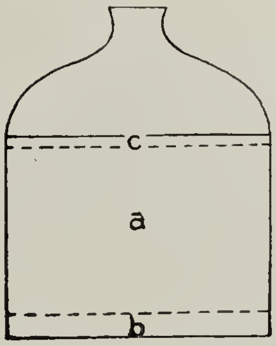

Fig. 1.—Gross appearance of solids in urine after standing (before treatment); a, amber color; b, blood, etc.; c, "cream."

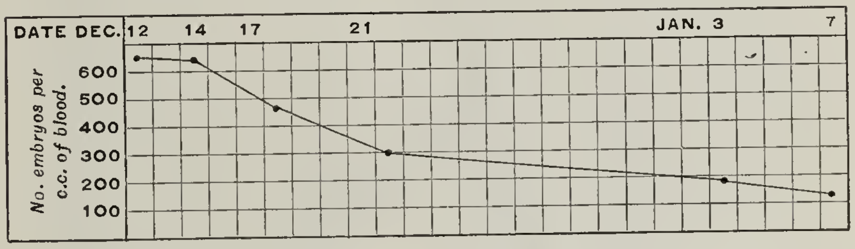

Fig. 2.—Chart showing the comparative numbers of microfilariæ in the peripheral blood at different times during the treatment.

December 31, urine was clear amber; no albumin by heat or acid test. It had been clear nearly four days.

January 3, urine was perfectly clear, pale amber, had been clear for a week. It had never been clear before since the patient's illness began in 1908.

January 7, urine was still clear; color pale amber; no albumin by heat or acid test.

January 12, urine had slight trace of albumin, reaction acid (Fig. 2).

January 14, urine was perfectly clear; no albumin.

The blood findings were also of interest. The number of microfilariæ in the peripheral circulation was not large even when the patient was first seen. The chart (Fig. 2) shows the comparative number of embryos found in equal sized drops of blood on the dates mentioned. The blood was always taken at night as with one exception (when a single embryo was found after a long search) the filariæ were absent from the blood taken in the day time.

The differential leucocyte count of Dec. 12, 1909, has already been given. On Jan. 7, 1910, the blood gave the following count:

| | |
|---|---|
| Polymorphonuclear neutrophils | 40 per cent |
| Lymphocytes | 39 per cent |
| Large hyaline mononuclears | 13 per cent |
| Eosinophils | 8 per cent |

Transitionals counted with polymorphonuclears.

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[5] Wherry and McDill: Jour. Trop. Med. and Hyg., Aug. 16, 1909, p. 241.

[6] Each capsule contained five grains of quinin sulphate.

[7] Twelve-inch coil; direct current; Wehnelt interrupter; 6¾-inch bulbs (Friedlander and Gundlach); distance from target *to table-top*, 15 inches; 3-inch vacuum which sometimes ran up to 6 or 7 inches during treatment.

On January 12 the embryos still persisted in the blood (taken at 2:30 a. m.) but in very small numbers, only one being found in 2 slides. No attempt was made to estimate their number per cubic centimeter. It should be said that the embryos were never found in the centrifugalized urine.

At the present writing (Jan. 24, 1910) the patient is very happy and encouraged and looks like a different man.[8]

In conclusion some of the interesting points connected with this case are as follows:

1. The apparent confirmation of the value of this method of treating filarial hematochyluria.

2. The absence of embryos from the urine even when the case was first seen.

3. The rapid decrease but persistence of a certain number of the microfilariæ in the peripheral night blood during the treatment.

Only time can settle the question as to the permanence of the cure, and we hope that other observers will test our results. We have tried in vain to find another case before publishing these notes, but, failing this, have thought that the suggestions arising from our experience warranted our laying the account of the experiment before other workers.

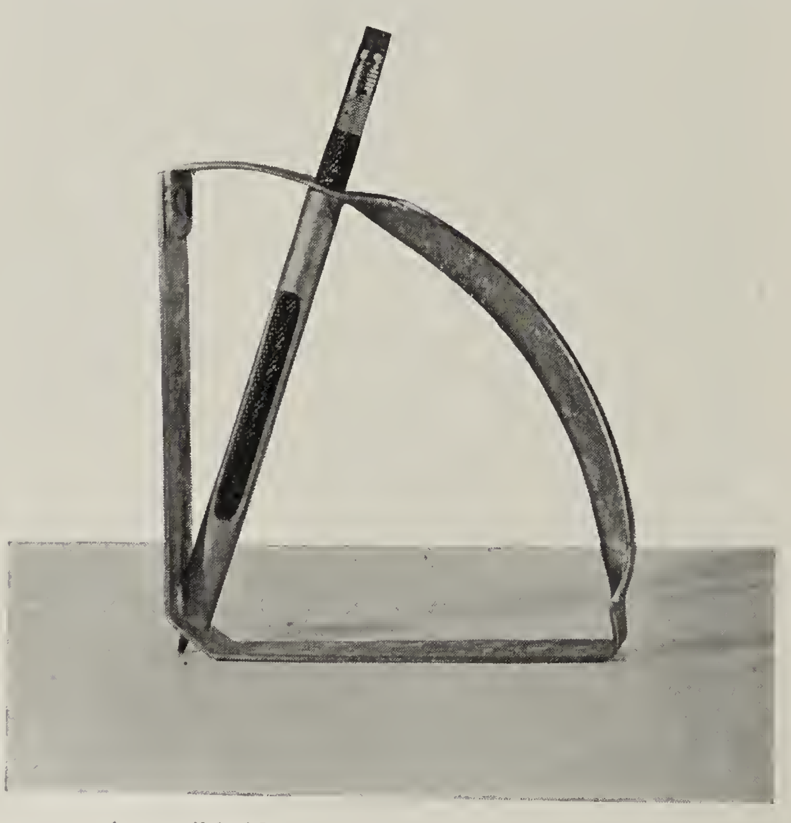
1068 Broadway.

# A PENCIL-HOLDER FOR TRACING OUTLINES OF LIMBS

JOHN RIDLON, M.D.

CHICAGO

It is often desirable to take the tracing of the outline of a patient's limbs for purposes of record, or for the use of the brace-maker. To carry the pencil in the hand in an absolutely vertical position, or with a uniform inclination, is impossible; the result of the attempt is an inaccurate and unsatisfactory outline. The device shown in the illustration makes it possible to obtain an accurate tracing, as the pencil-point is always in the vertical plane of the contour of the limb.



A pencil-holder for tracing outlines of limbs.

72 Madison Street.

# AN ANOMALY IN SENSIBILITY DURING AN ACUTE SEROUS MENINGITIS

TOM A. WILLIAMS, M.B., C.M. (EDIN.)

WASHINGTON, D. C.

*History.*—The patient, a farmer, aged 61, was thrown from a trap when intoxicated, and during the next ten days gradually became delirious and quadriplegic, with rectal and vesical incontinence. He had been a hard drinker, and for two years had suffered from numb feelings and coldness of hands and feet without pain or loss of power.

*Examination.*—Ten days after the accident, when the patient was admitted to the Emergency Hospital, there was complete paralysis below the second thoracic segment and also of the right triceps innervation. Other arm movements were conserved although much impaired, especially distally. Facial and neck movements were strong. All reflexes were then absent with the exception of a slight dorsiflexion of the left great toe. In his delirious state the sensibility could be examined only incompletely, but it was clear that the right side was quite insensitive to pain and temperature as high as the second intercostal space, although no abnormality was then detected on the left side. Bedsores began to appear.

*Disturbed Sensibility.*—Five days later, after the deep reflexes had returned and the great toe had ceased to extend, there was detected the curious anomaly of dissociated sensation which I desire to record. On the left side as high as the second thoracic vertebra a sensation of coolness was immediately reported when the man was touched with an object at a temperature of 60 F., but when he was touched with a tube containing ice no sensation of cold was felt, the patient immediately calling out with pain, crying "it sticks." He could appreciate the painfulness as well as the temperature of a tube of boiling water, but felt no pain, although he distinguished the warmth, of a tube a little over blood-heat. There was marked hyperesthesia to pin prick and to deep pressure over this area. Light touches could be felt on both sides, although less easily on the right, especially distally. The sense of attitude was completely lost in both lower limbs, and appeared to be impaired in the upper limbs. Without going into further detail, although the case presents other points of interest which are reserved for a future communication with Dr. Carr, I wish to report that the failure to appreciate cold as such still persists on the left side, one month later, but the patient now declares that it burns. The hyperesthesia is less intense and the sensibility has now returned on both sides as low as the sixth thoracic vertebra. As to the etiology, I had believed the lesion a hematomyelia, but no blood was found in the cerebrospinal fluid, though it was reported that lymphocytes were abundant. The Noguchi reaction was negative.

*Operation.*—Dr. W. W. Carr, hearing of the cases of Murray of Boston and Victor Horsley of London, believed that a serous meningitis might be present, and resolved to operate eight days after the man's admission to the hospital. He selected the fifth cervical vertebra as the site of operation on account of a slight asymmetry there, although the *x*-ray revealed nothing. No abnormality of cord or meninges was found, but about 6 ounces of serous fluid welled out when the bulging dura was incised.

The disordered sensibility was of a syringomyelic type as regards the right-sided loss to impressions of pain and change of temperature. But on the left side the pain and temperature impulses passed with increased facility and the patient's sensibility was only below the normal as to perception of extreme cold.

So far as this goes it conforms to what Head has described as a loss of protopathic sensibility; but in its completeness this comprises also loss of perception of high temperature and superficial pain as well. Moreover, its impairment is always due to peripheral nerve lesion, and never to interruption of afferent impulses within the central nervous system, where they are grouped into tracts, respectively, conveying (1) all forms of touch, (2) sense of attitudes, (a) conscious and (b) unconscious, (3) all forms of pain, (4) in close proximity to the last and contiguous or intermingled, all perception of change of temperature.

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[8] An embryo was found after some search in his blood on the night of Jan. 24, 1910, so the microfilariæ still persist in reduced numbers. The urine is still perfectly normal. We hope to report on the case again at some future time.

This patient's anomaly does not conform to either the peripheral or spinal type; hence it is worthy of record, in order that other observations may furnish comparative data for the solution of what is at present a problem.

1758 K Street.

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# A RELIABLE TENDON SUTURE

EDWARD RISCHAR, M.D.
Assistant in the Laboratory of Operative Surgery and Surgical Anatomy of the Chicago Policlinic
CHICAGO

A reliable tendon coaptation by suture is assured by the following technic:

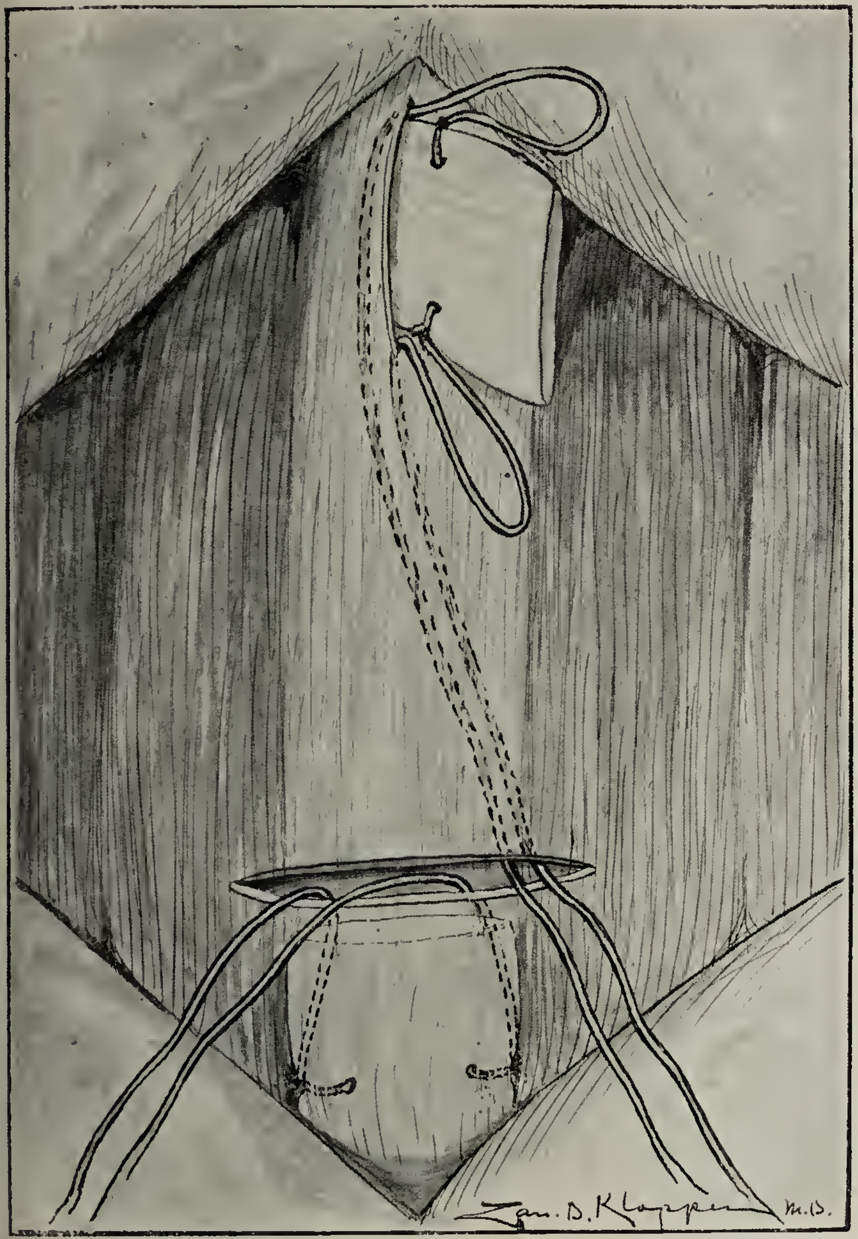

Fig. 1.—Showing side sutures inserted, to be used as tractors.

From within the tendon sheath bring a severed end of the tendon into the wound, with the least possible injury to the tendon. This is done by grasping its side with a small toothed forceps by which it is held until one of the side sutures is applied, which will then be used as a tractor until the opposite side suture is placed. These side sutures are placed about one-quarter of an inch from the stump, and grasp enough tissue to assure a secure hold for the intertendon sutures. They are firmly tied and left long, as shown in Figure 1.

Should one of the ends be so retracted as to be out of reach, which is often the case with the proximal end, place a probe in the sheath up to the tendon's stump Cut the skin over the sheath to where the stump is found; then make an opening into it, bring out the stump, and apply the side sutures as shown in Figure 1.

Having the side sutures in both stumps, use their long ends to pull and hold the stumps in position until the intertendon sutures are placed. These intertendon sutures are placed behind the side sutures, and their knots to one end as shown in Figure 2.

The sheath is closed with fine catgut. The limb is put up in a relaxed position with perfect rest, which means wood, or, better, plaster splinting, for two weeks or longer, followed by gradually increased motion. It should be remembered that the result in tendon surgery is best without drainage; therefore, the field must be well prepared.

The advantages of the suture are:

1. It holds the tendon with absolute security and in position.

2. The major part of the tendon is unsutured, permitting early union.

3. The knots are placed where they cannot interfere with a good closure nor invite infection.

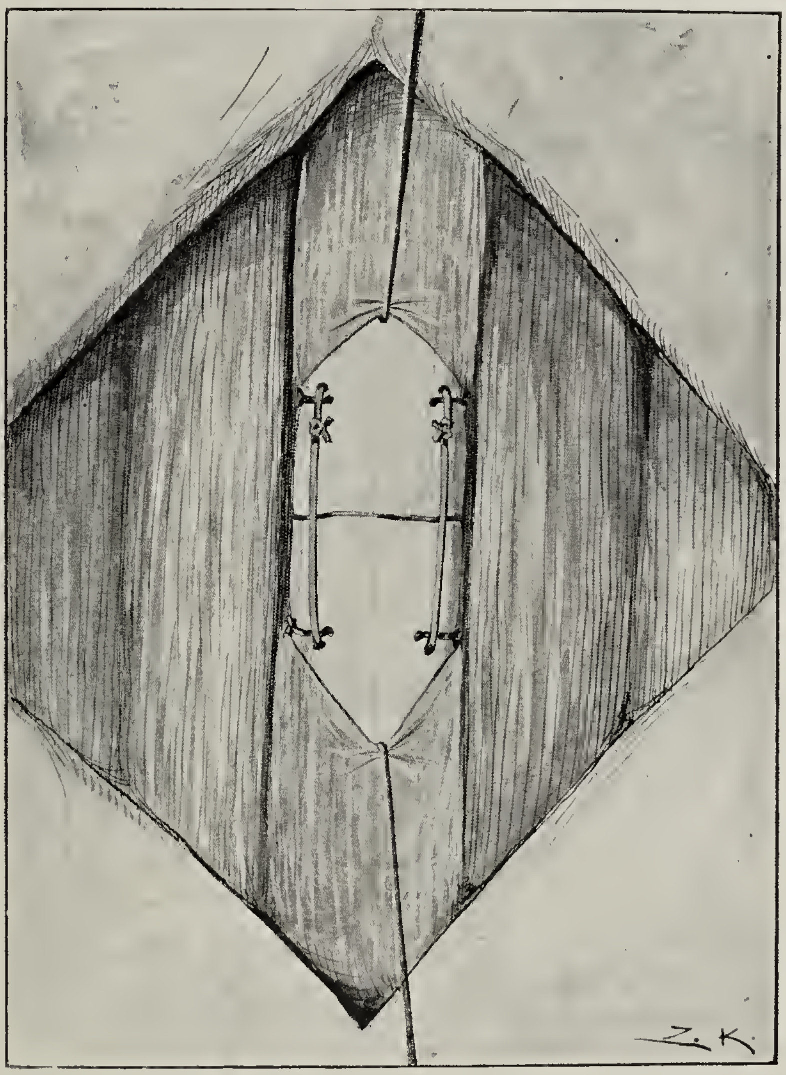

Fig. 2.—Showing intertendon sutures inserted behind side sutures and tied with knots distant from severed ends of tendon.

4. The method is precise, and for that reason can be carried out very quickly.

1316 Sedgwick Street.

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**Success of Mission Hospitals in India.**—Dr. Frank Van Allen. an American missionary in Madura, India, writes that Hindus have contributed over $5,000 to the Albert Victor Hospital in that city, although it is a distinctively Christian institution. A few years ago such an occurrence would not have been dreamed of by missionary or Hindu, and it is a notable tribute to the character of the work done, which appeals to all regardless of religious preference.

# A NEW SPIRAL TONSIL TENACULUM

WILLIAM WESLEY CARTER, A.M., M.D.
NEW YORK

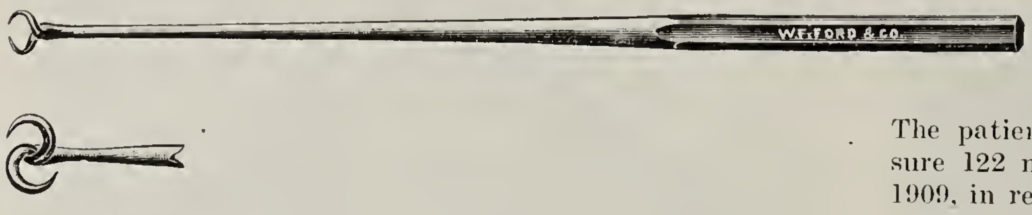
Heretofore there has been no instrument on the market that will securely hold a soft, friable tonsil while it is being liberated from its pillars and while the snare or tonsillotome is being adjusted and used. The instrument here illustrated consists of two spirally curved prongs, flattened on the upper surface, each making the half turn of a screw; these are mounted on a long slender shaft having an octagonal handle.

Some of the chief points in favor of the instrument are the following:

1. It is simple, occupies little space, can be instantly engaged or disengaged by a half turn in either direction, and admits of either the snare or tonsillotome being used with the greatest facility after the tenaculum has been placed in position.

2. The traction area of the instrument, which may be described as that portion of tissue that lies vertically above the engaging parts of the instrument after it is placed in position, is the greatest possible within the small space occupied by the instrument, and since it engages the more resistant portion of the tonsil, the grip that it maintains is very strong.

3. The twisting action of the instrument tends to center the tonsillar tissue, thus pulling it away from the pillars and assisting in liberating it from the latter.



A new spiral tonsil tenaculum.

4. The points of the instrument are imbedded, and therefore sponging of the throat can be done without the disagreeable experience of getting the gauze caught on the instrument.

5. The instrument finds its greatest usefulness in removing soft, mushy tonsils and in submerged cases.

69 West Fiftieth Street.

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# PAROXYSMAL HEMOGLOBINURIA

## A CASE PRESENTING CERTAIN INTERESTING CLINICAL FEATURES, WITH APPARENT CURE BY THE ADMINISTRATION OF CALCIUM LACTATE

HARRY W. GOODALL, M.D.
BOSTON

*History.*—The patient, a woman of French extraction, aged 30, had lived in New England for the past ten years. She had been always well and strong up to the time of the present illness. There was no history of syphilis or malaria. In the fall of 1905 after exposure to cold she was seized with a severe chill which lasted one hour. Similar chills occurred two or three times a week during the remainder of the winter, always after exposure to the cold. The following summer she was perfectly well. With the onset of cold weather in the fall of 1906 the chills recurred and were more frequent and more severe. During the summer of 1907 she had no chills but did not feel well, and complained of weakness and of being tired all the time. In the fall of 1907 the chills again returned. Exposure to the cold air was always followed by a chill. During this entire period the patient had paid no particular attention to the urine but at no time had she noticed anything abnormal.

*Examination.*—She was first seen Dec. 3, 1907, immediately after a chill. Examination of the urine voided soon afterward showed the well known characteristics of hemoglobinuria. Aside from a general brownish pigmentation of the skin, most pronounced about the neck and inner surface of the extremities, the physical examination was negative. This pigmentation had been first noticed one and a half years previously. Blood examination showed hemoglobin 70 per cent., whites 6,000, reds 3,600,000. A stained specimen showed moderate achromia, otherwise was negative. Systolic blood-pressure was 110 mm. Hg, diastolic 60 mm. Hg. The patient's weight was 120 pounds. She was under hospital observation from December 8 to December 20 inclusive. Typical chills were induced December 8, 9, 11, 12, 13 and 16 by allowing the patient to walk for half an hour in the cold air. Hemolysis was demonstrated after each chill, the blood serum giving the absorption bands of oxyhemoglobin. Hemoglobinuria, however, occurred only on the 11th and 16th. On the 11th four ounces of urine were voided one-half hour after the chill, which gave the absorption bands of oxyhemoglobin. Each subsequent specimen voided during the day was examined but hemoglobin could not be demonstrated. On the 16th three ounces of urine voided a half hour after the chill gave the absorption bands of oxyhemoglobin; one hour later three ounces were voided in which hemoglobin could not be demonstrated; two hours later four ounces of bright red urine were voided which gave the absorption bands of methemoglobin. Each subsequent specimen voided during the day was examined but contained no hemoglobin.

*Treatment and Course of Disease.*—The administration of four grains of calcium lactate four times a day by mouth was begun December 17. The following three mornings the patient was exposed to the cold air as previously but had no chills and the blood showed no hemolysis. On December 20 she was given Fowler's solution in increasing doses. On December 25 she had gained 5¼ pounds and felt perfectly well. On Feb. 4, 1908, she reported that she had had a severe attack of grip. From December 27 to January 1 there was no recurrence of the chills. The patient's weight was 127½ pounds; systolic blood-pressure 122 mm. Hg, hemoglobin 95 reds, 5,200,000. On May 6, 1909, in reply to a letter the patient stated that she had had no recurrence of the chills and had been perfectly well. Since this date it has been impossible to learn where the patient is.

Vincent[†] and Deaderick[‡] report favorable results from the use of calcium lactate in cases of hemoglobinuria.

213 Beacon Street.

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# SARCOMA OF THE PROSTATE [*]

C. L. GIBSON, M.D.
Surgeon St. Luke's Hospital; Consulting Genito-Urinary Surgeon to the City Hospital
NEW YORK

This disease is fortunately rare, as so far it has defied all the resources of the surgical art to relieve it. It is not quite so rare, however, as a perusal of the literature would seem to show, because the various statistical observations of accepted value have wisely refused to admit cases not backed up by a definite microscopic examination. As the great majority of these cases are unamenable to surgical treatment, and autopsies, particularly in this country, are difficult to obtain, suitable material for microscopic examination will only exceptionally be available.

When I reported my first case to this Association in 1904,[1] I could find only one extensive tabulation of authentic cases, 24 in all.[2] Powers[3] would accept only 23 cases, including his case and mine.

The latest observation by Proust[4] tabulates 34 authentic cases and 14 probable. This list is obviously incomplete and does not contain Powers' case nor mine of 1904.

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[†] Vincent: Compt. rend. Soc. de biol., Dec. 16, 1905, p. 633.

[‡] Deaderick: Jour. Trop. Med. and Hyg., 1907, x, 393.

[*] Read before the American Association of Genito-Urinary Surgeons, May 31, 1909.

[1] Paper was not published.

[2] Socin: Deutsch. Chir., 1902.

[3] Tr. Am. Surg. Assn., 1907.

[4] Ann. d. mal. d. Org. génito-urin., May 15, 1907.

It is not necessary to demonstrate by more extensive references to the literature that the disease is uncommon. We should be on the alert to discover its existence at an early stage, using, if necessary, extraordinary expedients, such as exploratory incision, in order to remove the disease radically at a period when it is confined to the prostate. As most of the cases occur in young individuals, any unusual size of the prostate or otherwise unexplainable obstructive symptoms should bring the possibility of this tumor to our minds.

CASE 1.—*History.*—My first case was that of a man, aged 35, referred to me by Dr. P. R. Bolton, who had operated on him at the New York Hospital in 1904, removing from the prostate an intravesical projection which had greatly interfered with evacuation of the bladder. The portion removed was reported by the pathological laboratory to be a small round-cell sarcoma of the prostate.

*Examination.*—The tumor of the prostate grew rapidly and the patient came under my care at St. Luke's four months after the previous operation. Rectal examination showed a diffuse, even, firm mass the size of a small fist occupying the prostatic region.

*Operation.*—The prostate was removed *en masse* with the neck of the bladder by a combined suprapubic and perineal operation, but the patient succumbed to increasing exhaustion. No autopsy.

CASE 2.—*History.*—G. G., aged 36, married, Italian laborer, was admitted to St. Luke's Hospital, Nov. 10, 1907, referred by Dr. M. J. Echeverria. There is no history of venereal disease.

*Present Illness.*—About two months before admission the patient began to notice pain in the lower abdomen, somewhat more marked on the right side, pretty constant, with occasional exacerbations. Urination was frequent, particularly at night. The patient had trouble in starting stream, and had to strain to empty bladder. There was also some scalding sensation. The urine was often cloudy, but blood was absent; there was no urethral discharge. The patient was constipated. There was loss of weight and strength.

*Examination.*—There was abdominal distention below the umbilicus. A mass could be felt extending from the umbilicus well down into the pelvis, which was hard and not freely movable. There was a retained left testicle. Rectal examination showed the axis of the rectum deflected to the right. An irregular mass, the size of the fist, hard and immovable, replaced the prostate. A soft catheter passed easily, withdrawing an ounce of residual urine. There was slight elevation of temperature and pulse. Blood examination showed 9,900 whites; polynuclears 80 per cent. Urine examination varied, but usually showed blood and albumin.

*Operation.*—November 15 exploratory operation was made to determine whether radical removal might be feasible; but it was found that the mass involved the other pelvic contents to a degree that made removal impossible. A fragment was removed for microscopic examination. Suprapubic drainage was instituted for prophylaxis of developing obstruction.

*Postoperative History.*—The growth of the tumor was very rapid; but the patient was now free from pain. Coley's fluid was used without appreciable results. The patient died of general exhaustion; the tumor mass then nearly filled the abdomen.

*Pathologic Report.*—By Dr. F. C. Wood. Macroscopic examination: Specimen consists of several small pieces of tissue removed from tumor of the prostate. Microscopic examination: Sections show a small round-cell sarcoma which is moderately vascular. The cells are regular in outline, not closely packed together, but separated by considerable intercellular stroma. Mitoses are frequent.

### NUMBER OF AUTHENTIC CASES

Analyzing the cases tabulated by Powers and Proust, eliminating those in the latter's table which are not accepted by Powers, we have 32, namely:

| | | | |
|---|---|---|---|
| Rose | 2 | West | 1 |
| Socin | 3 | Stein | 1 |
| Tordens | 1 | Hughes (Wharton) | 1 |
| Kaufmann | 4 | Burckhardt | 1 |
| Birch-Hirschfeld | 1 | Verhoogen | 1 |
| Schaleck-Bayer | 1 | Marsh | 1 |
| Ley | 2 | Mathias | 1 |
| Spanton | 1 | Botesen | 1 |
| Hind | 1 | Gibson (first case) | 1 |
| Van der Hoeven | 1 | Stern | 1 |
| Grattzer | 1 | Powers | 1 |
| Barth | 1 | | |
| Oleva | 1 | | 32 |
| Guyon (Proust) | 1 | | |

To these must be added Cabot's second case[5] (J. K., aged 75, operated April 21, 1904; tumor examined by Dr. F. W. Whitney and found to be a small spindle-cell sarcoma) and Gibson's second case.

Bobbeo (Turin) reports a case with autopsy and microscopic examination.[6]

Depage[7] successfully removed a prostate weighing 650 grams from a man of 25. Microscopic examination showed small, round-cell sarcoma.

These are the absolutely authenticated cases, numbering 36.

8 East Fifty-eighth Street.

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# THE ETIOLOGY OF THE TYPHUS FEVER (TABARDILLO) OF MEXICO CITY

## A FURTHER PRELIMINARY REPORT*

H. T. RICKETTS, M.D.
AND
RUSSELL M. WILDER
CHICAGO

Some months ago[1] we reported an experiment in which the virus of typhus, as it exists in the diluted serum of the patient, failed to pass through a Berkefeld filter. The monkey which received the unfiltered serum, exhibited a severe course of fever after an incubation period of five days, whereas the animal which received the filtered serum developed no fever and remained perfectly well.

The immunity test, which has not been reported heretofore, confirmed the conclusion that the virus did not pass through the filter. This test, which was given about one month following the "filtration experiment," consisted of the intraperitoneal injection of 7 c.c. of diluted defibrinated blood drawn from a human patient on the tenth or eleventh day of his fever. No. 3, which had tolerated the filtered serum without visible disturbance, showed a course of high fever lasting eleven days, and preceded by an incubation period of seven days, as the result of the immunity test. The animal which had received the unfiltered serum died as a consequence, and of course, no immunity test could be given.

This experiment has been repeated with a similar result. No. 19, which received filtered serum, showed no signs of infection, whereas No. 18, which was given unfiltered serum, passed through the customary incubation period followed by a severe course of fever.

Anderson and Goldberger[2] obtained a similar result.

It seems, therefore, that the evidence is sufficiently strong that the virus of tabardillo does not pass through a filter of the type mentioned. This being the case, the result may be taken as offering a suggestion in regard to the probable or approximate size of the virus. It seems not unlikely, in view of its non-filterability, that the micro-organism is of such size that it should be susceptible to observation microscopically, provided its tinctorial affinities and density are favorable.

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[5] Cabot, A. T.: Papers on Genito-Urinary Surgery, Boston, David Clapp & Son, 1907.

[6] Centralbl. f. Chir., 1909.

[7] Jour. d. chir., Bruxelles, 1908, p. 372.

* From the University of Chicago (Department of Pathology) and the Memorial Institute for Infectious Diseases, Chicago.

[1] THE JOURNAL A. M. A., Feb. 5, 1910, p. 463.

[2] Anderson and Goldberger: Pub. Health Rep., Feb. 18, 1910.

Prompted by this probability, we have been engaged in a careful search of the blood of patients for the presence of micro-organisms, correlating our findings with the microbic content of the organs of the body louse, which has the power of carrying the disease. It will be apparent that the results do not prove that the organism to be described is the cause of typhus, but to our minds they have a suggestive value which is sufficient to render their preliminary presentation justifiable. They may be stated briefly as follows:

1. In the stained (Giemsa) preparation of the blood of patients, taken on from the seventh to the twelfth day of the disease, we invariably have found a short bacillus which has roughly the morphology of those which belong to the "hemorrhagic septicemia group." Usually it appears to stain solidly, but on minute examination an unstained or faintly stained bar is seen to extend across the middle. Occasionally two organisms are seen end to end. Exact measurements have not been made, but when compared with the size of the erythrocyte, their length is estimated at hardly more than two micromillimeters, and their diameter at about one-third this figure. Certain other bodies, the identity of which is not so clear, may represent degeneration or involution forms of the above. They consist of two stained granules, connected by an "intermediate substance," which is stained faintly blue or not at all. Frequently one of these granules, or "poles," is larger than the other and stained a deep purple, whereas the smaller takes a faint blue color.

2. In moist preparations of the blood of patients, bacillary bodies, with a structure like that mentioned above, have been encountered in all cases. The differentiation of the forms into two halves, separated by a line or narrow zone of a substance of different refractive power, may be observed. They possess no active motility, but vibrate more or less rapidly.

3. The dejecta and various organs of a large series of lice have been stained in a similar way and examined for the presence of micro-organisms. Certain groups had been deliberately infected by permitting the lice to feed on patients, while others were supposedly normal, having been collected from healthy individuals. Streptococci, staphylococci, an oval bacillus occurring in clusters, and certain solid staining bacilli are encountered irregularly and indifferently in the feces and intestinal contents of both "normal" and "infected" lice. Polar-staining organisms have been found occasionally in the feces, and intestinal contents of "normal" lice, whereas they are present almost constantly, and often in large numbers, in similar material from "infected" individuals.

Protozoa have not been recognized. Micro-organisms are encountered occasionally in preparation of the salivary glands, ovary, eggs, and testes of the louse. Further study is needed to determine whether they are present in these tissues as a result of faulty technic, or not.

### TECHNIC

Probably no field of microscopic research is more exposed to errors and misinterpretation than the search of the blood for micro-organisms of an unknown character. We shall not at this time consider the many sources of confusion which are inherent in the blood itself, and in methods of its preparation. Naturally we have attempted to avoid being led astray by these conditions. Accidental contaminations from outside have been guarded against carefully. Slides and cover-glasses were cleaned in sulphuric acid and potassium bichromate, washed in freshly distilled water and preserved in absolute alcohol. The latter was removed by freshly laundered linen just prior to making the preparations. Forceps previously flamed were used in manipulating the glass. The water employed in diluting the Giemsa stain was distilled, then filtered, autoclaved and preserved in small flasks, which had been cleaned and rinsed repeatedly with filtered water. Preparations of the blood were covered at once to avoid contamination from the air. The blood was taken from the ear after the latter had been scrubbed with green soap and absolute alcohol by means of sterilized cotton.

### FREQUENCY OF THE BACILLI IN THE BLOOD

The organisms described have been found to be more numerous in the blood within three or four days prior to crisis than before this period. In comparison with the frequency with which the organism of malaria and trypanosomiasis are encountered in the blood of patients the bacilli would be considered quite rare. It is rare to recognize a bacillus short of one trip across a three-fourths-inch cover-glass, and frequently it is necessary to cover this distance two or three times. This is true of both the stained and the fresh preparations. A rough, and naturally inaccurate, idea of their number may be obtained from the consideration that 0.01 c.c. of blood made from fourteen to twenty-four smears on the three-quarter-inch cover-glass, as determined in two observations. With the 2-millimeter apochromatic objective of Zeiss and with the No. 6 compensating ocular, and with the tube drawn out to 16 millimeters, it is required to traverse the preparation from 80 to 90 times in order to observe the entire surface of one cover-glass. Hence one might expect, roughly, to find from 300 to 2,000 bacilli in 0.01 c.c. of blood.

In the intestinal contents of the "infected" louse, it is occasionally necessary to search for three or four minutes before bipolar organisms are found, but in most instances organisms of this type are much more numerous in the intestine of the "infected" louse, and fifteen or twenty may be found in a single field.

It has occurred to us that the segmented bacilli observed in the blood may be identical with the bipolar forms, which are found in the intestinal contents of the louse. The differences are not greater than those which are encountered in the known organisms of this type, such as the plague bacilli and that found in association with Rocky Mountain spotted fever.

### THEORETICAL CONSIDERATIONS

Considering that typhus is an insect-borne disease, the first thought in regard to its microbic etiology would naturally involve an organism of protozoan character, on the basis of analogies which are known to all. Yet our knowledge of the rôle of the flea in the transmission of the bacillus of plague, of the tick in South Africa in carrying the spirillum of tick fever, and of the same insect in carrying the bacilli which are associated with Rocky Mountain spotted fever, should leave us without prejudice regarding the etiology of some other insect-borne disease. It seems, therefore, that our minds should be open to conviction in relation to a bacterial cause for typhus as well as protozoan.

There are, in addition, at least two features of typhus which would suggest a bacterial rather than a protozoan cause.

The first consists of the fact that typhus is an acute self-limited disease, in so far as clinical evidence can show. This condition is more in harmony with a bacterial rather than a protozoan cause, inasmuch as the protozoan diseases, in so far as their etiology has been determined, are chronic in character, provided the animal survives the initial acute attack.

A second condition which suggests bacterial etiology consists of the fact that one attack of typhus, at least in the monkey, confers immunity to further inoculations. It is true that not all bacterial diseases confer such immunity, but it is equally true that immunity is not recognized as a distinctive feature of protozoan infections.

If we may be permitted to resort to another analogy, some ground may be found for the theory that typhus is caused by an organism of the "hemorrhagic septicemia group" of bacteria. This relates to the fact that typhus actually is a hemorrhagic septicemia from the clinical and experimental standpoints, and that it has certain points which are distinctly common to plague and Rocky Mountain spotted fever, both of which may be classed as hemorrhagic septicemias. We are inclined to consider, therefore, that the three diseases mentioned constitute a group of human "hemorrhagic septicemias,"

We are aware that others have described organisms more or less similar to the one we have considered in relation to typhus, but in so far as we know they are organisms which are susceptible to cultivation by ordinary means. Gavino and his assistants in Mexico City and Anderson and Goldberger have failed to cultivate an organism of any type from typhus, and this has been our experience also. We consequently conclude that the organism we described is not susceptible to cultivation under ordinary conditions. This is corroborated by the fact that two experiments failed to yield an organism of this type from the intestinal contents of the louse.

It is the purpose of this paper to present the observations and the theoretical considerations which have been mentioned solely because of their suggestive value. It is clear in our minds that the grounds are not sufficient for claiming an etiologic rôle on the part of the organism described, yet the conditions under which they are found, together with the theoretical argument presented above, appear to demand that they be taken somewhat seriously and subjected to further study in their relationship to typhus.

We desire to express our obligations to the Department of Public Instruction of Mexico; to Director Gaviño of the Bacteriologic Institute; to the authorities of the General Hospital; and particularly to Dr. Escalona, for their numerous courtesies.

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**The Professional Anesthetist.**—To the patient the professional anesthetist is of inestimable value for he relieves the surgeon totally of the worries of the anesthetic and permits him to give all his attention to the operation. To the surgeon he gives a feeling of confidence which knows no value. Due to his experience and skill, the professional anesthetist can usually learn the anesthetic characteristics of the patient. He knows when it is advisable or necessary to administer hypodermics of strychnin, morphin, scopolamin or atropin. He knows what preliminary anesthetic it is best to administer and what general one should follow, how to avoid the dangers when it becomes necessary to change from one anesthetic to another.—E. Metzenbaum, in *Ohio State Medical Journal.*

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## LOCAL ANESTHESIA WITH QUININ AND UREA HYDROCHLORID

HENRY THIBAULT, M.D.
SCOTT, ARK.

The following report of an experience with the bimuriate of quinin and urea hydrochlorid may prove of some value to surgeons doing abdominal work, especially in cases in which general anesthesia is undesirable.

*History.*—Strangulation of an old inguinal hernia occurred, March 10, in a negress, aged 64, who had, in addition, inoperable cancer of the uterus and rectum. The circulation was poor. There were arrhythmia, edema, considerable arterial sclerosis, beginning dilatation of the heart; slight cough, some pulmonary secretion and a parenchymatous nephritis.

*Operation.*—Immediate operation was necessary and both physicians called in consultation thought that general anesthesia would almost certainly prove fatal. The operation was done under local anesthesia, induced by injecting a 0.25 per cent. solution of quinin and urea hydrochlorid. The tissues above the canal were moderately infiltrated with the solution, and there was no pain until after the canal was laid open, when the peritoneum was found to be quite sensitive. About 2 drams of the warmed solution was poured into the canal and in a few minutes there was perfect anesthesia of the parietal peritoneum and the operation was finished without the patient at any subsequent time feeling any pain, although considerable adhesions were broken up. There was no local reaction in the peritoneum, union was primary and there was no shock. The fluid poured into the canal gradually escaped into the abdomen as the adhesions were broken up. There was no pain after the operation and nothing to indicate that any peritoneal irritation had taken place.

While it is dangerous to draw conclusions from a single case, this report is at least worth attention and suggests that the solution might be poured into the abdomen and more extensive operations done without pain or injury to the patient, as the presence of the solution seems to render the handling of the abdominal viscera painless.

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# Therapeutics

## HYPERTENSION

Increased arterial tension is probably always the incipient stage of arteriosclerosis and a more or less prolonged condition before the ever-increasing cardiovascular-renal disease is actually in evidence. Deaths from one end of this tripod, viz.: cardiac, arterial, or kidney lesions, are on the increase in civilized countries, and especially in America. Increased arterial tension, at first intermittent, then more or less persistent, is a forerunner of the disease that is really one that should be only that of old age. The age of apoplexy is growing younger. Valvular disease of the heart without previous history of tangible cause, such as inflammatory rheumatism, chorea, diphtheria, or other infection, is markedly on the increase, and chronic nephritis is climbing up the scale of frequency of the causes of death, especially in cities.

The recognized causes of early hypertension, and later arteriosclerosis, are severe infections, septic processes, typhoid fever, syphilis and the necessary prolonged use of mercury, and chronic lead poisoning, which is now rare. Causes that are not generally recognized are nervous hypertension, which is due to the excessive rapidity of our lives (most especially of men, but also of women); and chronic nicotin poisoning, which is occurring more and more frequently because, although a larger percentage of any gathering of men than ever before do not smoke at all, of the men who do smoke more smoke excessively, at least excessively for their ability to withstand the drug. In other words, nicotin plus high nervous tension causes more harm than nicotin did years ago without the nervous tension. Another often not recognized cause of hypertension is gout with its probable manifold causes and manifold signs, often so intangible as to be elusive. The varying causes of gout and the causes of hypertension without gout are so closely associated as often to baffle separation.

Imperfect thyroid secretion and increased suprarenal secretion would both tend to hypertension, but the strongest element of all is the strenuosity of life in the present era. A decreasing cause of hypertension is the overuse of alcohol, while an increasing cause is athletic competition among growing boys and young men.

The symptoms of hypertension are headaches or at least fulness of the head, slight, infrequent dizziness, a tendency to flushing, or at times a slight hyperemia of the skin, especially after the part has been irritated, irritability of temper, sometimes sleeplessness, and increased frequency of urination. Perhaps these are the only symptoms unless there are some due to the cause of the condition, viz.: if the cause is nicotin, there will be the symptoms of overuse of nicotin, etc. The pulse tension will be noted too high by the finger, but is demonstrably found too high by the sphygmomanometer. This is the stage when cardiovascular-renal disease may be postponed or perhaps actually prevented.

The next stage, and this only after months and perhaps even several years of the continued hypertension, will give symptoms referable to the heart, to the arteries, or to the kidneys, or, perhaps, will give combined symptoms from all three. The most frequent noticeable secondary symptoms of the present day are increased rapidity of the heart and dyspnea on slight exertion, some enlargement of the heart, possibly a soft, systolic blow at the apex showing a weakening of the mitral valve, or a slight systolic roughness at the aortic valve showing a stiffening of this valve, as these valves suffer the most from hypertension. Cardiac pains may occur and there may be more or less frequent attacks of "acute indigestion." The rapidity of the heart does not normally lessen on first lying down; in fact, there may be a palpitation and a noticeable uncomfortable activity of the heart. The primary enlargement of the left ventricle, then some slight weakening of the muscle and perhaps an insufficiently closed mitral valve are all well understood when the physical conditions are reviewed.

Dr. Curran Pope, in the *Monthly Cyclopedia and Medical Bulletin,* January, 1910, numerically presents the physics of the circulation. Computing the amount of blood passed through the heart of an average adult man, "the heart, beating at the rate of seventy times a minute, i. e., 4,200 times an hour; 100,800 times daily; and 36,792,000 times annually, would pump on an average two and one-half ounces of blood at each contraction, 175 ounces a minute, 656¼ pounds an hour, or 7½ tons a day," which Pope believes "is equivalent to lifting one ton 122 feet high."

As 30 pounds of blood go through the normal adult heart each three minutes, if the tension of the arteries is increased even 10 mm., to say nothing of 20, 30 and 40 mm. above normal, the amount of extra work that the left ventricle is called on to do can be realized, this increased pressure increasing the resistance to the flow of arterial blood just so much. It is no wonder, then, that with increased blood pressure, whatever be the cause, the heart sooner or later pays the penalty. The disturbed circulation is for some time unnoticed because at first it is an internal disturbance, the dilatable blood vessels of the abdomen being the ones most easily congested by imperfect circulation. This soon causes congestion of the abdominal organs, impaired digestion, and the absorption and circulation of toxins that are irritant to the kidneys and arterial walls.

The principal thing in the prevention of the development of cardiovascular-renal disease after hypertension has been discovered is that the patient, or rather the individual who is not yet even a patient, be made to realize the danger of the condition and what the future means to him if the hypertension is not reduced. This is so very true because nothing that the physician can do will counteract lack of cooperation on the part of the individual. It is he who must take rest, mental and physical; it is he who must take vacations. He must stop excessive eating and drinking of any kind, even if he is not put on an absolutely limited diet. He must reduce, if not actually stop, his tobacco and alcohol if he uses either or both. He must reduce or stop much tea and coffee, and it may not be wise even for him to drink water excessively, as adding so much more work for the circulation. He should realize that he is a subject under scientific observation by his physician, even if he does not tolerate the title of patient.

There can be no dogmatic decision as to what blood pressure is proper for any class of patients. Each patient must be individualized, and the blood-pressure found the best for him should be the one at which it is aimed to keep the circulation. As well pointed out by Sir Lauder Brunton (*British Medical Journal,* July 10, 1909), some persons feel well and are able to work at a tension of 100, while others are absolutely prostrated by such low tension; some feel fine, agile and stimulated by a pressure of 160 and over, while others feel uncomfortable from such high tension. Brunton believes, as is generally recognized, that a tension of 180 mm. or over is always dangerous, while it is generally found that a tension of 100 or under causes lassitude and even debility. However, it seems very important, as just stated, that each patient should be individualized, as an attempt to reduce a high pressure to the normal for the age and sex of the individual is often followed by unpleasant consequences; and the reverse is demonstrable, that when a low blood-pressure is raised too high by vasoconstrictors and cardiac tonics uncomfortable and sometimes dangerous symptoms occur.

All this emphasizes the importance of taking the blood-pressure in every instance of circulatory disturbance and letting the findings decide the treatment, medicinal and dietetic. It is also necessary for perfect management of the patient to take the blood-pressure frequently to see what results are being obtained by the treatment, or whether unpleasant results are occurring. With arteriosclerosis and a weak heart muscle it would seem unwise to give cardiac depressants, although the blood-pressure might be high on account of the difficulty of compressing hardened arteries with the blood-pressure instrument. Repeated observations should be made of heart strength and peripheral circulation before circulatory tonics are given, on the one hand, or circulatory depressants, on the other.

The actual treatment consists in removing any cause for hypertension that can be removed, such as nicotin, alcohol, perhaps coffee and tea (especially if large amounts are taken), excessive amounts of meat or quantities that are unwise for the individual patient, nervous strain, speed, severe athletic work, sudden severe muscular exertion, such as running for a train or car, cranking an automobile or propelling a bicycle uphill. As above stated, one of the most important causes to be removed, if possible, is nervous tension.

An important cause of the condition and a cause that must be remedied is intestinal putrefaction or fermentation, as evidenced by constipation, irregular diarrheas, excessive amount of intestinal gas, and indican in the urine. Constipation should be remedied by the laxative considered best for the individual patient. Bowel antiseptics to be taken any length of time are inadvisable, even if partially successful. Various lactic acid and sour milk preparations may be of marked benefit and may be tried (THE JOURNAL, March 12 and 19, 1910). The most successful means of removing putrefaction of the intestines is by total abstinence from meat and flesh of all kinds. Whether this is advisable in a given patient cannot be determined offhand. The radical substitution of a large amount of vegetables and cereals may cause more gastric and upper intestinal indigestion than is compensated for by the prevention of some of the large intestine disturbance. Generally it will be found best to allow meat at least once a day or possibly twice a day in small amount, and the amount of fruit, vegetables and cereals that tend to keep up nutrition and not cause indigestion. The main fact seems to be that most men under high tension eat rapidly and too much, improperly masticate their food, and drink liquids rapidly, hustle immediately after a meal has been taken, and thus cause intestinal and perhaps gastric indigestion. A correction of this bad habit of eating often alone corrects intestinal disturbances.

The next important necessity and requirement for the prevention of cardiovascular-renal disease is a proper action of the skin and a good circulation in the muscles and surface of the body. Gentle exercise, whether in gymnasiums or at home, by walking or by golf, depending on the individual, will increase muscle and skin circulation and reduce blood-pressure. Warm baths frequently, Turkish baths occasionally, or, better than all hydrotherapeutic measures, body-baking occasionally, will ordinarily reduce the blood-pressure, and if the regulation of the life and habits of the individual have been changed will tend to keep the blood-pressure down for months, if not for years. Massage is not ordinarily required for these active patients whose treatment is now being considered.

It has been repeatedly pointed out in this department of therapeutics that a large amount of water drunk with the intent of removing toxins from the blood, of preventing gout, and of preventing uric acid disturbances and gall-stone deposits is not necessarily valuable and may be a serious regimen for the circulation. This is true if the heart muscle is weak; it is often very true if the kidneys are slightly deficient; and it seems inadvisable when there is hypertension of the arteries. As stated by Dr. Boardman Reed (*California State Journal of Medicine,* September, 1909) excessive amount of any simple food and any simple drink, as water, to say nothing of spring waters, may cause more harm in a patient who has hypertension than a small amount of meat and a small amount of tobacco, tea, coffee, and even alcohol.

Pope (*Monthly Cyclopedia and Medical Bulletin,* February, 1910) suggests electric-light-bath treatments, and recommends the high-frequency electric and static wave currents as all of advantage in lowering the blood-pressure and increasing peripheral circulation. He does not find that the galvanic, faradic and sinusoidal currents are of value. Boardman Reed, on the other hand, thinks gentle faradic electricity is of benefit, and both think mechanical vibrations, especially along the region of the spinal muscles, tend to cause a lowering of pressure.

There can be no question of the advantage of a warm, equitable climate over a severe cold one or one that is subject to frequent rapid changes of temperature for the patient who has hypertension. However, it will be rare that a patient in the early stages of cardiovascular-renal disease can be induced to give up the work of his life for any more than temporary sojourns in distant climate. This emphasizes the fact, however, that such patients, as often as they can take vacations, should go to a region that tends to promote the peripheral circulation.

As pointed out repeatedly for many years by Dr. O. T. Osborne of Yale, any diminution in thyroid secretion tends to raise the blood-pressure, and any increase of suprarenal secretion tends to raise the blood-pressure. Therefore the deduction of the value of small doses of thyroid in hypertension. Thyroid secretion is Nature's method of keeping the blood-pressure normally low, and in hypertension small doses of thyroid extract daily for some time will not only lower the blood-pressure, but stimulate the thyroid gland to more perfect secretion. The dose should not be more than from 0.10 to 0.20 gram (from 1½ to 3 grains) of the official preparation a day. Small doses of iodin, as offered by an iodid, tends to cause the same lowering of blood-pressure, perhaps by the action of the iodin itself and quite supposedly by the stimulant action of the iodin on the thyroid gland. Certain it is that small doses of iodid, preferably sodium iodid, and not more than 0.10 to 0.20 gram (1½ to 3 grains), twice a day, is sufficient to stimulate the thyroid and to cause, after two or three weeks, a distinct lowering of blood-pressure. A thyroid gland once made more active may remain so for months without thyroid or iodid medication, and the blood-pressure may remain low for months, provided the other conditions of life have been properly regulated.

The administration of alkalies as exemplified by sodium bicarbonate and as presented by a larger vegetable diet causes a lowering of the blood-pressure and promotes nitrogen metabolism and elimination, but alkaline drugs should certainly not be long administered. In fact, the prolonged use of any drug is inadvisable in simple hypertension. They may be necessary when arteriosclerosis and cardiac debility are present.

The actual vasodilators, i. e., the nitrites, will most certainly cause active lowering of the blood-pressure, and to accomplish this it is not necessary to give large doses. Although their action is rapid and the apparent results of such action theoretically and laboratorily are short-lived, still the administration of a nitrite three or four times in twenty-four hours tends to and does keep the blood-pressure lower. The most used nitrite for this purpose is nitroglycerin, and the most used dose is probably 1/100 of a grain. However, 1/200 and even 1/400 of a grain in many patients will keep the blood-pressure lower than without it and may cause it to be lower than is agreeable to the patient. If taken after meals or with a large drink of water to cause slow absorption it will not cause flushing of the face or headache. The nitrite of sodium in even so small a dose as 1 grain three times a day, after meals, will often have even a more satisfactory action than nitroglycerin. Sir Lauder Brunton suggests the administration of "10 grains of potassium nitrate, 10 grains of potassium bicarbonate, and from ½ to 2 grains of sodium nitrite, in powder, dissolved in a glass of some hot aperient water, as tending not only to be laxative, but to keep the blood pressure down, and this may be continued daily for years."

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[*For other information see second page following reading matter*]

SATURDAY, APRIL 23, 1910

## THE AMERICAN MEDICAL ASSOCIATION—ITS POLICIES AND ITS WORK

### VI. THE CHEMICAL LABORATORY

To those who have given the matter any thought it must seem remarkable that until the establishment of the Council on Pharmacy and Chemistry five years ago there was no disinterested, reliable body to which physicians could apply for information regarding proprietary—or for that matter regarding any—medicinal products. That a physician had no means of obtaining unbiased scientific data on the preparations he was using daily in the treatment of disease seems on its face an anomaly. Such was the case, however, and the result was that all information concerning proprietary medicines had to come from those who were commercially interested in their sale. That information from such a source would be so biased as to be well-nigh worthless for scientific purposes might have been expected; that it *was* worthless has been demonstrated.

By far the most important work of the Council has been that of determining the actual composition—as distinct from the alleged composition—of proprietary medicines. To do this work, careful and painstaking chemical analyses were essential, and for such analyses the Council had to depend either on its own members or on chemists connected with commercial laboratories. The arduous duties connected with such work, which of necessity had to be of the most careful and painstaking nature, made it impracticable to expect the chemists on the Council to do it themselves; it was also found unsatisfactory to have it done in commercial laboratories. To meet these difficulties the Council on Pharmacy and Chemistry in its annual report (1906) to the Board of Trustees of the American Medical Association made the following suggestion: "It is hardly necessary to remind you that there is much detail of a chemical nature connected with this work, and while some of the members of the Council have been devoting much time and labor in this direction it is believed that some of this detail work could be done much more satisfactorily if facilities for it were provided by you at the Association's building. Therefore, the Council begs to suggest that if it is possible to do so, a chemical laboratory be established by the Association with a competent chemist in charge. There is a great amount of work to be done, and it is work that must be continued if the medical profession in the future desires to protect itself from unscrupulous promoters."

The Board of Trustees gave the matter careful consideration, and while it fully realized that the establishment of a well-equipped laboratory would entail no small expense, it decided that the crying need for such an institution amply justified any reasonable expenditure. The Board made an appropriation, therefore, and ordered that a portion of the Association's building should be fitted up as a chemical laboratory. This was done, and a space twenty feet deep and the entire width of the building was set aside for laboratory purposes and all the apparatus necessary for analytical chemical research was installed.

The Board was fortunate in being able to secure, to take charge of the laboratory and to act as secretary to the Council, a chemist, who not only ranked high in his profession, but whose familiarity with the conditions and practices of pharmacy and of pharmaceutical manufacturing made him an invaluable asset to the Council's work. As the scope of the laboratory's work widened, one chemist was added to the staff, and, later still, another. Both of these men are expert chemists, one holding the highest degree given by a university whose department of chemistry ranks among the best in the country; the other, also a graduate of one of the leading universities of the country, has done extensive analytical work in the Bureau of Chemistry of the Department of Agriculture at Washington. Thus the Association has at its command chemical and pharmaceutical talent of the highest grade—an item of importance when it is realized how critically the work of the laboratory is examined by those interests whose shortcomings are exposed. In this connection it is worth while to call attention to the fact that, in all the work which the laboratory has done its results have practically never been successfully challenged—a record of which the medical profession may justly be proud and one, too, that is indicative of the grade of work accomplished.

Good apparatus and expert chemists, however, are by no means all of which the laboratory can boast. A most comprehensive and complete reference library containing the latest and best books on chemistry, pharmacy and the allied sciences has been collected, and every important pharmaceutical and chemical journal published in any language is also to be found there.

The average reader may not at first glance appreciate all that this means. It means that the latest and most reliable data concerning new drugs—proprietary or otherwise—from all parts of the world are now at the disposal of the medical profession of America. The larger manufacturing houses have long realized the value of such data for purely commercial purposes and they have been careful to keep in touch with what was going on outside this country and were ever on the watch for anything new which might develop and which could be used by them. Physicians, however, have been among the last to learn the facts regarding new remedies; the information which manufacturers collected so zealously for themselves was not allowed to trickle out among the medical profession until it had been colored, flavored and sophisticated, often out of all likeness with the original, but always into apparent praise of the preparations marketed under trademarked names.

The laboratory has, then, both the equipment and the personnel requisite for the production of the highest type of analytical work. But it has more than this. Since its inception there has been compiled, systematically and thoroughly, the most complete collection of proprietary medicine advertising "literature" to be found anywhere. Such a collection is of inestimable value in tracing, through the devious paths of ever-varying claims for composition and therapeutic virtues, the evolution of many proprietary products now on the market. To see the advertisements put out by different firms a few years ago, and then to compare them with advertisements for the same products to-day, is in itself a revelation of the steady change—for the better—that has taken place in the commercial standards of pharmaceutical manufacturers.

The work that the laboratory has done in exposing, through the pages of THE JOURNAL, the frauds connected with the exploitation of some of the "ethical" proprietaries, is well known. The Council has felt that the medical profession, having vigorously attacked the "ethical" proprietary evil and, to a large degree at least, set its own house in order, could no longer be accused of inconsistency in exposing the broader and more widely-spread frauds of the "patent medicine" traffic. Within the past year, therefore, the laboratory has extended its work to include the examination of some of the more vicious "patent medicines."

In connection with this work there is being made an ever-increasing collection of information on practically every pharmaceutical or medical humbug that has come before the public in recent years. Inquiries for information about medical frauds and fakes are being received daily. A few of these are answered through THE JOURNAL, but the limitations of space make it necessary to answer the great majority by correspondence. As a correlated branch of the laboratory's work, a "testimonial file" has been compiled which contains the names of several thousand physicians who have written testimonials for various proprietary preparations—some for a score or more.

The Association laboratory is a unique institution, and it is doubtful if even yet the medical profession fully appreciates its value. Not that its equipment and organization differ essentially from those of any first-class chemical laboratory; but in the scope of its work and in the absolute independence of its action it has no counterpart. Municipal and state laboratories invariably find their work hampered and their usefulness curtailed by the political considerations which the antagonizing of powerful interests develops; even federal examining bodies are not free from such restrictions. In the Association laboratory such considerations have had no place and it has published work that others would not have dared to publish. For the first time in the history of medicine—not alone in the United States but anywhere—physicians have an impartial, non-commercial scientific body to determine the honesty of the medicinal preparations put up for their use.

What the chemical laboratory has accomplished can not easily be separated from what the Council on Pharmacy and Chemistry has done, for the work and aims of these two institutions have been largely along the same lines. Some things, however, can be credited specifically to the laboratory's account:

It has for instance shown up the worthlessness of many of the widely advertised "ethical" proprietaries and has torn the veil of mystery from some of the most vicious "patent medicines" on the market.

It has made ridiculous in the eyes of the profession the impossible and absurd formulas with which the advertising pages of medical journals—THE JOURNAL among them—used to abound.

It has proved that many combinations of drugs offered to the profession are pharmaceutical impossibilities and scientifically absurd.

It has challenged successfully the attitude previously taken by pharmaceutical manufacturers that no one had a right to publish anything derogatory to their proprietary products.

It has, in short, revolutionized the point of view. While the medical profession used to be looked on as fair game for the fraudulent exploiter of worthless or vicious nostrums it is now viewed with a fear tempered by wholesome respect for its increased worldly wisdom on the question of proprietaries.

## CANCER IN FISHES

On April 9, the President sent a message to Congress in which he requested that an appropriation of $50,000 be made to provide for the active investigation of problems connected with cancer in fishes. No doubt this request may seem to be a rather strange one at first sight. Why cancer in fishes and not cancer in human beings? Perhaps the President answers this question in his message when he says: "Progress in the prevention and treatment of human diseases has been marvelously aided by the investigation of the same disease in those of the lower animals that are subject to it, and we have every reason to believe that a close investigation into the subject of cancer in fishes which are frequently swept away by an epidemic of it may give us light on this dreadful human scourge."

A great deal has been learned about cancer in fishes during recent years. In addition to being subject to cancer in various organs, occurring in more or less isolated instances, fishes are especially liable to cancer of the thyroid gland. The peculiar feature of the latter form, which affects especially the trout family, is that it not infrequently becomes epidemic in hatcheries and thus constitutes a serious obstacle to artificial propagation.

Numerous and important problems are raised by the frequency of this cancerous process in the thyroid in fishes. Investigations are needed to determine its relationship to the external conditions and to heredity. It has already been found that in a hatchery, previously free from the disease, the introduction of ova from elsewhere may be followed by the appearance of the peculiar tumors in many of the fish raised from the imported ova; and, further, that fish of the indigenous stock kept with the affected also frequently develop the disease. Consequently it seems as if the disease is hereditary as well as contagious.

Possibly the trout may prove a more favorable animal than any other now at our disposal for the experimental study of cancer. In this country fish cancer has been studied by Gaylord of the New York State Cancer Laboratory at Buffalo, who has found epidemic thyroid cancer in several hatcheries in New York. He has pointed out what may be a remarkable circumstance, namely that the area in the United States of the greatest concentration of human cancer is almost identical with the area over which the trout family is distributed. It is chiefly as the result of this work and certain considerations arising out of it that the matter now has come before the national government. We hope that Congress will follow the enlightened policy illustrated by the foundation and maintenance of a cancer laboratory by the legislature of the state of New York—the first laboratory in this country devoted exclusively to the study of cancer—the activities of which should be furthered and enlarged now that such important problems are pressing for solution.

## THE SCOPE OF THE PHARMACOPEIA

Now that the rather spirited discussion as to the scope of the Pharmacopoeia is being carried into the columns of the daily press it may be well to stop and consider what the Pharmacopeia is, to whom it belongs and what are the interests of the owners in the question of its scope. The United States Pharmacopeia is the property of the United States Pharmacopeial Convention; the latter is made up of delegates from medical and pharmaceutical colleges and societies and from the three government medical services. The book belongs to this Convention alone; neither the commercial interests nor the officials engaged in the enforcement of the federal and state food and drug laws have as yet any rights in the work. The mere fact that Congress when it passed the Food and Drugs Act adopted the standards of the United States Pharmacopeia and National Formulary for the preparations contained therein does not give the government any rights in the work beyond what the Pharmacopeial Convention sees fit to give it. The United States Government has never appropriated a cent to defray the cost of the preparation of the work and recently when a bill was introduced into Congress which practically provided that the United States assume the burden of revising the Pharmacopeia there was an almost universal protest and none was more emphatic in the condemnation of the whole proposition of government control than some of those now so vigorously protesting against any effort to restrict the usefulness of the Pharmacopeia as a government standard.

Hence, there is no need for those who now control the United States Pharmacopeia to consider the question of establishing standards for drugs in which they are not interested. The interests of the medical and pharmaceutical professions in this matter are largely the same. It is argued that it is to the interest of the public health for all drugs, by whomsoever used, and whether of value or not, to have standards fixed. Admitting the desirability of having standards for these drugs in which physicians are not interested, it plainly devolves on the people themselves (through Congress) to establish such standards. The abilities of the owners of the present Pharmacopeia are already taxed to the utmost to prepare the work on the present lines; the last revision required five years and when it did appear it was far from representing the present-day needs of the physician. Even in the last revision a great deal of time was spent in formulating standards for preparations (whisky for example) in which the modern physician is not greatly interested.

If we are to have a pharmacopeia which is to be a standard, meeting fully the needs of the pure drug and custom-house officials, etc., the only logical thing is to ask Congress to prepare such a work; it is only fair that the government should bear this as well as the other expense connected with the enforcement of customs laws, the Food and Drugs Act, etc. Such an arrangement would have the additional advantage of freedom from possible corruption.

Aside from the injustice of imposing a greatly increased burden on the owners of the present Pharmacopeia, it is contrary to the interests of the public health to have drugs of no known value included in the Pharmacopeia. In spite of all disclaimers to the contrary, pharmacopeial recognition at present is mistaken for endorsement. Some of the most notorious nostrums on the market advertise freely the fact that the ingredients are recognized by the United States Pharmacopeia. We have also the testimony of Dr. Kebler,* chief of the Division of Drugs of the Bureau of Chemistry of the Department of Agriculture, who states: "When we remember that there are promoters of medicines who take advantage of every possible situation that presents itself we should be very circumspect about giving any questionable drug standing." And speaking of phytolacca he says that the makers of "patent" medicines make the reply: "That is recognized in the Pharmacopeia. It is approved by the medical and the pharmaceutical professions."

Those who followed the early prosecutions against the users of wood alcohol in medicinal products will remember the impression made on both jury and judge by the fact that wood alcohol was (through the efforts of a few misinformed physicians and pharmacists, and against the protests of some of the best men in both professions) included for a brief period of three years, in the sixties, in the British Pharmacopeia.

The question of what the next Pharmacopeia is to be, however, rests entirely with its owners, the Pharmacopeial Convention which meets May 10; the physicians who will there represent the medical profession should not allow their attention to be distracted from their duty, which is to consider the interests of the medical profession and the question of public health in its broadest aspect. They are under no obligations to consider the interests of the manufacturers or of the officials engaged in the enforcement of laws if these conflict with the best interests of the profession or the welfare of the public.

## DRAKE UNIVERSITY AND MEDICAL EDUCATION

The commendable spirit recently shown[1] by the faculty of Drake University College of Medicine, in voting to close the college rather than to conduct it except as a first-class institution, is an example of the action which representative members of the medical profession are willing to take in order that fair standards of medical education may prevail. This spirit has already been shown in other cities where colleges have been voluntarily closed for similar reasons, or where mergers have been brought about between two or more colleges in order that stronger and better equipped medical schools could be formed. This willingness to forego personal gain in the interest of better trained physicians is a sure indication that the problems of medical education in this country will be satisfactorily solved. But an unexpected turn of events followed the action of the Drake University faculty which may permit the continuance of the medical school. An agitation begun by the medical students may result in the raising of sufficient funds to insure the continuance of the college. It is hoped that this agitation in Des Moines will awaken the people to the fact that they not only have a decided interest in medical education, but also that it is their chief concern that this education be thorough and practical. It would be interesting if this movement led to the development in Des Moines of the same conditions that exist in Cincinnati, where the city is supporting a medical school in connection with its enormous city hospital, thereby insuring not only the best possible care for its sick poor but also that the abundance of clinical material in the latter will be used to the greatest advantage in the training of future physicians.

## CLUB PRACTICE RESULTS IN ANTAGONISM TO PHYSICIANS

A striking illustration of the results of club practice appears in a letter from a physician of Budapest published in a recent number of the *Wiener klinische Rundschau*. The letter states that a laboring man recently shot a club physician because the latter, the year before, had reported adversely on his application for sick indemnity. As a result of this and many less serious attacks, the physicians of the *Krankenkassen* sick-clubs have asked the authorities to adopt regulations to protect them against unjustified insults and ill-treatment on the part of members of the clubs. The *Krankenkassen* impose a fine on members guilty of such conduct, but evidently this provision is not enforced or it is not sufficiently stringent to deter members from abusing physicians. The letter adds that although this attack was evidently committed by a man not mentally sound, yet it has a certain significance as showing the feeling on the part of members toward the physicians of the sick-clubs. Part of this may be attributed to the failure on the part of physicians to understand the views of the great mass of working people and to show proper consideration for their patients, but the writer states that the campaign of abuse which has been inaugurated against the reasonable demands of the club physicians has increased the ill feeling of the members toward the physicians. The club physicians seem to be utterly defenseless. The daily press in some cases criticized their meek demands as directly inimical to the laboring classes. These unfortunate conditions have been made possible only through the lack of united action on the part of the Hungarian physicians. And yet it is interesting to note that the writer of the letter referred to states that things are not yet quite bad enough to rouse them to concerted action, and to bring them all into one organization.

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* THE JOURNAL A. M. A., Feb. 5, 1910, p. 439.

[1] See Iowa state news in this issue.

# Medical News

## ARKANSAS

**State Society Meeting.**—The annual meeting of the Arkansas Medical Society will be held at Little Rock, May 3-6. Dr. James H. Lenow, Little Rock, is president, and Dr. Morgan Smith, Little Rock, is secretary.

**County Societies Elect Officers.**—At the annual meeting of the Independence County Medical Society, held at Batesville, April 4, the following officers were elected: President, Dr. O. J. T. Johnston, Floral; vice-president, Dr. T. N. Rodman, Cushman; secretary-treasurer, Dr. Frank A. Gray, Batesville; delegate, Dr. O. J. T. Johnson, Floral.——At the annual meeting of the Garland County Medical Society, held at Hot Springs, April 5, the following officers were elected: President, Dr. Jacob W. McClendon; vice-president, Dr. John F. Rowland; secretary, Dr. John S. Wood; treasurer, Dr. Joseph S. Horner; censor, Dr. S. L. Steers; delegates, Drs. Linda H. Barry and Eugene C. Hay; alternates, Drs. William O. Forbes and Morgan F. Mount, all of Hot Springs.

## CALIFORNIA

**Awarded Damages.**—In the case of Robert Agers against Dr. Edwin Z. Hennesy, Napa, the jury awarded the plaintiff $10,000 damages, April 2, for alleged bad setting of a broken leg.

**County Society Elects Officers.**—The San Luis Obispo County Medical Society met in San Luis Obispo, March 31, and elected the following officers: President, Dr. H. M. Cox, San Luis Obispo; vice-presidents, Drs. Harry S. Walters, Arroyo Grande; Charles J. McGovern, San Luis Obispo; and William R. Hedgpeth, Paso Robles, and Dr. Richard M. Bradbury, San Luis Obispo, secretary-treasurer.

**Hospital News.**—Articles of incorporation of the Southern California Sanitarium and Farm Company were filed in San Diego March 19, with a capital stock of $500,000. The corporation will engage in general hospital business.——The temporary receiving hospital, San Diego, has been completed and affords ample facilities for the furnishing of first aid.——Ramona Hospital, San Bernardino, has been completed and is open to receive patients. The building is of the mission type, three stories in height and thoroughly equipped. Dr. Henry W. Mills is in charge of the institution.——The Board of Supervisors of Alameda county passed a resolution, March 13, to secure twenty acres in the city of Oakland as a site for the new county infirmary, which is to cost about $500,000.——The new receiving hospital, Los Angeles, was opened March 6. The institution has a large receiving room, operating room, male and female wards, and *x*-ray room, and has accommodation for ten patients.

## CONNECTICUT

**Vital Statistics.**—During 1909 the health of the state has compared favorably with that of previous years. The death-rate for the year was 15.6 per 1,000; in 1908 it was 15.4, and in 1907, 17.1. The total deaths numbered 16,460, or 460 more than for the previous year. There were 1,164 more births recorded in 1909 than in 1908, or a rate of 25.7 per 1,000, as compared with 24.2. Tuberculosis caused 1,422 deaths, or 1.34 per 1,000 of population. The greatest improvement noted is in deaths from typhoid fever, which numbered 154, or 0.14 per 1,000 of population, as compared with 0.18, 0.20 and 0.22, respectively, during the three previous years.

**Campaign Against Flies.**—The State Board of Health has issued a warning against the danger of food contamination and transmission of disease by flies. The following rules are laid down:

> Do not allow decaying material of any sort to accumulate on or near your premises.
>
> All refuse which tends in any way to fermentation, such as bedding, straw, paper, waste and vegetable matter, should be disposed of or covered with lime. Keep all receptacles for garbage carefully covered and the cans cleaned or sprinkled with lime.
>
> Keep all stable manure in vault or pit, screened or sprinkled with lime.
>
> See that your sewerage system is in good order; that it does not leak, is up-to-date and not exposed to flies. Pour kerosene into the drains. Burn or bury all table refuse.
>
> Screen all food, whether in the house or exposed for sale.
>
> Keep the flies away from the sick, especially those ill with contagious diseases. Kill every fly that strays into the sick room. His body is covered with disease germs.
>
> While it may be impossible to exterminate all flies, yet the danger and trouble may be greatly lessened by a proper use of screens for doors and windows.

**Society Meetings.**—The one hundred and eighteenth annual meeting of the Hartford County Medical Association was held in Hartford, April 5, and the following officers were elected: President, Dr. Herman W. Strosser, New Britain; vice-president, Dr. Harmon G. Howe, Hartford; secretary-treasurer, Dr. Frederick B. Willard, Hartford; councilor, Dr. Oliver C. Smith, Hartford; censors, Drs. Edward G. Fox, Wethersfield, Edward R. Lampson, Hartford, and H. A. Deane, South Windsor; and delegates to the state society, Drs. Frederick B. Willard, Michael H. Gill and John H. Rose, Hartford, Erastus P. Swazey, New Britain, Charles M. Wooster, Tariffville; Myron P. Robinson, Windsor Locke, and Thomas Q. Sloan, South Manchester.——The one hundred and eighteenth annual meeting of the New London County Medical Association was held in New London, April 7. The following officers were elected: President, Dr. P. J. Cassidy, Norwich; vice-president, Dr. E. C. Chipman, New London; secretary-treasurer, Dr. E. O. Winship, New London; delegate, Dr. L. F. LaPierre, Norwich; censor, Dr. R. W. Kimball; county reporter, Dr. E. J. Brophy, Norwich.

## FLORIDA

**Bacteriologic Laboratory to Be Established.**—It has been announced that the State Board of Health has decided to establish a complete bacteriologic laboratory in Pensacola at an early date. This is to be done on the recommendation of Dr. Warren E. Anderson, Pensacola.

**Personal.**—Dr. Ralph N. Greene, Tallahassee, has been elected chief physician at the Florida Hospital for the Insane, Chattahoochee, succeeding Dr. James H. Randolph, resigned; Dr. Benjamin F. Barnes, River Junction, has been elected assistant physician at hospital to succeed Dr. Greene.

**State Medical Society Elects.**—At the thirty-seventh annual meeting of the Florida Medical Association, held in Jacksonville, April 6-8, the following officers were elected: President, Dr. James D. Love, Jacksonville; vice-presidents, Drs. Albert H. Freeman, Starke; Leon A. Peek, Melbourne; and Fred C. Moore, Tallahassee; secretary-treasurer, Dr. J. D. Fernandez, Jacksonville (reelected); councilors, Drs. Leonidas M. Anderson, Lake City; J. Harris Pierpont, Pensacola, and Henry E. Palmer, Tallahassee, and librarian, Dr. Charles E. Terry, Jacksonville (reelected). Tallahassee was chosen as the place for the next annual meeting.

## ILLINOIS

**Milk Commission Named.**—At a meeting of the Sangamon County Medical Society, April 11, a milk commission composed of the following Springfield physicians was appointed: Drs. Hugh T. Morrison, Samuel E. Munson, Harry C. Blankmeyer, Emil L. Bernard and George T. Palmer. This commission will go into all the facts concerning the establishment of a system of certified milk for Springfield.

**Society Meetings.**—Tazewell County Medical Association met in Pekin, April 12, and elected the following officers: President, Dr. Harry V. Bailey, Pekin; vice-president, Dr. Harley A. Zinzer, Washington; secretary, Dr. Fernando C. Gale, Pekin; delegate to the state society, Dr. Henry L. Yoder, Morton, and alternate, Dr. Eugene F. Kelchner, Delavan.——At the regular meeting of the Rock Island County Medical Society, held in New Harper, April 12, the following officers were elected: President, Dr. Henry S. Bennett, Moline; vice-presidents, Drs. Warner L. Eddy, Milan, and Joseph E. Asay, Rock Island; secretary, Dr. Albert N. Mueller, Rock Island; and treasurer, Dr. Arthur T. Leipold, Moline.

**Personal.**—Dr. and Mrs. John A. Koch, Quincy, sail April 23 for a six-months' trip abroad.——Dr. Daniel D. Brengle, Winchester, one of the oldest physicians in the state, is critically ill.——Dr. John M. Gulick, Manteno, was operated on at Mercy Hospital, Chicago, for appendicitis, recently.——Dr. Edward A. Foley, Kankakee, has been appointed assistant superintendent of the Anna State Hospital.——Dr. Charles E. Crawford, city health officer of Rockford, has returned from a trip to California and other western points.——Drs. Walter S. Haines and Walter H. Allport, Chicago, have been appointed members of the State Commission on Occupational Diseases, succeeding Drs. Alice Hamilton and Arnold C. Klebs, Chicago, resigned.

## INDIANA

**Physician Wins Suit.**—In the case of Mrs. William H. Miers against Dr. George S. Crawford, Milford, for alleged malpractice, a jury in Shelby circuit court, on April 14, returned a verdict in favor of Dr. Crawford.

**Personal.**—Dr. Samuel Hollis, Hartford City, has been elected secretary of the county board of health, vice Dr. William N. Cronin, Hartford City, deceased.——Dr. Burton D. Myers, Bloomington, started for Europe, March 19.

**State Board Ruling.**—The State Board of Health has made a ruling that the pure food laws must be conformed to in the strictest sense of the letter. The order specifies that beginning with July 1, bread shall be protected by suitable wrapping paper or be placed in bags before being taken from bakeshops, and that all other goods from bakeries shall be carried in tight, dustproof boxes or cartons. The order that applies to butchers and wholesale meat dealers will go into effect on May 15, and is as stringent as the one governing bakeries.

**February Mortality and Morbidity.**—During the month there were 2,856 deaths, or 99 fewer than for the corresponding month of last year, a rate of 13.4, the rate of February last year being 14. There were 394 deaths of infants under 1 year of age, or 13.7 per cent. of the total; 163 deaths of children from 1 to 5, and 953 of individuals 65 and over, or 33.3 per cent. of the total. Influenza was the most prevalent disease, pneumonia was fifth in area of prevalence, and in February of last year it was third. Following is the order of disease prevalence: Influenza, tonsillitis, measles, bronchitis, pneumonia, rheumatism, scarlet fever, pleuritis, diphtheria and membranous croup, chickenpox, whooping-cough, typhoid, diarrhea, smallpox, intermittent and remittent fever, erysipelas, cerebrospinal meningitis, inflammation of the bowels, cholera morbus, puerperal fever, dysentery, typhomalaria fever, and cholera infantum.

### IOWA

**Medical Society Reorganized.**—The old Keokuk Medical Society, which has been in existence for sixty years, was reorganized March 21, and Dr. Joseph A. Scroggs, Keokuk, was elected president.

**Unlicensed Practitioner Fined.**—Dr. Renshaw, Logan, arrested and indicted for practicing medicine in Harrison county without a license, pleaded guilty, March 30, and was fined $300.

**Drake University College of Medicine Not to Close.**—At a recent meeting the faculty of Drake University College of Medicine voted to discontinue the college after the close of the present session owing to the fact that sufficient money was not available to make needed improvements in the laboratories and to provide for the growing expenses for maintenance. On learning of the faculty's action a demonstration begun by the medical students has so aroused the citizens of Des Moines that ample funds may be subscribed to insure the continuance of the college. The improvements which are now practically assured are a new laboratory building on the university campus, a larger use of the hospital wards of the city, and the raising of $100,000 for maintenance, of which sum $40,000 has already been subscribed.

**Personal.**—Dr. Murdoch Bannister, Ottumwa, has been appointed by the governor as a member of the Board of Control of State Institutions.——Dr. Charles E. Boyd, Newton, has returned from abroad.——Dr. James M. Donelan has been reappointed health officer for Glenwood and Glenwood township.——Dr. Warrick W. Klein, Waterloo, sustained severe injury to both legs, necessitating their amputation above the ankles, by falling from a moving train while rounding a sharp curve, March 17.——Dr. Henry H. Nichols, Marshalltown, is a patient in St. Thomas Hospital, having submitted to an emergency operation for an abscess of the chest.——Dr. Harry R. Reynolds, Clinton, has been appointed a member of the board of pension examiners for the district, vice Dr. Christian Jonsson, deceased.——Dr. Carl C. Lytle, Lansing, underwent an operation for appendicitis at Mercy Hospital, Dubuque, April 4.——Dr. Edgar H. Jones has been appointed city physician and city health officer of Eldora.

### LOUISIANA

**Personal.**—Drs. J. Hope Lamb and Henry A. Veazie, New Orleans, have been reappointed inspectors of all vessels coming from fruit ports in Central America and foreign places.——Dr. Whyte Glendower Owen, Whitecastle, has been appointed by President Taft as one of the three surgeons from Louisiana to a place on the inactive list of the Medical Reserve Corps, United States Army, with the rank of first lieutenant.——Dr. Oscar Dowling, Shreveport, has removed to New Orleans to take up the work of the late Dr. Gordon King.

**County Societies Elect Officers.**—The Grant Parish Medical Society met at Colfax, March 30, and elected the following officers: President, Dr. Philip Goode, Colfax; vice-president, Dr. W. A. Fletcher, New Verda; secretary, Dr. J. Luther Kelley; and treasurer, Dr. E. B. Gray, Colfax.——The Winn Parish Medical Society met at Winnfield, April 6, and elected the following officers: President, Dr. Carson R. Reed, Grace; vice-president, Dr. J. B. Parker, Sikes, and secretary-treasurer, Dr. S. Clyde Fitts, Winnfield.——At the annual meeting of the East Feliciana Parish Medical Society in Jackson, April 6, the following officers were elected: President, Dr. Jesse W. Lea, Jackson; vice-president, Dr. William F. Hagaman, Norwood; and secretary-treasurer, Dr. Robert P. Jones, Clinton.

### MARYLAND

**Coming Meeting.**—The one hundred and twelfth annual meeting of the Medical and Chirurgical Faculty of Maryland will be held in Baltimore, April 26, 27 and 28, under the presidency of Dr. G. Milton Linthicum, Baltimore. The secretary is Dr. John Ruhräh, Baltimore.

**Appropriations for Hospitals.**—Annapolis has received an appropriation of $30,000 for the completion of the Emergency Hospital building, in addition to the usual appropriation of $5,000 a year for maintenance.——Johns Hopkins University has received the appropriation of $25,000, asked for by it, and Mercy Hospital, Maryland General Hospital, and the University of Maryland Hospital, Baltimore, have received an appropriation of $13,000 each per year.

**Hospital and Dispensary News.**—Extensive improvements will be made at the Springfield Asylum for the Insane, $270,000 having been appropriated by the state for the purpose.——An electric plant will be installed at Bayview Hospital, which will also provide for Sydenham Hospital for Infectious Diseases.——The dispensary of St. Agnes' Hopital, which has been closed for sixteen years, was reopened April 5, the medical staff of the hospital being in charge.

**Bills Vetoed and Approved.**—The governor has vetoed the "optometry" bill, much to the gratification of the medical profession. This bill aimed to create a special class of "optometrists," with examining board, license, etc. He also vetoed bills for incorporating the State University of Maryland; for requiring full Pasteur treatment for persons bitten by rabid animals, and for authorizing the sale of condensed skimmed milk. He approved the bills for the reorganization of the State Board of Health into five departments, but reducing the annual appropriation for expenses to $10,000; the midwifery bill; for a woman physician for the Baltimore juvenile court; for a bond issue of $100,000 for the State Tuberculosis Sanatorium at Sabillasville, for buildings, and $75,000 a year for maintenance; and requiring that tuberculin shall bear a label.

#### Baltimore

**Johns Hopkins University Raising Fund.**—The Johns Hopkins University is endeavoring to raise $2,000,000, to enable it to move to the new suburban site, Homewood, and to branch out in various directions. A department of preventive medicine is one of the new features proposed.

**Personal.**—Dr. Robert W. Johnson has been elected vice-president of the Churchmen's Club.——Dr. Lewis M. Allen was elected president of the Maryland Alumni Association of the University of Virginia, April 9.——Dr. William A. Fisher has resigned the office of assistant surgeon of the Fifth Regiment, Maryland National Guard.

### MINNESOTA

**Personal.**—The University of Minnesota has appointed Dr. Thomas G. Lee, Minneapolis, director of the Institute of Anatomy, as its delegate to the second International Anatomic Congress, Brussels, and to the eighth International Zoologic Congress, Graz, Austria. Dr. Lee sailed for Europe April 9, and will spend the summer in visiting laboratories in the interest of the new institute, which is to cost $200,000.——Drs. A. E. Ahrens and S. G. Cobb, St. Paul, have gone to Vienna for five months' postgraduate work.

### NEW HAMPSHIRE

**State Medical Society Meeting.**—The one hundred and nineteenth annual meeting of the New Hampshire Medical Society will be held in Concord, May 12 and 13. Dr. Frank Blaisdell is president and Dr. D. E. Sullivan, secretary.

**National Department of Health Approved.**—At a meeting of the Center District Medical Society, held at the State Hospital, Concord, April 11, resolutions were unanimously adopted favoring Senate Bill 6049 for the establishment of a national department of health, and urging that the Committee on Legislation of the American Medical Association and the representatives of New Hampshire in Congress support the bill.

**County Society Elects Officers.**—The fifth annual meeting of the Hillsboro County Medical Society was held in Manchester, April 6, when the following officers were elected: President, Dr. John H. Gleason, Manchester; vice-president, Dr. Herbert L. Smith, Nashua; secretary-treasurer, Dr. Ella B. Atherton, Nashua; executive committee, Drs. Frank Blaisdell, Goffstown; Arthur F. Sumner, Manchester; William E. Reed, Nashua; Joseph W. Finerty, Milford, and Guy H. Greeley, Merrimack; delegates to the state medical society, Drs. George S. Foster, Manchester; Frank E. Kittredge, Nashua; and Nathaniel F. Cheever, Greenfield; auditor, Dr. James B. Pettingill, Amherst.

## NEW YORK

**Scarlet Fever Epidemic.**—An epidemic of scarlet fever has appeared along the Putnam division of the New York Central Railroad starting at Amawalk; from there it spread to Yorktown Heights, to Kitchawan, Millwood, Briercliff Manor and Ardsley.

**Cases of Communicable Diseases Reported During February.**—There were reported during February 3,203 cases of tuberculosis; 2,025 cases of diphtheria and croup; 4,118 of scarlet fever; 10,047 cases of measles; 566 cases of typhoid; 32 cases of cerebrospinal meningitis; 46 cases of smallpox, and 4 cases of ophthalmia neonatorum.

**Mortality from Pulmonary Tuberculosis.**—The mortalities of the state from this disease for quinquennial periods since 1885 have been as follows: 1885-1889, yearly average 11,913, percentage of all deaths, 12.6; 1890-1894, 13,339 yearly average, 11.0 percentage of all deaths; 1895-1899, 13,313 yearly average, 10.9 percentage of all deaths; 1900-1904, 13,458 yearly average, 10.4 percentage of all deaths; 1905-1909, 14,557 yearly average, 10.1 percentage of all deaths.

**From Legislative Halls.**—The assembly has passed a bill prohibiting the sale of cocain and other drugs without proper restrictions.——The senate has also passed Senator McManus' bill empowering the New York City Health Department to establish dental stations to care for the teeth of children under 14 years of age who cannot afford to pay for such treatment.——The assembly has passed the bill which would give to the Board of Estimate and Apportionment in New York City the right by resolution to determine that there shall be in the City of New York a board of inebriety. When the board determines this it will be incumbent on the mayor to appoint such a board which shall consist of seven members, two of whom shall be physicians. The board is given authority to purchase a site for a hospital and industrial colony for the care and treatment of inebriates within or without the City of New York. After the Board of Inebriety is appointed any male person who is a resident of New York City and who is adjudged by a court of record to be an inebriate may on his own application or the petition of a relative or a commissioner of public charities or of the Board of Trustees of Bellevue and the Allied Hospitals and on the certificate of two medical examiners in lunacy be committed by such court to the board for a period of not less than one year nor more than three years. The provisions of law relating to the commitment of insane persons shall so far as may be practicable apply to the commitment of inebriates.——A bill has been introduced amending the health law by relaxing the present restrictions against the admission of unvaccinated pupils to the public schools by requiring such admission on a duly executed certificate of a physician that the pupil's health would be jeopdized by vaccination, or on a written declaration of the parent or guardian of the pupil to the effect that he is conscientiously opposed to vaccination.——Among the bills reported on favorably was that one giving State Health Commissioner Eugene H. Porter increased jurisdiction over the discharge of sewage and industrial wastes into public waters.——Governor Hughes has signed the Merritt bill appropriating $1,231,500 for state hospital maintenance.

### New York City

**Another Building for Physicians.**—A new office building for physicians and dentists exclusively is being erected at No. 40 East Forty-first street. Among the attractions offered are a sterilizing plant, a laundry, a buffet-restaurant and a sunroom.

**Junior Sea Breeze to Reopen.**—This station has been in operation for four years and has been sustained entirely by Mr. Rockefeller. Two physicians, twenty-two nurses, and two dieticians will be in attendance at the camp and four nurses will devote their time to the education of the mothers in the tenement homes.

**Personal.**—Prof. F. Lange of Munich, recently arrived here as a representative of Germany to the orthopedic congress to be held at Washington.——Dr. William Hallock Park, professor of bacteriology and hygiene in the University of New York, will receive the honorary degree of LL.D. from Queen's University of Kingston, Ont., this month.

**Pathologic Laboratory for Hospital.**—Adolph Lewisohn has given $130,000 more to Mount Sinai Hospital for the purpose of building and equipping a pathologic laboratory. The new laboratory will be known as the Mount Sinai Pathologic Laboratory, Adolph Lewisohn Foundation. The site for the new building has been purchased on One Hundredth street near the hospital proper. Mr. Lewisohn some time ago made a gift of $70,000 to the hospital.

**Reception and Dinner to Dr. Jacobi.**—The Medical Society of the State of New York will give a reception on the evening of May 6, at the New York Academy of Medicine, New York City, in honor of the eightieth birthday anniversary of Dr. Abraham Jacobi.——Invitations have been issued by the board of directors of the Hospital for Deformities and Joint Diseases for a dinner in honor of Dr. Abraham Jacobi, the senior consultant of the hospital, to be given at the Waldorf on April 20.

## PENNSYLVANIA

**Nurses Receive State Licenses.**—Three hundred and thirty-nine nurses have just received from the Pennsylvania State Board of Examiners for the Registration of Nurses, notification that they have passed the necessary examinations and have been registered to practice in this state. The next meeting of the board for the examination of nurses who desire registration will be held in Pittsburg, April 21. The board proposes to hold meetings in various sections of the state, so that it may learn the needs of the various localities and get in touch with the physicians and nurses, in an effort to see that the nurse registration act passed by the legislature is being properly observed.

**Tuberculosis Society Names New Officers.**—Complete reorganization of the Pennsylvania Society for the Prevention of Tuberculosis, took place at the nineteenth annual meeting held April 13. Dr. James Tyson, who recently retired from the chair of medicine at the University of Pennsylvania, was unanimously elected to the presidency, Dr. Charles J. Hatfield, the incumbent, retiring. The other officers elected are: Vice-presidents, Drs. W. D. Robinson, Philadelphia, William Charles White, Pittsburg, and Charles H. Miner, Wilkes-Barre; treasurer, George Burnham, Jr.; secretary, Dr. Ward Brinton, Philadelphia; solicitor, Samuel Scoville, Jr.; directors, Drs. Joseph Walsh, Charles J. Hatfield, C. Lincoln Furbush, A. P. Francine, F. A. Craig, J. Clinton Foltz, J. Willoughby Irwin, all of Philadelphia; Messrs. Alexander Wilson, Asa S. Wing, L. J. Palmer, Henry H. Collins, Jr., Alfred C. Scattergood, Mrs. William T. Jenks, Mrs. Lawrence Lewis and Miss Henrietta Ely.

**State Examination of School Children.**—State Health Commissioner Dixon has completed the medical inspection of the rural district schools in Dauphin, Cumberland and Lancaster counties. This work will form a basis of examination of school children in the rural districts throughout the entire state. Children examined in 572 schools numbered 12,255. Of the total number 2,439 children presented one or more physical defects tending to handicap them in their school work; 1,929 children showed defective vision, 249 defective hearing, 284 defective nasal breathing, and 55 presented conditions that would lead the inspector to suspect the existence of tuberculosis. Eleven inspectors in Dauphin, 9 in Cumberland and 35 in Lancaster made the examinations in these three counties, from one to three townships being assigned to each physician. The inspectors also made a thorough investigation of the sanitary conditions existing at the schools. On receiving the reports at the central bureau at Harrisburg, the chief medical inspector and his assistants go over them carefully, and letters are written to the parents of the children in whom physical defects are found, calling attention to these defects and suggesting that the child be taken to the family physician for more detailed examination and treatment.

### Philadelphia

**Von Eiselsberg Conducts Clinic.**—Dr. Anton von Eiselsberg, professor of surgery in the University of Vienna, conducted a surgical clinic in the Jefferson Medical College Hospital, April 13.

**Banquet to Dr. Cohen.**—Dr. Jacob Solis Cohen was the guest of honor at the tenth annual banquet of the Northern Medical Association, the occasion being the fiftieth anniversary of Dr. Cohen's graduation from the University of Pennsylvania, Department of Medicine.

**Cocain Sellers Fined.**—George and Charles Rollins pleaded guilty before Judge Carr, April 7, to the indictment charging them with unlawfully selling cocain and having the drug in their possession, and were sentenced to pay a fine of $500 each and to serve two years in prison.

**Food Commissioner Plans Arrests.**—April 15, Food Commissioner Foust ordered a renewal of the crusade against Philadelphia dealers for the sale of partly decomposed eggs, known in the trade as "rots and spots." The fine for the offense is from $200 to $1,000, with imprisonment if the court may decide that it should be added.

**Resident Physicians Appointed.**—The senior medical appointments of the University of Pennsylvania were announced April 4. The men who have been assigned to the University Hospital are: I. G. Clark, R. M. Lewis, L. H. Langdon, F. S. Sproul, I. W. Cook and P. McCall Keating. The successful men were selected from the list of twenty who had obtained the highest scolastic average on February 1.

**Personal.**—Dr. and Mrs. James A. Irwin sailed for Italy April 19.——Dr. Joseph Leidy, who has been spending the winter with his family in Switzerland, returned to his home April 15.——Dr. Charles H. Frazier, who was recently operated on at the University Hospital for appendicitis, is rapidly recovering.——Dr. H. R. Owen, a police surgeon, has been appointed a member of the staff of surgeons at the Philadelphia General Hospital, to succeed Dr. J. Chalmers DaCosta, resigned.——Dr. J. M. Fisher has been appointed associate professor of gynecology at the Jefferson Medical College.

**Report of the Bureau of Health for February.**—The report of the division of medical inspection shows 2,421 inspections, excluding schools, 5,130 total visits to schools were made; 722 children excluded from school and 84 cases held for special diagnosis; 743 fumigations ordered, 137 cultures taken, 301 injections of antitoxin and 279 vaccinations.——The report of the division of vital statistics shows 2,435 deaths reported and 2,611 births.——The report of the division of milk inspection shows that 7,677 inspections were made in which 178,959 quarts were inspected, condemning 98 quarts.——The report of the bacteriologic laboratory shows that 1,302 examinations of diphtheria, 279 of suspected typhoid blood, 843 of milk, and 199 of sputum were made, 7 disinfection tests were performed, and 8,911,200 units of antitoxin were distributed.

**Charitable Bequests.**—A bequest of $3,000 to the Methodist Hospital was included in the will of the late Maria Snyder.——From an estate valued at $50,000 left by the late Mary H. Griffith the sum of $500 is bequeathed to the Bryn Mawr Hospital.——The will of the late Kate E. Hetzell bequeathed $200 to the Philadelphia Home for Incurables.——The will of the late Annie E. Travers contains the following bequests: $300 to St. Joseph's Orphan Asylum; $200 to St. Vincent's Home; $200 to St. Joseph's Orphan Asylum for Girls and $200 to St. Joseph's Working Home for Boys.——In the will of the late Caroline M. Scholkelmann, bequests of $100 each are made to the Little Sisters of the Poor of Germantown, St. Vincent's Orphan Asylum of Tacony and St. Mary's Hospital.——One thousand dollars has been received by the Aid Association of the Philadelphia County Medical Association from the estate of Mrs. Caroline E. Richmond. Mrs. Richmond left the money to be distributed among charitable institutions to Dr. Richard A. Cleeman.

**Open-Air Schools Urged.**—At the monthly meeting of the Board of Education held April 12, the Committee on Special Schools brought up the question of introducing open-air schools in connection with the public school system of this city. Open-air schools, designed especially for sick and weakly children, have been in operation in many European cities for about six years. In this country, the plan has been successful in New York, Boston, Pittsburg, Chicago, Hartford and Rochester. Those who now urge the adoption of the plan in Philadelphia, include C. C. Harrison, provost of the University of Pennsylvania, Dr. James Tyson, George Burnham, Rev. Joseph Krauskopf, Dr. Talcott Williams, Dr. John H. Musser, Dr. W. W. Keen, Dr. George Woodward, John Converse and Samuel F. Houston. It was also suggested that the Philadelphia Department of Health should be asked to furnish the services of a qualified school physician to examine pupils who are referred or apply for admission to such schools, that he should have general oversight of the diet and treatment of the pupils and should be required to maintain such a system of health records as will enable him to prescribe for their treatment and determine their improvement.

## GENERAL NEWS AND COMMENT

**Personal.**—William C. Rucker, passed assistant surgeon in the United States Public Health and Marine-Hospital Service, has been made a member of the London Society of Tropical Medicine.

**Coming Meeting.**—The sixth annual meeting of the National Association for the Study and Prevention of Tuberculosis will be held at the New Willard Hotel, Washington, D. C., May 2 and 3. All members are expected to make their own hotel arrangements. The president is Dr. Edward G. Janeway, New York City, and the executive secretary, Dr. Livingston Farrand, New York City. The Sociological Section, under the chairmanship of Mr. Bernard Flexner, Louisville, will take up "A Budget and Program for a Local Anti-Tuberculosis Campaign," "The Question of Enforcement," the "Enforcement of Anti-Spitting Ordinances in the United States" and "The School Child and Tuberculosis." The clinical and pathological sections will take up the medical side of the subject.

**Work of the Milk and Baby Hygiene Association.**—The report of the Milk and Baby Hygiene Association of Boston to March 1, 1910, is a pamphlet of about 40 pages, giving an outline of the work attempted by the association and its results. It contains numerous illustrations of its milk stations, dairies, etc., and charts and tables concerning infant mortality, its causes and distribution throughout the different months of the year. Among the babies under the care of the association during 1909 the death-rate was 33⅓ per cent. less than for the babies not under their care. Mothers are persuaded to nurse their babies and the death-rate has been found in the experience of the association to vary from 1.9 per cent. in wholly breast-fed infants to 4.68 per cent. in those partially breast-fed and up to 9.55 per cent. in those fed on carefully modified milk. Ten people's milk stations in charge of seven trained nurses are maintained; and modified, inspected and certified milk, and infants' sanitary feeding-bottles and nipples are sold at cost. Conferences have been organized with twenty-four volunteer physicians to instruct mothers in the care and nourishment of their children. There are also a class for high-school girls and lectures to fathers and other groups. Tracts on the care of children are distributed, and by the use of special phonograph cylinders and graphic exhibits the educational influence of the organization is extended. The association also takes part in the propaganda for a better city milk-supply and better methods of handling, cooperates with the public health authorities and takes part in hearings before the legislature.

## LONDON LETTER

*(From Our Regular Correspondent)*

London, April 9, 1910.

### Changes in Regard to Coroners' Inquests

As foreshadowed in previous letters important changes are about to be made in the antiquated law of coroners' inquests which dates from the thirteenth century. Fifteen months ago the home secretary appointed a committee to inquire into the subject and it has just issued a report. The committee reports astonishment at the good work done by coroners with out-of-date and imperfect machinery. At present the coroner has power to order a post-mortem examination only for the purpose of an inquest. The committee thinks that it is most desirable that he should have power to do so without an inquest when the cause of death is unknown and there is no reason to suspect that the death is unnatural or violent. An inquest is always a painful ordeal for friends and relatives, and by dispensing with it trouble and expense would be saved. The fees allowed to medical witnesses are regarded as inadequate. In many cases the postmortem examination can be effectively made only by a pathologic expert who can at present be paid not more than $5. Every coroner should be empowered to call such medical witnesses as may be necessary and should have a wider discretion as regards medical costs. The viewing of the body by the jury is now obligatory and to many jurymen is most disagreeable. The committee holds that the viewing is useful only in exceptional cases. As a rule it is only a perfunctory march past and quite futile. Generally, therefore, it should be dispensed with; but in special cases the coroner should have power to order it. The present law of death certification is condemned. A doctor can give a death certificate if he has seen a patient within a week of the alleged death, and it is not necessary for him to see the body and verify the fact of death. The law offers every opportunity for premature burial and every facility for the concealment of crime. The committee recommends that the physician should be required to inspect the body and that in every case in which a medical certificate is not given the death ought to be reported to the coroner, who, however, need hold an inquest only when he thinks it necessary. The verdict in cases of suicide has always been a difficult question. As a rule no matter what the facts, juries avoid the verdict of *felo de se* in order to spare the feelings of the relatives and bring in a verdict of temporary insanity on the slenderest grounds. The committee recommends that the verdict of *felo de se* should be abolished as the members cannot imagine that the fear of it can have any deterrent effect on persons contemplating suicide. Forfeiture of the suicide's property and burial at the cross-roads have long been abolished. The only effect of retaining this verdict is to induce juries to find a verdict of temporary insanity without any evidence to justify it. The committee thinks that the verdict should simply state that the deceased died by his own hand (stating how); but that the jury should be at liberty to add that there is no evidence to show the state of his mind or that at the time of suicide he was of unsound mind.

### African Entomologic Research

Active work is now in progress at the natural history department of the British Museum in connection with the African Entomological Research Committee appointed last summer by the government. Five thousand dollars has been voted for the purpose and two experienced entomologists, Mr. S. A. Neave and Mr. J. J. Simpson, have been sent to Africa, the former to Nyasaland and the latter to Nigeria. They will not only collect specimens but will interest and instruct such residents in Africa as may be willing to devote some part of their time to entomology. The object is to procure the fullest possible knowledge of the insects of tropical and subtropical Africa. The need for such an organization is rendered necessary by the immense importance of economic entomology, from the viewpoints of public health and commerce. Tropical Africa offers the best example of the development of a fertile country being hampered by the widespread occurrence of insects which convey such diseases as sleeping sickness, yellow fever, malaria, plague and several diseases of animals. The committee proposes to issue a journal which will be called the *Bulletin of Entomological Research*, and will contain the observations made by field workers which may have any bearing on the subject of economic entomology, descriptions of insect life histories, figures of their earlier stages, methods of destroying or keeping in check noxious species, papers by specialists on the classification of such groups as are known to be or likely to be injurious to man, live stock or agriculture. The requirements of medical men, farmers, etc., who have no special knowledge of entomology, will also be kept in view and fully illustrated papers will be issued from time to time showing as simply as possible the characters by which the most important pests can be recognized.

### The Midwives Act

The midwives act of 1902 has now come fully into force and has revolutionized the nursing of lying-in women. Previous to that date, any woman, skilled or unskilled, could pursue the occupation of midwife without interference by the state. By the act no woman may "habitually and for gain" attend women in childbirth unless she be certified, which requires a course of training and the passing of an examination. The date at which the act was to come fully into force was postponed until the present year to give time for a sufficient number of women to be trained. A central midwives board was established for the purpose of framing rules for the issue of certificates, the conditions of admission to the roll of midwives, the course of training and the conduct of examinations. At one time it was feared that when the act came fully into force there would not be a sufficient number of midwives but this has not proved true. The number on the roll now amounts to 29,000, nearly as many as the physicians in the country. The introduction of the midwives act received considerable opposition from the medical profession who objected to the creation of an "inferior order of practitioner," the members of which were necessarily incompletely educated and trained in the practice of midwifery. But even before the passing of the act only a minority of the labors in the country were attended by physicians and many catastrophes, especially the communication of puerperal fever, arose from the ignorance of the midwives. Under the act, the midwives are subject to strict discipline, the practice of antisepsis is compulsory, and they are empowered only to attend normal labor; in case of any complication they must send for a physician. Some friction with the medical profession in the working of the act has arisen from the fact that the law while rendering this obligatory, made no provision for the payment of the physician. However, that difficulty is now being surmounted by the local poor-law authority becoming responsible for the fee.

### The Perils of Altruism

At a meeting of the Haselmere Eugenics Club an address was delivered on the "Care and Control of the Feeble-Minded" by Judge Parker, who made a remarkable pronouncement on the perils of altruism from the eugenic standpoint. Referring to proposed legislation on the subject under discussion he said that for the first time in the history of the country it recognized that all proposals for social reform must be judged from considerations, not on the individuals of existing society, but on their ultimate effect on the unborn—on the inborn character of the race. The last 100 years of our history, he said, had seen a development of altruistic feelings which had led to the enlargement of the sphere in which a sense of duty to one's neighbor was the compelling force and had led the state to reform the conditions of life among the less fortunate classes. On the one hand, charitable institutions were endowed on an unprecedented scale, and on the other hand there was a vast extension of ameliorative legislation, such as the factory acts and the education acts. But those altruistic actions were primarily concerned with existing individuals. Nature had no mercy on the weakly, yet those qualities which were most valued in man were always directed toward succoring the weakly. But in succoring them were we multiplying their numbers and perpetuating the very condition against which our moral nature rebelled? The fact was that in legislation we wanted wisdom as well as enthusiasm for ideals.

### The Definition of an "Accident"

An important decision on an appeal under the Workmen's Compensation Act has been given by the highest court in Great Britain—the House of Lords. A workman while in the act of tightening a nut with a spanner made an exclamation and fell back dead. Necropsy showed that death was due to rupture of an aneurism of the aorta. The aneurism was in such an advanced condition that it might have burst while the deceased was asleep and very slight exertion would have been sufficient to bring about rupture. The judge in the local court awarded the widow $1,500 damages on the ground that the death was due to accident but the emloyers appealed to the higher court where the award was upheld. They then further appealed to the House of Lords. In giving judgment the lord chancellor confirmed the decision of the lower courts. He said that for the workman's dependents to be entitled to compensation the injury must be caused by an accident. An accident had been defined in that court as "an unlooked-for mishap or an untoward event, which is not expected or designed." The crucial point was: Did the accident arise out of the employment? When the man's condition was such that he might have died in his sleep and the mere tightening of the nut with no more than the ordinary strain of such work caused the accident could it be said that the "accident arose out of the employment?" No importance could be attached to the fact that the strain was not above the ordinary. If this point had to be considered there must be some standard of exertion for each trade. Nor should any importance be attached to the state of the man's health. If this had to be considered there should be some standard of health varying with different ages. In each case the arbitrator ought to consider whether in substance, so far as he can judge, the accident came from the disease alone or whether the employment contributed to it. In other words, did the man die from the disease alone or from the disease and the employment together? Of the other judges Lord Macnaghten and Lord Collins concurred with the Lord Chancellor, but Lord Atkinson and Lord Shaw differed. Lord Atkinson said that on the evidence either the natural termination of the disease, rupture, was reached unaffected by the work the deceased was doing, or the work accelerated the termination. The inevitable or highly probable result of a disease could not be termed an accident. In agreeing with this view Lord Shaw said that if such occurrences were to be termed accidents a new peril would be introduced into the lives of many workers who, notwithstanding debility and chronic diseases, are anxious and willing to devote their remaining powers to earning a livelihood. As has been pointed out in previous letters to The Journal, the fear expressed by the last judge has already been realized. Employers always insure against the liabilities of the Workmens' Compensation Act. Insurance companies refuse to take at ordinary rates men suffering from defects which increase the risk of accident, though these defects often in no way prevent the workman from following his occupation. The act is therefore a cause of unemployment.

## PARIS LETTER

*(From Our Regular Correspondent)*

PARIS, April 8, 1910.

### Third International Congress of Physiotherapy

The opening session of the third international congress of physiotherapy, now in progress in Paris, took place March 29 under the presidency of M. Fallières, president of the republic. Professor Landouzy, dean of the college of medicine and president of the congress, made a speech in which he traced the evolution of physiotherapy. Dr. H. Vaquez then outlined the history of the two preceding congresses. Among the countries taking part are the United States, England, Germany, Italy and Belgium.

A feature of this congress is an exposition organized by Dr. A. Weil, which includes exhibits illustrative of thermal and climatic resorts, apparatus for hydrotherapy, aerotherapy, thermotherapy, electrotherapy, radiotherapy, etc., as well as foodstuffs and exhibits illustrating dietetic régimes. One section is devoted to books and reviews of physiotherapy. In a retrospective section of physiotherapy is found the apparatus used by Duchenne of Boulogne.

### Projected Law on Abortion

The minister of justice has just laid before the bureau of the Chamber of Deputies a bill to modify the present law on abortion. Because of the excessive severity of the penalties, like hard labor, which the present law lays on the guilty woman as well as on her accomplices, those who are guilty are often acquitted, so that there is at present almost no check on abortion. Thus in 1908, out of 66 accused, 53 were acquitted. In order to escape this serious difficulty the new bill mitigates the penalties for abortion, replacing hard labor and a minimum of five years in a house of correction by imprisonment and fine. At the same time—and this is the new feature—the bill punishes incitement to abortion. There has been for some time an increase of the propaganda in favor of the limitation of births, based on the doctrines of Malthus. Abortion has been advocated through all channels, in speeches, lectures, pamphlets, handbills, newspaper advertisements, placards, etc., and it is hard not to see in a campaign of this kind one of the causes of the depopulation from which France is at present suffering. Against this propaganda French legislation has been up to the present almost disarmed, and it is just this serious want which the bill in question is intended to fill. It imposes a penalty of imprisonment for not more than three years and a fine of not more than 3,000 francs ($600) on the incitement to abortion (whether this incitement shall have been effective or not) by lectures in public places, by the sale or the offering for sale, even though not public, the exhibition, the posting, or the distribution in public places of writings, printed matter, advertisements, sketches, models, drugs, instruments, or any means whatsoever; by their distribution at houses; by the forwarding of such objects in packets or in unsealed envelopes by the postal service or by any agent of distribution or transportation.

### Medical Inspection of Schools

The minister of public instruction has just approved a bill organizing the medical inspection of schools and making it obligatory. Up to the present, medical inspection has been organized only in a certain number of communes, especially in the large cities; in the great majority of the little communes nothing has been done.

According to the new bill there is to be medical inspection on the following points:

1. The school buildings and furniture.—The medical inspection service is to be consulted concerning the choice of sites and plans and the arrangements of new educational institutions and is to point out the imperfections in those at present existing and the improvements which should be made.
2. The régime of the schools.—The medical inspection service is to make sure of the observance of rules concerning ventilation, food, heating, lighting, cleanliness, duration of sedentary work, of rest, of sleep, of meals and of physical exercise.
3. The sanitary condition of the pupils.—The medical inspector is to make an inspection of individual pupils at least twice a year. The results of this examination, which is to bear particularly on the conditions of the respiratory organs, the cutaneous system, the organs of sight and hearing and the teeth are to be made a matter of record.
4. The observance of conditions imposed on the members of the educational staff by the hygienic regulations.
5. Special hygienic measures relative to tuberculosis and contagious diseases.

The medical inspector is also to record the amount of instruction which the pupils have received in hygiene.

The remuneration of medical inspectors has been established according to a scale differing for the urban centers and for the rural neighborhoods, where the schools are often far apart from each other. For each school the basis of remuneration is the number of pupils enrolled and not that of the pupils present the day of the visit.

### The International Lannelongue Medal

Dr. Lannelongue, professor of surgical pathology at the Paris college of medicine, has just informed the Paris Surgical Society that he has founded a prize consisting of a gold medal, to be awarded every five years, and endowed by a sum of $1,000 (5,000 francs). This medal is to be international, that is, it is to be awarded to the surgeon of whatsoever country, who during the preceding ten years shall have made the most celebrated surgical discovery or performed the works which are most useful for the art and science of surgery. This medal cannot be awarded twice consecutively to the same nationality. It is to be awarded only to candidates presented by (1), the board of the Société Nationale de Chirurgie; (2) one-fourth of the other active and honorary members of the society, chosen by lot every five years; (3) the winners of the Lannelongue medal, and (4) the surgeons who are members of the faculty of ten medical colleges outside of France, two in each nationality to be chosen for the task every five years by the board of the French Société Nationale de Chirurgie. Among the nationalities from which the judges will be drawn will be the United States and Canada, as well as the South American countries. The foreign surgeons will be invited to propose a candidate; the nominations must be made before November 15 of the year preceding the annual session of the surgical society.

### The New Tax on Automobiles

The Chamber of Deputies has just voted an increase of the tax on automobiles, composed of a fixed vehicle tax and a tax proportionate to the horse-power. The vehicle tax is at Paris $10 (50 francs) for a carriage with two seats and $18 (90 francs) for a carriage with more than two seats. In the provinces it varies according to the size of the population of the cities, between $4 and $8 for a carriage with two seats and between $8 and $15 for a carriage with more than two seats. Under the proportional tax a 12-horse-power car with more than two seats will pay $30 (150 francs) in Paris and a car of 100-horse-power, with more than two seats, will pay in Paris $246 (1,230 francs). Licensed physicians will always have a right to be taxed at half rate.

### Death of Professor Gréhant

M. Nestor Gréhant, professor of general physiology at the Museum of Natural History and member of the Académie de Médecine, has just died, aged 72. He was known especially for his researches on the gases of the blood, on the poisons of the air and on carbon monoxid. In one of my letters (THE JOURNAL, Feb. 6, 1909, lii, 487) I mentioned his researches to promote the safety of mines and prevent fire-damp catastrophes.

### Death of Dr. Hennequin

Dr. Hennequin, member of the Société de Chirurgie, who was an advocate of continuous extension in the treatment of fractures, died March 24. His remarkably ingenious devices were celebrated, and he was often called on by heads of the hospital services of Paris to apply them. A few years ago, in collaboration with his pupil, Dr. R. Loewy, he published a treatise on the practical treatment of fractures of the long bones.

### The Number of Medical Students in France in 1910

The Ministry of Public Instruction has just published the results of the annual investigation into the number of students in the French universities. On January 15 last, there were in our 16 universities a total of 40,131 students, male and female, of whom almost half (17,512) are in Paris. Of this number the colleges and schools of medicine had at that date 9,721 students (8,029 medical students in the colleges and 1,692 in the schools). After Paris, which has 2,857 medical students, the colleges are ranked in the following order, according to the number of students: Lyons (746), Bordeaux (740), Montpellier (504), Nancy, Toulouse, Lille and Algiers. Among the schools Marseilles is at the head with 285 students, then Rennes and Nantes. Out of the total of 9,721 medical students enrolled in the colleges and schools there are 1,143 foreign students, among whom the Russians are most numerous (515 at Paris, 137 at Montpellier, 29 at Nancy, etc.); then come the Turks (62 at Paris), the Roumanians (43 at Paris), the Greeks, the Bulgarians, etc. The colleges and schools of medicine are attended by a total of 1,074 women students, of whom 565 are French women and 509 foreigners. The Paris college of medicine alone has 508 women students and that of Montpellier 117. The students of pharmacy number 1,448.

### Imposition of a Special Tax at the Climatic and Mineral Water Stations

The Chamber of Deputies has just passed a bill according to which the communes which possess mineral springs or climatic advantages may be officially recognized as mineral water or climatic resorts or "stations." On their own demand, these stations may be authorized to collect during the whole or part of the year a special tax, the revenue from which may be entirely devoted to sanitation or to embellishments intended to increase the popularity of the resorts. The stations also may undertake the treatment of the poor. The tax in question is a tax on transients not domiciled in the commune. The rate may be so much for each person for each day of sojourn, or so much per person independent of the duration of the stay. It may be based on the nature and the price of the lodgings occupied, etc. In any case the tax will not be due from any one longer than a month. The bill provides, moreover, for the formation of a permanent commission, under the ministry of the interior, mineral water and climatic stations of France.

### A Projected Organization of Medical First Aid on the Public Thoroughfares of Paris

At its last general assembly the Medical Syndicate of Paris again considered the organization of a service of medical aid on the public thoroughfares. There are, at present, first-aid stations in connection with all police stations, where persons injured on the public thoroughfares are first taken, and where are found medicines, dressings and means of transportation for injured persons, but no physicians. Unfortunately, the administration, up to the present, has concerned itself only with the transportation of injured persons to the hospitals, and has completely neglected the organization of the service to give immediate medical attention on the spot. There is, however, in Paris a night medical service which gives excellent results (The Journal, Oct. 9, 1909, liii, 1201), and it may be asked why the organization which works satisfactorily from 10 in the evening until 7 in the morning, every night, cannot be utilized from 7 in the morning until 10 in the evening. Of course, it is difficult to find physicians at their offices every hour in the day, but for a system of first aid by day, analogous to the night first aid, about thirty physicians would be sufficient in each quarter, each one being present at his office or at the first-aid post for two or three hours each day for a week. If one remembers in certain arrondissements in Paris, there are each day, on an average, three accidents or attacks of illness on the public thoroughfares, which makes about 20,000 a year, it may easily be seen what valuable service such an organization would render to the population of Paris. The Medical Syndicate of Paris adopted the following resolutions: 1. The first-aid posts in each quarter of Paris should be organized so that first aid should be rendered there by physicians. 2. Policemen should receive orders to take to these posts all those injured or taken ill on the public thoroughfares. 3. The medical service should be supplied by rotation among all the physicians of the quarter who have themselves enrolled. 4. Fees should be regulated by an agreement reached between the administration and the medical service.

## BERLIN LETTER

*(From Our Regular Correspondent)*

Berlin, March 31, 1910.

### Personal

Professor Gronven has been appointed director of the poliklinic for skin diseases as successor of his former chief, Prof. E. Hoffmann, who, as previously announced, is going to Bonn in place of von Doutrelepont. Here a certain bargain has occurred which allows one to infer certain transactions behind the scenes. Other vacancies in the universities have been filled in a similar way, only that the bargain is not always so plain as here.

### Medical Sunday Rest

For a long time physicians have been trying to obtain some respite from the slavery of their profession, at least on Sundays and holidays. This has been partly secured by the agreement of certain physicians for a mutual exchange of services, so that alternately on a Sunday or a holiday one of the physicians is on duty and the other at leisure. In recognition of this justifiable effort, the administration of the kingdom of Saxony a short time ago published a decree which officially brings this arrangement to the knowledge of the public. According to the decree, inasmuch as it is often difficult on Sundays and holidays to obtain prompt medical aid, a voluntary medical service has been established in Dresden and Leipsic for Sundays and holidays according to which physicians shall in turn remain at home, and every one who is in need of medical services can learn the name and residence of the physician who is on duty, either at the residences of physicians or at the police stations. This arrangement is not only in the interest of the general convenience of the public but also a benefit to the physicians themselves as they can enjoy better rest on Sundays and at night than formerly. As a similar arrangement should be established in other cities and in the large rural communities where there are several physicians, the district authorities of places where it appears suitable are urged to cooperate with the proper authorities as well as with the medical societies of the district in an advisory way.

### Campaign Against Infant Mortality in Bavaria

In a decree of the government published a few weeks ago the principles that are to govern the managing authorities and district physicians in the matter of infant hygiene are stated. Three departments are made: Outside care of infants, institutional care, and the protection of mothers and guardianship of illegitimate children. In the outside care the greatest stress is laid on educational measures, which are to be carried out, (1) by the distribution of leaflets; (2) the publication of a professional journal by the Bavarian bureau for hygiene of infants and the recommendation of good books on the care of mother and child, and (3) the delivery of lectures. The outside care will be further promoted by consulting stations, nursing premiums, midwife premiums and lying-in assistance.

The consulting stations under the supervision of physicians are to advise mothers in the care of healthy and sick infants, to encourage breast feeding and to improve the capacity of mothers in this respect where necessary. Premiums are to be given in the form of money or provisions to compensate for the decreased earning power of nursing mothers. No investigation as to worthiness and no distinction between legitimate and illegitimate children will be made, the object being to preserve the life of the infant.

Midwives are to be given prizes to induce women to nurse their infants or to take them to the consulting stations. Milk depots are to be established in close connection with the consulting stations, under the supervision of physicians, to furnish raw milk to nursing mothers or properly modified milk for infants requiring it, and also unobjectionable milk for older children. Artificial food is to be given only when paid for. Milk for infants is to be given only on prescription and fixed milk mixtures are to be avoided. Communities or societies by payment at the milk depots can get tickets for distribution to the poor.

Homes and crèches are to be established to receive children for the first three years, without reference to religion or parentage, for daily care at the cost of the food furnished. The crèches will meet the needs of working women, and will be under the daily supervision of a physician. Not more than six infants or twenty older children are to be placed under one nurse, and nutrition is to receive special attention. Mothers are to be given opportunity to nurse their children in the institution, and the institutions are to be located in factory districts convenient of access to working mothers. To avoid the spread of contagious diseases, crèches are to be separate from institutions for continuous care, and isolation rooms are to be provided for cases of suspected illness. Firms employing nursing women shall allow them time for nursing their infants without deduction of pay.

Sanatoria are to be provided for the medical treatment of infants with acute diseases, and are to receive especially unprotected and abandoned children requiring institutional care. Nursing mothers are to be admitted in limited number to supply natural nourishment in case of need. Nurses will be trained in these institutions.

Provision is to be made that working women shall be relieved from severe bodily labor in the last weeks of their pregnancies. Intelligence bureaus are to be established in the country to advise women regarding these arrangements. In larger communities homes for lying-in women and mothers are to be established for women needing care after delivery or for whom no appropriate home is provided.

# Pharmacology

## VACCINE VIRUS AND TETANUS ANTITOXIN

### Committee of Section on Pathology and Physiology Recommends Their Admission to the Pharmacopeia

*To the Section on Pathology and Physiology:* Your committee recommends that vaccine virus and tetanus antitoxin be admitted to the Pharmacopeia, and submits the following report:

#### VACCINE VIRUS

Vaccine virus was the first and it is the oldest and best specific preventive known. It is a drug in the broadest sense of the term, and as such is handled by every pharmacist. One of the first advantages in admitting vaccine virus into the Pharmacopeia would be to establish for it an official and legal name. This would help to avoid much confusion now existing on account of the bacterial vaccines and other substances called "vaccines" used in the prevention and cure of disease. For almost a hundred years vaccination was a specific term limited to the introduction of the virus of vaccinia into the skin for the prevention of smallpox. In recent years the term "vaccination" has been used in a generic sense to include the introduction of many different substances, in many different ways and for many different purposes. To establish a definite and accurate nomenclature is one of the most important functions of the Pharmacopeia.

To include vaccine virus in the Pharmacopeia would be one of the best means of calling the attention of all pharmacists to the fact that it must be kept in a cool, dry place, etc. Much of the vaccine virus on the market is inert, because not properly handled in the trade. Hence, concise, authoritative directions in the Pharmacopeia would have an educational value and would help to prevent smallpox and save life.

The objection that vaccine virus is an indefinite substance, the "active principle" of which is not known, is no longer valid, for the Pharmacopeia contains many such substances, including the ferments, against which a similar objection holds.

The objection that vaccine virus cannot be "assayed" by the average druggist also lacks force when we recall that the potency and purity of vaccine virus in interstate traffic is cared for by the federal government under the law of July 1, 1902, which relieves the pharmacist of the responsibility. Further, other substances, such as serum antidiphthericum, the testing of which requires special training and special laboratories, have been admitted to the Pharmacopeia.

The Pharmacopeia should briefly state the essential requirements of the law above mentioned concerning false labeling or marking of any package or container of vaccine virus; requiring further that each package of vaccine virus must be plainly marked with the proper name of the article, the name, address and license number of the manufacturer, and the date beyond which the contents cannot be expected, beyond reasonable doubt, to give specific results. Such information in the hands of every druggist will serve an educational purpose and also help the federal authorities in the rigid enforcement of the law.

The Pharmacopeia should briefly state the method of preparing vaccine virus and specify the difference between glycerinated preparations and dry points and the other forms on the market. As a precedent, it may be stated, that the Belgian Pharmacopeia (third edition, 1906, page 194), has introduced vaccine virus under the title of "vaccinum" and the Swiss Pharmacopeia (fourth edition, 1907, page 512), has introduced vaccine virus as "vaccinum," synonyms: "Kuhpockenimpfstoff," "vaccine," "vaccin jennèrien," "vaccino jenneriano."

#### TETANUS ANTITOXIN

We recommend that tetanus antitoxin be admitted into the Pharmacopeia for the reason that this is now a well-established, useful prophylactic; that its mode of action is understood, and that a satisfactory method of standardization exists by which uniform potency is assured.

An American unit for measuring tetanus antitoxin was established on the authority of the act of July 1, 1902, by the Public Health and Marine-Hospital Service (see Hygienic Laboratory Bulletin No. 43). This unit was promulgated Oct. 25, 1907, and is now used by all the manufacturers of tetanus antitoxin in this country, and in some cases abroad.

Tetanus antitoxin should be admitted into the Pharmacopeia on the same terms, with similar definition and similar text to that used in the case of diphtheria antitoxin.

On account of the lack of methods for determining satisfactorily the potency of other biologic products, we think it advisable not to admit them into this revision of the Pharmacopeia.

E. R. Baldwin,
George H. Weaver,
M. J. Rosenau,
Committee.

### Iron Tropon

An inquiry has been received as to the composition and value of Iron Tropon. The composition of this product seems to have varied from time to time. The manufacturers formerly stated that it contained fat, sugar, pepsin and iron in organic combination with albumin, and its use was advocated both as a food and as a medicine. It was not claimed to contain over 1 per cent. of pepsin, but tests failed to show that it contained any pepsin, or if any, such a small amount that there was not sufficient to digest the albumin in Iron Tropon itself. It was also claimed that the iron, being in organic combination with the albumin, possessed advantages over the widely used aromatic fluid preparations of iron. Tests, however, showed that the iron was not in organic combination, though even had it been, late investigations fail to demonstrate the superiority of the organic over inorganic iron compounds.

The manufacturers state in their later "literature" that Iron Tropon is a tonic and a food; that it is a compound of the food albumin tropon, 2.5 per cent. of iron in its most assimilable form, and enough chocolate to flavor it agreeably. It will be noted that they now make no claim for pepsin, nor do they state that it contains iron in organic form. In the dose recommended, a teaspoonful three times a day for an adult, the patient gets something over a grain of iron, and he might as well take an equivalent quantity of Blaud's mass, the value of which has been proved.

As a food, Iron Tropon, weight for weight, is about equal to beans and a little better than flour, although it contains a larger percentage of protein than either. In the dose stated, an invalid would get about 50 calories, or about 1/40 the necessary nourishment for a day. Tests also have shown that the albumin is difficult of digestion. In spite of this fact, the advertisement of Iron Tropon states: "A patient who takes Iron Tropon receives not only the benefit of iron medication, but at the same time his economy is supplied with perfectly assimilable albumin in sufficient quantity." It will thus be seen that the claim for pepsin in this preparation has been abandoned, that the statement as to the iron being in organic form has been modified, and that the food value of the albumin is exaggerated; but perhaps the manufacturers do not expect the physician to apply his arithmetic to such problems.

### Iridium

Dr. C. A. Dexter, Columbus, Ga., asks for information concerning the use of iridium in the treatment of acute and chronic rheumatism. Iridium is a well-known element although we have not found that it has been used as a medicine; however, we presume our correspondent refers to "Iridium (Medicinal)," sold by the Platinum Company of America. We are not able to locate this company, but in their advertising circular "Iridium (Medicinal)" is said to be "an agent for the blood, a laxative, an alterative, indicated in all disorders of the stomach, in Jacksonian epilepsy," and "a specific in rheumatism." As to its origin, it is said in the circular, "the platinum sands are associated with and composed of iridium" and some other elements, so that as far as the circular gives information the nostrum is alleged to contain the element iridium.

A few statements quoted from the circular will show that the person who wrote it knows nothing about medicine and cannot correctly use the English language: "The qualifications of Medicinal Iridium are its simplicity, purity, harmless under prolonged use, easily borne by the stomach." "It has been observed that when Medicinal Iridium acts as a laxative, it will regulate the same." "Called the family group, Iridium and Osmium are destined to become the world's benefactors in medicinal properties, thereby creating a new chapter in medical science." The circular quotes some supposed "excerpts from hundreds of letters on file, written by physicians, in the hope they may attract your attention," which bear marks of having been written by the same person who wrote the circular. Note the quality of the following statements: "Iridium has a power, purity and simplicity that pleases me; now I can make progress." "I say to you frankly, Iridium is my standard. I can get results and make progress. I am confident it aids the fibrin in the blood." "Dr. X. is pushing Iridium on five or six cases." It is not explained who Dr. X. is, but it has this to say about him: "Dr. X. is an eminent practitioner. He has made a remarkable record with Iridium and has so far never failed on cases of Jacksonian epilepsy, experimental tests have shown that Iridium increases blood corpuscles."

The man who signs himself president of the Platinum Company of America is said to be a lawyer, but is not working at it, and was formerly a promoter, fiscal agent, etc. It should not be difficult for the physician to fix the status of iridium under this sort of exploitation.

### Mrs. Winslow's Soothing Syrup—Another Baby Sacrificed

Numerous cases of poisoning have been reported[1] at different times in The Journal from the use of "soothing syrups" administered to infants. "Kopp's Baby's Friend" and "Mrs. Winslow's Soothing Syrup" have proved especially vicious in this connection. The newspapers recently contained a news item from Cheyenne, Wyoming, to the effect that an infant had been accidentally poisoned by its mother administering a "patent soothing syrup"—the name of the nostrum not being given. Dr. C. Y. Beard, Cheyenne, Wyoming, who was reported as having been called in just before the infant's death occurred, writes as follows in response to our request for the facts:

"I was called at 2:30 a. m., March 26, 1910, to see Edna N., a well-nourished babe of ten months. I found the child lying on the bed, breathing somewhat irregularly, but very slowly; there was noisy gurgling in the throat from retained secretions; the skin was waxy and somewhat cyanotic; the pulse about 50 and intermittent; the limbs were cold; there were pin-point pupils; the limbs and abdomen were insensible to pinching and to the extremes of heat and cold; the child could not be aroused enough to swallow. The usual stimulation from atropin, strychnin and alcohol with external heat failed to revive the child, who died at 4 a. m. On first inquiry the mother said the child had been given no medicine internally, but when I insisted that it was under an opiate she admitted the child was cross the afternoon before, and that an old lady advised giving her a dose of Mrs. Winslow's Soothing Syrup. This was secured from a nearby drugstore, and one teaspoonful, the designated dose, was administered about 5 p. m. The babe soon exhibited restlessness, which lasted about thirty minutes. She then fell into a sleep which they thought a very natural one until about midnight, when she began tossing her head from side to side with no motion of limbs or body. It was then found that she could not be aroused. The family physician was called, but he was out of town and I was summoned. A verdict of 'Accidental poisoning from morphin contained in Mrs. Winslow's Soothing Syrup' was given at the coroner's inquest."

## Correspondence

### Circulatory Changes in Chronic Nephritis

*To the Editor:*—In your editorial in The Journal, March 19, on "The Circulatory Changes in Chronic Nephritis," you review a purely mechanical explanation, and a theory that you call "the alternative hypothesis," attributing the cardiac and vascular phenomena of chronic nephritis to chemical excitation of the walls of the vessels by pathologic constituents of the blood.

I suggest the propriety of considering another theory. I have formed a belief that the high blood pressure found in cases of defective kidney action is a compensatory phenomenon. Whenever any functional activity is required of an organ in the body, there is always a tendency to a rise of blood pressure, just as an engine puts on more steam to go up hill. When the kidneys are required to remove from the blood waste products circulating in it, there is a tendency to increased blood pressure. When the kidneys are permanently defective, this increase of blood pressure becomes permanent, resulting in changes in the heart and blood vessels, due to a constant demand for a high blood pressure. Clinical studies of the relations of blood pressure have been to me almost a life work so I cannot in the space of a letter enter into a complete elaboration of my own conclusions, though I am sure the mere naming of the theory that the blood pressure of chronic nephritis is a compensatory phenomenon, rather than the mechanical result of obstruction or the chemical result of irritation of the walls of the blood vessels, will be sufficient to suggest the details. The mechanism by which blood pressure is raised is not clearly understood, and it is barely possible that the compensatory demand for a high blood pressure may be supplied through the action of an increased adrenalin formation.

We are not surprised at hypertrophy of the heart when a greater demand is made on it; we are just become accustomed to the idea of hypertrophy of the blood vessels; and we must become accustomed to hyper-development of blood pressure under conditions of greater demand.

Louis F. Bishop, New York.

[Comment: Dr. Bishop's suggestion does not seem to be an attempt at explanation of the physiology of the processes, but only a teleologic theory. While scientific men as a rule hesitate to deal with teleology it does seem probable that the ciculatory changes in chronic nephritis are purposeful; but the important thing for the investigator is to determine, if possible, how the changes are brought about. It was with regard to this point that our editorial was written.—Ed.]

### The Double Hernial Sac

*To the Editor:*—In The Journal (March 26, 1910, liv, 1049) is an article on "Rare Variety of Hernial Sac." Thinking it may be of interest to the readers of The Journal to know how accurately this unusual condition was described at the beginning of the eighteenth century, I give below a translation of a description by Le Blanc (Précis d' opérations de chirurgie. Paris, Méquignon, 1782, i, 58) as follows: "The hernial tumor should be examined to see if it is not composed of two hernias. Several practitioners in operating have found two hernias which passed through the ring on the same side and which formed only one tumor in the scrotum. These hernias had each its individual sac, in each of which was contained a loop of intestine or a portion of the omentum or both together." ["Il faut même examiner si la tumeur herniaire n'est pas composée de deux hernies. Plusieurs Practiciens (M. Mery, Mémoires de l'Academie Royale des Sciences ann. 1701, p. 277; M. Mertrud et M. Arnaud, Mémoires de Chirurgie, ann. 1768 Londres, pp. 78-79) ont rencontré en opérant, deux hernies qui passoient l'une et l'autre par l'anneau du même côté, et qui ne formoient qu'une seule et même tumeur dans le scrotum. Ces hernies avoient chacune leur sac particulier, dans chacun desquels étoit contenu une anse d'intestines, ou une portion d' epiploon, ou tous les deux ensemble."]

Walter M. Boothby.

### The Dire Possibilities in Handwritten Copy

*To the Editor:*—One of your compositors—or is it the proofreader?—is a great artist. He made me shed tears. I laughed and cried when I read in The Journal, April 9, page 1220, Latin "incurables," thinking I had written incunabula; my ecstasy increased when on the same page, while I believed that Weir Mitchell was where he belongs, in a haven full of muses, he was reported to have flirted with a "harem full of nurses." Too bad! Please correct.

Would you care to know that other compositors are as accomplished as yours? Here are some corrections they have invented for me. You may enjoy them. I once spoke of a hospital as a source of relief and salvation. They made it "starvation." I spoke of thyroid in different forms of cretinism. They made it "criticism." I quoted Cicero's dictum, according to which unless what we do is useful it is sterile. They made it "striped." I spoke of my Therapeutics of Infancy and Childhood. They made it "Infantry." I meant the modern Hippocrates. They made him "hypocrite."

A. Jacobi.

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[1] Brief abstracts of all these cases are given in the latest edition of the Propaganda for Reform pamphlet

# Association News

## OFFICIAL CALL

### Sixty-First Annual Session of the American Medical Association at St. Louis, June 7-10, 1910

The sixty-first annual session of the American Medical Association will be held on Tuesday, Wednesday, Thursday and Friday, June 7, 8, 9 and 10, 1910, at St. Louis, Missouri.

The House of Delegates will convene at 10 a. m., Monday, June 6. In the House, the representation of the various constituent associations for the years 1910 to 1912, is as follows:

| | | | | | |
|---|---|---|---|---|---|
| Alabama | 3 | Louisiana | 2 | Ohio | 7 |
| Arizona | 1 | Maine | 1 | Oklahoma | 2 |
| Arkansas | 2 | Maryland | 2 | Oregon | 1 |
| California | 3 | Massachusetts | 6 | Pennsylvania | 9 |
| Colorado | 2 | Michigan | 3 | Philippine Islands | 1 |
| Connecticut | 2 | Minnesota | 2 | Rhode Island | 1 |
| Delaware | 1 | Mississippi | 2 | South Carolina | 2 |
| Dist. of Columbia | 1 | Missouri | 5 | South Dakota | 1 |
| Florida | 1 | Montana | 1 | Tennessee | 3 |
| Georgia | 2 | Nebraska | 2 | Texas | 5 |
| Hawaii | 1 | Nevada | 1 | Utah | 1 |
| Idaho | 1 | New Hampshire | 1 | Vermont | 1 |
| Illinois | 9 | New Jersey | 3 | Virginia | 3 |
| Indiana | 4 | New Mexico | 1 | Washington | 2 |
| Iowa | 3 | New York | 11 | West Virginia | 2 |
| Kansas | 2 | North Carolina | 2 | Wisconsin | 3 |
| Kentucky | 4 | North Dakota | 1 | Wyoming | 1 |

The twelve scientific Sections of the American Medical Association, the Medical Department of the Army, the Medical Corps of the Navy, and the United States Public Health and Marine-Hospital Service are entitled to one delegate each.

The General Meeting, which constitutes the opening exercises of the scientific functions of the Association, will be held at 10:30 a. m., Tuesday, June 7.

The Registration Department will be open from 8:30 a. m. until 5:30 p. m., on Monday, Tuesday, Wednesday and Thursday, June 6, 7, 8 and 9, and from 9 to 10 a. m. on Friday, June 10. WILLIAM C. GORGAS, President.

GEORGE H. SIMMONS, General Secretary.

## THE ST. LOUIS SESSION

### Railroad Rates and Special Trains—Further Announcement by the Committee on Transportation

Since the last report of the Committee on Transportation information has been received from the Southeastern Passenger Association, whose territory embraces states south of the Ohio and the Potomac and east of the Mississippi rivers that a fare of one and one-half cents a mile in each direction will be granted, which is practically a rate of one and one-half fares, the same as the other territories. The Southwestern Passenger Association has granted a rate of two cents a mile in each direction from all points in this territory to the eastern gateways.

In the trans-Missouri territory, which covers the states of Kansas, Colorado, Nebraska, Utah, Wyoming, North Dakota and South Dakota west of Missouri river, the regular tourist rates to Missouri river stations added to one and one-half fare rates from such stations to St. Louis and return will be in force.

For the special trains from Chicago to St. Louis over the Chicago and Alton railroad reservations may now be made of C. R. Davidson, assistant general passenger agent, Rector Bldg., Monroe and Clark streets, Chicago.

For the special trains from Kansas City, reservations may be made of W. H. Abel, assistant general passenger agent, Junction Ticket Office, Ninth and Main streets, Kansas City, Mo.

For the special train from Toledo, Ohio, application should be sent to E. L. Browne, district passenger agent, Clover Leaf Route, Toledo, Ohio.

For reservations over the New York Central lines from New York and the east, apply to L. F. Vosburgh, general eastern passenger agent, 1216 Broadway, New York.

For reservations over the Boston and Albany from Boston apply to A. S. Hanson, Boston.

Reservations should be made as early as possible in order that all may be accommodated.

M. L. HARRIS, Chairman.

# Book Notices

CONSTIPATION AND ALLIED INTESTINAL DISORDERS. By Arthur F. Hertz, M.A., Assistant Physician, Physician in Charge of the Electrical Department and Demonstrator of Morbid Anatomy at Guy's Hospital. Cloth. Pp. 344, with 34 illustrations. Price, $4. London: Oxford University Press, 1909.

This monograph is a full consideration of the subject, but includes a great deal of original research by the author, the preliminary account of which gained him the Radcliffe Prize at Oxford University. He has devoted three years to research on the physiology and pathology of movements of the alimentary canal. These studies have been made by observing with the aid of the *x*-ray the movement of test-meals made visible by the admixture of bismuth salts. The book contains many diagrams illustrating the results of such examinations.

The scope of the book will be comprehended when it is stated that about 40 pages are devoted to the physiology of intestinal movements and of defecation; more than 100 pages to causes of constipation; 100 to symptoms and 80 to treatment.

In recent years many have believed that antiperistalsis occurs, but Hertz has failed to see any evidence of it in his numerous experiments and observations. He has seen a bismuth emulsion flow under a pressure of three feet of water from the rectum to the cecum, making the whole colon visible. "But the flow was produced solely by hydrostatic pressure." Moreover, *x*-ray observations show that there is very little variation in the rate of passage through different parts of the colon." The average times taken for a test meal are four and one-half hours to the cecum, six and one-half hours to the hepatic flexure, nine hours to the splenic flexure, and eleven hours to the commencement of the iliac colon. He finds that the progress through the colon is exceedingly slow except as it is stimulated by meals. Often no appreciable change could be detected after an hour, but the feces advanced considerably after a meal. Hertz confirms Cannon's statement that when the ileum pours its contents into the empty cecum characteristic sounds are audible, but he does not agree that they are produced rhythmically.

Owing to the comfort and health of many individuals who defecate only at long intervals it is difficult to define constipation exactly. Our author says that it is "a condition in which none of the residue of a meal taken eight hours after defecation is excreted within forty-eight hours." He divides all cases into two principal classes: first, those in which food is delayed in passing from the stomach to the pelvic colon: second, those in which there is not complete evacuation of the pelvic colon at proper intervals. In the first class passage through the intestines is delayed while defecation is normal, and in the second the reverse is true.

The first class he subdivides, first, into cases with deficient motor activity which may be due to, (a) weak intestinal muscles, (b) deficient reflex activity of the intestines, (c) inhibition of motor activity, and (d) enterospasm; second, into cases due to excessive force required to carry feces to the pelvic colon which may be due to, (a) obstruction by feces or foreign bodies and (b) narrowing of intestinal lumen.

The second class, in which there is defective defecation he subdivides into two groups, first, inefficient defecation from, (a) habitual disregard of call to defecate, (b) weakness of voluntary muscles, (c) unfavorable posture, (d) weakness of reflex, and (e) a hysterical condition; second, obstacles to efficient defecation from, (a) hard and bulky feces, (b) functional and organic stricture of rectum, (c) rectoceles, and (d) invagination. He elaborates this subject interestingly and fully and illustrates it with well-chosen cases.

Under the head of symptoms he discusses those produced by constipation and provocative of it; as well as briefly some of the diseases producing it. It is unnecessary to comment to any extent on this portion of the book. The author does not describe the dyspnea sometimes associated with constipation as well as he might. He says also that albuminuria and cylindruria occasionally result from constipation. Our observation is that they often do.

His discussion of prophylaxis is excellent, although he adds nothing to what is known. Moreover, what is said of treatment can only be commended. The whole subject is thoroughly considered; all the measures from suggestion to surgery are described and their value weighed. In passing it may be noted that he disagrees with many in thinking that olive-oil enemas soften fecal masses less than water. Nevertheless he gives these enemas their full quantum of praise but assigns other and sufficient reasons for their utility.

The book is excellent and the author is to be congratulated on his good work.

A Handbook of Medical Diagnosis. By J. C. Wilson, A.M., M.D., Professor of the Practice of Medicine and Clinical Medicine in the Jefferson Medical College. Cloth. Pp. 1412, with 408 illustrations and 14 full-page plates. Price, $6. Philadelphia: J. B. Lippincott Co.

There are already many excellent books on medical diagnosis. It must have taken a good deal of courage for Dr. Wilson to come on the stage asking the favor of the medical audience for still another work on the same subject. His justification for such an act is, as he tells us in the preface, not only the expressed wishes of colleagues and the needs of successive classes of pupils, but the conviction that something different in method and a new arrangement of details were urgently needed. We confess that before looking at the book critically we were skeptical as to finding much that was new, even in arrangement and method of handling. But it is a pleasure to state that the author has fulfilled his promise and an eminently satisfactory book is the result. The four parts into which the book is divided are: (1) "Medical Diagnosis in General;" (2) "The Methods and Their Immediate Results;" (3) "Symptoms and Signs;" (4) "The Clinical Applications." In a sense each one of these parts is a complete whole. There is little overlapping or repetition. Part 2, for instance, could be printed as a small volume on laboratory and physical methods of examination. Part 3 is a brief yet comprehensive discussion of symptoms and signs and their significance. Here are treated such phenomena as fever, cough, pulse, vomiting, tenesmus, edema, paresthesia, vertigo, convulsions and tremor. In the last part is an excellent and discriminating treatment of the subject of the clinical application of what has gone before, in the diagnosis of medical diseases. The practitioner, therefore, may utilize the book in a variety of ways. He may go directly to the pages discussing the diagnosis of the disease he believes he has in hand or may turn to its most striking symptoms, the interpretation of which is not clear to him, or may find directions as to laboratory technic for tests helpful in diagnosis of the case he has in hand. It is this combination of these four parts, with their distinct characteristics yet intimate correlation, that makes the book especially valuable to the practitioner. Its aim is to be practical rather than theoretical. In this endeavor the author is successful. Little space is taken up with hypotheses and theories, few names of authorities are mentioned, and almost no bibliographic references are given. Criticism on this score might easily be made, for such a plan carries with it more or less of dogmatism in the way of making statements. We feel, however, that our author has been wise in electing to follow this method. We see everywhere the marks of the up-to-date physician of wide experience in hospital and private practice, and the one who knows the needs of the student struggling to master the rudiments of diagnosis and the perplexities of the general physician who becomes tangled in trying to solve the mysteries of the complicated concrete case.

Dr. Wilson's style is scholarly and clear. The illustrations are excellent and most of them really show what they were designed to show; they are in no sense put in for mere display or for padding. The work assigned to others, for instance, nervous diseases, the eye, the stomach, the *x*-ray, and some of the laboratory work, has been well done. It bears unmistakable evidence of the editorial supervision and active participation of Dr. Wilson. The book, while containing over 1,400 pages is, because of paper and type, not unduly bulky. Larger type, thicker paper, a little increase in the size of illustrations, a little wider spacing, might easily have been employed to make two or even three volumes that would have sold for double the amount charged for this one volume. We feel that the book represents a sincere effort on the part of the author and the publishers to put forth a good, honest book, and that they have succeeded. Whoever buys this work may feel that he has one of the very best.

The Open-Air or Sanatorium Treatment of Pulmonary Tuberculosis. By F. Rufenacht Walters, M.D., Physician to the Crooksbury Sanatorium. Cloth. Pp. 323, with illustrations. Price, $2.25 net. New York: William Wood & Co., 1909.

Dr. Walters has been connected with sanatoriums for consumptives in England for many years and writes this book from abundant experience. There is nothing new in it, but it contains an excellent and full account of what is to-day regarded as the best treatment for tuberculosis of the lungs. It can be heartily commended. If it is to be criticized at all it is because the author has combined two books in one cover, or rather one book and a supplement, for they cannot be read apart. The first half is intended for patients and laymen interested in the subject, as well as for medical men, and the last part for medical men more especially. This causes the consideration of most topics twice in a way which is not agreeable to the reader. Much of the matter in the last part could have been incorporated in the first with advantage to patients, and much of the remainder could have been put in long foot notes; as, for instance, details of the various tuberculin tests, of tuberculin treatment, and of many other subjects.

The author looks on exercise, in cases for which it is adapted, as necessary "to increase resistance to tuberculosis by causing the absorption of a small dose of tubercle poison." The exercise should be "such as will give a dose just short of what will cause constitutional disturbance."

He does not believe in indiscriminate stuffing. Patients whose weight is up to standard need not be fed to gain more. Exercise to harden them may necessitate more food. Moreover, when patients have fever they often need more food. He believes also that most consumptives take too little fat.

The volume contains in its second part much detailed information of importance to physicians treating such patients.

Modern Surgery (General and Operative). By John C. Da Costa, M.D., Professor of Surgery and Clinical Surgery in Jefferson Medical College, Philadelphia. Sixth Edition. Cloth. Price, $5.50 net. Pp. 1502, with 966 illustrations. Philadelphia: W. B. Saunders Co., 1910.

This work, which has reached its sixth edition in a comparatively few years, has received a number of notices in these columns in the past.

Notwithstanding the fact that it is less than three years since the fifth edition of this surgery appeared, almost every section has been altered or added to for the sixth edition. Among new matter particular mention may be made of arteriorrhaphy, a procedure which is founded on the investigations of Murphy, Carrel and Matas; Crile's arteriovenous anastomosis for effecting transfusion of blood; Brewer's tubes for transfusion; the use of Halsted's aluminum bands in the treatment of aneurism; the operative treatment of recent fractures; Horsley's operation for chronic spinal meningitis; the use of positive and negative air-pressure in intrathoracic surgery. Murphy's method of treating acute peritonitis; Cushing's operation of decompression for brain tumors; Bier's intravenous local anesthesia; the parathyroid glandules; the intraglandular extirpation of goiter; the Lorenz treatment of hip-disease by weight-bearing and fixation; cystoscopy and catheterization of the ureters; Bier's treatment of inflammation; Wright's views on inflammation; immunity with a sketch of antibodies, of opsonins and phagocytosis; bacterial vaccines; Wassermann's reaction for syphilis and numerous other subjects. The new matter added has been judiciously selected, and while the volume has increased somewhat in size it has not yet reached unwieldy proportions. The work is an excellent one and one of the most complete of the single-volume surgeries.

Ionic Surgery in the Treatment of Cancer. With a Chapter on Ionization in Surgical Tuberculosis and in Hemorrhoids. By G. Betton Massey, M.D., Attending Surgeon to American Oncologic Hospital. Cloth. Price, $3. Pp. 239, with 80 illustrations. New York: A. L. Chatterton Co., 1910.

In this book, part of which has appeared in the form of articles in journals devoted to electrotherapeutics, the author urges the giving of greater attention to correct diagnosis in the early stages of malignant growths, and emphasizes the importance of treatment at this time. He discusses the nature of malignant growths, the search for possible cancer germs, and the differential diagnosis, as well as the destruction of these tumors by the local cataphoric diffusion of metallic ions. He gives the details of his method of treatment as well as a description and choice of apparatus. Cases are reported of malignant tumors of various parts of the body cured after ionic treatment, and photographs are reproduced of the patients before and after operation.

THE ESSENTIALS OF CHEMICAL PHYSIOLOGY FOR THE USE OF STUDENTS. By W. D. Halliburton, M. D., Fellow of the Royal College of Physicians. Cloth. Price, $1.50. Pp. 280, with 71 illustrations. Seventh Edition. New York: Longmans' Green & Co., 1909.

When a text-book has run through six editions in a few years its place as a standard may be regarded as established. Halliburton's "Essentials of Chemical Physiology" is exactly what its title proclaims it to be; the essentials of the subject are considered systematically and concisely, while clearness of exposition is not sacrificed to brevity. In this latest edition the author has added, with much discretion and good judgment, the most important recent advances. If the student uses this book as a basis for his study of physiologic chemistry, and does a proper amount of collateral reading from more extensive treatises, he should secure a good understanding of the subject; the danger is that with such a compact little epitome as this he will be content with its contents and fail to seek wider sources of information. We may add a particular word of approval of the expression "chemical physiology," for the reversed term, "physiologic chemistry," has commonly led to a misappreciation of the field covered and objects sought by most of the workers in this branch of science.

EUGENICS. The Science of Human Improvement by Better Breeding. By C. B. Davenport, Carnegie Institution of Washington, Director Department of Experimental Evolution. Cold Spring Harbor, N. Y. Cloth. Price, 50 cents net. Pp. 35. New York: Henry Holt & Co., 1910.

This neatly gotten up booklet contains an essay which the author read by invitation before the American Academy of Medicine at Yale University, Nov. 12, 1909. Davenport adopts unquestioningly the Mendelian theories of heredity and applies them to human mating. Whether all would agree with him in such complete acceptance is a question. Some of his statements appear rather positive, such as that, so far as he is aware, there is no case on record where two imbecile parents have produced a normal child. Considering the relativity of the term "imbecility" and "normal," this assertion might be qualified. There are all degrees of general imbecility and of partial imbecility, which latter is frequently the accompaniment of genius in some other direction. It is also pretty safe to say that a perfectly normal individual is a rarity if he exists anywhere. An investigation into the relation between the "ordinary" and the "normal" human being might be both interesting and enlightening. The investigations along the line taken in this book, however, are in the right direction and the author has stated some approximate truths very well. The family trees given are striking as supporting his views regarding heredity.

LE GLOBULIN DES MAMMIFÈRES. Par le docteur M. Aynaud, Préparateur à la Faculté. Paper. Pp. 229, with illustrations. Paris: G. Steinheil, Editeur, 2 Rue Casimir-Delavigne, 1910.

This monograph on the blood platelets contains a comprehensive discussion of the anatomy, physiology and pathology of these, the least studied of all the blood elements. The author has been associated for some years with Achard in an active investigation of these structures, and includes his own observations with an ample background of the previous work of others, American investigators, we are pleased to notice, receiving recognition. J. H. Wright's important observations would probably receive more consideration by Aynaud if the latter had seen Wright's preparations instead of mere inadequate photographic reproductions. The broad and liberal discussion of the topic assures this monograph a stable place in the literature of a baffling subject, while the simplicity and clarity of the text is refreshing to one who has often had to beat his way through the average German monograph of similar nature and scope.

EMERGENCY SURGERY. For the General Practitioner. By John W. Sluss, M.D., Professor of Anatomy, Indiana University School of Medicine. Second Edition. Flexible Leather. Price, $3.50 net. Pp. 747, with 605 illustrations. Philadelphia: P. Blakiston's Son & Co., 1910.

The second edition of this book has been changed in certain chapters to meet criticisms offered, additions to others have been made, and it also contains an entirely new chapter on Cesarean section. A number of new illustrations have been added to the large number of the former edition, some of which do not add to its value. Some subjects are still included in the book which could not strictly be regarded as coming under the head of emergency surgery, but perhaps that is not a serious criticism. A serious one is that the author has not advised sufficient caution in the use of spinal anesthesia, which is one of the new topics included in this edition. Spinal anesthesia should not be attempted by the general practitioner, perhaps, nor by any one else outside of a hospital. The inclusion of the new topics has somewhat enlarged the book, which remains a practical and useful guide for the general practitioner, who necessarily does some surgery.

CLAIMS ARISING FROM RESULTS OF PERSONAL INJURIES. The Relation Injury Bears to Disease and Disease to Injury. B. W. Edward Magruder, M.D., Associate Professor of Clinical Medicine, College of Physicians and Surgeons. Cloth. Price, $2.50. Pp. 266. New York: The Spectator Company (1910).

Dr. Magruder's book is a compilation with an extensive bibliography on the relation between injury and disease, with especial reference to the manner in which certain diseases may add to claims for injuries by retarding recovery. Dr. Magruder states in the preface that efforts to find in medical literature the information needed to assist him in passing intelligently on the problems which daily arose in his work led him to the compilation of this volume. Overe fifty diseases are considered with special reference to their relation to injuries. Additional chapters have been added on tumors, *x*-ray burns, *x*-ray diagnosis and post-mortem examinations. The book is unique and will be of great value to all physicians engaged in insurance work as well as to lawyers and others needing references to current literature on this subject.

DUNKELFELDBELEUCHTUNG UND ULTRAMIKROSKOPIE IN DER BIOLOGIE UND IN DER MEDIZIN. Von N. Gaidukov. Paper. Price, 8 marks. Pp. 84, with 18 illustrations. Jena: Gustav Fischer, 1910.

A very useful review of the dark-field illumination and ultramicroscopy, with especial reference to medicine and biology, particularly botany. The author's researches lie in the field of the minute structure of cells. The importance of dark-field illumination in recognizing the *Spirochæta pallida* is given due prominence. A full bibliography is appended. The illustrations are good.

# Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

## DOSAGE OF ANTIPYRIN

Dr. Claude W. Bankes, Philadelphia, calls attention to an error in a prescription in the Department of Therapeutics, March 26, p. 1059. The dosage of antipyrin is given correctly in the metric system but incorrectly in apothecaries weight, by a typographic error. The prescription should read as follows:

| ℞ | gm. or c.c. | |
|---|---|---|
| Antipyrini | 3 | gr.xl |
| Syrupi | 50 | or fl℥iss |
| Aquæ menthæ piperitæ | ad, 100 | ad, fl℥iii |

M. et Sig.: A teaspoonful, in water, three or four times a day.

This would be the dose of antipyrin for a child from three to four and one-half years of age.

## DATA WANTED ON DANGERS OF COMMON COMMUNION CUP

*To the Editor:*—Please ask your readers if any one can furnish me with well-authenticated history of cases of contagion spread through the use of the "common cup" at the communion table? I shall be most grateful to any one furnishing me with such data, as some of our medical missionaries are having no easy undertaking in their efforts to show some of our clerical missionaries that now, while the church is young here, is the time to introduce the "individual cups" at the Lord's Supper. It is hard for me to understand how any one could object to introducing this reasonable, intelligent, clean and prophylactic measure at this stage of civilization, yet objection is made.

JOHN J. MULLOWNEY,
Methodist Episcopal Mission, Peking, China.

ANSWER.—No authenticated cases of disease traceable to the common communion cup have come to our knowledge. This may be due in part to the facts that the communion cup might not suggest itself readily as a possible source in the history of a case; that infection conveyed through this medium might have a more remote origin (i. e., might have been conveyed by the lips of a healthy individual from an infected cup to the communion cup); and that, in some cases, sentiment might hinder a thorough investigation. The possibility of infection through this source was recognized as early as the fourteenth century, when the prevalence of the plague caused the temporary disuse of the common communion cup (Martin: *Med. Klin.*, Dec. 15, 1907; abstr. in The Journal, March 7, 1908, p. 786). Infection through this medium is an undeniable possibility. Cases of disease transmitted through common drinking cups are on record, and pathogenic bacteria have been cultivated from communion cups after use. (Mueller: *Deutsch. med. Wchnschr.*, April 6, 1905; abstr. in The Journal, May 27, 1905, p. 1722.) The practice of wiping the edge of the cup with a napkin after the use by each communicant offers no absolute security. The only satisfactory prophylactic measure would be the use of individual cups, each one either brought by the communicant for his own use, or, if furnished by the church, sterilized immediately before the service. At the present time, when many states are prohibiting the use of the common cup in public places, and many private concerns are, on their own initiative, abolishing the public cup in their establishments, it seems highly desirable that those institutions which stand as the representatives of religion and morality should not set an example of disregard of public welfare by clinging to a custom which is, to say the least, hygienically under grave suspicion.

## DISPOSAL OF HUMAN EXCRETA

*To the Editor:*—Can you give me any information concerning the disposal of human excreta in small inland towns where a regular sewer system cannot be installed? The common privy or closet system is now in use, but I should like to find a way to improve it. In these towns the flies are not only a nuisance, but positively dangerous, and it occurs to me that by better disposition of the excreta we may be able to decrease the number of flies and possibly eliminate a very fruitful and dangerous source of infection. In my opinion more attention to the elimination of old *Musca domestica* and some of his relatives will greatly simplify the battle with the tubercle bacillus and the numerous enteric infections. Would occasional (say once a week) use of formaldehyde solution be efficient and economical, or would powdered unslaked lime be better?

B. E.

Answer.—Where sewers are not available the dry earth method of treating the excrement is inexpensive and less dangerous than the open privy. In order to prevent the leaching of the liquid portions into the soil with danger of contaminating springs or wells, even at considerable distances away, privy vaults should be built of concrete, or of stone or brick with cement lining. The bottom of the vault should be but a few inches below the level of the ground and should slope toward an opening in order to facilitate the removal of the contents. The receptacle may also be made more cheaply in the shape of a box, large pail or can placed on the ground level. This receptacle may be emptied conveniently, and, if it is of metal and without punctures, it is practically as safe as the concrete or cement-lined vault. Two or three inches of dry earth or ashes should be spread on the bottom of the vault, and each time it is visited a quantity of dry earth or ashes should be thrown down. If the earth used is top soil containing nitrifying bacteria, fermentation and putrefaction will be prevented and destruction of the excrement will be effected. In some army camps crude oil is sprinkled on the dejecta by each one who uses the latrine, a method which is effective in discouraging flies. Flies should be totally excluded from the privy by a close-fitting door, or by a screen if light is admitted. It is of advantage to admit the direct sunlight when the weather will permit for its effect in destroying odors and bacteria, provided that flies can be excluded; otherwise the place had better be dark. The vault should be cleaned often; in summer, about once a week. The work is not very offensive when enough ashes or dry earth is used to take up all the moisture. Besides, the action of the nitrifying bacteria very soon destroys the offensive material. The addition of unslaked lime with earth, as suggested, would also effect this. The use of formaldehyde, besides being expensive, would probably not be effective because it would not reach all portions of the material. When there is sickness in any family, either typhoid or any other transmissible disease, the greatest care should be taken in disposing of the stools of the person affected. They should be rendered liquid and treated with formaldehyde or the other disinfectants commonly used for this purpose before being disposed of in the vault with the dry earth covering. Extra care should of course be taken that no flies have access to these discharges.

If the material from the vault is to be used as fertilizer, it should be remembered that human wastes differ from the wastes of the lower animals chiefly in being much richer in nitrogenous matter, from which ammonia, and, finally, nitric acid, are derived. Consequently, unless thoroughly decomposed and mixed with large quantities of earth before being applied, they are destructive of plant life. From the point of view of human hygiene, it would be safest not to use such material around plants from which food is obtained, or, at least, not around those plants in which the edible product comes in contact with the soil, such as most vegetables and trailing small fruits, like strawberries.

A far better method of purification and disposal of sewage, which may be employed by individual property owners, though at some expense, is that by means of septic tanks or settling tanks, with removal of the residue at long intervals. This method is available where houses are provided with running water, either from a public supply or by means of the individual compressed air or gravity systems, which are frequently used now in country towns or on farms.

As to the elimination of flies, one of the most frequent breeding places of the domestic fly is in horse-manure, and other means besides exclusion from human feces would have to be employed to prevent the multiplication of this pest. If horse-manure is kept cleaned up in the stable and thrown into a screened bin or at once scattered, the fly nuisance in a community will be eliminated to a considerable extent.

The subject of sewage disposal in small towns is discussed in a paper by Dr. G. B. Lake in the *Journal of the Indiana State Medical Association* for February, 1909; abstracted in The Journal, March 27, 1909, p. 1062. References to other articles appearing in The Journal are as follows:

Fuller: Water-Supply and Sewage Disposal, The Journal, Oct. 7, 1905, p. 1059.

Moore: Sewage Purification by Septic Tank and Chemical Precipitation, The Journal, Aug. 24, 1907, p. 677.

Baker: Sewage Disposal—the Septic Tank, *Ill. Med. Jour.*, September, 1907; abstr. in The Journal, June 22, 1907, p. 2150.

Starkey: Economical Purification of Sewage in Rural Districts, *Brit. Med. Jour.*, Sept. 14, 1907; abstr. in The Journal, Oct. 12, 1907, p. 1314.

The lack of privies among the poor classes, especially in some parts of the South and the custom of depositing excretions on the ground, with the consequent soil pollution, are regarded as perhaps the most prolific means of the spread of the hookworm infection. A great campaign has been inaugurated throughout the South to do away with this custom and with the open privy, to which flies, birds, pigs and dogs have access, by which means also the hookworm infection is spread. The establishment of some sort of inclosed privies by means of which the dejecta can be taken care of properly is one of the necessary measures in the elimination of hookworm disease in the South.

# The Public Service

## Medical Department of the Army

Changes for the week ended April 16, 1910:

Baker, David, major, detailed instructor Camp of Instruction for infantry officers of the organized militia, State of Florida, St. Augustine, Fla., May 16 to 20, 1910.

Van Dusen, James W., major, left Fort Riley, Kan., en route to Fort Leavenworth, Kan., for duty as member of a general court martial to meet at that station April 11, 1910.

Bourke, James, capt., ordered to accompany detachment of troops from Fort Leavenworth, Kan., to the Presidio of San Francisco. On completion of this duty to return to his proper station.

Beeuwkes, Henry, 1st lieut., M. R. C., ordered to proceed to New York City, on official business pertaining to the Medical Department.

Wing, Frank F., dental surgeon, on arrival at San Francisco, will proceed to Fort D. A. Russell, Wyo., for duty at that station.

Mason, George L., dental surgeon, on arrival at San Francisco, will proceed to Fort Snelling, Minn., for duty at that station.

Skinner, George A., major, relieved from duty at Fort Lawton, Wash., and ordered to Fort D. A. Russell, Wyo., for duty.

Marrow, Charles E., major, relieved from duty at Fort D. A. Russell, Wyo., and ordered to Fort Lawton, Washington, for duty.

Maus, Louis M., col., left Chicago, on 10 days' leave of absence.

Gunckel, George I., dental surgeon, returned to Fort McPherson, Ga., from temporary duty at Fort Moultrie, S. C.

Oliver, Robert T., E. S. D. S., reports departure from detached duty at Fort Slocum, en route to his station, Fort Hamilton, N. Y.

Stearns, Charles H., 1st lieut., M. R. C., granted 15 days' leave of absence about May 10, 1910.

Powell, William A., capt., granted 3 months' leave of absence, with permission to go beyond the sea, when relieved from duty in the Philippine Division.

Holland, Josiah H., 1st lieut., M. R. C., granted 10 days' leave of absence.

Baker, Charles L., 1st lieut., M. R. C., will report to Capt. E. S. Wright, 1st Cavalry, Presidio of San Francisco, to accompany and for duty with troops to be stationed in Sequoia National Park, Cal.

Boards of Officers of the Medical Corps are appointed to meet at the places designated for the purpose of conducting examinations of applicants for appointment as 1st Lieutenants in the Medical Reserve Corps: Ancon, Canal Zone, Panama; Fort Andrews, Mass.; The Army General Hospital, San Francisco; Fort Banks, Mass.; Fort Benjamin Harrison, Ind.; Columbus Barracks, Ohio; Fort Crook, Neb.; Fort D. A. Russell, Wyo.; Fort Des Moines, Iowa; Fort Douglas, Utah; Fort Ethan Allen, Vt.; Fort George Wright, Wash.; Fort Howard, Md.; Jackson Barracks, La.; Fort Jay, N. Y.; Jefferson Barracks, Mo.; Fort Lawton, Wash.; Fort Leavenworth, Kan.; Fort Lincoln, N. D.; Fort Logan, Colo.; Fort Logan H. Roots, Ark.; Fort McHenry, Md.; Fort McIntosh, Tex.; Fort McKinley, Me.; Fort McPherson, Ga.; Fort Meade, S. D.; Fort Monroe, Va.; Fort Moultrie, S. C.; Fort Oglethorpe, Ga.; Fort Porter, N. Y.; Fort Riley, Kan.; Fort Sam Houston, Tex.; Fort Screven, Ga.; Fort Sheridan, Ill.; Fort Sill, Okla.; Fort Snelling, Minn.; Fort Thomas, Ky.; Vancouver Barracks, Wash.; Walter Reed General Hospital, Takoma Park, D. C.; Fort Wayne, Mich.; Fort William H. Harrison, Mont.

Company C., Hospital Corps, Capt. William A. Wickline, Medical Corps, commanding, is relieved from duty at Fort Niagara, N. Y., and will proceed to the Walter Reed General Hospital, Takoma Park, D. C., for station.

Mills, R. H., dental surgeon, reported for temporary duty at Fort Ethan Allen, Vt.

Hill, Eben C., lieut., left Madison Barracks, N. Y., on 2 months' sick leave of absence.

Graham, George D., dental surgeon, left Fort Crook, Neb., en route to Fort Omaha, Neb., for temporary duty.

## Medical Corps of the Navy

Changes for the week ended April 9, 1910:

Richardson, R. R., P. A. surgeon, detached from the Naval Hospital, Portsmouth, N. H., and ordered to the Naval Medical School, Washington, D. C., for instruction.

Asserson, F. A., P. A. surgeon, detached from the Naval Hospital, Boston, and ordered to duty at the Naval Hospital, Portsmouth, N. H.

Shippen L. P., asst.-surgeon, detached from the *Buffalo*, and from duty at Camp Elliott, Panama, Canal Zone, and ordered home; resignation accepted.

Johnson, J. T., acting asst.-surgeon, resignation as Acting Assistant Surgeon, dated July 27, 1909, accepted, to take effect April 18, 1910; detached from the Naval Medical School and ordered home.

Wieber, F. W. F., medical inspector, commissioned Medical Inspector from Dec. 13, 1909.

Bachman, R. A., P. A. surgeon, detached from the *St. Louis* and ordered to duty at the Naval Hospital, Narragansett Bay, R. I.

Jenness, B. F., P. A. surgeon, detached from the *Milwaukee* and ordered to the Naval Recruiting Station, Buffalo, N. Y.

McGuire, L. W., asst.-surgeon, detached from the *Montana* and ordered to the *South Dakota*.

Hermesch, H. R., asst.-surgeon, detached from the *South Dakota* and ordered to the *Montana*.

Changes for the week ended April 16, 1910:

Randall, J. A., P. A. surgeon, detached from the Naval Hospital, Canacao, P. I., and ordered to duty at the Naval Hospital, Olongapo, P. I.

Trible, G. B., asst.-surgeon, detached from the *Relief* and ordered home.

Dollard, H. L., asst.-surgeon, detached from the Naval Hospital, Canacao, P. I., and ordered to the *Relief*.

Sterne, C. F., asst.-surgeon, detached from the *Washington* and ordered to the *Iris*.

Duhigg, J. T., asst.-surgeon, detached from the *Iris* and from the Pacific Torpedo Fleet, and ordered to Washington, D. C., for examination for promotion.

Valz, E. V., asst.-surgeon, ordered home to wait orders on completion of examination for promotion.

The following officers have been commissioned Assistant-Surgeons: D. C. Walton, J. A. Bass, G. E. Thomas, C. B. Camerer, G. E. Robertson, W. H. Connor, A. B. Davidson, W. L. Irvine, E. W. Phillips, W. A. Bloedorn, A. B. Cecil, I. W. Robbins, H. E. Jenkins, G. R. W. French, S. D. Hart, F. W. Thompson, W. J. Riddick and J. J. A. McMullin.

DuBose, W. R., medical director, April 12, commissioned Medical Director from March 5, 1910.

## Public Health and Marine-Hospital Service

Changes for the week ended April 13, 1910:

Brown, B. W., surgeon, granted 4 days' leave of absence from April 4, 1910.

Grubbs, S. B., P. A. surgeon, detailed to attend the annual meeting of the American Medical Association, to be held in St. Louis, June 7-10, 1910. Granted 1 month's leave of absence en route from and return to station.

Lloyd, B. J., P. A. surgeon, granted 7 days' leave of absence from April 6, 1910, under paragraph 191, Service Regulations.

McCoy, George W., P. A. surgeon, detailed to represent the Service at the meetings of the California Public Health Association and the State Medical Society, to be held in Sacramento, Cal., April 18-21, 1910.

Warren, B. S., P. A. surgeon, detailed to attend the meeting of the National Conference of Charities and Corrections, to be held in St. Louis, May 19-26, 1910.

Roberts, Norman, P. A. surgeon, granted 6 days' leave of absence from April 11, 1910, under paragraph 191, Service Regulations. Granted 7 days' leave of absence from April 17, 1910.

Collins, G. L., P. A. surgeon, granted 1 month's leave of absence from April 14, 1910.

Alexander, E., acting asst.-surgeon, granted 30 days' extension of leave on account of sickness from Feb. 26, 1910, and 30 days' annual leave from March 28, 1910.

Bailey, C. A., acting asst.-surgeon, granted 5 days' leave of absence from April 8, 1910.

Foster, S. B., acting asst.-surgeon, granted 15 days' leave of absence from April 15, 1910.

Wetmore, W. O., acting asst.-surgeon, granted 11 days' extension of leave on account of sickness from March 25, 1910.

Board of medical officers convened to meet at the Marine Hospital, Baltimore, for a physical examination of a gunner of the Revenue Cutter Service. Detail for the board: Surgeon W. P. McIntosh, chairman; Assistant Surgeon D. C. Turnipseed, recorder.

# *Medical Education and State Boards of Registration*

## COMING EXAMINATIONS

ARKANSAS: Regular; Little Rock, May 10-11. Sec., Dr. F. T. Murphy, Brinkley.

FLORIDA: Eclectic; Tampa, May 2. Sec., Dr. Hiram J. Hampton, 1805 Florida Avenue.

GEORGIA: Regular; Augusta, May 2-3, Atlanta, May 4-7. Sec., Dr. I. H. Goss, 297 Hancock Avenue, Athens. Homeopathic: Atlanta, May 15. Sec., Dr. R. E. Hinman, 153 Whitehall Street.

LOUISIANA: Regular; New Orleans, May 19-20. Sec., Dr. Felix A. Larue, 211 Camp Street. Homeopathic; New Orleans, May 2. Sec., Dr. Gayle Aiken, 1102 St. Charles Avenue.

MASSACHUSETTS: State House, Boston, May 10-12. Sec., Dr. E. B. Harvey, Room 159, State House.

MISSISSIPPI: State Capitol, Jackson, May 10. Sec., Dr. S. H. McLean, Jackson.

NEBRASKA: State House, Lincoln, May 11-12. Sec., Dr. E. Arthur Carr.

NEVADA: Carson City, May 2. Sec., Dr. S. L. Lee.

NEW YORK: Albany, May 24-27. Chief of Examinations Division, Mr. Charles F. Wheelock, Albany.

TENNESSEE: Memphis, Nashville and Knoxville, May 3-4. Sec., Dr. C. A. Abernathy, Pulaski.

## Alabama January Report

Dr. W. H. Sanders, chairman of Alabama State Board of Medical Examiners, reports the written examination held at Montgomery, Jan. 11-14, 1910. The number of subjects examined in was 10; total number of questions asked, 80; percentage required to pass, 75. The total number of candidates examined was 42, of whom 22 passed and 20 failed. The following colleges were represented:

| College | Year Grad. | Per Cent. |
|---|---|---|
| PASSED | | |
| University of Alabama | (1908) 82.3; (1909) | 77.8, 87.1, 82.4 |
| Birmingham Medical College | (1908) 79.6; (1909) | 75, 75. 75.1. 76.5, 78.5, 82.8, 88.3. |
| University of Georgia | (1905) | 81.8 |
| Tulane University of Louisiana | (1909) | 75.6 |
| Medical College of Ohio | (1908) | 76.7 |
| University of Pennsylvania | (1909) | 89.3 |
| Vanderbilt University | (1901) 80.4; (1909) | 77.8 |
| University of Tennessee | (1908) 78.3; (1909). | 75.9 |
| Chattanooga Medical College | (1908) | 78 |
| University of Virginia | (1909) | 84.1 |
| FAILED | | |
| University of Alabama | (1908) 65.2; (1909) | 69.7 |
| Birmingham Medical College | (1909) | 71.7 |
| Atlanta College of Physicians and Surgeons | (1909) | 68.5, 69.3 |
| Atlanta School of Med. | (1906) 67.3; (1907) 65.4; (1908) | 54.4, 69.2 |
| University of Louisville | (1909) | 69.4 |
| University of the South | (1907) 59.7; (1908) | 48.5 |
| University of Nashville | (1908) | 70.1 |
| Chattanooga Med. Coll. | (1907) 52.3; (1908) 57.4; (1909) | 70.2 |
| University of Tennessee | (1908) | 61.7 |
| Knoxville Medical College | (1908) | 48.4 |
| Meharry Medical College | (1902) 70.6; (1908) | 71.7 |

The following questions were asked:

### CHEMISTRY

*(Answer Eight, no more)*

1. What is the difference between analytic and synthetic methods in chemistry? Illustrate each. 2. Explain the reaction which occurs when the aqueous solutions of the two parts of a Seidlitz powder are mixed. 3. Write the equations which show the reaction occurring when corrosive sublimate and potassium iodide in solution are brought together. 4. What is the essential element of all acids? Differentiate between hydracids and oxyacids? 5. Give a test for $H_2SO_4$ when an adulterant in vinegar. 6. Give the technical names of (a) aqua regia, (b) oil of vitriol, (c) green vitriol, and the formula of one of them. 7. What is the chemical composition of ordinary alum? 8. Give the chemical reaction of (a) tears, (b) bile, (c) blood, (d) saliva, (e) milk, and state what salt causes acidity of urine. 9. Give a test for ferrous salts. 10. Explain the difference between a sulphate and a sulphite. Give an example of each. 11. Give tests for albumin and sugar in urine. 12. Describe a chemical test for blood.

### ANATOMY

*(For Graduates of Less than Five Years' Standing)*

1. Describe the upper third of the femur. 2. Give the class of joint, the articulation, and ligaments of the shoulder joint. 3. Trace blood from the heart by way of the subclavian artery to the circle of Willis, naming the arteries uniting to form the circle. 4. Name the muscles of the anterior chest, and give origin and insertion of the largest one of them. 5. Name the main superficial venous trunks of the upper arm, describing one of them. 6. Describe the gall-bladder and bile-ducts. 7. Describe the great sciatic nerve. 8. Describe the rectum.

*(For Graduates of More than Five Years)*

1. Name the bones of the lower extremity. 2. Name and locate the valves of the heart. 3. Describe in full the sartorious muscle. 4. Locate the spleen and describe its gross anatomy. 5. Describe

in full the pulmonary veins. 6. Describe the contents in Scarpa's triangle and give their relations. 7. Name the lobes and ventricles of the brain. 8. Name the ligaments supporting the uterus and describe its blood supply.

### PHYSIOLOGY

1. Explain the functions of the spinal cord. 2. What are the functions of the trifacial or fifth pair of cranial nerves? 3. What is meant by cell action? Give examples. 4. What are the supposed functions of the spleen? 5. What are the supposed functions of the thyroid gland? What symptoms sometimes follow its removal? 6. Explain the glycogenic function of the liver. 7. How is the equilibrium of the circulation of the blood maintained in the body? 8. What are the functions of the skin?

### ETIOLOGY, PATHOLOGY, SYMPTOMATOLOGY, AND DIAGNOSIS OF DISEASES

1. Give the etiology of cirrhosis of the liver. 2. Give the etiology of pyelitis. 3. Give the pathology of arterial sclerosis. 4. Give the symptoms and diagnosis of hookworm disease. 5. Give the differential diagnosis between pericarditis and acute pleurisy. 6. Give the pathology of cerebrospinal meningitis. 7. Give the etiology of erysipelas. 8. Give the pathology of pneumonia.

### OBSTETRICS AND OBSTETRIC OPERATIONS

1. What is meant by the inclined planes of the pelvis? 2. What are the forces by which the child is expelled? 3. Give operation for adherent placenta. 4. Give mechanism of left occipito-posterior position. 5. How would you manage a shoulder presentation? 6. Give causes and treatment of asphyxia in a new-born child. 7. How would you apply forceps at the inferior strait when the occiput has rotated to the pubic symphysis? 8. Give the degrees of perineal laceration and management of each.

### GYNECOLOGY

1. Give causes and treatment of hemorrhage of the uterus. 2. Give the cause and treatment of amenorrhea. 3. Define ectopic pregnancy and give varieties. 4. Give differential diagnosis between fluid and solid neoplasms in the abdominal cavity. 5. Under what conditions and why would you prefer vaginal to abdominal hysterectomy? 6. Give symptoms of fibroid tumors of the uterus. 7. Give etiology of retro-displacement of the uterus. 8. Describe the technic of a gynecologic examination.

### SURGERY

1. Give general rules for the treatment of wounds. 2. Give symptoms and treatment of traumatic spreading gangrene. 3. Give general rules for the treatment of tubercular abscesses. 4. Give differential diagnosis between chancre and chancroid. 5. Give treatment of a compound, comminuted fracture of the femur. 6. Give symptoms and treatment of subcoracoid dislocation of head of humerus. 7. Give symptoms and treatment of stone in the kidney. 8. Give treatment of penetrating gunshot wound of the abdomen.

### PHYSICAL DIAGNOSIS

1. In what pathological conditions of the lungs is moderate dulness found; in what is absolute dulness found? 2. Give differential diagnosis between acute bronchitis and lobar pneumonia. 3. What are the principal points of difference between pleuritic friction sounds and bronchial rales? 4. Give the diagnostic signs of aortic aneurism. 5. What are the conditions most favorable for the production of metallic tinkle? 6. Give the differential diagnosis between endocarditis and pericarditis. 7. Give the diagnostic symptoms of emphysema of the lungs. 8. Differentiate between aortic stenosis and mitral insufficiency.

### EYE, EAR, NOSE AND THROAT

1. Give symptoms and management of acute catarrhal conjunctivitis. 2. Give the symptoms, dangers, and management of gonorrheal ophthalmia in the adult and in the new-born. 3. Give the management of ulcer of the cornea. 4. In what part of the ear does cerumen sometimes become impacted, and how diagnosed and treated? 5. What is the seat of acute suppurative otitis media, and what the symptoms, dangers, and management? 6. In the absence of the special instrument for the purpose how would you arrest an alarming hemorrhage from the nose? 7. What is the most conclusive symptom of diphtheria and how ascertained? What is the most generally accepted treatment? Give in detail the method of administering the treatment, and the dose. 8. Name three instances in which intubation of the larynx would be indicated. Name three in which laryngotomy or laryngo-tracheotomy would be required, and describe the operation.

### HYGIENE AND MEDICAL JURISPRUDENCE

1. What is the period of incubation of smallpox? of measles? Give the differential diagnosis between these two diseases. 2. What is immunity? What susceptibility?

3. How is typhoid fever disseminated? Give the hygienic management of a case. 4. Describe briefly the proper location and construction of a school building. 5. Define malpractice.

6. What are illusions? delusions? 7. Give the differential diagnosis between strychnin poisoning and tetanic convulsions. 8. What are the symptoms of acute poisoning from coal tar derivatives?

## Arizona January Report

Dr. Ancil Martin, secretary of the Arizona Board of Medical Examiners, reports the written examination held at Phoenix, Jan. 3-4, 1910. The number of subjects examined in was 9; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 5, of whom 3 passed and 2 failed. The following colleges were represented:

| College | Year Grad. | Per Cent. |
|---|---|---|
| PASSED | | |
| Hahnemann Medical College and Hospital, Chicago | (1906) 76.5; (1907) | 75 |
| University Medical College, Kansas City | (1905) | 81 |
| FAILED | | |
| University of Louisville | (1909) | 68.6, 73.3 |

# *Marriages*

Aaron Bray, M.D., to Miss Sophia Pollock, both of Philadelphia, April 5.

John Parr, M.D., Methuen, Mass., to Miss Katherine Smith, of Boston, April 5.

Otto Schmidt, M.D., Bethany, Mo., to Miss Dora Mink, of St. Louis, Mo., April 13.

Robert Stevens Page, M.D., Bel Air, Md., to Miss Grace Rogers Street, at Bel Air, April 6.

James T. Jarrett, M.D., Portsmouth, Va., to Miss Anna Andrews, of Roanoke, Va., March 31.

Francis de Sales Dube, M.D., Amasa, Mich., to Miss Estella Isabell Derse, of Milwaukee, recently.

Walter S. Lawrence, M.D., to Miss Merle Mauldin, both of Memphis, Tenn., at Monroe, La., April 5.

Joseph Longworth Nichols, M.D., New York, to Miss May Morgan, at Saranac Lake, N. Y., April 5.

Samuel Henry Hairston, M.D., to Miss Nellie Vaughn Johnson, both of Meridian, Miss., March 16.

Edwin M. Howg, M.D., Petersburg, N. D., to Miss Emma Christine Thorson, of Sisseton, S. D., April 7.

Edgar Harold Willard, M.D., Mount Pleasant, Md., to Miss Mary Louise Gittings, at Knoxville, Md., April 2.

# *Deaths*

**Andrew Heermance Smith, M.D.** College of Physicians and Surgeons, New York City, 1858; a member of the Medical Society of the State of New York; president of the New York Academy of Medicine in 1903 and 1904; assistant surgeon Forty-third New York Volunteer Infantry during the Civil War, and assistant surgeon in the Army until 1867; a member of the American Climatological Association; physician to the Presbyterian, St. Luke's, St. Mark's and the Woman's Hospital; and since 1895, vice-president of the New York Post-Graduate Medical School and Hospital; died at his home in New York City, April 8, from arteriosclerosis and myocarditis, aged 72. At a special meeting of the Board of Directors of the New York Post-Graduate Medical School and Hospital, April 11, resolutions of affection and esteem were unanimously adopted.

**Robert Breckenridge Christian, M.D.** University of Virginia, Charlottesville, 1870; a member of the American Medical Association; a charter member of the Arkansas Medical Society; ex-president of the Pulaski County Medical Society, a member of the International Association of Railway Surgeons; secretary of the State Board of Health from 1893 to 1905; from 1898 to 1901, physician to the State School for the Blind; physician to the Arkansas Confederate Home; local surgeon at Little Rock for the Missouri Pacific Railroad from 1882 to 1889; physician in charge of the Pulaski County Hospital in 1891 and 1892, and surgeon of the Little Rock Street Railway and Electric Company from 1892 to 1897; died at his home in Little Rock, April 8, aged 60.

**Anson Luman Clark, M.D.** Eclectic Medical Institute, Cincinnati, 1861; formerly president of the National Eclectic Medical Association; one of the founders and for 35 years president of, and emeritus professor of obstetrics in Bennett Medical College, Chicago; gynecologist to Bennett Hospital; attending physician and surgeon to Sherman Hospital, Elgin, Ill.; local surgeon to the Chicago, Milwaukee and St. Paul Railway; for 14 years a member and treasurer of the State Board of Health; a member of the Twenty-seventh General Assembly; a member and for five years president of the Board of Education of Elgin; assistant surgeon of the One Hundred and Twenty-seventh Illinois Volunteer Infantry throughout the Civil War; one of the most prominent and esteemed eclectic practitioners of the west; died at his home in Elgin, April 11, from uremia, aged 73.

**Edward Champe Carter, M.D.** University of Virginia, Charlottesville, 1880; a member of the American Medical Association, Medical Society of the Philippine Islands, Manila Medical Society, and Association of Military Surgeons of the United States; Lieutenant Colonel in the Medical Corps, U. S. Army; chief surgeon at Fort Sheridan, Ill.; formerly instructor in the care of troops and diseases of the chest and sanitation in the Cavalry and Infantry School, Fort Leavenworth, Kan.;

formerly health commissioner of Manila, and a member of Opium Commission; died in the Army and Navy General Hospital, Hot Springs, Ark., April 14, from pneumonia, aged 55.

**Richard Gray Herron, M.D.** Western Pennsylvania Medical College, Pittsburg, 1889; of Pittsburg; a member of the American Medical Association; chief surgeon of the Pennsylvania Railroad Lines East, and for twenty years surgeon to the company; for several years a member of the staff of the West Penn Hospital, and since 1900 a member of the surgical staff of the Allegheny Hospital; died in that institution, April 9, from dilatation of the heart, aged 44.

**Charles B. Mallery, M.D.** Albany (N. Y.) Medical College, 1886; a member of the American Medical Association; president of the Aberdeen (S. D.) District Medical Society in 1903, and of the South Dakota State Medical Association in 1905; secretary of the local board of pension examining surgeons; a member of the board of health of Aberdeen; died in St. Luke's Hospital in that city, April 3, from diphtheritic endocarditis, aged 45.

**James R. Kewley, M.D.** Chicago Medical College, 1876; of Chicago; a member of the American Medical Association and of the Chicago Medical Examiners' Association; oculist and aurist to the People's Hospital; a member of the staff of Mercy Hospital for several years; an Odd Fellow of high rank; died in Eustis, Fla., April 14, from myocarditis, aged 56.

**Frank M. Sawyer, M.D.** Bennett Medical College, Chicago, 1878; College of Physicians and Surgeons, Chicago, 1884; a member of the American Medical Association; secretary of the board of health of South Bend, Ind., from 1888 to 1890; member of the board of directors of Epworth Hospital; died at his home, April 9, from cerebral hemorrhage, aged 59.

**George Louis Horn, M.D.** University of Pennsylvania, Philadelphia, 1868; for twenty years an employee of the Baltimore postoffice and superintendent of the money order division; formerly a member of the school board and city council of Baltimore; died at his home in Walbrook, Baltimore, April 8, from heart disease, aged 62.

**Samuel Pierpont Ladd, M.D.** New York University, New York City, 1879; who was about to be arrested on the charge of having performed a criminal operation, died suddenly in his office in Moosup, Conn., April 6, from the effects of cyanid of potassium, believed to have been self-administered with suicidal intent, aged 61.

**John R. King, M.D.** Bellevue Hospital Medical College, 1867; a member of the Ohio State Medical Association and Cincinnati Academy of Medicine; for 33 years local surgeon of the Pennsylvania System; and for 43 years a practitioner of Cincinnati; died at his home in Hyde Park, April 10, from heart disease, aged 65.

**Thomas Neil McLean, M.D.** Yale University, New Haven, 1871; a member of the American Medical Association; one of the founders of and consulting physician to the Elizabeth (N. J.) General Hospital; died in Johns Hopkins Hospital, Baltimore, April 8, from pneumonia, following influenza, aged 67.

**Charles Fay Amos, M.D.** University of the South, Sewanee, Tenn., 1895; a member of the American Medical Association; surgeon for the Baltimore and Ohio Railroad at various points in West Virginia until 1909, when he moved to Ohio, died at his home in Youngstown, March 21, from pneumonia, aged 39.

**Alfred Fowler Rudd, M.D.** American Medical College, Eclectic, Cincinnati, 1857; died at his home in Jefferson City, Mont., March 13, from the effects of an incised wound of the throat, supposed to have been self-inflicted with suicidal intent, while despondent on account of the recent death of his wife, aged 77.

**Arthur Alvin Holmes, M.D.** Harvard Medical School, 1865; a member of the Connecticut State Medical Society; a surgeon in the Federal Service during the Civil War; consulting physician to Bridgeport Hospital; died at his home in Bridgeport, March 24, from pneumonia, following influenza, aged 71.

**Charles Schumacher, M.D.** University of Göttingen, Germany, 1866; is reported to have died at his ranch twenty miles north of Pasco, Wash., March 30, from the effects of a gunshot wound of the head, self-inflicted, it is believed, with suicidal intent, aged 71.

**Clyde Edmund Botkin, M.D.** Purdue University, Indianapolis, 1907; formerly a member of the American Medical Association; a member of the Indiana State Medical Association; died at his home in Parker, April 7, from pneumonia, aged 27.

**Maurice F. Linquist, M.D.** Eclectic Medical College of the City of New York, 1869; a veteran of the Mexican War and a surgeon of volunteers during the Civil War; died at his home in New Haven, April 3, from pneumonia, aged 83.

**David P. Lagrone, M.D.** Medical College of the State of South Carolina, Charleston, 1861; surgeon in the Confederate Service during the Civil War; died at his home in Johnston, S. C., April 2, from cerebral hemorrhage, aged 77.

**John Field Grinstead, M.D.** St. Louis College of Physicians and Surgeons, 1889; surgeon for the Wabash Railroad at Keytesville, Mo.; died suddenly at the home of his sister in St. Louis, April 6, from heart disease, aged 45.

**Rose Morgan, M.D.** Woman's Medical College of Pennsylvania, Philadelphia, 1895; a member of the Medical Society of the State of Pennsylvania; died at her home in Williamsport, March 29, from carcinoma of the intestine.

**William H. Elliott, M.D.** American Medical College, Eclectic, St. Louis, 1878; who conducted a sanitarium for many years at Havana, Ill.; died at his home in Bardolph, Ill., March 24, from carcinoma of the rectum, aged 74.

**Haven Palmer, M.D.** Medical School of Maine, Brunswick, 1871; a member of the American Medical Association; for 27 years a practitioner of Plymouth, N. H.; died at his home April 8, from nephritis, aged 66.

**Charles Bartlett Hammond, M.D.** Harvard Medical School, 1880; a member of the American Medical Association, and New Hampshire Surgical Club; died at his home in Nashua, April 8, from uremia, aged 56.

**John Milton Hawks, M.D.** Physio-Medical College, Cincinnati, 1847; a veteran of the Civil War; and surgeon of the Thirty-third Colored Infantry; died at his home in Hawk's Park, Fla., April 2, aged 73.

**Arthur Sylvester McNatt** (registration, Eighth Judicial District Board, Texas, 1901); a member of the Hunt County Medical Association; died at his home in Campbell, February 5, from pneumonia, aged 57.

**Mary Freeman Coil, M.D.** Cooper Medical College, San Francisco, 1882; a member of the Medical Society of the State of California; died at her home in Woodland, Aug. 19, 1909, from arteriosclerosis, aged 58.

**Jason Milburn Randall** (license, years of practice, Iowa, 1886); of Birmingham; a veteran of the Civil War; died at the home of his daughter in Waterloo, April 3, from organic heart disease, aged 67.

**Crawford McWilliams, M.D.** College of Physicans and Surgeons, Chicago, 1890; a member of the Iowa State Medical Society; died at his home in Ames, April 2, from pleuropneumonia, aged 44.

**John Lafayette Warren, M.D.** University of Pennsylvania, Philadelphia, 1856; well-known as a naturalist and sportsman; died at his home in West Chester, Pa., April 8, from pneumonia, aged 72.

**Lawrence A. Highland, M.D.** University of Buffalo, 1903; of Buffalo, N. Y.; died in the Contagious Diseases Hospital in that city, April 2, from scarlet fever contracted while attending a patient, aged 30.

**William A. Davis, M.D.** Louisville Medical College, 1904; of Collinsville, Miss.; who was shot in a street duel in Deemer, Miss., March 28, died twenty hours later at Oktibbeha, Kemper county, aged 34.

**Return J. Pope, M.D.** Washington University, St. Louis, 1871; a member of the State Medical Association of Texas; died suddenly at his home in Sweetwater, April 6, from heart disease, aged 65.

**Samuel E. Sanderson, M.D.** Eclectic Medical College of Pennsylvania, Philadelphia, 1876; a pioneer practitioner of Minneota, Minn.; died in Madison, Wis., February 5, from nephritis, aged 59.

**Clarence Duane Heflin, M.D.** Keokuk, Iowa, Medical College, 1895; formerly of St. Joseph, Mo.; died in St. Francis Hospital, Kewanee, Ill., March 29, from pernicious anemia, aged 41.

**Arthur James Darrah, M.D.** University of Vermont, Burlington, 1867; a member of the Vermont State Medical Society; died at his home in Enosburg Falls, April 3, from influenza, aged 65.

**Clarence Godfrey Vary, M.D.** Jefferson Medical College, 1898; a member of the Michigan State Medical Society; died at his home in Battle Creek, April 7, from nephritis, aged 36.

**Frederick E. Green** (Registration, Thirteenth Judicial District Board, Texas, 1898); died in his apartment in Hutchins, April 9, from the effects of an overdose of chloroform.

**Thomas G. McClellan, M.D.** Memphis, 185—; of Dallas, Texas; for several years treasurer of Fayette county; died at the home of his grandson, Aug. 18, 1909, aged 84.

**William T. Coffman, M.D.** Central Medical College, of St. Joseph, Mo., 1902; died at his home in Unadilla, Neb., April 23, 1909, from intestinal obstruction, aged 45.

**Joel Thomas Bell, M.D.** University of Nashville, Tenn., 1858; died at the home of his daughter in Guthrie, Ky., March 30, from pneumonia following influenza, aged 78.

**Henry Clay Cress, M.D.** Jenner Medical College, Chicago, 1901; of Chicago; died in Provident Hospital in that city, Nov. 15, 1909, from pneumonia, aged 34.

**John B. Crowley, M.D.** Philadelphia College of Medicine and Surgery, 1858; for forty-five years a practitioner of Sullivan, Ind.; died at his home, April 7, aged 84.

**George Francis Haynes, M.D.** Eclectic Medical Institute, Cincinnati, 1872; died at his home in Chicago, January 2, from cerebral hemorrhage, aged 73.

**John H. Elrick, M.D.** Jefferson Medical College, Philadelphia, 1858; died at his home in Harrisville, Pa., January 24, from capillary bronchitis, aged 80.

**Frederick William Scheid, M.D.** Pulte Medical College, Cincinnati, 1881; died suddenly at his home in Toledo, April 7, from heart disease, aged 50.

**Joseph P. McNutt, M.D.** Medical College of Virginia, Richmond, 1870; died at his home in Princeton, W. Va., April 5, from acute gastritis.

**James B. Cowan, M.D.** University of Nashville, Tenn., 1878; died at his home in Lebanon, Tenn., Oct. 3, 1909, from angina pectoris, aged 52.

**Robert E. McLelland** (state certificate, Texas, 1904); died in his room in Houston, Texas, March 19, from tuberculosis, aged 45.

# *Medical Economics*

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

## THE PUBLIC PRESS AND THE PUBLIC SCHOOLS AS FACTORS IN THE ANTITUBERCULOSIS EDUCATIONAL CAMPAIGN

By M. T. Field, M.D.
SALEM, MASS.

So much has been written and said concerning public instruction on tuberculosis that there seems to be little excuse for any further literature on the subject. Many of the antituberculosis educational methods adopted by boards of health and special societies, are excellent and far-reaching in the good results produced. On the other hand, some of them, while perhaps ingenious, are not very effective, either because they influence only a relatively small number of people or because they influence them only in an unimpressive manner.

Two agencies that are within the reach of all health authorities have not been employed as frequently as they should—the public press and the public schools. These two agencies present almost unlimited opportunities for distributing antituberculosis information among the people. The "dosage" can be made as large or as small as is desired, and can be repeated as often as necessary. In this way, practically all the people can be reached in a very short time, with only a small expenditure of money.

The purpose of this paper is to describe a plan adopted by the Salem Board of Health during the year 1909 which employed, in a thorough manner, the public press and the public schools, in its antituberculosis educational campaign. Early in the year, illustrated circulars were printed and distributed throughout the city, in the factories, stores, etc. These folders touched on important features of the disease and called attention to the fact that antituberculosis articles were to be published daily in the local papers by the board of health. Every one was advised to read them. These articles were printed as ordinary news in a prominent part of the paper and in the same place each day, and were inserted with ordinary large type headings. They were made as readable as possible, considerable attention being paid to conditions as they existed in Salem. Much stress was laid on the importance of early treatment, and the great care that should be used to avoid infection, particularly when there was more or less exposure to the disease in the same household. The articles continued every day for nearly a month. They were then followed by a "question box department," which the board of health opened in the papers. In these columns suitable questions were answered daily. Many of these questions touched on features that were difficult to deal with in the regular articles. Judging from the various encouraging reports that came to us from time to time, we are firmly convinced that the newspaper publicity was productive of much good, and there was no evidence of any phthisiophobia resulting from it.

Our attention was next directed to public school instruction. The board of health prepared a well-illustrated pamphlet of about 75 pages entitled, "The Story of Tuberculosis, Man's Greatest Enemy," expressly for the use of school children. We tried to make this as readable as possible, at the same time treating of all the essential features of tuberculosis. Every effort was made not to arouse undue morbidity. Permission was obtained from the school board and church authorities to introduce this publication as a text-book, into the seventh, eighth and ninth grades of the grammar schools and into the high and parochial schools; much interest was manifested by both teachers and pupils.

The text-books were distributed with the understanding that at the end of the course of study, each child would be required to answer, in writing, a set of questions submitted by the board of health. This was done in order to promote more diligent study and also to enable us to judge how well the children grasped the subject. Children were also advised to take the pamphlets home and encourage other members of the household to read them.

The method of teaching adopted in the schools was as follows: In the grammar grades, this study was taken up every day during the reading hour. The portion of the book to be read was designated by the "reading teachers," who explained the things that were difficult to understand and encouraged and assisted the pupils in many ways. This continued for about three weeks. At the end of this time, each child was required to answer the board of health questions in writing, and was urged to use his own words as much as possible. The pupils of some of the schools were required to answer the questions in writing, first at home in conjunction with other members of the family and after this, a memory examination was held in school, the pupils answering ten questions each day for three consecutive days. In the high school the study was introduced into the literature class. The pastor in charge of one of the parochial schools gave several cash prizes for the best papers written by the children of his school.

The following is the list of examination questions answered in writing by over 3,000 school children. (The population of Salem is 39,000.)

1. What is tuberculosis?
2. Describe briefly its cause.
3. What is consumption?
4. What are the three common ways for the germs of tuberculosis to enter the body?
5. Is tuberculosis inherited?
6. What is meant by "predisposition?"
7. Is it possible to prevent tuberculosis?
8. How may this be done?
9. Why is it important to take care of all sputum, especially consumptives' sputum?
10. Describe the proper methods of disposal of consumptives' sputum.
11. What is the significance of "open" and "closed" tuberculosis?
12. Why is consumption called a house disease?
13. How can the home be made sanitary?
14. What are the evil results of house dust, dampness and improper ventilation?
15. Why are bare floors and rugs more hygienic than fixed carpets?
16. What is the value of regulated bathing?
17. Why do drunkenness and other bad habits frequently lead to tuberculosis?
18. Describe briefly the essential features in the treatment of tuberculosis.
19. Why should a love of outdoor life be cultivated?
20. Are advertised "cures" of any value?
21. How curable is tuberculosis?
22. Why is it desirable to obtain treatment early?
23. Why should very sick patients not be advised to seek a change of climate?

24. What are some of the advantages and disadvantages of home treatment?
25. How can it be made safe to live in the same household with a consumptive patient?
26. What is the value of soap as a disinfectant?
27. Why is sanitarium treatment so successful?
28. What useful purpose do day and night camps and open air schools serve?
29. Is it possible to prevent the occurrence of one case of consumption after another in the same family?
30. How can this be prevented?

These questions were answered by pupils from 11 to 18 years of age. It was not our intention at first to include the younger children, but we were urged to do so by some of the teachers. The results proved their contention that the subject was within the understanding of children even 11 or 12 years of age.

The majority of the papers were extremely good. Any one given the opportunity to glance over them would at once be convinced that the subject matter was well understood. Some of these papers are to be published in the local press. It is the intention of the board of health to have the teaching of this subject, followed by examinations, repeated once a year.

As a result of this year's work, we feel justified in drawing the following conclusions:

1. Tuberculosis as a study can be introduced into the public schools without conflicting in any way with the other school work and without creating morbidness among the pupils.
2. Even young children 11 or 12 years of age can, with proper assistance, master the essential features of the subject.
3. A very powerful educational influence can be exerted by children thus instructed in their own houses and elsewhere.
4. The method of teaching which compels the pupil to study the subject carefully in order to answer correctly the examination questions is, in our opinion, better than any other plan we know of—such as occasional lectures by physicians.
5. If this method of antituberculosis instruction could be adopted in every city and town throughout the country, year after year, it would mean that every future man and woman —every father and mother educated in this country, would have received a good antituberculosis education which almost unconsciously would lead to a more sanitary way of living, resulting in benefit in many ways, and protecting not alone against tuberculosis but against other diseases as well.

We believe that it would be an excellent plan for state medical societies or the state boards of health to take charge of the antituberculosis education of school children, sending out examination questions from time to time in this subject, just as the Board of Regents in New York state does now on other subjects. In this way, general interest would be aroused that could not possibly be produced in any other way and much benefit would result therefrom.

## A National Department of Health

From all reports it is evident that there is a general and widespread approval on the part of the medical profession of the country for the measure to create a national Department of Health. Resolutions have already been passed favoring a department by the following county societies: Adams county, Ill.; Lee county, Ill.; Tazewell county, Ill.; Mercer county, Ky.; Merrimack county, N. H.; New Orleans Parish, La.; Sebastian county, Ark.; Montgomery county, Ark.; Pulaski county, Ill.; Daviess county, Mo.; Washington county, Tenn.; Washington county, Iowa; Washington county, Ark.; Fourth District Society, S. D.; Madison county, Ala.; Alameda county, Cal. The Commercial Club of North Platte, Neb.; the Florida Press Association, and the Hobart, Okla., Chamber of Commerce have also taken action.

Editorial comments show that the movement has the endorsement of the public press. Extracts from a few of the editorials received follow:

The *Wilkes-Barre* (Pa.) *Record* says, April 11, "Congress has before it a bill providing for the consolidation of the various health agencies into a federal bureau. The movement has been endorsed by the national platforms of the two great parties and by President Taft. A dispatch from Washington states 'it is appreciated that there is little or no hope of action at this session.' It is impossible to see why there should be further delay. The proposition is not revolutionary. It merely provides that various agencies already established shall be brought under one management, in order that there may be a concerted and harmonious fight against disease so far as it lies in the power of the federal government to pursue that work. . . . Science has pointed out the way to the rescue. The public demand for it has been created. There is absolutely no reason why congress should longer defer the enactment of a measure advocated by the national and state medical associations, the party platforms, the President and the best thought of the nation."

The *St. Paul* (Minn.) *Pioneer-Press* says, "Senator Owen of Oklahoma in a speech supporting his bill to provide for a Department of Health . . . presented to the Senate some statistics that should make the people of the country think. . . . Even if the conditions are only a small part of what he says and if only a minor fraction of what he claims could be accomplished, a Department of Health would be worth while. Let us conserve lives and health of the people along with our other resources, for these are our greatest resource."

The *Chicago Examiner* says: "Senator Owen's bill, providing for the establishment of a national Department of Health, should speedily become a law. . . . If there be any subject of government that is essentially interstate and that requires uniform, nation-wide control it is disease. Microbes pay no attention to political divisions—they have no regard for state lines. . . . Disease germs are so furtive and insinuating that to deal with them effectively requires that they shall be attacked wherever and whenever found. A sanitary campaign in New York will often be the best possible protection for Illinois. . . . Senator Owen's bill has no shadow of despotism in it. By its terms all federal officials whose duties relate to 'the medical, surgical, biologic or sanitary service or any question relative thereto' (excepting the departments of the War and the Navy) are integrated in the proposed Department of Health. . . . A large corps of attentive and capable students and observers scattered throughout the country, and all coordinating their work in one intelligent system, cannot fail to accomplish much good. What the Weather Bureau is to storms the proposed department would be to disease—and something more. The bill ought to pass!"

## POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
Bowling Green, Kentucky

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

### Ninth Month—Second Weekly Meeting

#### Diseases of Nasal Septum

Deviations: Etiology, pathology, operative treatment.
Perforation of Nasal Septum: Etiology, treatment.
Injuries of Nose: Pathology, diagnosis, treatment.

#### Diseases of the Accessory Sinuses of the Nose

Inflammation of the Antrum of Highmore: Etiology, diagnosis, treatment.
Inflammation of the Frontal Sinus: Varieties, etiology, symptoms, treatment.
Inflammation of the Ethmoid Cells: Pathology, symptoms, treatment.
Empyema of the Sphenoidal Cells: Symptoms, treatment.

#### Diseases of the Nasopharynx

Postnasal Catarrh: Adenoids. Hypertrophy of pharyngeal tonsil. Symptoms, treatment. Chronic bursitis.

#### Diseases of the Oropharynx

Acute Pharyngitis: Diagnosis, treatment.
Simple Chronic Pharyngitis: Etiology, diagnosis.
Chronic Follicular Pharyngitis: Symptoms, treatment.
Atrophic Pharyngitis.
Ulcerative Pharyngitis.
Phlegmonous Pharyngitis.
Retropharyngeal Abscess.

# *Society Proceedings*

## COMING MEETINGS

Amer. Assn. of Genito-Urinary Surgeons, Washington, D. C., May 3-4.
Amer. Assn. of Pathologists and Bacteriologists, Washington, May 3-5.
American Climatological Association, Washington, D. C., May 3-5.
American Dermatological Association, Washington, D. C., May 3-5.
American Gynecological Society, Washington, D. C., May 3-5.
American Laryngological Association, Washington, D. C., May 3-5.
Am. Laryn., Rhin. and Otol. Society, Washington, D. C., April 28-30.
Amer. Medico-Psychological Association, Washington, D. C., May 3-5.
American Neurological Association, Washington, D. C., May 3-5.
American Ophthalmological Society, Washington, D. C., May 3-4.
American Orthopedic Association, Washington, D. C., May 3-5.
American Otological Society, Washington, D. C., May 3-5.
American Pediatric Society, Washington, D. C., May 3-5.
American Surgical Association, Washington, D. C., May 3-5.
American Therapeutic Society, Washington, D. C., May 5-7.
Association of American Physicians, Washington, D. C., May 3-5.
Conf. State and Prov. Bds. of Health, Washington, April 28-29.
Congress of Amer. Phys. and Surg., Washington, D. C., May 3-5.
Connecticut State Medical Society, New Haven, May 25-26.
District of Columbia, Medical Association of, Washington, April 26.
Illinois State Medical Society, Danville, May 17-19.
Iowa State Medical Society, Des Moines, May 20-21.
Kansas Medical Society, Topeka, May 4-6.
Louisiana State Medical Society, New Orleans, May 3-5.
Maryland, Med. and Chirurgical Faculty of, Baltimore, April 26-28.
Missouri State Medical Association, Hannibal, May 3-5.
Montana State Medical Assn., Hunter's Hot Springs, May 11.
National Association for Study of Epilepsy, Baltimore, May 7.
Nebraska State Medical Association, Lincoln, May 10-12.
New Hampshire Medical Society, Concord, May 12-13.
North Dakota State Medical Association, Grand Forks, May 10-11.
Ohio State Medical Association, Toledo, May 11-13.
Oklahoma State Medical Association, Tulsa, May 10-12.
Rhode Island Medical Society, Providence, May 31.
Texas, State Medical Association of, Dallas, May 10-12.

## TENNESSEE STATE MEDICAL ASSOCIATION

*Seventy-seventh Annual Meeting, held at Memphis, April 12-14, 1910*

The President, Dr. Jere L. Crook, Jackson, in the Chair

### Officers Elected

The following officers were elected: President, Dr. John A. Witherspoon, Nashville; vice-presidents, east Tennessee, Dr. J. J. Waller, Oliver Springs; middle Tennessee, Dr. Richard A. Barr, Nashville; west Tennessee, Dr. J. H. E. Rosamond, Memphis; secretary-editor, Dr. George H. Price, Nashville; treasurer, Dr. W. C. Bilbro, Murfreesboro.

Nashville was selected as the place for the next annual meeting, April 11 and 12, 1911.

### Pellagra

Dr. J. A. Sewell, Rockwood, gave a history of this disease, and then discussed the symptomatology, the etiology, pathology, diagnosis and treatment. Regarding the treatment he said. To the present no specific remedy has been discovered and medication has little or no effect in the treatment of pellagra. The essential management consists in placing the patient in good hygienic surroundings, and improving the general health by giving good nourishing food and such tonics as may seem indicated. The various preparations of arsenic and iron are the remedies on which reliance has been placed and would sometimes seem to influence the disease favorably. Prophylaxis operating through the medium of the enforcement of the pure food law, the enactment of suitable prohibitory laws, regulating the sale and use of intoxicants, the rigid enforcement of good hygienic rules and regulations, together with compulsory education and the art of proper cooking being taught in our public schools, affords the only way to combat the malady successfully.

### Hypertrophied Prostate

Dr. L. E. Burch, Nashville: The direct cause of prostatic hypertrophy is unknown. Sir Henry Thompson states that 33.33 per cent. of men beyond the age of 55 have enlarged prostate, but not more than 5 per cent. of these present symptoms. In the light of recent investigation, gonorrhea plays no part. Young claims that in his series of cases it was more common in married men, and states that he has never seen it in a Catholic priest. There are two varieties of prostatic hypertrophy. First, the glandular, which is by far the most common; second, the fibromuscular, which produces a smaller and a firmer growth. If the patient is seen early, palliative treatment is indicated, consisting of tonics, regulation of the secretions and excretions, regular habits, and dilatation of the prostatic urethra followed by injection of one of the silver salts. If this treatment fails and residual urine begins to accumulate, then the patient should be given the choice of a catheter life or operation. I am convinced that if the advantages and disadvantages of both are fairly stated the majority of patients will select operation. There are two routes for the removal of this gland, the perineal and suprapubic. If the tumor is low down and well-defined by rectal examination, the perineal route is the operation of choice. If the patient is stout and has a long prostatic urethra, or if the tumor is prominent in the bladder and is not palpable by the rectum, then suprapubic prostatectomy is indicated. Between these two extremes are the borderline cases that can be reached by either route depending on the choice of the operator.

### Chronic Prostatitis

Dr. George R. Livermore, Memphis: Those who take too optimistic a view of chronic prostatitis have either had little experience or else have allowed their enthusiasm to get the better of their judgment, for it has been my experience that these cases are among the most difficult and trying that the genito-urinary specialist is called on to treat. Prostatic massage is the treatment *par excellence*. It should be done carefully and systematically, beginning with gentle massage, lasting only a minute, once or twice a week, and increasing in frequency in time and strength until given every other day. The bladder should be irrigated after the massage with some antiseptic solution; or a good plan is to fill the bladder moderately full with some antiseptic solution, massage the prostate, and then allow the patient to void the solution, thus carrying away the débris expressed by the prostate. After irrigating the bladder, instillations of stronger solutions may be made to the prostatic urethra.

### Diagnosis and Treatment of Prostatic Obstruction

Dr. Bransford Lewis, St. Louis: What is the evidence that enables us to determine definitely the points essential for the differential diagnosis of prostatic obstruction? First, hypertrophy: After the patient finishes the endeavor to urinate, in which the character of the stream is shown, insert the forefinger into the rectum and feel the prostate. Learn whether it is large, globular, hard, or soft, rugged, and nodular, or smooth and even. While rectal palpation does not always give absolute information on this point since the hypertrophy may tend rather toward the bladder cavity than toward the rectum, the information it gives is valuable in most cases and is not to be looked on lightly. Second, is there obstruction? Obstruction and the amount of obstruction are both determined by the simple maneuver of inserting a catheter following the voluntary urination and rectal palpation. The catheter draws off the urine that the patient has been unable to pass—the residual urine, which is a barometer of no mean value in estimating the seriousness of a given case of urinary obstruction. The amount varies from 1 or 2 to 42 ounces. It is more reliable than the patient's own impressions as to whether he empties his bladder or not.

(*To be continued*)

## JOINT MEETING OF THE NORTH CENTRAL SECTION OF THE AMERICAN UROLOGICAL ASSOCIATION WITH THE CHICAGO UROLOGICAL SOCIETY

*Meeting held in Chicago, March 24, 1910*

Dr. Gustav Kolischer, President of the Chicago Urological Society, in the Chair

### Ought the General Practitioner to Treat Venereal Diseases?

Dr. Daniel S. Gardner, Massillon, Ohio: Experience has taught me that no one has the necessary elements of qualification in this work who has not, (1) mastered a sufficient knowledge of microscopic technic to determine the presence of pathogenic organisms; (2) a sufficient diagnostic knowledge to determine the nature of physical lesions; (3) an equipment and the necessary technic for the diagnosis and treatment of these diseases; (4) a willingness to give his cases the personal time and attention they require. Rarely does the general practitioner outside the city even possess a microscope, and when he does he has ceased to retain his laboratory technic to a working degree. In the absence of this, he must grope his way blindly for he is less fortunate than his city brother who can, if he chooses, have the benefits of a microscopic laboratory. Also, universities are at fault. They content themselves with a few didactic lectures each semester and to the discredit of American teaching, nowhere in the country can be found a place where organized clinical teaching of these subjects can be found. Hence, the comparatively small number of cases encountered in his practice precludes the possibility of the general practitioner having diagnostic skill or acquiring a technic in the use of the many instruments necessary to cope with these diseases. He has a few urethral sounds, selected without reference to scale but as to what would constitute the normal urethral caliber. Asepsis, antisepsis, sterilization, do not enter into the matter. If urethral chill follow the operation it is never attributed to the possible condition of the instrument. In the face of these facts, what right has the general practitioner to argue against the absolute specialism in the treatment of these diseases? While we all admit that the work has frequently fallen into unscrupulous hands and that quackery of a vicious sort has been reaping an unmerited reward, yet on what has that industry thrived, but the indifferent management of the primary cases at the hands of the general practitioner?

Whatever advance the practitioner may have made in the line of general medicine, I fail to see a corresponding progress in his mastery of the details of venereal diseases. I feel that this society should inaugurate a campaign of education.

DISCUSSION

DR. BRANSFORD LEWIS, St. Louis: In this country much work has been done along the line indicated by Dr. Gardner and there are six or seven different local organizations in such cities as New York, Philadelphia, Detroit and Chicago; and there is a movement on foot to form a national organization along these lines during the session of the American Medical Association at St. Louis in June. Every one interested in the subject ought to contribute his quota to the formation of such an organization with a view to developing some sentiment in different cities of the country. If men are going to undertake urological work they should see to it that their patients get the proper service and not a slurring over in the matter of diagnosis which occurs most of the time. I recall the case of a farmer who consulted a number of practitioners with reference to excessive frequency of urination. All gave medicines for the relief of his trouble without avail. This man urinated from twenty to thirty times a day and as many times during the night. His life was one of misery. A careful examination disclosed a large stone in the bladder which could have been removed by perhaps any of the men whom he had consulted if they had taken the pains to make a thorough examination and diagnosed the case carefully. There was no difficulty in removing the stone. It is an obloquy on our profession that such a fact should be stated. It is a shame that any man should be allowed to go through such an experience.

DR. FREDERICK W. ROBBINS, Detroit: The position taken by Dr. Gardner is similar to that taken by men in other branches of medical work. There are many men whose specialty is ophthalmology, who insist that the only thing a general practitioner has to do is to make a diagnosis of some disease of the eye and send the patient to an ophthalmologist. On the other hand a special effort is being put forth in many states requiring the medical student before he is licensed to practice medicine to pass an examination on the simple forms of ophthalmologic work. Many ophthalmologists have taken the stand that the great bulk of work in ophthalmology should not be done by them, but by the general practitioner who is educated in the treatment of the simple diseases of the eye. If we, as an organization, take the position of Dr. Gardner, if we were all simply and only urologists, then we could speak in this way as regards the general practitioners, but even then the question should revert to the teaching of these things in our medical schools. The practitioner ought to know enough to tell whether he can handle a case or not, and if he is not competent to treat it the patient should be sent to some one who is competent to do so.

DR. L. W. BREMERMAN, Chicago: The general practitioner has too much to attend to; he wants to make all the money he can out of his practice and considers genitourinary diseases his legitimate prey. So long as it is permissible for members of county medical societies to guarantee a cure of gonorrhea for fifteen dollars, just so long are we going to have gonorrhea if there is not careful inspection afterward. The promiscuous treatment of gonorrhea by those who are not practitioners of medicine should be condemned. The laity to-day have as good a conception of what argyrol, protargol and similar preparations are used for as the practitioner himself, and the druggist facilitates that knowledge by prescribing for the treatment of gonorrhea. One man told me it cost eighty-five dollars in prescriptions for the treatment of his case of gonorrhea before the discharge had stopped and then he was far from cured. I think it is our duty to volunteer our services in giving lectures or talks before sociologic societies on the dangers of venereal diseases.

DR. HENRY J. SCHERCK, St. Louis: I cannot agree with Dr. Gardner that the general practitioner should not treat venereal diseases. It has been my experience and observation that the number of competent men in every city engaged in genitourinary work is proportionately much smaller than in any other specialty in medicine. No matter how much we may decry the efforts of the general practitioner, he will attend most of the cases before we see them. I seldom see a fresh or new genitourinary case. In fully 90 per cent. of the patients who come to me the disease has reached an advanced stage. The slogan should be education; not so much of the public, but of the general practitioner in methods of accurate diagnosis and in the treatment of these conditions so that he does not produce more harm than existed in the first instance. General education of the public must come through the instrumentality of such organizations as have been mentioned. I do not think much can be accomplished by legislation. Popular, systematic education of the growing youth and of the man about town is the solution of this question.

DR. D. S. GARDNER: For years I have read papers on these subjects in my local societies and none of my hearers has replied to my remarks concerning more accurate diagnoses and better treatment of these cases. They simply listened and said nothing. The education of such men to my mind is out of the question.

### Bladder Symptoms and Extra-Bladder Pathology

DR. FREDERICK W. ROBBINS, Detroit, reported three cases, all in females, and having to do with inflammatory conditions at the vesicourethral junction. The cause of the inflammatory area seems different in each of the three cases. In each case the dysuria and pollakiuria were due to inflammation of the urethra at about the urethrocystic junction or where the vesical sphincter may be thrown into spasm as a result of the inflamed mucosa beneath it.

DISCUSSION

DR. HENRY JACOBSON, St. Louis, Missouri: Our knowledge should be broad as to the different reflex causes of trouble. Tabes will cause urinary symptoms. For instance, in beginning tabes we have to make a diagnosis from the exaggerated reflexes, the difference in the pupils and the urinary symptoms, taken together with the other symptoms, would indicate our line of treatment. Adenoids sometimes cause increased frequency of urination, and in children adherent prepuce will cause urinary symptoms. A fibroid tumor of the uterus will cause frequent micturition, and prostatic inflammation of all kinds causes urinary symptoms; frequency of urination is also observed in hysterical women. All these things indicate that we should have a good working knowledge of the human system, and genitourinary specialists should keep in touch with the general conditions of the body in order to make accurate diagnoses and to treat his patients successfully.

DR. HENRY J. SCHERCK, St. Louis: I wish to report two cases. The first was one of hysterical retention of urine in which a neurologist could not by any method he could advise, get the woman to empty the bladder voluntarily, so that it was necessary to catheterize her at intervals. Being familiar with the literature and knowing that the treatment of these cases is generally unsatisfactory, as there were certain areas of the skin which were perfectly anesthetic, it occurred to me it might have something to do with the condition of the bladder. Through the cystoscope I was enabled to detect some areas of anesthesia in different portions of the bladder, and marked pressure with the cystoscope by means of a catheter, through which I put a little wire, failed to elicit any symptoms or any sensation of pain, while other portions of the bladder were apparently normal in sensation. I mention this as showing the possibility of areas of anesthesia existing in the bladder just as well as on the outer surface of the body in these cases. A man was brought to the hospital in a bad condition. I was sent for and did a suprapubic cystotomy under local anesthesia. The bladder was distended above the umbilicus. The intern diagnosed retention of urine due to impassable stricture. The man's pulse was very rapid. Two quarts of a mixture of blood and urine came from the bladder. I introduced my finger into the bladder and felt an impacted stone in the ureteral opening, brought it down and removed it.

Dr. Gustav Kolischer, Chicago: Urethroceles are not uncommon in women. One symptom which will always lead to the suspicion that urethrocele exists is that after these patients have urinated there is a dribbling of urine and they learn to evacuate the urine by inserting the finger into the vagina and squeezing the urethrocele. Urethrocele is not only the origin of frequent urination, but finally leads to serious disturbances because the urine is retained. The wall of the urethrocele becomes infected and this leads to the formation of deep abscesses in the vesico-vaginal septum. The rational therapy of urethrocele is to excise it, that is, insert a sound as a guide and excise the whole sac of the urethrocele and unite the edges.

Dr. F. W. Robbins: I had always supposed the bladder wall was entirely anesthetic. In touching any portion of the bladder I have never been able to elicit pain or an uncomfortable feeling from the patient. Inability to urinate may be considered due to hysteria, but if we pass the urethroscope into the bladder and withdraw it we will find granular areas of the vesical sphincter which gives us a clearer reason for the condition than to go ahead on the basis of the trouble being hysterical or reflex. If we find granular areas in the urethral wall, and if we stretch it by passing a large sound and apply nitrate of silver, these areas may disappear like magic.

### Possibly a Way for Cure of Seminal Vesicle Infection

Dr. Charles E. Barnett, Fort Wayne, Ind.: That the vesicles become infected frequently goes without saying; so the burden of solving the problem of relief from vesicular infection is paramount in the urologists' mind. I have advocated for several years the autogenous vaccine possibility, and have contended that were we able to find culture media that would grow the gonococcus as luxuriantly as can man himself, at least the infection might be eradicated even if the pathology that was concomitant with the infection would remain pathologic. If pus tubes in the female sterilize themselves after a time, why should not infected vesicles and prostate in men do so also. We know, however, that even after many years pus evacuated from either vesicle or prostate may show the gonococcus and when it is given good media for growth, as for instance, the uterus or tubes, it will reproduce an organism that is virulent. With this condition present in such a large percentage of men it makes it a danger for all women that is appalling to contemplate. So it behooves the urologist to devise ways and means for sterilizing the infected body.

Stock vaccines and sera of the Neisser coccus is an advance in this direction and in some cases acts potently but autogenous vaccine seems to be the desideratum.

Through the assistance of Dr. Rhamy, autogenous vaccines are prepared as follows: The pus massaged from the vesicles and prostate is in its entirety spread on blood serum and incubated, the dependence being placed almost entirely on its multiplication within the pus itself. Bacterines are made from this in strengths of from 50,000,000, 150,000,000 to 500,000,000. The patient, besides all other treatment, is injected every other day with a gradually increased dose unless a reaction occurs.

Results in patients treated with these bacterines indicate that they are beneficial and comparing the stock from the homologous ones, I think that the autogenous are the ones of choice, for the degree of virulence will be equalized in each individual subject. The mixed infection will also be counteracted. While it takes many cases to prove a point, yet, I am convinced of the value of this part of the treatment, which admits a possibility, at least, of removing the infection in the vesicle even if there is changed tissue left behind.

#### DISCUSSION

Dr. William T. Belfield, Chicago: The experience of Dr. Barnett is encouraging, and yet it has been my sad observation that even autogenous vaccines cannot be relied on to produce the satisfactory and sanguine results sometimes reported. I have never used mixed cultures. This is a new phase of vaccine therapy, and it is inspiring to hear of the gratifying results obtained by Dr. Barnett. Pure cultures, from my limited observation, seem to be quite as uncertain in the ultimate results as the stock vaccines. I have seen brilliant temporary results from both, and I have seen most lamentable failures from both, from which I am inclined to think I do not know exactly how best to use them. We get results more often from the stock vaccines, but also from the autogenous vaccines, where the gonococcus alone, or where one of the others alone has been used as the basis for the culture.

Dr. Bransford Lewis, St. Louis: Some work in vaccine therapy is being carried on by Dr. Mark and Dr. Hall, of Kansas City, Mo., in which the results thus far obtained are similar to those reported by Dr. Barnett. These men have obtained better results by using autogenous cultures and injections than from stock cultures. They have observed failures in some instances in which they expected success, and are now investigating the cause of those failures.

Dr. Frederick Leusman, Chicago: A man urinated very frequently. His trouble was referred to the prostate. He applied to a number of physicians for relief without avail. A perineal prostatectomy was performed, and while the man recovered from the operation he was not relieved of the symptoms of frequent urination. He went to a laboratory, had autogenous vaccines made, and used them on the advice of some other practitioner. While he has not been cured, he is greatly relieved.

Dr. Henry Jacobson, St. Louis: I have found that epididymitis has occurred in cases in which I have used the Kollman dilator, so that I have given up that method of treatment of the prostate, and seminal vesicles, and now rely on massage, tonics, and systematic exercise.

Dr. Frederick W. Robbins: Dr. Barnett referred to the frequency with which he found gonococci in the fluid expressed from the prostate and seminal vesicles. That statement does not coincide with the experience of Young and other workers who have not been able to find any gonococci in cases of chronic prostatitis and chronic vesiculitis.

### The Prostatic Urethra

Dr. John A. Hawkins, Pittsburg: I wish to call attention to three conditions of the posterior urethra, although two of them are in reality prostatic. They are, first, contraction of the internal urinary orifice; second, suppurative lobular prostatitis, and third, the veru montanum. Suppurative lobular prostatitis is responsible for many cases of "morning drop." Enlargement of the veru montanum, with spastic contraction of the posterior urethra, prevents all the pus from passing into the bladder, and it seeps along the urethra to the external meatus. A positive evidence of its presence is the appearance of a copious discharge in a patient who, to all intents and purposes, is about well. The veru montanum is responsible for more human suffering than is generally charged to it. There are certain chronic cases in which examination of the posterior urethra with the urethroscope will show the presence of a large veru montanum. The caput will be seen filling the urethra at this point. The actual cautery will serve well to reduce the swelling, but a quicker and better way is to remove the top of the hypertrophy with the sharp edge of the deep urethral tube. Inflammation of the veru montanum is not always due to gonorrhea, although this is its most frequent cause. It may be due to any of the causes which produce prostatitis, and it cannot be differentiated from the latter except by examination with the deep urethroscope. It may also complicate a prostatitis or a seminal vesiculitis, especially the latter when due to gonorrhea. The treatment in these cases is chiefly the judicious use of silver nitrate. Other preparations may be used, but silver nitrate, if intelligently employed, will obviate the necessity of using the proprietary preparations in this as in other urethral diseases.

### DISCUSSION

Dr. Bransford Lewis, St. Louis: Urologic practitioners attach too little importance to disturbances of the veru montanum. A physician thought he had an enlarged prostate with all the disturbances that prostatic affections lead to and wanted the prostate removed. He consulted a number of different surgeons on account of persistent burning in the deep urethra and prostatic region which was so intense that he gave up his practice. Among other things he received massage and irrigation treatment without avail. He had no residual urine. Palpation of the vesicle neck failed to reveal any enlargement of the prostate, consequently I told him that it would be ridiculous to remove the prostate. I used the posterior endoscope and made applications to the veru montanum which I found inflamed and very sensitive. This afforded only temporary relief. Later, through a perineal incision, I curetted and dug out the whole veru montanum and the floor of the urethra, sparing the roof and other parts of the prostatic urethra. This operation gave relief.

Dr. H. Kraus, Chicago: My results from the use of nitrate of silver have not been satisfactory in cases in which hypertrophy was present and ejaculations frequent. I find, however, by starting with an equal dosage of glycerin and iodin for the first treatment and following it up with pure tincture of iodin that I get excellent results. I saw several cases of marked hypertrophy of the veru montanum treated in Berlin by Dr. Goldschmidt. The hypertrophy was so great as to obstruct the posterior urethra. The patient could not urinate. Goldschmidt cauterized the hypertrophy with his operative endoscope and made longitudinal slits in some cases in the hypertrophy down to the rectum. This treatment was followed by good results.

Dr. J. G. Keller, Cleveland, Ohio: I have used pure stick silver in the treatment of these cases with gratifying results and frequently it is only necessary to give one treatment.

Dr. A. C. Stokes, Omaha: I sometimes question whether it is the condition of the veru montanum *per se* that is the cause of the trouble with which we have to deal. I have always regarded it as an infection, either superficial or deep, of the ducts in the region of the veru montanum, extending out into the connective tissue more than anything else. The pathology is really one of chronic prostatitis, or chronic vesiculitis, or chronic infection of the ducts in the region of the veru montanum.

Dr. Louis E. Schmidt, Chicago: Inflammation of the utriculus is of considerable importance and if it can be diagnosed and treated separately, well and good, but in the vast majority of cases the symptoms can be referred to disease of the veru montanum. In treatment, I have used not only direct cauterization of the posterior urethra, but the electrocautery and applications of nitrate of silver in a large number of cases without much benefit, and the results have been comparatively poor in the group of cases in which the symptoms apparently arise from pathologic conditions of the veru montanum.

Dr. Frederick W. Robbins, Detroit, described a case in which he removed the veru montanum through the endoscope with a good result.

### Surgery of Posterior Ureteral and Prostatic Abscess and Their Resulting Fistulæ

Dr. B. M. Ricketts, Cincinnati, Ohio: No form of pelvic abscess is more annoying to the patient and perplexing to the surgeon than these. The incision to drain an abscess cavity in this locality should be made with reference to drainage by gravity and after-care, especially if a fistula should result. Rupture of a stricture is the most common cause of urinary abscess. Urethral abscess is commonly due to disease, injury or stricture, the latter being the most frequent. Periurethral abscess is due to infection from the urethra through an opening in the urethra, resulting from disease or injury, or through the lymphatics or veins. Intraprostatic abscess may be single or multiple, large or small, and originate in any portion of the gland. The wall of the bladder is seldom the seat of an abscess, although such a condition has been known to exist. Abscess of the seminal vesicles is usually due to gonorrhea and may simulate a prostatic abscess. When a large abscess is situated in the upper portion of the gland, with or without the presence of pus in the urine, a suprapubic incision will not only serve for exploration, but for incision and drainage as well. Fistulas or sinuses requirê surgical attention more frequently than abscess, because the former seldom disappear spontaneously, while the latter quite frequently rupture and disappear without attention or complications.

### Urethroscopy of the Posterior Urethra

Dr. H. Kraus, Chicago: The advantages of the Goldschmidt endoscope over others are the following: The fluid used for cooling the instrument and for distending the urethra is allowed to escape from the end of the endoscope with force enough to keep at abeyance the tissue which would otherwise protrude into the opening of the tube, but the force of the stream is not great enough to disturb, to any extent, the natural relation of the parts, and if so, this slight anemia is preferable to the marked hyperemia. Besides showing the ducts to the glands and Morgagni's crypts as seen in other endoscopes. We can scrutinize in detail the cicatricial tissue, the formation of which follows gonorrhea. It is certain that the normal color of the mucous membrane is preserved and that the slightest changes thereof produce a decided contrast in the picture. We are able to see pouch-like recesses of the mucosa as the result of a beginning stricture; such a pouch may resemble a diverticulum. They are usually situated above such a constriction. The border between anterior and posterior urethra can be plainly seen as a fold of the mucous membrane in the shape of a half moon, the base of which rests on the floor of the urethra. This band is described by the French as *"collette fibreux."* In the posterior urethra we can see more or less plainly the changes of the outlets which open on the floor of the deep urethra. The instrument covers a considerable field of vision and with only a few movements, which are not very painful to the patient. The entire pars prostatica becomes visible. The ejaculatory ducts can be seen clearly with this instrument, and when involved their mouths appear as yellow spots, showing the pus plugging up the openings. The veru montanum is usually mushroom-shaped, but may present irregularities of all kinds. In cases of epididymitis and profuse phosphaturia, there is deepened coloration of the mucous membrane. Goldschmidt reports a case of an abscess of the scrotum with subsequent cicatrization thereof, in which the veru montanum had been bound down until it almost became flush with the floor of the urethra. That portion of the urethra between the colliculus seminalis and the internal sphincter, was never previously produced as clearly as with the Goldschmidt endoscope. The fact that the operative work on the posterior urethra has never received hearty support is due to the fact that the field of operation has always been more or less in the dark, and because of the diameter of the endoscope would not admit of passing moderately sized instruments, not to speak of large-sized ones. This has been overcome to a large extent by the Goldschmidt endoscope, which admits of the passing and manipulating of such instruments as are deemed necessary in the surgical treatment of the posterior or anterior urethra, under the eye of the operators, thereby limiting and actually fixing the work desiring to be accomplished.

# Medicolegal

### Malpractice by Corporation and Unlicensed Person—Restriction of Damages—Expert Testimony Required and to Be Duly Weighed

The First Appellate Division of the Supreme Court of New York says that the case of Lubbe vs. Mathew Hilgert and the Hilgert Curative Footgear Institution, 120 N. Y. S., 387, as developed by the evidence adduced on the trial was brought to recover damages alleged to have been sustained by the plaintiff in consequence of advice received from the defendant Hilgert, representing the defendant corporation, and acted on, which resulted in the abandonment of the use for the time being of a brace for his right hip which had been prescribed for a disease of the hip from which he was suffering, it being claimed that the abandonment of the use of the brace resulted in aggravating and spreading the disease.

The defendant corporation was incorporated for the purpose, among other things, of "manufacturing boots, shoes and general footwear and external mechanical appliances for the restoration of health to the human body," and to erect, equip, conduct and maintain such "buildings and establishment as may be suitable for the needs and purposes of the corporation and for the accommodation and comfort of its patients and customers." On its letter-heads were printed "locomotor ataxia," "paralysis," "rheumatism," and "gout" in a manner to indicate that it manufactured or sold footgear or other external mechanical appliances for the treatment or alleviation of those diseases. Of course, the corporation could not practice medicine, and it appeared that the defendant Hilgert was not a licensed physician. No question, however, with respect to the correct theory of the liability of the defendants was presented by the appeal, for on the trial the plaintiff elected to proceed against them on the rule of liability applicable in an action against a physician for malpractice, and that course was followed without objection.

The trial resulted in a verdict for $3,000 in favor of the plaintiff, but the court thinks that was, in amount, clearly against the weight of evidence, and sends the case back for a new trial. It says that the evidence showed that at the time the plaintiff was taken to the defendants for treatment he was suffering from tubercular hip-joint disease, which had already progressed to its third, or an incurable, stage, as was manifested by abscesses. His right to recover damages must necessarily depend on medical evidence, for the question was to what extent, if any, the failure of the defendants to properly treat him aggravated the disease from which he was suffering or increased his pain or suffering. That question could neither be decided on the testimony of laymen nor by the jurors on their own knowledge and experience without testimony. The defendants did not cause, and were not responsible for, the hip disease, and, since it was incurable when he came to them for treatment, they were not responsible in this or any form of action for their inability to cure it, notwithstanding the assurances they gave in that regard. They were responsible on the record before the court only for the pain and suffering or disability which flowed from their erroneous advice to the plaintiff to abandon the use of the brace for his hip; and, although that probably could not have been shown with precision, it should have been shown approximately to warrant a recovery.

It is proper, and in many cases important, that the jury should be cautioned with respect to the weight to be given to expert testimony, and, in order that they may be able to properly weigh such testimony, their attention should be drawn by the court to the fact that, when given in answer to a hypothetical question, its weight depends entirely on whether or not the facts recited therein are established by the evidence, and that in all cases it depends on the knowledge, accuracy and honesty of the witnesses. But the jury should be instructed that the testimony of physicians, whether with respect to what they have seen and observed or with r spect to their opinions on an assumed state of facts, is not to be rejected or accepted at will, but is to be weighed and considered by the jury the same as any other evidence; the jury being, of course, at liberty, after weighing and considering such testimony, to disbelieve it when it is discredited or disproved by other testimony in the case or when the jury believes that the witness has testified falsely or was mistaken as to any fact or opinion.

### Hospital Responsible for Ambulance and Driver Bearing Its Name

The Second Appellate Division of the Supreme Court of New York affirms, in Kellogg vs. Church Charity Foundation of Long Island, 120 N. Y. S. 406, a judgment for damages in favor of the plaintiff for personal injuries he sustained in a collision due to negligence in the turning of a corner by an ambulance which, as well as its driver, bore the name of a hospital owned and conducted by the defendant. An attempt was made to throw whatever responsibility there was for the accident on a livery stable keeper who furnished the horse and the driver for the ambulance, but that did not succeed.

The ambulance being labeled with the name of the hospital and the driver wearing a cap owned and furnished by it, on which was its name, the court says that those were the defendant's declarations that the driver was its servant, engaged in its business, and clothed with such rights and immunities as is enjoyed in the use of the streets. This manifestation was an invitation to the public to consider the driver its (the defendant's) servant, to respect him as such, to grant him by courtesy the latitude that his mission demanded in the matter of speedy passage, and to yield him the rights in the street that belonged to a real servant of the defendant.

The status thus given to the driver obtained for him privileges and immunities that belonged to the defendant. He thereby became its acknowledged servant, abroad on its urgent and merciful errands, and entitled to the right of way allowed to those operating ambulances for their proper purposes. An ambulance in such use may be driven in derogation of certain usual rules of the road. That does not mean that a stablekeeper, in his capacity as such, and in furtherance of his business, may so drive a vehicle in the form of an ambulance, but that a person engaged in the business of succoring the sick, injured, or dying may transport them, facilitated by such paramount right.

The case, it is further suggested, does not seem to be at all like that of the ordinary hiring of a livery turnout, or of the employment of a truckman to transport goods, in which cases the driver remains the servant of the independent contractor. For the purposes of this case the defendant might be regarded as in the position of the liveryman or the truckman, and as having hired the horse and servant of another for temporary use in its business, the servant becoming for this its servant.

### Unsatisfactory Proof of Physician's Account

The Court of Appeals of New York says, in Swan vs. Warner (90 N. E. R. 430), that this action was brought by an administrator to recover for professional services which had been rendered by a physician. The account consisted of many items, and extended over several months. With the exception of some very slight oral testimony, which it was claimed established one of the items of the account, the evidence depended on consisted wholly of entries in books of account claimed to have been kept by the physician.

The rules governing the admission of a party's books for the purpose of sustaining his claim in an action like this are stated as follows in Vosburgh vs. Thayer, 12 Johns. 461: "They ought not to be admitted where there are several charges, unless a foundation is first laid for their admission by proving that the party had no clerk; that some of the articles charged have been delivered; that the books produced are the account books of the party; and that he keeps fair and honest accounts—and this by those who have dealt and settled with him." This rule, in substance, has been reaffirmed often.

It was a very serious question amongst other things whether the plaintiff sufficiently established the rendition of any of the items of services for which recovery was sought by evidence independent of the books. The identification of the defendant was unnecessarily meager, and the evidence of his visit to the physician on one occasion for the supposed purpose of receiving professional treatment left much to presumption.

But the judgment recovered in this case is reversed, and a new trial ordered, principally because very many of the items for which recovery was allowed explicitly indicated that the services charged therein were rendered to a nephew of the defendant. There was no evidence of any express authority to charge such services to the defendant, and no proof of any circumstances which, without express authority, warranted such a charge, and it was therefore clearly error to permit the account to be received in evidence for the purpose of establishing those items.

### Injury as Cause of Death from Delirium Tremens

The First Appellate Division of the Supreme Court of New York says, in McCahill vs. New York Transportation Co. (120 N. Y. S. 1), an action brought to recover for a man's death charged to the negligence of the company, that the direct injury received was synovitis of the knee and a broken thigh. The medical testimony established that the man died of delirium tremens. Summarizing the medical testimony, it was to the effect that, in the opinion of the physicians from what they observed, the man was in a markedly alcoholic condition when he was admitted to the hospital after his injury; that he was not then suffering from delirium tremens, which did not develop until the afternoon of the next day; that no one can say that the use of alcohol will necessarily produce delirium tremens; but that delirium tremens can only occur when there is a previous alcoholic condition; and that a severe injury of the character suffered by this man, while not an inducing cause of delirium tremens, will precipitate it.

On all the evidence, the court thinks it was a question for the jury whether the injury caused by the negligence of the company did not produce the delirium tremens which, in the opinion of the physician, was the immediate cause of death. If the man, but for the injury, might have lived for many years, and the injury, plus his condition when he received it, caused the delirium tremens, of which he died, the court considers that the case came within the meaning of the provision of the code which gives a cause of action to recover damages for a wrongful act, neglect, or default by which a person's death is caused.

The court adds that it does not think that reckless drivers of automobiles are to be relieved of responsibility because their victims are sick, infirm, diseased, or even addicted to the use of alcoholic drinks, when it fairly appears that their condition was aggravated or death precipitated as a result of the injury received.

A judgment for the plaintiff is affirmed, two members of the court dissenting.

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## Current Medical Literature

### AMERICAN

Titles marked with an asterisk (*) are abstracted below.

#### New York Medical Journal

*April 9*

1 The Contractile Elements in Connective Tissue. J. Wright, New York.
2 Relationship Between Rectal Diseases and those of the Female Pelvic Organs. J. P. Tuttle, New York.
3 *Acid-Fast Organisms in Waters. E. Burvill-Holmes, Philadelphia.
4 *Are Acid-Fast Bacteria Other than the Tubercle Bacillus Commonly Met in Clinical Laboratory Work? A. B. Clifford, Las Animas, Colo.
5 Ophthalmic Nursing. M. L. Foster, New York.
6 *The Bead Test of Einhorn and the Test Diet for Intestinal Diseases of Adolf Schmidt. J. G. Wells, New York.
7 The Legal and Moral Obligations of a Physician Confronted with a Case of Tuberculosis. G. W. Beach, Binghamton, N. Y.
8 Banti's Disease. O. Lerch, New Orleans.

3. **Acid-Fast Organisms in Waters.**—Burvill-Holmes presents the results of the examination of a few samples of water or waters which are to be used in the preparation of solutions, etc., in work which has for its purpose the demonstration of the tubercle bacillus, for instance, in the examination of feces and blood. He says the water should be examined with the microscope so as to preclude the possible presence of any acid-fast organisms which might cause a misinterpretation of results. Acid-fast organisms are present in many specimens of water—not necessarily distilled—providing they are old and have been open to air contamination. Failure of bacilli to decolorize with Pappenheim's solution does not imply that they are tubercle bacilli.

4. **Acid-Fast Bacteria.**—It should be borne in mind, Clifford says, that there are no such things as acid-fast bacteria in an absolute sense of the term. Aqueous solutions of any acid, especially any inorganic acid, will remove the color from any fuchsin-stained organism; and the length of time required to remove the color will vary, not only with the character of the organism, but with the intensity of the primary fuchsin staining, and the strength and composition of the acid used. It is true that the tubercle bacillus shows considerable variation in its staining properties. The ease or rapidity with which it takes up the primary stain, as well as the resistance which it shows to the decolorizing influence of acid, or acid alcohol, is a function which varies considerably with its environment. Still there are good reasons for expressing the opinion that as an almost invariable rule, the tubercle bacillus stains with greater difficulty, and offers more marked resistance to the decoloring influence of acids or acid alcohol, than any other member of the group of acid-fast bacteria.

During the past month, Clifford has been searching for acid-fast organisms in water, and wherever it seemed possible that they might appear as a confusing element in clinical laboratory work. He summarizes his findings as follows: 1. Acid-fast organisms, other than the tubercle bacillus, are rarely encountered in clinical laboratory work. 2. Such organisms, as a contamination of distilled water, are a negligible factor in staining for the tubercle bacillus. 3. When, in the examination of tuberculous patients, or those suspected of being tuberculous, acid-alcohol fast organisms having the morphology of the tubercle bacillus are found, after having stained by the previously mentioned method, we are fully justified in making a diagnosis of tuberculosis.

6. **The Bead Test and the Test Diet.**—In an effort to answer the question whether the bead test is practicable and reliable, Wells undertook a comparative analysis of 20 cases, using the test diet for intestinal disease as devised by Dr. Adolf Schmidt as a basis to work on. The digestive test capsule, or bead test, was prepared according to the directions given by Einhorn. Wells found that it takes the same amount of time to make a digestive capsule that it does to examine a stool. It is easier to obtain the beads than it is a proper stool in patients not confined to the house and who are taking their meals at restaurants. No expert knowledge is required to examine the beads, while a certain amount of skill is required to examine a stool. Many physicians would examine the beads especially when they do not have to make the digestive capsule themselves, when under no consideration would they examine a stool. The bead test is accurate enough to be of practical value. When the diet is regulated according to the findings after the bead test and unsatisfactory results are obtained, the patient should be placed on a strict diet, as advised by Dr. Adolf Schmidt, and the stool examined at the end of three days. The bead test gives a very fair idea of how long the food remains in the intestinal tract, which the test diet does not. It should be borne in mind that the only functions of the bead test are to show the digestibility of proteids, fats and carbohydrates and the mobility of the intestinal tract.

#### Medical Record, New York

*April 9*

9 Errors of Diagnosis in Surgical Lesions of the Kidney. A. B. Johnson, New York.
10 Medical Practice Laws. F. M. Crandall, New York.
11 *Is Insanity Increasing? A. J. Givens, Stamford, Conn.
12 *Antidote for Aluminum Phosphate: The Poison that Causes Milk-Sickness. E. L. Moseley, Sandusky, Ohio.
13 The Card System for Recording Histories of Patients in Private Practice. E. C. Hill, U. S. Army.
14 The Management of Hemorrhage During Operations on the Tonsil. C. J. Imperatori, New York.

11. **Insanity Increasing.**—Givens quotes statistics from various countries and states of the Union, which show that there is a steady increase in the number of individuals under public care. Although alcoholic excesses are, for the most part, responsible, prohibitory legislation and local option have in no way improved the conditions as to the use of alcohol. Givens sees the solution of the problem of stopping its use in a law prohibiting the sale of liquors until after they have

been ten years in storage, and the poisonous qualities have been changed so as to render the liquor comparatively harmless. Beer should not be sold until it has been stored for 6 months. High-grade liquors properly made and aged lose much of their poisonous qualities.

12. **Antidote for Milk-Sickness.**—According to Mosley, the substance contained in white snakeroot that causes milk-sickness is aluminum phosphate. Bicarbonate of soda is an antidote to the poison. The poisoning seems to be due to an acidosis produced in the blood; hence the bicarbonate of soda, by increasing the alkalinity of the blood, counteracts its effects. If given with a vegetable diet the poison is harmless, but with animal food its effects are poisonous.

### The Boston Medical and Surgical Journal

*April 7*

15 *Chronic Primary Intussusception in the Adult. H. W. Goodall, Boston.
16 *Psychic and Somatic Factors in Patient with Acute Delirium Dying of Septicemia: Experimental Guinea-Pig Infection with *Staphylococcus Albus.* E. E. Southard and J. G. Fitzgerald, Toronto.
17 Uterine Constriction Bands Complicating Labor. J. C. Hubbard, Boston.
18 Pain Relieved by Manual Therapy. E. C. Thompson, Boston.

15. **Chronic Primary Intussusception.**—Goodall's analysis is based on a study of 122 cases, 1 of which occurred in his practice, 4 were taken from the records of the Massachusetts General Hospital, and 117 were collected from the literature. The following points are emphasized:

1. Chronic primary invagination in the adult is probably not so infrequent as might be supposed, since in the great majority of the reported cases the true nature of the disease has been unsuspected throughout its course, the diagnosis being made at the time of operation or post-mortem examination.
2. This failure to diagnose is in many of the cases to be explained by unfamiliarity with the symptomatology, since the clinical picture has often been typical enough to at least suggest the nature of the disease.
3. The disease, if allowed to run its natural course, is usually fatal, whereas with proper surgical treatment, especially if an early diagnosis is made, the mortality should be low.
4. The disease often simulates some grave abdominal condition such as tuberculosis or carcinoma in which a most unfavorable prognosis is given and operation deemed inadvisable, emphasizing the importance of excluding chronic invagination in all obscure diseases of the abdomen.

16. **Psychic and Somatic Factors in Acute Delirium.**—A well-educated negress, with probably some hereditary tendency to insanity, marries at 28 an impotent husband of 60. Six and one-half years later she develops nervousness and insomnia, together with headaches and constipation, which the subsequent history indicates are probably due to the growth of fibromyomata of the uterus. Meantime the patient complains at times of sexual dissatisfactions. The uterine growth, which only later was certainly diagnosed as fibromyomatous, becomes palpable 15 months after the initial train of symptoms had set in. Whether the eroticism which accompanied the other symptoms is at all conceivably due to impulses from the uterine region is doubtful. Operation is refused.

Acute insanity of delirious type develops, and the only physical symptoms then of note are acne and a slight swelling of the legs (observable by family physician, but not noted by examining physicians unfamiliar with patient). Following the somatic symptoms, it appears that a marked swelling of the left leg, with fulness and tenderness of the popliteal space, was first noted in hospital 15 days after onset, accompanied by a temperature of 101 F. The swelling subsided to some degree later, so that it became difficult to say that one leg was larger than the other. It is hard to say at what time the iliac vein thrombi began to develop. Possibly the swelling of both legs, noted in the acute outburst, was due to pressure on the veins by the fibromyomata rather than to the growth of thrombi within the veins. Also it is impossible to say when the septicemia began. Whether the septicemia developed prior to the acute outburst or 15 days later, it remains certain that in the first 15 days of the insanity there was evidence of an important somatic disease (massive fibromyomata exerting pressure on the iliac veins), the results of which became later inextricably mingled with the mental symptoms.

### The Lancet-Clinic, Cincinnati

*April 9*

19 Sexual Impotence in the Male. A. W. Nelson, Cincinnati.
20 Arthritis Deformans. J. V. Shoemaker, Philadelphia.
21 Case of Dermatitis Venenata. C. J. Broeman, Cincinnati.

### Virginia Medical Semi-Monthly, Richmond

*March 25*

22 The Physiology of the Adrenals in Relation to Poisoning by Adrenal Preparations. C. E. deM. Sajous, Philadelphia.
23 Intracapsular Fracture of Hip: Prognosis. J. N. Upshur, Richmond.
24 Headache. G. L. Servoss, Fairview, Nev.
25 Surgical Drainage. L. Sexton, New Orleans.
26 Causes and Treatment of Rheumatic Fever. W. S. Gordon, Richmond.
27 Regurgitation from the Bladder to the Kidney During Ureteral Catheterization. F. R. Hagner, Washington, D. C.
28 Manic-Depressive Insanity. D. P. Hinckling, Washington, D. C.
29 Acute Nephritis Following Severe Tonsillitis. O. Marshall, Brandy Station.

### The Northwestern Lancet, Minneapolis

*March 15*

30 *The Contagiousness of Poliomyelitis. H. W. Hill, Minneapolis.
31 Spinal Anesthesia. F. R. Wright, Minneapolis.
32 Diseases of the Stomach and Their Treatment. H. L. Knight, Minneapolis.
33 *Diverticula of the Sigmoid. A. W. Abbott, Minneapolis.
34 Prevention of Appendicitis. A. Kuhlmann, Melrose, Minn.
35 An International Commission on the Control of Tuberculosis of Domestic Animals. M. H. Reynolds, St. Paul.

30. **Contagiousness of Poliomyelitis.**—Hill has tabulated 81 cases, occurring in 69 families. These figures show that the highest number of cases at any one age is 19 at 2 years old (from 1½ to 2½ years); i. e., about 23 per cent. of all cases were at or about 2 years old; 73 per cent. of all children of this age in the affected families were attacked. The group age-incidence is most marked at 1 to 3 years (1 and over to 3½ years). About 53 per cent. occurred in this group; 66 per cent. of all the children of this age group in the affected families were attacked. The sex-incidence is 46 males and 45 females (certain cases available for this calculation, in addition to those suitable for other calculations, being added in). Whether or not the sex-incidence at different ages is different could hardly be determined from these scanty figures. There seemed to be no relation to nationality. The nationalities predominating in each community, judging from the general information obtainable, naturally suffered most. Exact figures showing the nationality distribution of the different communities were not available. Eight of the 69 families showed secondary cases; 4 of these families showed 1 secondary case each, and 4 showed 2 secondary cases each.

33. **Diverticula of Sigmoid.**—In Abbott's case the cause of the diverticulum was a stricture. The formation of fecal stones proximal to that stricture followed by which the ordinary fecal contents had passed naturally and for a long time, and that the stones had simply buried themselves in the wall of the gut. That the stones were formed before the diverticula was rendered almost certain from the fact that there were still several lying free in the lumen of the gut of the same size and hardness as those in the diverticula.

### Journal Tennessee State Medical Association, Nashville

*March*

36 The Correction of Uterine Displacements. C. N. Cowden, Nashville.
37 Woman in the Field of Medicine. D. L. Wilder, Knoxville.
38 Diagnosis and Treatment of Amebic Ulceration of the Large Intestine. A. B. Cooke, Nashville.
39 Intussusception in Children. J. Overton, Nashville.

### Journal Medical Society of New Jersey, Orange

*April*

40 Edema. W. L. Pyle, Jersey City.
41 Summer Grip. J. Douglas, Morristown.
42 The More Common Affections of the Nose and Throat; Diagnosis and Treatment. G. H. Cocks, New York.
43 Urethral Stricture. C. L. de Meritt, West Hoboken.
44 *Health Education of the Juvenile Public. W. H. Shipps, Bordentown.
45 *Sarcoma of the Uterus in a Child: Operation: Recovery. W. D. Miningham, Newark.

44. **Health Education of Juvenile Public.**—It is held by Shipps to be the duty of every parent and guardian to

instruct the child in Nature's laws so far as they concern his physical welfare, at as early a date as the child is capable of grasping such information, and no false sentimentalism should seek to keep from the child that knowledge of his physical being which he has a perfect right to demand. Were this course more universally adopted, he believes much suffering and misery would be averted and the labors of the sanitarium appreciably lightened. A proper course to pursue is to aid in the organization of societies, whose aim should be to contribute largely to the creation of a sentiment in favor of this work on the part of the general public, which, if accomplished, will unodubtedly aid materially in gaining the results anticipated. In addition to the methods referred to, the health culture of the young can also be largely facilitated by other resources, such as local boards of health, boards of education, medical school inspectors, health officers and representatives of the medical profession, all of whom should recognize the opportunities they hold of imparting to the young such knowledge as it is unquestionably their duty to give careful attention to.

45. **Sarcoma of the Uterus in a Child.**—A case of primary sarcoma of the uterus in a child of 12 is reported by Miningham. The tumor was of a small, spindle-cell variety, and presented many areas of gangrene. With the exception of an attack of scarlet fever at 5 years, the patient had always been well. Menstruation had never been established. In December, 1908. a bloody flow from the uterus occurred, which continued uninterruptedly for three weeks. It was attributed to menstruation and no examination was made. The girl was never well afterward; a gradual loss of weight and strength set in, growing progressively worse. Slight pain and discomfort in the pelvic region were often complained of. Irregular hemorrhages occurred frequently until Oct. 15, 1909, since which time the flow had been more or less constant. Drugs and tampons were of service now and then, but during the latter part of her illness were entirely ineffective. The curette simply aggravated the condition. Septic absorption from the gangrenous mass added considerably to her misery. The temperature curve was of the true septic type.

The diagnosis of sarcoma was made, and although a distinctly bad surgical risk, Dr. Ill urged an operation as offering the only chance. Examination showed a large, freely movable tumor extending to the umbilicus and occupying the entire pelvis. At the cervix there presented a friable polypoid mass which bled on the slightest manipulation. The combined vaginal and abdominal operation was performed, removing uterus, tubes and ovaries. Improvement set in immediately and continued uninterruptedly.

### Journal of the South Carolina Medical Association, Florence

*February*

46 Pneumonia. O. B. Mayer, Newberry.
47 Treatment of Pneumonia. S. L. Swygert, Greenwood.
48 Congenital Dislocation of the Hip. A. R. Taft, Charleston.
49 Factors which Govern Drug Action. G. E. Thompson, Easley.
50 Dysmenorrhea. J. H. Teague, Laurens.
51 Uncinariasis. O. W. Nettles, Spartanburg.
52 The Family Physician. S. G. Dixon, Philadelphia.

### Bulletin of the Lying-in Hospital of the City of New York

*September, 1909*

53 *Rupture of the Uterus During Labor. R. W. Lobenstine, New York.
54 *The Results and Technic of the Lying-in-Hospital Out-Patient Service in 45,000 Confinements. J. A. Harrar, New York.
55 Constipation as Treated in the Babies' Class. E. L. Coolidge, New York.
56 *The Hour of Birth. C. B. Knapp, New York.
57 *Avulsion of the Puerperal Uterus Following Inversion. J. A. Harrar, New York.
58 *Incarceration of the Pregnant Uterus. R. W. Lobenstine, New York.

53. Abstracted in THE JOURNAL, Oct. 9, 1909, p. 1218, and published in the *American Journal of Obstetrics* for November, 1909.

54. **Results at Lying-in Hospital.**—This series of cases occurred during the last 14 years, and the mortality among the mothers was found to be 0.32 per cent. (144 cases), which is 1 death to about every 300 deliveries. This includes all patients transferred during labor or afterward to the Lying-in Hospital or other hospitals and subsequently dying in the wards; 99 died in the tenements and 45 in the hospital wards after admission from the tenement service. The chief causes of death were sepsis, rupture of the uterus, eclampsia and placenta prævia, in the order named; 36 women, or 1 in 1,250 (.008 per cent.) succumbed to septic infection. Harrar attributes the frequency of this condition not only to the patient's surroundings, but also to the practice of employing midwives, who are both dirty and incompetent. Twenty women died as the result of rupture of the uterus. In 9 the rupture was discovered after performance of an internal podalic version and the accident was ascribed to the operation. There were 6 cases of spontaneous rupture in prolonged labors; in 1 the cervix had been amputated a year previously and the rupture was produced during a high forcep delivery; 1 followed injury from a fall and 1 occurred in the scar from a formal Cesarean operation. Placenta prævia ranked fourth on the list as a mortality factor, there having been 16 deaths from this condition. The remaining deaths were due to pneumonia (8 cases); cardiac diseases (6 cases); premature detachment of the placenta (4 cases); postpartum hemorrhages (4 cases); and pulmonary phthisis (5 cases); 4 deaths were ascribed to uremia and 1 to shock; 5 women died after the Cesarean section had been performed. A number of other causes of deaths are mentioned which claimed 1 or 2 patients each, and make up the remaining number.

Harrar claims that as one-quarter of the total mortality was due to sepsis, which is a preventable cause, that a possible future reduction in these figures may be hoped for. An analysis of the deaths from this cause show that in succeeding groups of 10,000 cases each, a marked reduction has taken place in the later ones. He describes the method in which surgical cleanliness on the part of the patient and the attendant is secured and as the results of which the improvement has taken place.

56. **Hour of Birth.**—Knapp presents certain conclusions regarding the hour of birth which he bases on a series of about 39,000 cases. He found in this series that the largest number of births took place during the hour from 11 p. m. to midnight, while the smallest number occurred during the hour from 6 to 7 p. m. As the length of the average labor is twelve hours' duration, it would appear that in the majority of cases this process begins between the hours of 10 a. m. and 10 p. m. Knapp believes that the activities of the day furnish the exciting cause in the production of labor and the tendency to start the same is greater during the day time because of the patient's muscular exertions connected with her ordinary movements.

57. **Avulsion of the Puerperal Uterus.**—Harrar reports a case of complete avulsion of the puerperal uterus following version, in a young woman of 24, in her fourth pregnancy. She gave a history of a beginning miscarriage for which a doctor was called in, who extracted the fetus after only partially dilating the cervix. In extracting the placenta, which was firmly adherent, he inverted the uterus. He diagnosed this condition as a large polyp, which he proceeded to remove by twisting it off. He succeeded, but the woman bled profusely and went into collapse. After packing the vagina with cotton, he sent the patient to the hospital. On examination after admission, the bladder was found to be intact, although the serous coat was torn, and a portion of the broad ligament with the ovary attached was hanging down in the vagina. This was removed, the area cleansed as well as possible and the cavity packed with iodoform gauze. The patient made almost an uneventful recovery, without any evidence of septic infection.

58. Published in the *American Journal of Obstetrics and Diseases of Women and Children*, December, 1909.

### Colorado Medicine, Denver

*March*

59 Surgical Typhoid Infections of the Hepatic Organs. E. G. Edwards, La Junta.
60 An Avoidable Form of Infant Starvation. H. B. Whitney, Denver.
61 Surgery in the Tuberculous. D. P. Mayhew, Colorado Springs
62 The Use of Tuberculin in Pulmonary Tuberculosis. W. T. Little, Canon City.
63 A Pharmacologic Study of the Drugs used in Diseases of the Genitourinary Tract. W. A. Jolley, Boulder.

### Journal Indiana State Medical Association, Fort Wayne

*March*

64 *Unusual Injuries in the Region of the Shoulder-Joint. P. F. Martin, Indianapolis.
65 The Home Treatment of Tuberculosis. J. C. Blossom, Richmond.
66 The Medical History of Indiana (continued). G. W. H. Kemper, Muncie.
67 Congenital Heart Disease. L. T. Rawles, Huntertown.

64. **Unusual Injuries of Shoulder-Joint.**—Martin has found that fracture dislocations of the upper end of the humerus are of greater frequency than is generally believed; the condition is often not recognized. In all cases of dislocation of the humerus, an attempt at reduction by gentle manipulation under anesthesia having failed, he advises that open arthrotomy should be done at once. Immediate open arthrotomy, under favorable circumstances, should be practiced in all cases of known fracture dislocations of the upper end of the humerus. There should be no old unreduced dislocations. Radiography should be employed in connection with a thorough, properly painstaking physical examination, and not as a substitute, conclusive diagnosis depending on the clinical manifestations as the keynote and the radiogram as correlative evidence.

### Ohio State Medical Journal, Columbus

*March*

68 The *X*-Ray Examination of the Stomach. S. Lange, Cincinnati.
69 The Remote Effects of Shock and Concussion. F. Warner, Columbus.
70 The Professional Anesthetist. E. Metzenbaum, Cleveland.
71 Practical Treatment of Hemorrhoids. W. Teachnor, Columbus.
72 Phases of Automatism in Epilepsy. W. H. Pritchard, Gallipolis.
73 Thoughts on Dermatology. D. Moury, Bellefontaine.
74 Advantages of the Submucous Incision for the Reduction of Hypertrophied Turbinals. C. P. Linhart, Columbus.

### Southern Medical Journal, Nashville

*March*

75 *Two Apparently New Physical Signs, Whereby Normal Organs may be Outlined and Diseased Conditions Diagnosticated, Particularly Within the Chest, by Means of Palpation. F. M. Pottenger, Monrovia, Cal.
76 *The Cancer Problem. R. Park, Buffalo.
77 Goiter. F. T. Meriwether, Asheville, N. C.
78 Pulmonary Tuberculosis—Its Care and Treatment. C. A. Robertson, Nashville.
79 Erysipelas. C. F. Anderson, Nashville.
80 *Ureterocystostomy—An Improved Technic—Case of Double Ureteral Implantation into the Bladder. J. W. Long, Greensboro, N. C.
81 Hematogenous Kidney Infections. A. F. Toole, Birmingham, Ala.

75. Published in the *Interstate Medical Journal*, December, 1909, *Southern California Practitioner*, December, 1909, and the *Lancet-Clinic*, Dec. 11, 1909.

76. Abstracted in THE JOURNAL, Jan. 15, 1910, p. 231.

80. **Ureterocystostomy.**—The method which Long regards as the simplest, and therefore the best, of doing an intra-abdominal ureterocystostomy is as follows: Make an incision of convenient length into the posterior wall of the bladder near its base. It is just as easy to sew up an incision one or two inches long, as it is to sew a half-inch incision, and, in fact, according to his experience, it is much easier. Besides, it gives one an opportunity of stitching the end of the ureter to the mucosa of the bladder and thereby do away with traction sutures. Long therefore makes an incision long enough so that he can work conveniently and quickly. The end of the ureter, cut tapering, is then introduced into the bladder a sufficient distance to be easily sutured by two fine catgut sutures to the mucosa a little way from the incision. The incision is then closed, and the intraperitoneal exposed portion of the ureter covered. The method was employed successfully in a case of carcinoma of the cervix uteri.

### Chicago Medical Recorder

*March*

82 The Press in its Relation to Legislation for the Improvement of Charitable Institutions and Medical Reforms. F. Billings, Chicago.
83 The Press as a Public Educator in Medicine. W. Hutchinson, New York.
84 What May the Medical Profession Expect from the Press? S. Mathews, Chicago.
85 The Relation of the Press and Physicians to Departments of Health. W. A. Evans, Chicago.
86 Intra-oral Surgical Operations. T. W. Brophy, Chicago.

### Yale Medical Journal, New Haven

*March*

87 *Osteitis Deformans. C. J. Bartlett, New Haven.
88 Poisoning Resulting from the Inhalation of Castor Pomace. S. B. Gibert, New Haven, Conn.
89 A Simple Freezing Microtome Stage. W. E. Rounseville, Hartford, Conn.

87. **Osteitis Deformans.**—Bartlett reports a case showing gross involvement of the skull only (hyperostosis cranii). It appears to be unique among those reported that have come to autopsy, in that, although during life there was no evidence of the involvement of the long bones, microscopic examination of a portion of the femur removed at autopsy showed the early stage of such involvement. Also the condition of the pituitary gland found here is of interest from the etiologic standpoint. The enlargement of the head was in all diameters, but was most marked in the temporal regions, causing the upper parts of the ears to project prominently from the head. The measurements of the skull were: occipitofrontal circumference over glabella, 66 cm.; from glabella to inion along sagittal suture, 38 cm.; diameter from glabella to most posterior part of the head, 21.2 cm.; bitemporal diameter, 19.5 cm.

The anatomic diagnosis was diffuse hypertrophy and rarefaction of skull; enlarged pituitary gland; backward displacement of manubrium; moderate mitral stenosis with some replacement fibrosis of heart; beginning fatty degeneration of aorta and coronary arteries; bronchopneumonia with emphysema, edema, and chronic congestion of lungs; atrophy of gastric mucosa; chronic diffuse nephritis; bone marrow, red; and general muscular atrophy. From the autopsy findings it appears that the hypertrophy of the skull was almost entirely on its outer surface. Its cavity had not been encroached on by the thickened bone.

### Journal Oklahoma State Medical Society, Muskogee

*March*

90 The Surgical Rôle of the Pneumococcus. A. L. Blesh and C. E. Lee, Oklahoma City.
91 Animal Heat. G. H. Thrailkill, Chickasha.
92 The Social Evil. M. A. Warhurst, Maud.
93 Infantile Eczema. C. R. Day, Oklahoma City.
94 Pelvic Drainage. G. H. Butler, Tulsa.
95 Retroperitoneal Shortening of the Round Ligaments. W. E. Dicken, Oklahoma City.

### Journal of the Kansas Medical Society, Kansas City

*March*

96 Laboratory Methods Accessible to the Clinician. E. H. Schorer, Lawrence.
97 Muscular Atrophy. W. W. Yates, Topeka.

### Surgery, Gynecology and Obstetrics, Chicago

*March*

98 *Gastrojejunal Ulcers (Pseudojejunal Ulcers). W. J. Mayo, Rochester, Minn.
99 *Excision of the Fat of the Abdominal Wall—Lipectomy. H. A. Kelly, Baltimore.
100 *Inflammatory Tumors of the Sigmoid. M. A. Myer, St. Louis.
101 Circumscribed Serous Meningitis of the Cord. J. C. Munro, Boston.
102 Pregnancy and Labor Complicated by Nervous Over-Development. F. S. Newell, Boston, Mass.
103 *Frequency of Congenital Sacs in Oblique Inguinal Hernia. W. Hessert, Chicago.
104 A New Operation for Arthritis Deformans and Certain other Deforming Affections of the Hip. F. H. Albee, New York City.
105 The Ferment and Antiferment Treatment of Suppurative Processes. E. Müller, Marburg, Germany.
106 *Five Hundred Cases of Diffuse and General Peritonitis Following Appendicitis. J. W. Kennedy, Philadelphia.
107 A Positive-Pressure Cabinet for Thoracic Surgery. S. Robinson, Boston.
108 Diverticulitis of the Sigmoid. J. H. Barbat, San Francisco.
109 *Surgical Treatment of Exophthalmic Goiter. F. C. Zapffe, Chicago.
110 Direct Implantation of Bone Grafts. C. C. Allison, Omaha.
111 Combined Transvesical and Extraperitoneal Method for Removal of Stones from the Lower end of the Ureter. M. Ballin, Detroit.
112 *Operative Technic of Vaginal Hysterectomy for Prolapsus. T. S. Cullen, Baltimore.
113 Improved Technic for Removal of Collapsed Vulvovaginal and other Cysts and Hernial Sacs. A. J. Schoenberg, Chicago.
114 A New Device for Supporting the Arm. A. B. Eustace, Chicago.
115 An Aid to Vessel Suturing. S. Bunnell, San Francisco.

98. **Gastrojejunal Ulcers.**—The total number of operations performed on the stomach and duodenum up to Dec. 31, 1909,

done by C. H. and W. J. Mayo, was 1,775. Of these, 1,141 were gastrojejunostomies. In 715 cases the operation was for duodenal and gastric ulcer, in 167 cases for cancerous obstruction at the pylorus, and 259 were in connection with partial gastrectomy. The majority of the latter operations were for malignant disease. Of the whole number, not a single patient developed true jejunal ulcer; nor have any such cases come to the Mayos in which gastrojejunostomy had been performed by other surgeons. They report 3 cases corresponding to the gastrojejunal or pseudojejunal type of ulcer.

99. **Excision of Fat of Abdominal Wall.**—Kelly says that it is easy to see how much tissue ought to be removed by pulling the mass up and away from the body. An incision above and below on the pendulous mass made a little above the lines of deflection will remove enough and yet leave enough skin for approximation. With a little practice, the surgeon will be able to decide this with his eye as the patient lies on the back on the table, or if he is uncertain he may cut across the abdomen below from side to side and then cautiously carry the upper incision from side to side, measuring with the eye and testing the mobility of the tissues above to see that they will slide down to meet the lower flap. This dissection can be made very rapidly. All hemorrhage must be checked; deep vessels must be caught as they come out of the fascia and ligated with catgut. The incision must be carefully covered with hot gauze while operating, and the incision sloped a little inward so that apposition will be perfect. All vessels are tied with fine catgut; the fat sewn together with catgut and the skin with silkworm gut and horsehair. At either end of the incision a small cigarette drain of rubber protective tissue is inserted. The dressing is with silver foil and sterile gauze. These wounds, in spite of their immense size, heal promptly, and there is practically no postoperative discomfort.

100. **Inflammatory Tumors of the Sigmoid.**—Myer describes a primary, circumscribed, inflammatory tumor of the sigmoid, benign in its pathologic findings, but demanding radical treatment on account of a great deal of pain in the left side; a bloody discharge from the vagina; very severe constipation; at time the passing of gas, and painful stools.

103. **Congenital Sacs in Oblique Inguinal Hernia.**—Hessert claims that the chief etiologic factor underlying the development of oblique inguinal hernia in fully three-fourths of the cases can be traced to the pre-existence of a congenital sac, the result of faulty closure of a part or the whole of the vaginal process. This proposition has been sustained in the last 100 operations in Hessert's practice.

106. **Diffuse and General Peritonitis.**—In the 500 cases of diffuse or general peritonitis reported by Kennedy, there were 9 deaths. This includes the deaths in the hands of several assistants. In 124 of these cases the incision was in the median line for a general peritonitis with distention. In the remaining cases with a diffuse peritonitis, the toilet was always proportionate to the extent of involvement of the peritoneum. Three of the deaths were in patients over 70. One of the patients died one hour after the operation. This patient went on the table with a subnormal temperature of 96 degrees. Another patient lost was a vigorous man with cecum and appendix on the left side. The appendix was gangrenous and retrocecal. The error in this case was that Kennedy made the incision on the right side. It should have been in the center. The toilet of the left side would have been better and should have saved this patient; as it was, he died with symptoms of retroperitoneal infection.

All patients had the open treatment, not a stitch in the abdomen and the cofferdam drain. The Fowler position was not used in any case; in fact, the reverse position was used, the foot of the bed being elevated in the worst conditions. This position was not used with the idea of increasing or decreasing absorption, but to place the patient in the best position to resist shock of operations. Proctoclysis was not consistently used, but Kennedy has no objection to its use.

109. Published also in *Illinois Medical Journal*, March; see abstract No. 139.

112. **Vaginal Hysterectomy for Prolapsus.**—In cases in which there is a marked prolapsus of the uterus associated with much redundancy of the anterior and posterior vaginal walls and occasionally with a greater or less amount of ulceration, vaginal hysterectomy, combined with a wide removal of the surrounding vaginal mucosa, closure of the vaginal vault and repair of the perineum is the operation performed by Cullen. He outlines the area to be removed at the commencement by cutting just through the vaginal mucosa downward from the bladder, entering Douglas' cul-de-sac behind, in order that he may get his bearings, removes the uterus and joins the vaginal mucosa to the peritoneum of Douglas' pouch. The peritoneum of the anterior pelvic wall is then sutured to that of the posterior wall, and in this way the pelvis is completely shut off.

### Iowa Medical Journal, Des Moines

*March*

116 *Blennorrhea Neonatorum—Cause, Prevalence and Prophylaxis. L. W. Dean, Iowa City.
117 *The Cost of Ophthalmia Neonatorum in Iowa. A. R. Amos, Des Moines.
118 *The Practical Aspects of Prevention of Ophthalmia Neonatorum. R. M. Lapsley, Keokuk.
119 Morbid Worry. W. J. Egloff, Mason City.
120 *Early Diagnosis of Diseases of Children that lead to Deformities. F. Mueller, Chicago.
121 Cholangeitis. N. Schilling, New Hampton.
122 Cholecystitis. S. T. Gray, Albia.

116, 117, 118, 120. Abstracted in The Journal, July 17, 1909, pp. 229, 230.

### Monthly Cyclopedia and Medical Bulletin, Philadelphia

*March*

123 *Cerebrospinal Meningitis in an Infant Two Months Old: Diagnosis made by Tapping the Lateral Ventricles: Treatment by Intraventricular Injections of Flexner's Antimeningitis Serum: Recovery. L. Fischer, New York.
124 Lithia Waters as Therapeutic Agents. H. Leffmann, Philadelphia.
125 Tonsillar Hypertrophy. R. B. Scarlett, Philadelphia.
126 Joint Conditions Causing Pensionable Disabilities. J. T. Rugh, Philadelphia.
127 *The Coal-Tar Derivatives versus Opiates. C. E. deM. Sajous, Philadelphia.

123. Published in *The New York Medical Journal*, March 26, 1910, and abstracted in The Journal, April 9, 1910, p. 1234.

127. **Coal-Tar Derivatives Versus Opiates.**—Sajous points out that the history of coal-tar derivatives as therapeutic agents shows that it is not through the medical profession that the sins attributed to them have been perpetuated, but through lay manufacturers of headache powders. If such a reason were to prevail among those who oppose the use of acetanilid, antipyrin and acetphenetidin, in practice, or their retention in the Pharmacopeia, then all our valuable therapeutic agents should be similarly treated, since all in turn have once on a time been used by empirics or enterprising commercialists who look on human suffering merely as an opportunity to satisfy their greed. Even the fate of opium and its analgesic salts would be sealed by the evil reputation soothing syrups have given them.

The most important phase of the question which bespeaks their retention among official remedies, however, according to Sajous, is the relatively small proportion of coal-tar habitués as compared to the victims of the morphin habit. Even the most active agent of this class used in medicine, acetanilid, is practically inoffensive as a cause of drug mania. Withdrawal of coal-tar products gives very little trouble. Under the gradual withdrawal of the drug, tonics and the bromids, and with a little cannabis indica to subdue pain, if any, prompt recovery ensues.

Much is said of the poisonous effects of coal-tar products. If, however, we study closely the causes of the deaths they have produced, we shall find that in practically every instance the fatal results were due to their use either in excessive doses or in disorders in which experience has shown them to be contraindicated. The fatal results due to excessive dosage with "orangein," "bromo-seltzer," and the like, or to the cumulative action of too many doses within a given time, belong to the category of self-treatment by laymen and the free dispensing of proprietary drugs—features which stand outside the pale of professional responsibility, though well within the reach of legislation. Finally, it is urged against the coal-tar derivatives that although they relieve pain they do not produce sleep. In the first place, this is an error; they do induce somnolence, though this is much less marked than when opiates are used. But even were it true—nothing prevents the simultaneous use of safe advantages in their employment concomitantly, since the dose of either agent can be made smaller. Summarizing all these facts, it seems plain, Sajous says, that far from being harmful in the hands of the profession, the coal-tar derivatives have furnished the only means to avoid the use of the opiates.

### Old Dominion Journal of Medicine and Surgery, Richmond

*March*

128 Appendicitis in Children. J. M. T. Finney, Baltimore.
129 Pityriasis Rubra Pilaris in a Negro. W. L. Gatewood and J. C. Bardin, Petersburg.
130 Pulmonary Tuberculosis—Its Early Diagnosis and Subsequent Management. W. D. Tewksbury, Catawba, Va.
131 Successful Enucleation of a Meningeal Endothelioma Involving the Motor Cortex. S. H. Watts, Charlottesville, Va.
132 Peroneal Palsy of Obstetric Origin. A. Gordon, Philadelphia.
133 The Life and Work of Andreas Vesalius. D. K. Shute, Washington, D. C.

### Detroit Medical Journal

*March*

134 Infectious Foci of the Mouth, Nose and Throat. H. L. Begle, Detroit.
135 Chemical Therapeutics. F. T. F. Stephenson, Detroit.
136 Chorea. A. D. Potter, Detroit.
137 Syphilitic Arthropathies. N. E. Aronstam, Detroit.

### Illinois Medical Journal, Springfield

*March*

138 Surgical Aspects of Exophthalmic Goiter. A. H. Ferguson, Chicago.
139 *Surgical Treatment of Exophthalmic Goiter. F. C. Zapffe, Chicago.
140 *Medical Treatment of Exophthalmic Goiter. M. M. Portis, Chicago.
141 *Treatment of Exophthalmic Goiter with Serum of Thyroidectomized Animals. S. Krumholz, Chicago.
142 Organotherapy: Historical Review and Critique. A. C. Croftan, Chicago.
143 *Adrenal Therapy. C. E. de M. Sajous, Philadelphia.
144 Orchitic and Ovarian Therapy. G. Schmauch, Chicago.
145 Thyroid Therapy. J. B. Herrick, Chicago.
146 Medical Inspection of Public School Children. G. W. Rice, Champaign.

139. **Surgical Treatment of Exophthalmic Goiter.**—It is held by Zapffe that any one who has had an opportunity to observe the results which follow the surgical treatment of exophthalmic goiter must confess that it is the best treatment for this disease in nearly every case, although not every case of exophthalmic goiter is suitable for surgical treatment. Most authorities are agreed that in cases in which surgery has failed to produce good results it was not the fault of the operation, but the fault of too late an operation being performed. Surgical treatment should not be considered a last resort, but should be looked on in the same manner as the medical treatment is regarded—as a form of treatment, and not as the last thing to be attempted, in the hope of giving the patient relief. An early operation, a careful operation, done by an experienced operator, and not by an occasional operator, are essential to success.

140. **Medical Treatment of Exophthalmic Goiter.**—Surgery, says Portis, has demonstrated more brilliant results than medicine so far. But not all cases are surgical. The mild cases, the patients with acute symptoms, the advanced cases with cardiac degeneration, the patients who although operated on have not improved, all these should be treated medically. The internist should not temporize with patients who resist medical measures or those who relapse of acute symptoms. These cases are surgical, and the patients should be operated on when the acute symptoms are under control and before they have gone too far as chronic cases. Then, and then only, will the unusual mortality be improved.

141. **Serum Treatment of Exophthalmic Goiter.**—It is Krumholz's opinion that this serum is the most valuable drug as yet offered. In most cases nearly the whole symptom-complex is ameliorated. The subjective symptoms subside. The tremor and nervousness diminish, and the nutritional disturbance is markedly lessened. In some cases the thyroid gland is reduced in size and occasionally the exophthalmos recedes. The tachycardia is reduced more promptly and effectively with the serum than with any other therapeutic agent. Taking the 14 cases under his observation as a basis for computation, the ailment did not recur in 2 cases after a lapse of several years, equaling 14.3 per cent.; marked improvement resulted in 42.8 per cent.; slight improvement in 35.6 per cent. In one case, or 7.1 per cent., there was no response to treatment. After treatment had ceased, relapses occurred in 5 cases after periods of 9, 8, and in the last three, 6 months, respectively. These figures seem to indicate that the serum has an accumulative action like iodothyrin, and, in order to secure permanent relief, should be administered at intervals. It is interesting to note that after the first few days of the serum treatment the pulse rate increased in 5 cases and the weight decreased in 5 cases. Krumholz emphasizes that to secure favorable results it is essential to reach and maintain a point of neutralization and then approximate the doses in each case, for the reason that small doses have no marked beneficial effect, while an excessive quantity aggravates the condition. There is no standard dose. The usual maximum dose administered in Krumholz's series of cases consisted of 120 drops of the liquid or 60 grains of the desiccated serum.

143. Published in the *Monthly Cyclopedia and Medical Bulletin*, February, 1910, and the *Interstate Medical Journal*, February, 1910; abstracted in The Journal, March 19, 1910, p. 1010.

### Western Medical Review, Omaha

*March*

147 Bacteriology of Acute Infectious Diseases of Bone. H. N. Waite, Lincoln.
148 Surgical Treatment of Rachitic Deformities. H. W. Orr, Lincoln.
149 *Constitutional Diseases of Infancy Leading to Bone Deformity. H. M. McClanahan, Omaha.
150 When to Operate in Bone Tuberculosis. D. T. Quigley, North Platte, Neb.
151 Law Enforcement. F. L. Wilmeth, Lincoln.
152 *The Application of Business Methods to the Practice of Medicine. F. A. Long, Madison, Neb.

149, 152. Abstracted in The Journal, Nov. 20, 1909, p. 1762.

### Denver Medical Times and Utah Medical Journal

*March*

153 *Arms of Precision. W. Stuver, Fort Collins, Colo.
154 Typhoid Report for Greeley, Colo., 1909. C. B. Dyde, Greeley, Colo.
155 The *X*-Ray in Diagnosis of Renal, Biliary, and Vesical Calculi. S. B. Childs, Denver.
156 Winter Remedies. G. L. Servous, Fairview, Nev.
157 A Bipolar Intragastric Electrode. A. G. Hurdman, Denver.
158 Preventive Medicine. E. V. Silver, Salt Lake City.

153. Abstracted in The Journal, Nov. 27, 1909, p. 1844.

## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### Lancet, London

*March 26*

1 *Angina Pectoris (continued.) W. Osler.
2 *Treatment of the Surgical Forms of Tuberculosis by Tuberculin. N. Raw.
3 The Abdominal Watersheds and their Influence on the Localization of Intraperitoneal Infections. C. R. Box.
4 *Treatment of Psoriasis. E. G. G. Little.
5 Case of Heart Block. J. G. Emanuel.
6 The Antituberculosis Campaign in London. D. J. Williamson.

1. **Angina Pectoris.**—The following explanation of the pain in angina pectoris is given by Osler: Angina results from an alteration in the working of the muscle fibers in any part of the cardiovascular system whereby painful afferent stimuli are excited. Cold, emotion and toxic agents interfering with the orderly action of the peripheral mechanism, increase the tension in the pump walls or in the larger central mains, causing strain, and a type of abnormal contraction enough to excite in the involuntary muscles painful afferent stimuli. In stretching, in disturbance of the wall tension at any point, and in a pain-producing resistance to this by the muscle elements, lie the essence of the phenomena. In a man with arteriosclerosis and high pressure, and all the more likely if he has a local lesion, a syphilitic aortitis for example, disturbance at any point, of

the tension of the wall permits the stretching of its tissues. Spasm or narrowing of a coronary artery, or even of one branch, may so modify the action of a section of the heart that it works with disturbed tension, and there are stretching and strain sufficient to arouse painful sensations. The heart may be in the same state as the leg muscles of a man with intermittent claudication working smoothly when quiet, but instantly an effort is made or a wave of emotion touches the peripheral vessels, anything which heightens the pressure and disturbs the normal contraction, brings on a crisis of pain.

2. **Tuberculin Treatment of Surgical Tuberculosis.**—Sixty-one cases of tuberculous glands in the neck and elsewhere have been treated by Raw with human tuberculin with astonishing and excellent results. He is strongly averse to extensive dissections in the neck with the object of clearing out all tuberculous glands. He advises that caseating or suppurating glands should always be opened or removed as they are a source of danger, but states that the glands which are now caseating will nearly always disappear after a course of 12 or 15 injections of tuberculin. Raw looks on glands in the neck as the most favorable lesions for treatment with human tuberculin. He has treated 17 patients with tuberculous salpingitis with injections of Koch's tuberculin having previously had the tubes removed by operation. Several of the women have been completely cured, with increase of weight and loss of all symptoms, although in 5 cases the bladder was involved. Tuberculosis of the genitourinary apparatus seems to respond well to tuberculin treatment, and of 26 patients 14 seemed to receive lasting benefit, while 12 progressed. Many of these cases were advanced, but in early cases the individuals respond well to treatment. A tuberculous testicle should always be removed, says Raw, as by remaining it is liable to be followed by acute generalized tuberculosis. Tuberculous kidneys should not be removed unless suppuration is present, as they improve and often remain useful organs after tuberculin treatment. Tuberculous ulcers in the bladder are often very intractable, and may require some surgical interference as well as tuberculin, but they sometimes heal altogether without operation.

4. **Treatment of Psoriasis.**—Of all the local applications employed in psoriasis, Little holds that none can compare in efficiency with chrysarobin added to a fairly adhesive ointment base, such as the following:

| | gm. or c.c. | | |
|---|---|---|---|
| Kaolin .............................. | 8 | | ʒii |
| Starch | | | |
| Lanolin, āā .............................. | 16 | or | ʒiv |
| Paraffin, fluid .............................. | 8 | | ʒii |
| To this is added chrysarobin............ | 1-2 | | gr. xv-xxx |

The ointment thus resulting may be applied to the face and the forehead where the hair joins the skin—a very frequent position for obstinate patches of the disease. It should be used at night and removed in the morning either with petrolatum or with benzen; the latter is especially useful on hairy parts, and all trace of the ointment should be removed before washing the parts with soap, which in combination with chrysarobin, produces purple discoloration of the hair. The patient must be warned of the danger of conjunctivitis from contact of the conjunctiva with chrysarobin. On the hands the most convenient covering is a pair of cotton gloves, which may be used again and again. The more the ointment soaks into the glove, the more efficacious it becomes. On the covered parts of the body the adhesive ointment mentioned can be left *in situ*, and the proportion of chrysarobin increased to half a dram to the ounce; it will not come off with mere rubbing, so that the bath need not be prohibited.

### British Medical Journal, London

*March 26*

7 Epilepsy. W. A. Turner.
8 *Optic Neuritis and Suppurative Otitis. J. S. Barr and J. Rowan.
9 *Scopolamin-Morphin Narcosis. R. H. Jamieson.
10 Death Under Spinal Anesthesia by Jonnesco's Method in Acute Intestinal Obstruction. F. V. Milward.
11 Hemopneumothorax without Traumatism: Recovery. R. B. Ness and G. A. Allan.
12 Acute Tuberculous Bronchopneumonia after Gastroenterostomy. W. A. Mackay, I. MacDonald and H. G. Sutherland.
13 *A Typhoid Bacillus-Carrier. J. R. Hutchinson.
14 Syphilitic Leucoderma in a Male. K. H. Jones.
15 Relation of the Parovarium to Cyst Formation. P. P. Cole.
16 Electrocardiographic Curves Yielded by Ectopic Beats Arising in Walls of the Auricles and Ventricles. T. Lewis.

8. **Optic Neuritis and Suppurative Otitis.**—The conclusions arrived at by Barr and Rowan are founded on the examination of the eyes and ears of 160 patients. When possible, each individual has been kept under observation until the termination of the ear affection in recovery, either as the result of local treatment or after operation. Barr and Rowan found that apart from optic neuritis, vascular changes of a lesser degree are frequent (39 times in 160 cases, or about 25 per cent.). Cases of purulent middle-ear disease, in which optic neuritis or vascular engorgement of the fundus is present, are much less amenable to local treatment than those in which the fundus is normal. As a general rule, an improvement in the eye condition is accompanied by improvement in the aural condition, while an increase in the intensity of the changes in the fundus or their persistence is associated with less amenability to treatment and greater gravity of the ear condition. The most probable cause of vascular engorgement of the fundus or optic neuritis is serous meningitis (diffuse or localized). Optic neuritis caused in this way is not usually followed by atrophy, and unless there are other symptoms demanding it, opening of the dura mater is unnecessary.

The practical lessons deducible are: (1) a case showing these changes in the fundus should be watched closely, and their existence regarded as an additional reason for the early performance of the radical mastoid operation; (2) if, on the other hand, they show a tendency to clear off, especially with improvement in the ear condition, or if the fundus is normal to begin with and remains so, we may, with more confidence, look for a favorable response to conservative treatment. Barr and Rowan plead for a more systematic general use of the ophthalmoscope in cases of purulent disease of the middle ear, as they are convinced that the trouble involved will be more than repaid by the results, both as regards the progress and prognosis of this disease.

9. **Scopolamin-Morphin Narcosis.**—In the course of some pharmacologic experiments with scopolamin and morphin, Jamieson found in animals certain effects produced on the respiration similar to those which sometimes attend the clinical use of scopolamin and morphin as an anesthetic. Clinically, one meets with those apparently alarming cases in which the respiration is greatly reduced, to 5 or 6 a minute, and Jamieson's work shows the clinical importance of artificial respiration in cases of an overdose of scopolamin and morphin; and this artificial respiration, combined with drugs which stimulate the respiratory centers, such as strychnin, seems to offer the most logical method of treatment in cases of an overdose.

13. **A Typhoid Bacillus Carrier.**—The only factor common to seven cases reported by Hutchinson is the presence of the lodging-house keeper. No history of contact with known enteric fever cases, or of consumption of food likely to be infected was obtainable in any of these cases. The lodging-house keeper's medical history is as follows: Up to 1893, when she was about 54 years old, she enjoyed good health. In this year she had an attack of "influenza and pneumonia," for which she was treated in a hospital. She remembers little about this illness, except that she had severe headaches and pain in the back and was delirious. She was ill for 5 weeks and was fed entirely on fluid foods. Since this illness she has suffered from periodic attacks of abdominal pain and vomiting. These attacks did not follow immediately on the illness of 1893; there was an interval of 5 years during which her health was good. A specimen of blood obtained in November, 1907, gave a negative reaction. On Nov. 4, 1908, her blood gave a positive reaction in 30 minutes. Feces and urine contained typhoid bacilli. Hutchinson deems it highly probable that the combination influenza and pneumonia of 1893 was in reality enteric fever. It is remarkable that she was not known to have infected any one prior to 1898, particularly so as she was engaged in general housework, including the preparation of food, etc., for her lodgers. Certainly her attacks of abdominal pain, etc., do not seem to have troubled her prior to the middle of 1898. The cases reported occurred in 1898 (1), 1905 (2), 1906 (2), 1907 (1), and 1908 (1).

### Medical Press and Circular, London

*March 9*

17 Gonorrheal Retro-ocular Neuritis and Myelitis. W. Gowers.
18 *The Cerebellum and its Diseases (continued). J. S. R. Russell.
19 Treatment of Acute Peritonitis. J. M. Paton.
20 Coxa Vara. J. S. Darling.
21 Etiology, Prophylaxis and Treatment of Cerebrospinal Meningitis. H. de Meric.

*March 16*

22 Nasal and Aural Hemorrhage; Three Causes and Treatment. A. Wylie.
23 Curettage of the Uterus. S. G. Kirby-Gomes.
24 Treatment of Labor in Contracted Pelvis: Especially Justifiability of Pubiotomy. G. F. Blacker.

18. Published in the *British Medical Journal*, March 12, 1910.

### Clinical Journal, London

*March 9*

25 Exophthalmic Goiter. W. P. Herringham.

*March 16*

26 *Question of Position and Early Movement after Abdominal Operations. C. M. Moullin.
27 Degeneration of the Spinal Cord. J. A. Ormerod.
28 Cancer. F. M. Sandwith.

26. **Position and Early Movement After Abdominal Operations.**—Whether or not patients after abdominal operations should be allowed to get up sooner than is the custom at present is a question well worth considering. Moullin is strongly disposed to believe that we are still too much tied down in this respect by the traditions of the old, bad system of septic surgery with its suppurating wounds. He agrees that when a wound is full of pus no relaxation can be allowed, but aseptic wounds are a new development and must be judged by totally different standards. So far as these are concerned, it is time, he declares, that we discard ancient authority and think out the matter for ourselves. In the first place, a clear distinction must be drawn between allowing a patient to be lifted quietly out of bed and placed in a comfortable chair with abundance of cushions and pillows for a few hours each day, for the sake of having his meals in comfort or for other reasons, and letting him get up and get about by himself, doing whatever he thinks fit. The latter is decidedly not recommended by Moullin, if for no other reason than that it is impossible to guarantee the patient against accidents.

So far as voluntary movements are concerned, the test when a patient may be allowed to control his own actions is a simple one. Moullin has adopted it for many years past and is perfectly satisfied with it. He makes the patient, while lying in bed, put the muscles that have been divided into action, and he does not give him his freedom until the scar definitely sinks in when this is done. He takes the sinking-in to mean that the lymph which has been effused has by this time become organized, so that, provided the patient is reasonably careful, it will stand ordinary work. He sees no reason why a patient whose wound is running an aseptic course should not be raised and lifted out of bed by trained nurses the next day, if it is thought desirable. The actual choice of position may be left to the patient. Comfort is the best guide. No position which throws the least strain on the wound can be comfortable for long.

### Australasian Medical Gazette, Sidney

*January*

29 Eugenics in the Light of Higher Civilization. G. L'Estrange.
30 Complement Deviation in Hydatid Disease. J. F. Flashman and A. G. Butler.
31 *Possibility of Treating Leprosy with Bactericidal Drugs. L. E. Row.
32 Brophy's Operation for Complete Cleft Palate. T. Fiaschi.
33 The Mayo Brothers' Clinic: Special Reference to Open Method of Ether Administration. G. Craig.
34 Life History of Hydatid Cyst. W. R. C. Mainwaring.
35 Cutaneous Reaction of von Pirquet in Diagnosis of Tubercle. E. A. Briummit.
36 Camphor-Carbolic Acid as Direct Antiseptic Application to Ulcerated Surface. J. B. Cleland.
37 *Treatment of Epistaxis by a Simple Method. J. Boyd.

31. **Bactericidal Drugs.**—For nearly 3 years Row has been experimenting with guaiacol, and finds, he says, that it has the power of destroying the *Bacillus lepræ*, causing reactions more or less pronounced according to the dose given. In mild cases the patients can take as much as 12 minims, 3 times a day, by the mouth, without any sign of suppuration occurring, but if a similar dose be given in advanced cases, extensive suppuration will result. Care must be taken to accustom the patient to it gradually, and no more than 4 or 5 minims, 3 times a day, should be given for the first 2 or 3 months. At the end of this time the dose can be gradually increased by 2 minims at a time till the maximum dose is reached—say from 12 to 14 minims, 3 times a day. In advanced cases of nodular leprosy no more than 15 minims a day should be given, but in mild cases up to 36 or 40 minims a day can be given with safety, under careful supervision. Should suppuration occur, however, the dose must immediately be reduced. When a patient suffering from nodular leprosy is placed under the guaiacol treatment (5 minims, 3 times a day) for the first week or two he will complain of vertigo occasionally, but this will gradually wear off, until the dose is increased, when he will again suffer more or less from it. As the patient gradually becomes used to the drug an increase in dose will not produce this symptom, as a rule.

When the patient has been under treatment for 6 or 8 weeks a considerable improvement will be noticeable in the general health, but no change takes place in the tubercles for about 4 months. At the expiration of this time, however, the tubercles become softer in the center, and absorption commences. This is a slow process, but it is progressive, and in the course of a few months a considerable diminution in the size of the tubercles can be noticed. Row has tried this treatment on over 50 patients, for variable periods, in all stages of the disease, and states that there has been distinct improvement in every one, so long as the patient persevered, but retrogression occurred when the use of the drug was discontinued. In the most advanced cases the improvement was slight, but it has been very marked in those patients who have not reached such an advanced stage of the disease that their resisting forces have been more or less destroyed. Out of 31 patients who persevered with the treatment, 3, at least, have advanced toward recovery to such an extent that it is extremely difficult to obtain evidence of the existence of bacilli in specimens taken from them, and even when such bacilli are found they are not normal. These 3 patients, he asserts, are in the best of health and never have the least sign of fever, pain or malaise.

37. **Treatment of Epistaxis.**—Boyd describes his method as follows: Take a piece of fine starched muslin from 5 to 6 inches square. Impinge the points of a closed dressing forceps—a thin penholder will do—in the center, and pull the muslin over the forceps, forming a closed umbrella appearance with the forceps forming the handle. This is passed through the nostril until it comes in contact with the posterior nasopharyngeal wall, when the forceps is withdrawn. The ends of the muslin are now spread over the face and held in place by the fingers of the left hand, and the hollow cone left is rapidly plugged from behind forward with small pieces of cotton wool soaked in any available styptic, *i. e.*, vinegar, as firmly as is thought desirable; the projecting ends of the muslin are trimmed off, and the little operation is completed easily in a couple of minutes. The second nostril is similarly dealt with if necessary. If it be not necessary to plug the postnasal fossa (doing the latter will almost invariably leave temporary deafness), the muslin cone, after withdrawal of the forceps, can be pulled forward to clear the posterior wall of any pressure before the plugs are introduced. The muslin should not be moistened, and the little plugs should be rapidly introduced before the cone gets flabby with moisture, as they slip in so much more easily.

### Dublin Journal of Science

*March*

38 Treatment of Syphilis by Intramuscular Injections of Mercury. G. S. Walton.
39 Duodenal Ulcer. M. K. Acheson.
40 *More About Medical Education. W. H. Thompson.

40. **Medical Education.**—The chief points contended for by Thompson may be summarized as follows: The teaching given in the laboratories of medical schools has a direct or clinical bearing to a greater degree than is generally recognized. The standard in anatomy and physiology is not higher now than it was during the four-year curriculum. The dissatisfaction on the part of the hospital with the present state of affairs has chiefly arisen from a normal development—namely, the natural growth of laboratory instruction—in accordance with the recent progress in medicine. It would be unwise to check this growth, and the hospital would benefit by providing

greater facilities for utilizing to a fuller extent the laboratory teaching given to the students. The hospital would gain by adopting a more developed class system and enforcing a more regular attendance. The changes in the medical curriculum commonly suggested by clinical teachers—namely, the exclusion of botany and zoology, together with the proposal to reduce anatomy and physiology, and confine them to the first two years, Thompson thinks, would entail a postponement of hospital work till the third year or even later in the case of students who fall behind. The compression of work into the early years of the curriculum, coupled with the relegation of the final examinations to the end of the fifth year, would leave the third and fourth years very light, and he thinks, would not help the student.

### Archives Générales de Chirurgie, Paris

*February, IV, No. 2, pp. 111-220*

41 *Osteoma of the Brachialis Anticus. Vandenbossche.
42 *Arthritis due to the Sporothrix. (Arthrites sporotrichosiques.) P. Moure.
43 *Metal Bracelet for Fixation of Stumps after Fracture of the Radius. (Ostéosynthèse de la diaphyse radiale avec une bague métallique amovible.) Mauclaire.

41. **Osteoma of the Brachialis Anticus.**—Vandenbossche gives the details of 4 cases from his experience, the lesion developing after luxation and fracture or separation of the epiphysis. Spontaneous retrogression during immobilization may occur as in two of his cases. Immobilization, he declares, is important from the standpoint of prevention in all cases of dislocation of the elbow. If the osteoma involves the joint, operative treatment must be that for ankylosis in general. Time aids in the cure of an osteoma and surgical measures, he states, should not be instituted for at least a year after development of the lesion, and then only when there is important functional impotency.

42. **Arthritis Due to the Sporothrix.**—Moure reports a case in which a serious joint affection commenced with accumulation of fluid in the joint, assumed to be of syphilitic origin, this diagnosis being confirmed by the benefit at first under mercury and iodid treatment. The lesion continuing to progress, a cold abscess developed below and the diagnosis was changed to tuberculosis as there was nothing in the history of the case so far to indicate a mycosis. But when the abscess perforated outward and the germs gained access to the lymphatics, 28 subcutaneous nodules developed along their course. The sporothrix was cultivated in pure cultures and no signs of tuberculosis developed in animals inoculated with material from the lesion. The findings in the case are illustrated and compared with 2 similar cases on record. Moure has also found the sporothrix present in 4 out of 36 cases of various surgical affections during the last 18 months, and he is convinced that systematic search for this germ would elucidate many puzzling surgical lesions and enable a prompt cure under potassium iodid. When the lesion is advanced, the sporothrix may have been killed off by its own products or by secondary infection, but the nature of the process can be readily differentiated by the fixation of complement test and sporoagglutination or still more easily by tentative administration of potassium iodid. He is convinced that many patients who now drag from hospital to hospital on account of closed or open subacute or chronic osteoarthritis, could be promptly cured if this were done.

43. **Bracelet Clamp in Treatment of Fracture of the Radius.**—Mauclaire describes the methods in vogue for coaptation of the stumps in fracture of the radius when there is a marked tendency for the stumps to deviate toward the ulna and comments on the drawbacks of the various methods. He then describes a broad metal bracelet which he applies to the bone and which holds the stumps in the correct position by means of an inner shell which is forced firmly down on the bone by a thumbscrew.

### Bulletin de l'Académie de Médecine, Paris

*March 15, LXXIV, No. 10, pp. 261-291*

44 *Tumor of the Pineal Gland in Children. F. Raymond and H. Claude.

44. **Tumor of the Pineal Gland in Children.**—Raymond and Claude report a case which seems to demonstrate that it may be possible to differentiate early a tumor in the pineal gland and thus permit its removal in time. This is also shown by 5 other cases in children that have been reported in detail in recent literature. Besides the signs of extreme hydrocephalus, the syndrome includes indications of defective or exaggerated functioning on the part of several of the glands with internal secretion. The location of the pineal body commanding the blood vessels that drain the central regions of the brain explains, he says, the liability to sudden and extreme hydrocephalus. In the case described the tumor in the pineal body had been diagnosed during life. The first symptoms in the patient, a boy of 7, were headache on the right side, radiating to the eye, nose and upper jaw on the same side; when the attack of headache was very severe, there was liable to be vomiting. A tooth was pulled, and quinin was given, and the attenuation of the disturbances seemed to coincide with this treatment. A year later the attacks returned and the child who had been growing normally hitherto became quite obese and too weak to walk; vision became poor, and the eyeballs deviated toward the right; quinin, mercury and iodid gave no relief, but some benefit followed three lumbar punctures. By the end of the second year amaurosis was complete and another lumbar puncture had a disastrous effect, being followed by intense headache, vomiting, general depression and absolute gastric intolerance. Some improvement was evident after three months, but the child was too weak to walk. The hair on the pubis was developed like that on a youth of 15 and there was down on the upper lip and cheeks, but the genital organs were undersized. The child died in coma three years after the first symptoms and autopsy revealed a gliomatous tumor in the region of the pineal gland with atrophy of the hypophysis.

### Bulletin de la Société de Pédiatrie, Paris

*February, XII, No. 2, pp. 85-127*

45 *Oiled Silk in Treatment of Edema and Sclerema in New-Born Infants. (Traitement de l'œdème et du sclérème idiopathiques des nouveau-nés débiles par l'enveloppement dans le taffetas gommé.) H. Dufour.
46 *Joint Tuberculosis with Valvular Lesions. (Note sur les arthropathies tuberculeuses, avec lésions valvulaires du cœur.) M. H. Barbier.
47 Cricotracheal Stenosis Following Intubation. (Trois cas de laryngostomies pour sténoses cicatricielles cricotrachéales ayant nécessité la trachéotomie.) M. Guisez.
48 Radioscopy in Pneumonia in Children. (Le triangle axillaire de la pneumonie infantile. Etude de radioscopie clinique.) E. Weill and G. Mouriquand.

45. **Oiled Silk in Treatment and Prevention of Idiopathic Sclerema and Edema in the New-Born.**—Dufour treats prematurely born infants with a tendency to sclerema or edema by wrapping them in oiled silk instead of putting them in an incubator. Since he adopted this method of treatment two years ago these two syndromes have entirely disappeared from his service. The aim is to keep in the child's heat, and the infant is wrapped completely in the oiled silk, only its head protruding, as it is the excessive loss of heat by these weakly prematurely born infants, he says, which leads to production of the sclerema and edema. Tibone has also recommended the use of oiled silk but he merely wraps the limb affected with the sclerema with cotton with oiled silk or rubber tissue outside, the aim being thus different from Dufour's total pack.

46. **Tuberculous Arthropathies with Valvular Disease of the Heart.**—Barbier calls attention to a syndrome in which the symptoms seem to indicate rheumatism but they develop into a tuberculosis syndrome in time. In the case first described a girl of 15 had had recurring attacks of this tuberculous rheumatism, the knee, hip and shoulders being extremely painful and the patient shrinking from the slightest movement of the limb involved; there was no redness, edema or swelling of the joint. A concomitant chronic endocarditis was probably of the same tuberculous nature. The patient finally succumbed to rapid involvement of the lungs, four years after the first symptoms. In the second case the patient was a girl of 13 with pain in the right knee and hydrarthrosis, the disturbances subsiding and returning at intervals during the year and at last involving several joints with signs of a mitral lesion and of an apical process. The intradermal tuberculin test elicited a positive response, but under sanatorium treatment the joint disturbances rapidly and entirely retrogressed and the general condition improved.

### Presse Médicale, Paris

*March 16, XVIII, No. 22, pp. 185-192*

49 Relations between the Nasal Mucosa and the Genital Apparatus. (Relations entre la muqueuse du nez et l'appareil génital de la femme.) G. Mahu.
50 Insoluble Radium Salts in Therapeutics. (Des sels de radium insolubles en thérapeutique.) H. Dominici.

### Semaine Médicale, Paris

*March 16, XXX, No. 11, pp. 121-132*

51 *Six New Signs of Organic Hemiplegia. J. Lhermitte.

*March 23, No. 12, pp. 133-144*

52 Medicopsychologie Study of Intellectual Superiority. (M. Henri Poincaré.) E. Toulouse.
53 Treatment of Fat Embolism by Temporary Drainage of the Thoracic Duct. (Traitement de l'embolie graisseuse par le drainage temporaire du canal thoracique.) M. W[illegible]s.

51. **New Signs of Organic Hemiplegia.**—Lhermitte comments on six new signs that have been recently discovered as showing that hemiplegia from some organic cerebral cause is far from being of as simple origin as previously imagined. The evidence of hypertonicity with the organic form and its constant absence in hysteric paralysis confirms the difference in their mechanism. Claude has recently called attention to a sign of curable organic hemiplegia, in that the paralyzed member may make spontaneous movements in response to stimulation of the skin or muscle. In three cases of complete cerebral paralysis of the arm, the hand and fingers became flexed or the arm bent up when the skin was pinched or the arm was suddenly turned. Similar movements could be induced in the paralyzed leg by pinching the skin of the outer aspect of the thigh. The foot could be flexed by pinching the muscle in the thigh. In all these cases in which this automatic movement could be induced the hemiplegia subsided within a month after the apoplexy. Raimiste's hand sign was described in The Journal, March 12, 1910, page 871: If the forearm and hand are placed vertically on a table and the supporting hands are suddenly withdrawn, the wrist drops with cerebral hemiplegia while the hand retains its vertical position under other conditions. The same writer has also called attention to a movement of abduction in the paralyzed leg when the patient is directed to abduct the sound leg and the movement is suddenly prevented, the patient lying on a hard bed. The effort made is revealed in the movement of abduction on the part of the paralyzed limb, although the limb is incapable of making any spontaneous movement. This associated abduction or adduction is not observed in health nor in hysteric hemiplegia. Néri has found that the leg presents a phenomenon similar to Raimiste's drop wrist or hand sign: With the patient reclining, the paralyzed limb becomes flexed when the leg is raised to form an angle with the plane of the bed of 50 degrees, while the sound leg can be raised to an angle of 75 degrees without flexing. The same phenomenon can be induced by having the patient bend over as he stands, the legs apart. As the trunk is held horizontal the paralyzed leg becomes flexed while the sound limb remains extended. This hypertonicity of the flexors of the limb can be made evident in the coma phase. Souque's sign is induced by passive raising of the arm. As it is raised the fingers become extended and spread apart like a fan. He found this sign 17 times in 29 cases of hemiplegia, although of course it is not apparent when the paralysis is complete. Klippel and Weil have also called attention to the thumb sign, that is, slight extension of the thumb as the other fingers are slowly lifted. They found this sign constant in 9 cases of hemiplegia with contracture, while it was never present with flaccid paralysis. The hand sign and associated adduction sign are observed with the flaccid form.

### Archiv für Gynaekologie, Berlin

*XC, No. 2, pp. 213-438. Last indexed March 5, p. 823*

54 Intrauterine Injections in Treatment of Inflammation in the Adnexa. E. Aulhorn.
55 Seroreaction in Pregnancy and Puerperium. (Eine "Reaction" im Serum Schwangerer, Kreissender und Wöchnerinnen.) T. Heynemann.
56 Colon Bacillus Infection of the Female Urinary Passages in Pregnancy and the Puerperium. (Infection der weiblichen Harnwege durch das Bacterium coli commune in der Schwangerschaft und im Wochenbett.) P. Alsberg.
57 Closure of Botallo's Duct. (Der Verschluss des Ductus arteriosus Botalli.) F. Kirstein.
58 Lymphangioma of Fallopian Tube. R. Franz.
59 Relations between the Albumin in Human Milk and the Albumin in the Serum of Mother and Child. (Beziehungen zwischen dem Eiweiss der Frauenmilch und dem Serumeiweiss von Mutter und Kind.) A. Bauereisen.
60 Pathologic Anatomic Findings in Recurring Uterine Carcinoma. (Untersuchungsbefunde an Recidiven nach Uteruscarcinomoperationen.) M. Stickel.

### Beiträge zur Klinik der Tuberkulose, Würzburg

*XV, No. 2, pp. 175-302. Last indexed March 12, p. 916*

61 *Dosage in Tuberculin Tests. A. van Balen.
62 Local Tuberculin Reaction in Clinically Sound Adults. Id.
63 *Effect of Tuberculosis on the Heart. F. M. Pottenger (Monrovia, Cal.).
64 Morphologic and Biologic Research on Tubercle Bacilli Stained with Methyl-Violet-Fuchsin. W. Knoll.
65 *Treatment of Laryngeal Tuberculosis in Public Sanatoriums. (Zur Behandlung der Kehlkopftuberkulose in der Volksheilstätte.) H. Clarus.
66 Probable Tuberculous Disease of the Lymphatic Apparatus. (Zur Kenntnis von Sternbergs sogenannter "Eigenartiger Tuberkulose des lymphatischen Apparates."). F. Graetz.
67 Problem of Experimental Immunization against Tuberculosis. G. Deycke and H. Much.

*No. 3, pp. 303-482*

68 *Clinical Experiences with Treatment of Pulmonary Tuberculosis by Nitrogen Injections. C. Saugman and T. B. Hansen.
69 Position of Diaphragm in Health and with Emphysema. (Der Stand des Zwerchfelles bei Gesunden und Emphysematikern.) Seefeldt.
70 Results of Combined Institutional and Tuberculin Treatment of Pulmonary Tuberculosis. (Mitteilung zu Bandeliers Arbeit, Band XV, Heft 1.) F. Köhler.

61. **Dosage for Tuberculin Tests.**—Balen has been testing the subcutaneous injection of tuberculin on clinically sound adults and found that a local reaction may occur in them even with the smallest doses, but the subjective phenomena: headache, nausea, drowsiness or insomnia, signs of a general reaction, were never observed in those free from tuberculosis. The signs of general reaction did not develop until a few hours after the absorption of the tuberculin which confirms that they are the effect of the action of the tuberculin, and equivalent to a positive diagnosis of tuberculosis. In small children the tuberculosis is always active. In adults it is important to know not only whether there is reaction, but the dose and the manner of the reaction. Only when there is infiltration and redness to a dose less than 1/100 mg. should enhanced susceptibility be assumed. A positive general reaction with only 1/10 mg. or less speaks for the disease. With active tuberculosis this reaction may occur with 1/100 or even 1/1000. He believes that his is the first research to determine the smallest amount of tuberculin which induces a reaction local, general or topical.

63. Abstracted in The Journal, Nov. 6, 1909, page 1595.

65. **Treatment of Laryngeal Tuberculosis in Sanatoriums.**—Clarus comments on the fact that laryngeal tuberculosis is rarely diagnosed when there are concomitant lung lesions. In 190 patients at the Görbersdorf Sanatorium only 50 had had the larynx examined and yet 16 of the others had a laryngeal process. It is of great importance for the prognosis of pulmonary tuberculosis to know whether there are complications on the part of the larynx. This is liable even with the mildest cases. Sunlight and induced hyperemia may be useful as adjuvants but too much reliance must not be placed on them. Absolute rest of the voice is of the greatest importance, supplemented by menthol, either as intralaryngeal injections of menthol oil or inhalation of hot menthol fumes for hours at a time. He injects a few drops of the 10 or 20 per cent. oil at first daily and then two or three times a week. As the best of all measures for general application in the sanatorium he commends the actual cautery under cocain; he has thus treated 34 patients with most excellent results, 14 being entirely cured and 17 improved. He cites a few typical cases from this experience.

68. **Treatment of Pulmonary Tuberculosis by Pneumothorax Induced by Injection of Nitrogen.**—Saugman and Hansen devote over 150 pages to a detailed report of their experiences with the artificially induced pneumothorax in 54 cases in nearly three years. They found *x*-ray examination indispensable. With the technic illustrated they have made 970 injections without a trace of tendency to air embolism. In 33 cases an interval of eight months at least has elapsed and

study of these cases shows that in combinaton with institutional treatment, it is possible to save a large percentage of patients otherwise hopelessly lost. This result was obtained in 11 out of 24 cases in which the treatment was completed. The method should be restricted to severe, predominantly unilateral pulmonary tuberculosis; it is free from danger and the technic is simple but in about a fourth of the patients the adhesions in the pleura render the method inapplicable. They never witnessed serious mishaps but in some cases there was effusion into the pleura which sometimes had a favorable influence on the outcome, although troublesome at first. The treatment must be kept up for one year at least in acute cases and for two or more years in the chronic. A number of skiagrams and tracings are appended.

## Beiträge zur klinischen Chirurgie, Tübingen

*January, LXVI, No. 1, pp. 1-192*

71 *Tuberculosis plus Adenocarcinoma of the Breast. H. Klose and H. Vogt.
72 *Malignant Hypernephroma in Children. O. Franck.
73 *Malignant Chorioepithelioma Diagnosed Early by Abdominal Curetting. Lehmann.
74 Multiple Amniogenic Malformations plus Peculiar Tumor Formation. F. Grahl.
75 Ileus from Chronic Diverticulitis. (Darmverschluss bei chronischer Entzündung des Meckel'schen Divertikels.) H. Finsterer.
76 Primary Suture of the Lung. (Zur Frage der primären Lungennaht bei Lungenverletzungen.) W. Wolf.
77 *Transplantation of Blood Vessels. (Transplantation freier und konservierter Gefässe.) E. Bode and E. Fabian.
78 *Successful Transplantation of Parathyroid in Case of Thyreopriva Tetany. (Erfolgreiche Epithelkörperchentransplantation bei Tetania parathyreopriva.) W. Danielsen.
79 Perforated Gastric Ulcer in Etiology of Necrosis of the Pancreas. K. Fritsch.
80 Hernia in the Abdominal Wall Aside from the Median Line. (Ueber die Hernien der Bauchwand seitlich der Mittellinie unter besonderer Berücksichtigung der Hernien der Linea semilunaris Spiegelii.) A. Stühmer.
81 Hammer-Toe Flatfoot and Club-Toe Flatfoot. (Hammerzehenplattfuss und Klumpzehenplattfuss.) H. Rubritius.
82 *Influence of External Irritation in Origin of Carcinoma. (Bedentung des äusseren Reizes für die Entstehung der Carcinome.) E. Rehn.
83 Sarcoma of the Omentum. (Netzsarkom.) Capelle.

71. **Combination of Tuberculosis and Neoplasms.**—Klose and Vogt report a case in which a tuberculous process and an adenocarcinoma developed coincidently in the right breast. The patient was a woman of 25 with objectively sound internal organs who had nursed her one child for about a year when the breast became painful and was treated for five months on the assumption of suppurative mastitis. The authors have been able to find only 16 similar cases on record, and they assume in their case that the cancer developed on a primary tuberculous process.

72. **Malignant Hypernephroma in Children.**—Franck reports a case in a boy of nearly 9, who had always been pale and weak. Six weeks after an acute pericarditis the symptoms of the malignant disease became apparent and the tumor soon penetrated into the thorax. This is the fourth case on record, he says, in which a malignant hypernephroma developed in a child. The other children were between 2 and 5 years old; in one the tumor had developed on a horseshoe kidney. All were distinguished by extreme malignancy but no hematuria was observed. In the 222 cases of hypernephroma he has found on record a traumatic factor was evident in only 8 instances.

73. **Early Diagnosis and Removal of a Chorioepithelioma.**—An apparently healthy woman of about 30 with a healthy child was brought to the hospital on account of persisting hemorrhage after abortion. Curetting disclosed nothing pathologic. A year later she was brought again on account of hemorrhage from abortion and high temperature, but nothing pathologic was found in the fetus. As the symptoms continued, the abdomen was opened and the site of the placenta was resected. It proved to be also the site of an incipient malignant chorioepithelioma, one of the earliest ever discovered, and probably the cause of the abortion and symptoms observed.

77. **Transplantation of Vessels.**—In the experiments reported from Garrè's clinic, the transplanted vessels were able to retain their structure for months, up to 122 days. Vessels kept in Ringer's or Locke's fluid could also sometimes be effectually transplanted, and even human vessels were successfully implanted in some of the animals.

78. **Transplantation of Parathyroid Tissue to Cure Tetany.**—Danielsen reports a case in which a woman of 51 with menacing postoperative tetany after removal of a very large colloid goiter was apparently saved by implantation of two parathyroids removed from two other patients at the same time during a strumectomy. The glands were transplanted in a few moments after their removal, being inserted in a pocket made for them between the fascia and the peritoneum, just above the umbilicus. A few severe convulsions occurred after the transplantation but they rapidly subsided in number and intensity and examination after seven months showed approximately normal conditions. The circumstances of the case seem to show, Danielson says, that the transplanted glands were mainly responsible for the favorable outcome of the case. The technic for strumectomy to avoid injury of the parathyroids is discussed in detail and the indications for transplantation.

82. **External Irritation in Development of Cancer.**—Rehn analyzes five typical cases from his experience in which external irritation might possibly have had something to do with the growth of a cancer. It was in a hemorrhoidal nodule in one case, in the palm of the right hand in another, and on the leg in the others.

## Berliner klinische Wochenschrift

*March 7, XLVII, No. 10, pp. 421-468*

84 *Healing of Perforated Gastric Ulcer. (Heilung des perforierten Magengeschwürs.) M. Martens.
85 Special Form of Periostitis of the Jaw. (Eigenartige Form von Beinhautentzündung.) W. Spät.
86 *Permanent Retention of Urine. (Ungewöhnliche Fälle dauernder Harnverhaltung.) L. Casper.
87 *Intraneural Injections in Treatment of Neuralgia and Prevention of Salt Fever. O. Wiener.
88 *Gastroptosis and its Origin. M. Bönniger.
89 Casein Content of Human Milk. (Caseingehalt der Frauenmilch.) Engel and A. Frehn.
90 Recent Progress in Tropical Medicine. P. Mühlens.

84. **Healing of Perforated Gastric Ulcer.**—Martens has encountered 22 cases since 1895, all but 2 within the last 7 years. The patients were from 6 to 60 years old; most of them had suffered from stomach disturbances, but blood in the stomach content or stool had seldom been noticed, and in some cases the perforation occurred without any preceding symptoms. He discusses the differentiating signs: If the stomach content and pus have followed the colon down toward the region of the appendix it is liable to be painful, deceptively simulating appendicitis. Tense rigidity of the right side of the abdomen, especially the upper part, was evident in all but one of his cases. Soon after the perforation the abdomen is almost always retracted; distention follows as the intestines become paralyzed. That technic is best which makes least demands on the patient, namely, simple suturing in of the ulcer in two tiers. He has always been able to accomplish this, applying the suture transverse to the longitudinal axis of the stomach, at least at the pylorus, in order to prevent making it smaller. If the lumen is made smaller by the suture he makes a gastroenterostomy at once. The suture is reenforced with a flap of omentum. In one of his cases there were two perforated ulcers; a second one should always be looked for. Eleven patients of the 15 treated in this way were entirely cured, the main point being early recognition of the trouble, with prompt operation before peritonitis has had time to develop. He operated in from 2½ to 26 hours after the perforation. It is important, he adds, to impress on ulcer patients the possibility of perforation at any moment and the necessity for immediate operation. One man thus warned felt the perforation while in the street and took a cab at once for the hospital where the operation was done within an hour with the best results.

86. **Unusual Cases of Permanent Retention of Urine.**—In the first of Casper's two cases the trouble was evidently senile changes in the outer muscular layer of the bladder commanding the expulsion of the urine. The patient was a man of 60 and the only relief was by introduction of a retention catheter which he has worn uninterruptedly for 8 years. He urinates 8 times a day by removing the plug in the catheter, and twice a day rinses out the bladder to keep the inevitable cystitis within bounds. A new catheter is introduced every 6 or 8 weeks. By this means the patient is kept free from disturbances and attends to his business with practically no

inconvenience from his condition. In the second case the discovery of partial atrophy of the skin suggested that the retention of urine might be the result of a process of atrophy in the bladder, which proved to be the case. The changes observed in various muscles indicate trophoneurotic disturbances, coordinated processes of atrophy involving various organs. This patient is a man of 34 who has been unable to empty his bladder spontaneously for 6 years, but is doing well with the retention catheter, although a papilloma has developed where the crosspiece of the retention catheter rests on the bladder wall, but it causes no disturbances to date.

87. **Intraneural Injections in Treatment of Neuralgia.**—Wiener has treated 75 patients with long chronic sciatica by intraneural injection of chilled salt solution. He has never observed any injurious action but has been impressed with the benefit in certain cases as also in a case of the lancinating pains of tabes. No permanent benefit is derived unless the needle reaches the nerve, evidenced by the sudden intense pain extending down into the toes. He has injected 25 c.c. of the fluid in 26 cases of trigeminal neuralgia, injecting the fluid at the emerging point of the nerve; 2 of the patients were improved and 22 cured, also 5 other patients with neuralgic headache and 3 with lumbago. Immediate relief of the pain is most striking if the injection has been made strictly intraneural. The fever sometimes observed is due to the salt in the solution, and lately he has been avoiding this toxic action by using a mixture of 6 parts salt and 0.75 part calcium chlorid to 1,000 parts water; this secures the neutralizing action of the calcium chlorid on the salt so that there is no rise in temperature.

88. **Origin of Gastroptosis.**—Bönniger discusses the origin of the unusually long stomach which he ascribes to an abnormal mode of development of the body as a whole, the stomach growing downward where it has more space for development. The long stomach is comparatively rare in men, and he ascribes it to the lack of exercise among girls, and urges hygienic measures to prevent its development. Once developed nothing can be done to shorten the stomach, but it can be supported better by developing the muscles by gymnastic exercises. His statements are based on examination of 300 persons free from stomach disturbances, the connection between the shape of the stomach and the shape of the trunk being unmistakable. Gastroptosis in the true sense of the term, he declares, may occur from sliding down of the stomach as a whole from relaxation of its supports or lack of support from the intestines below.

### Correspondenz-Blatt für Schweizer Aerzte, Basel

*March 10, XL, No. 8, pp. 209-240*

91 *Prophylaxis and Non-Operative Treatment of Appendicitis. O. Fiertz.

*March 20, No. 9, pp. 241-288*

92 Rational Treatment and Prophylaxis of Acute Tonsillitis. A. Schönemann.

93 *Retention of Fluid Simulating Obesity. (Durch Flüssigkeitsretention vorgetäuschte Obesitas.) E. Bernoulli.

94 *The Obligation to Professional Secrecy on the Part of the Physician. (Schweigepflicht des Arztes.) A. Jaquet.

91. **Prevention of Appendicitis.**—Fiertz explains the increasing prevalence of appendicitis as due to the change in the habits of city people. Instead of attending all day to household duties, women sit at work or sit at theaters or clubs long hours at a time, neglecting the calls of Nature and suppressing the desires. Sedentary occupations are becoming more common among men, and there is less opportunity and time to heed Nature's calls. The result is an increasing tendency to constipation, and this is responsible for the appendicitis. He ascribes the fatalities after appendectomy to the continuance of intoxication from putrefying matters in the intestines still left after the operation, while, he declares, thorough evacuation of the intestines would have answered the purpose without the operation, or at least would have usefully supplemented it. In 51 cases of acute appendicitis a prompt cure was realized by keeping the patients absolutely still in bed and giving a rectal injection of a glass of a 1 per thousand solution of salicylic acid, mixed with a glass of oil, the receptacle held as high as possible; then a quart of the salicylic solution is poured into the receptacle and allowed to flow slowly into the rectum. This is repeated once or twice a day and the patient not allowed to move. The injections must be given by an expert, possibly by the physician himself. Moist heat is then applied to the abdomen, and if necessary opium is given to relieve the pains. Perforation occurred in 12 of his cases, but under this treatment it was rapidly followed by encapsulation and the ultimate outcome was excellent in every case. Any foreign body in the appendix found its way through the perforation and passed off harmlessly. Twelve of the patients were between 5 and 10 years old and 17 between 20 and 30, and all have been under observation for years since, confirming the advantages of this oil and water medical treatment during the acute phase. Appendectomy later is a much less serious operation if deemed necessary, which he accepts in case the patient expects to live remote from hospital privileges. He adds that children should be trained to utilize the peristaltic movements that follow a meal to insure regular defecation at the same time each day. They can seldom spare the time for it in the morning.

93. **Obesity Simulated by Retention of Fluid.**—Bernoulli reports the case of a young woman with a nervous taint whose weight fluctuated remarkably at times independently of the amount of food consumed. The difference was evidently due to retention of fluid, though there was no actual edema, and displayed unmistakable connection with emotional stress and the onset of the menses. The metabolic findings are given in detail on various diets with or without thyroid treatment and abstention from salt, and the case is compared with somewhat similar ones in the literature. Between morning and night the patient's waist and bust measure would sometimes increase so that she was unable to get into her clothes. No permanent benefit was derived from the treatment instituted, although transient improvement followed each time.

94. **Professional Secrecy.**—The ordinances at Basel, Switzerland, require that any public official learning of any crime by virtue of his office must report it to the authorities. The physician in charge of the public hospital there recently enquired of the authorities whether this applied to cases of criminal abortion of which the medical force of the hospital may learn in treating the patients in their charge. If the medical men comply with the law and denounce the crime, women seeking relief after abortion will avoid the hospital and trust exclusively to quacks and others on whose discretion they think they can count. The authorities have been reconsidering the ordinance in consequence, and an expert opinion on the subject was asked of the local medical society. Jaquet's article was presented at a recent meeting to open the debate on the subject. He reviews the laws in regard to privileged communications in various European countries, presenting an able summary of legal decisions and the opinions of leading medical men. The tendency of his conclusions is in the line of still greater reticence on the part of the physician even when the interested parties release him from the professional obligation of secrecy. The physician alone can be the judge as to the propriety of revealing what he has learned in the practice of his profession and no one can foretell the far-reaching consequences of disregard of professional secrecy in any given instance. The confidences of the patients in a public hospital should be respected just as in private practice. He comments on the general lack of appreciation among the public of the physician's attitude in respect to professional reticence. No one seems to think he is committing an indiscretion to enquire of a physician in regard to the diagnosis and prognosis of some patient in his charge. The laity seem to think that the physician can chat in regard to his patients without restriction so long as a non-venereal or non-mental affection is in question, and even in the latter case they do not hesitate to enquire at times. Jaquet remarks that it is not uncommon for patients to give a wrong address or name or beg that their family physician should not be informed, fearing that outsiders may learn what they wish to conceal. In one case he directed a patient to go to a certain specialist but the patient refused, saying, "I will not go to Dr. X.; he tells everything." The advantage of a legal recognition of the privileged communication is obvious as both physicians and public are reminded constantly by it of their mutual obligations and privileges. The physician when questioned can refer to the law, while the public, on the other hand, gains greater con-

fidence in the profession. Jaquet cites a number of instances to show the evil effects of a lack of reticence, as for example when a family physician warned a wife that her husband had recently acquired syphilis. The wife nearly became insane, the home was wrecked and—she blamed the physician for all the trouble. With thoughtfulness and tact, the desired results can nearly always be accomplished without breach of professional secrecy. For instance, if a father before the marriage of his daughter consults a physician in regard to the health of the son-in-law-elect, the physician may advise the father to stipulate that the young man must take out a life-insurance policy. If the applicant is rejected, the father can draw his own conclusions. When young people hesitate to inform their parents of disease, the physician should urge them to confide in the parents as this is usually the only way to ensure suitable and systematic treatment, or the physician may offer to make the confession in the name of the young patient; his experience and tact may render the communication much less of a shock for the parents. Brouardel found this course to have many advantages in his experience as medical adviser of a large preparatory school at Paris. The French are particularly stringent in regard to professional secrecy; one of their writers says that no one is sure enough of himself to put his conscience in the place of the law. The conception of circumstances requiring the "justifiable defense of the community" should be acted on only as the very last resort. At the same time, Jaquet regards it as the duty of the physician to denounce to the authorities cases in which children, neglected by their parents or the latter consenting, are being sacrificed to immoral purposes. The Swiss law imposes a penalty on servants, employees, etc., for willfully concealing the existence of contagious disease and thus imperiling the health of the family, other factory hands, etc. By insisting on this law the physician can usually persuade the one affected to inform his employer himself.

### Deutsche medizinische Wochenschrift, Berlin

*March 17, XXXVI, No. 11, pp. 489-544*

95 *Electric Cauterization. (Ueber Operationen mit dem elektrischen Lichtbogen und Diathermie.) V. Czerny.
96 Segmental Diagnosis of Spinal Cord Lesions. (Kasuistische Beiträge zur Segmentdiagnose des Rückenmarks.) F. Engels.
97 Pityriasis Capitis as a Factor in Baldness. (Ueber Pityriasis capitis und ihre Bedeutung für den Haarausfall.) K. Herzheimer.
98 Case of Typhoid plus Colon Bacillus Infection and Colon Bacillus Pneumonia. G. Kiralyfi.
99 Simplified Neisser Stain for Diphtheria Bacilli. P. Sommerfeld.
100 *Transient Positive Response to Wassermann Reaction after General Anesthesia. G. Wolfsohn.
101 Hecht's Modification of the Wassermann Reaction. R. W. König.
102 *Mishap after Scopolamin-Morphin-Chloroform Anesthesia. J. Faust.
103 Management of Narrow Pelvis in General Practice. (Die Reformen in der Therapie des engen Beckens und die Praxis.) F. A. Scheffzek.

95. **Deep Electric Cauterization and Thermopenetration in Cancer.**—Czerny has made extensive application of fulguration, Arsonvalization and other methods of deep intensive electrocauterization and reports his experiences in 61 cases of cancer. The methods to date do not insure against recurrence more than the procedures hitherto in vogue, but he urges further work in this line, believing that it may be possible by electric means to affect cancer germs in the depths to such an extent as to inhibit their growth and thus enable the organism to gain the upper hand over them, with possibly some assistance from without to enhance the natural defensive processes.

100. **The Wassermann Reaction Changed After General Anesthesia.**—Wolfsohn applied the Wassermann test to the serum of a patient just before an operation and by chance again after the operation. The findings with the test were entirely negative with the first specimen of serum but with he second specimen there was a pronounced positive reaction. He then examined the serum from 50 other patients immediately after general anesthesia and obtained a pronounced positive reaction in 13 cases, in 11 of which syphilis could be positively excluded. The anesthesia was induced with a combination of veronal, morphin, scopolamin and ether and he warns that the findings in the serum after general anesthesia must not be accepted as conclusive in regard to the presence of syphilis.

102. **Mishap from Scopolamin-Morphin Anesthesia.**—Faust's patient was a robust youth of 17 and an hour after appendectomy there was spasmodic contraction of the throat musculature with extreme cyanosis. Artificial respiration was impossible and the spasm suddenly subsided spontaneously but soon recurred. This was repeated about six times, the attacks growing milder until by the end of the hour the patient was out of danger. Faust ascribes the spasm to the scopolamin and remarks that the frantic measures to restore respiration, kept up for over an hour, did not seem to disturb the healing of the wound which he says suggests that patients may safely be allowed to get up earlier than is now the rule.

### Deutsche Zeitschrift für Chirurgie, Leipsic

*February, CIV, Nos. 1-2, pp. 1-208*

104 *Surgery of Liver and Bile Ducts. (Zur Chirurgie der Leber und der Gallenwege.) A. Jenckel.
105 *Acute Hemorrhagic Pancreatitis Cured by Prompt Operation. L. Imfeld.
106 Perineal Prostatectomy with Lateral Incision. M. Wilms.
107 Cholangitic Liver Abscess. (Zur Kenntnis der cholangitischen Leberabszesse.) S. Schönberg.
108 Absorption of Lead from Retained Bullets. (Bleiresorption aus steckengebliebenen Projektilen.) Wieting and I. Effendi.
109 Injury of the Diaphragm and Operative Treatment. (Ueber Zwerchfellverletzungen und ihre operative Behandlung.) W. Wolf.
110 *Carcinoma of Face and Scalp. (Zur Statistik der Carcinome des Gesichtes und der behaarten Kopfhaut.) G. Marassovich.

104. **Gall-Stone Operations.**—Jenckel reviews the operations on the biliary apparatus since his previous reports at the surgical clinic at Göttingen in charge of Braun, the total now amounting to 230 in the course of 13 years. The series is unique in the fact that all but 2 of the patients have been traced to date, so that the ultimate outcome is known in all but these 2. Cholecystectomy gave the best final results.

105. **Acute Hemorrhagic Pancreatitis.**—The patient in the case reported was a mechanic of 36. The first symptoms were repeated vomiting and pain in the stomach region, yet he was able to continue at work for a week. Then symptoms developed suggesting ileus but closer examination differentiated acute pancreatitis, and the capsule was slit for 3 or 4 cm. and a Mikulicz tampon applied directly to the pancreas. The abdomen was sutured around this and a glass drain, and after expulsion of a few sequesters of pancreas tissue the patient made a smooth recovery. The case permitted considerable research on the functioning of the pancreas as the fistula did not heal for about four months and numerous tests were made.

110. **Carcinoma of the Face and Scalp.**—Marassovich gives an analytic study of 182 cases of this kind during the last 8 years at the surgical clinic at Vienna in charge of Hochenegg. The list includes 80 women. In 3 cases the patients were between 24 and 30; in 7 between 30 and 40; the others were older. The first symptom of trouble had been noticed from 4 weeks to 20 years before the patients applied for relief. In 4 cases the cancer had developed on lupus. In 26 cases the cancer on the face was multiple; in 2 there was cancer elsewhere. In 3 cases a family tendency was unmistakable.

### Medizinische Klinik, Berlin

*March 13, VI, No. 11, pp. 411-450*

111 Antistreptococcus Serotherapy in Staphylococcus Sepsis. H. Eichhorst.
112 *Specific Diagnosis and Treatment of Tuberculosis in Children. Engel. Commenced in No. 10.
113 What is Disease? (Krankheit.) N. P. Tendeloo.
114 *Sudden Death at Spas. (Ueber plötzliche Todesfälle in den Kurorten.) E. H. Kisch.
115 Technic and Results of Respiratory Exercises in Bronchial Asthma. (Atmungsgymnastik beim Bronchialasthma.) L. Hofbauer.
116 Differentiation of Natural and Artificial Honey by Fixation of Complement. (Zur Frage der Differenzierung von Natur- und Kunsthonig auf biologischem Wege.) A. Schutze.

112. **Diagnosis and Treatment of Tuberculosis in Children.**—Engel remarks that active pulmonary tuberculosis is often diagnosed in children when it is not present. Dulness and changes in expiration are frequent in children but do not always indicate an apical process. The extent of a tuberculous process is revealed by the rapidity of the response to the tuberculin test and by the delay before tolerance to a larger dose is realized. Most significant is the behavior of the temperature during the repeated application of the same dose at

one-day intervals. Repeatedly recurring reaction to a small dose indicates an extensive lesion. A positive reaction with a dubious process does not always indicate that the process in question is tuberculous; there may be some latent process in some gland, while the manifest lesion may be of another character. The decision here depends on the local reaction that is observed even with a dose too small to affect the temperature. He urges that servants, etc., should be examined for tuberculosis before being engaged, while the medical school inspectors should guard the children by removing sources of contagion in teachers and schoolmates. If a tuberculous process is discovered or is revealed by a tuberculin reaction, the child should be given the benefit of systematic treatment, even though apparently healthy. This is all the more important the younger the child. After the age of 6, occult tuberculosis may not require such intensive treatment but it should never be neglected. The climate is of the greatest importance, but he warns that children should not be sent to the seashore, etc., merely with the parents or attendants; they require sanatorium care. Tuberculin treatment is particularly easy in the case of children as they have only a slight susceptibility and do not require the extensive courses of adults. Children adapt themselves readily to the tuberculin but the malignancy of pulmonary tuberculosis in a child renders tuberculin treatment of little use for this. The effect of tuberculin treatment, he asserts, is most pronounced with bone and joint tuberculous affections.

114. **Sudden Deaths at Health Resorts.**—Kisch has compared the autopsy findings with the clinical history in 156 cases of sudden death. The liability to a sudden fatality in persons with heart disease increases with age; under 30 sudden death is no more frequent than in persons with sound hearts. After 50, patients with cardiovascular disease should reckon with sudden death as a possible contingency, especially when there is a tendency to lipomatosis or general arteriosclerosis. Of especially bad omen is the coincidence of mitral insufficiency with endarteritis and insufficiency of the aorta when examination reveals advanced fatty degeneration of the myocardium and considerable dilatation of the left ventricle. This combination of mitral and aortic insufficiency was evident in 15 per cent. of his cases. The combination of pulmonary emphysema with the heart disease is also liable to entail sudden death. With heart disease even the most apparently harmless cause may bring on the fatality, especially emotions or anything that raises the blood pressure. He warns most seriously against the practice of allowing the sick at a watering place to take the baths, exercises, etc., without medical advice, citing several striking cases from his experience at Marienbad. Among them was that of a man of 46 who drank several glasses of mineral water immediately on arriving after a long journey and dropped dead. A letter from his home physician later stated that he had an incompensated cardiac defect. Kisch always impresses on the patient with heart disease that the most serious results may follow failure to comply with the medical directions in regard to drinking, bathing, eating and exercising, and he warns the family of the possibility of a sudden fatality. He even pleads to have the baths and other "cure" measures only accessible on a medical order, or at least that the authorities should post placards urgently advising the guests not to take the "cure" or any part of it without medical advice. The number of persons with heart disease who visit the spas is constantly increasing while the measures are becoming more complicated, and such two-edged swords are best wielded by the physician. In conclusion Kisch urges careful records of sudden death in the watering places and, in addition, extensive autopsy.

### Monatsschrift für Geburtshülfe und Gynäkologie, Berlin

*March, XXXI, No. 3, pp. 275-414*

117 Local Defensive Reaction to Irritation; Absorption of Fat in the Ovary and Omentum. K. Ulesko-Stroganowa.
118 Management of Mentoposterior Face Presentation. (Zur Behandlung der Mentoposterioren Gesichtslage.) F. Unterberger.
119 *Treatment of Uterine Myomas. A. Troell.
120 Metastatic Ovarian Carcinoma. F. Cohn.
121 *Inheritance of Syphilis. (Zur Lehre von der Vererbung der Syphilis). O. Frankl. Commenced in No. 2.
122 Recent Research on Ergot. (Ergebnisse der neueren Mutterkornforschung.) A. Bennecke.

119. **Treatment of Uterine Myoma.**—Troell gives tabulated details of 100 cases of uterine myoma, supplementing a previous series of 105 cases, being 52.03 per cent. of the total 394 myoma cases at the clinic for women's diseases at Lund. In 9 cases simultaneous malignant disease was discovered in the uterus. The ultimate outcome in the total 205 cases speaks in favor of supravaginal amputation as the results are equally good as those of hysterectomy while it is a much less serious operation. The myoma recurred in 22.2 per cent. of the 18 cases in which it was merely enucleated or resected. The 2 fatal cases of pulmonary embolism in his experience occurred after hysterectomy, and the fatality in another case was the result of injury of the bladder during a hysterectomy. In one of the fatal embolism cases the operation had been done during the menses, in the other after excessive loss of blood.

121. **Inheritance of Syphilis.**—Frankl reviews the experiences in this line at the clinic in charge of Schauta at Vienna. These do not indicate that it is wise to institute mercurial treatment of apparently sound women on the basis of a positive seroreaction alone unless the woman has given birth to a syphilitic child. In this case she evidently has latent infection and specific treatment is required without waiting for further manifestations of the disease. On the other hand, a positive reaction in the child, although it may be apparently healthy, should indicate specific treatment. If the child with inherited taint shows no signs of syphilis and gives a negative seroreaction, it might be well to wait for some manifestations on its part, commencing mercurial treatment at the first signs of "snuffles," or if the seroreaction becomes positive on repeated tests. This may result in some child escaping specific treatment who should have had it, but, on the other hand, it is not a pleasant idea for the physician to find that he has inflicted on a sound child an unnecessary and by no means entirely harmless course of mercurial treatment. The details of 87 cases are summarized.

### Münchener medizinische Wochenschrift

*March 8, LVII, No. 10, pp. 505-560*

123 Muscle Hernia. (Ueber Muskelhernien.) E. Lexer and H. Haus.
124 Easy Technic for Diagnosis of Syphilis by Wassermann Reaction. (Wie kann der Arzt die Wassermannsche Reaktion ohne Vorkenntnisse leicht vornehmen?) E. v. Dungern.
125 *Heart Disease and Psychoses. (Herzkrankheit und Psychose.) L. Saathoff.
126 *Clinical Picture of Infantilism and Hypoplasia. A. Mayer.
127 *Connection between Dysmenorrhea and Tuberculosis. E. Gräfenberg.
128 Fracture of Fifth Lumbar Vertebra from Lifting. (Zur Kenntnis des Verhebungsbruches am 5. Lendenwirbel.) Delorme.
129 Immunization against Acute Poliomyelitis. (Ueber Immunität und Immunisierung gegen das Virus der epidemischen Kinderlähmung.) P. H. Römer and K. Joseph.
130 *Congenital Absence of Pericardium. (Zur Klinik der Herzbeuteldefekte.) E. Ebstein.
131 Substitutes for Cocain in Rhinology and Laryngology. (Haben sich in der Rhino-Laryngologie die Ersatzmittel des Kokain bewährt?) M. Senator.
132 Apparatus for Electrocardiography. (Universal-Registrier-Apparat Modell Bock-Thoma.) H. Bock.
133 Medical Course in Obstetrics. (Das geburtshilfliche Seminar und die geburtshilflich seminaristischen Uebungen.) G. Leopold.
134 *Professional Secrecy and Venereal Disease. (Aerztliches Berufsgeheimnis und Geschlechtskrankheiten.) Hecht.

125. **Heart Disease and Psychoses.**—Saathoff reports three cases showing that syphilitics with failing compensation are liable to present mental symptoms from the disturbances in the circulation in the brain injured by the constitutional syphilis. The psychosis in his cases was a kind of distressed confusion, hallucinations and motor agitation. The autopsy findings are given in each case; the brain showed traces of atrophy with secondary hydrocephalus. Conditions are somewhat similar in these cases to alcohol delirium; injuries which pass without a reaction on the part of a normal brain may induce a typical psychosis. Saathoff reviews the literature on the subject of the connection between aortic aneurisms and other circulatory affections and insanity.

126. **Clinical Picture of Infantilism and Hypoplasia.**—Mayer remarks that in these days of insurance against disability, it is important to study the cases of congenital disability, and he reviews the various types of infantilism and hypoplasia as affecting various organs. Besides corporal anomalies there are

often psychiatric and neurologic abnormal conditions In 60 cases of infantilism he noticed evidences of morbid conditions in the nervous system in 20 cases. The frequent combination of exophthalmic goiter with anomalies closely allied with defective development, such as chlorosis, inherited syphilis, tuberculosis, persisting thymus and adenoids sustains, he asserts, the assumption of a congenital physical inferiority as a factor in the Basedow syndrome. This seems the more reasonable, he believes, as the tendency to exophthalmic goiter and to the nervous and mental symptoms observed with it seems to be congenital. It is especially significant that the disturbance underlying the Basedow syndrome is in the thyroid, which has such an important influence on the general development and is evidently closely connected with the functions of the female genitalia, and is also involved in infantilism. Exophthalmic goiter, he says, is often associated with hypoplasia in the genitalia.

127. **Dysmenorrhea and Tuberculosis.**—Gräfenberg's experience confirms the assumption that dysmenorrhea has an underlying tuberculous infection as a factor in many cases. Eisenstein reported a year or two ago that 118 women with menstrual disturbances gave a positive reaction to a subcutaneous injection of tuberculin, although there was nothing else to suggest tuberculosis. Gräfenberg found in 3 cases tuberculous lesions at autopsy of young women who had been treated for dysmenorrhea. In another case of the kind the severe abdominal pain compelled laparotomy, which revealed advanced tuberculous lesions in the pelvic organs. Pfannenstiel has reported a case in which rapid miliary tuberculosis in the abdomen followed laminaria dilatation of the cervix done for dysmenorrhea; the patient was an apparently healthy young woman. Gräfenberg obtained a positive response to the tuberculin test in 21 of 30 patients who had applied for relief from primary dysmenorrhea. The response was always negative in the cases of secondary dysmenorrhea. With the primary form the genitalia are always defectively developed. In 11 cases there was also a local reaction in the genitalia. These findings suggest that the defective development of the genital organs was the consequence of some tuberculous process in the pelvic organs during childhood, this process possibly healing. The menstrual hyperemia induces the dysmenorrheic disturbances in the imperfectly developed genital organs. A system of organs already the site of a tuberculous process and consequently defectively developed, is much more liable to new disease than a sound organ. He concludes from his research and experiences that tuberculin treatment may prove successful when primary dysmenorrhea is accompanied by a local reaction to tuberculin. In 6 cases he has obtained most excellent results by this means, the dysmenorrhea and other pelvic symptoms subsiding, the general health improving and the weight increasing. He gives the tuberculin injection twice a week. In conclusion he warns against the slightest local intervention with primary dysmenorrhea as liable to arouse a latent general tuberculosis. This danger is especially imminent when the tubercle bacilli are in the circulating blood; curetting the uterus or even an insignificant local measure might lead them to settle at this point.

130. **Congenital Absence of the Pericardium.**—Ebstein reports a case in which the patient, a young woman, seemed to be healthy after an attack of typhoid, followed by what was diagnosed as a post-infectious myocarditis, but autopsy a few months later, the patient having died from acute potassium cyanid poisoning, revealed that the pericardium was missing. He has found records of 31 other cases of missing pericardium and reviews the clinical picture, which resembles in many respects that of movable heart.

134. **Professional Secrecy and Venereal Disease.**—Hecht recently had occasion to operate for a nasal affection on a patient and found later that the patient was under treatment at the same time for recent syphilis, in the charge of a local dermatologist. He reproached the patient for not informing him of his recent syphilis, but the latter declared that the dermatologist had consented to the operation. Hecht then reproached the specialist who said that he had told the patient to warn the operator, and declared that he had no right to warn the latter himself. Hecht discusses the arguments on this question of secrecy and the prophylaxis of venereal disease and suggests the following two topics for discussion in medical societies: 1. Is it the ethical duty of a physician to warn the surgeon or dentist who is to undertake an operation on a patient with recent syphilis in his charge? 2. Is it the duty of the physician to seek for the source of the infection when a patient with recent syphilis applies to him? Is it the duty of the physician to ascertain whether the infecting person is already receiving appropriate treatment, and if not, to take measures to insure this and close this source of infection?

## Wiener klinische Wochenschrift, Vienna

*March 17, XXIII, No. 11, pp. 386-424*

135 *Serum Anaphylaxis in Guinea-Pigs. (Experimentelle Studien über Anaphylaxie. III.) A. Biedl and R. Kraus.
136 *Treatment of Obesity. (Behandlung der Adipositas.) K. E. Wagner.
137 *Interval Before Coagulation in Connection with Kidney Functioning. (Blutgerinnungszeit und Nierenfunktion.) R. Bachrach and W. Tittinger.
138 *Research on Susceptibility to Action of Radium. (Zur genaueren Kenntnis der Radiosensibilität. II.) G. Schwarz.
139 *Carlsbad Waters in Treatment of Epilepsy. E. Biernacki.

135. **Experimental Study on Anaphylaxis.**—Biedl and Kraus have continued their research on serum anaphylaxis in guinea-pigs and here report spasmodic contraction of the bronchial musculature, entailing acute swelling and rigidity of the lung, as one manifestation of the induced anaphylaxis, the phenomena resembling remarkably the acute attack of bronchial asthma in man.

136. **Treatment of Obesity.**—Wagner classifies acquired obesity as A, due to immoderate eating, or lack of exercise or both; B, obesity due to abnormal functioning of glands with an internal secretion; and C, obesity from spontaneous anomalies in the cellular metabolism. The inherited form, A, is due to constitutional weakness of the functioning of the glands with an internal secretion; B, is due to inheritance of spontaneous anomalies in cellular metabolism. Treatment based on this classification has given excellent results in his hands, especially on the assumption of defective thyroid functioning. His list includes 149 cases of obesity during the nine years before 1908. Thyroid treatment proved more or less effectual in every instance, especially when alternated with mineral water. The ages of the patients ranged from 10 to 70; his principle is to give small doses 2 or 3 times a day. The maximal dose is about half of a moderate sized gland. Slight symptoms of intolerance were observed in 17 cases, the treatment being suspended at the first sign of it, this first sign being generally "tired eyes."

137. **Coagulating Time and Kidney Functioning.**—Bachrach has been investigating the cryoscopic urine and blood findings in connection with the time required for the blood to clot. His findings seem to demonstrate that the interval before clotting is dependent on the concentration of the blood, as he describes in detail.

138. **Application of Radium Under Suction.**—Schwarz reports experiences which seem to contradict what has previously been learned in regard to the action of radium. Applied to the arm under a suction bell, the reaction to the radium rays occurred more rapidly but was at the same time much milder and more transient.

139. **Carlsbad Waters in Treatment of Epilepsy.**—Biernacker refers to several cases in which a course of Carlsbad waters for gastrointestinal disturbances seemed to have a favorable influence on long-existing epilepsy. The results were so good that he urges prescribing a course at Carlsbad as a routine measure for certain patients with epilepsy, especially those in whom migraine accompanies or substitutes the epileptic seizures or those with some metabolic disturbances, uric acid diathesis with oxalate stones in the urine and pain in the joints and limbs. It was in such cases that the results were most striking.

## Zentralblatt für Chirurgie, Leipsic

*March 19, XXXVII, No. 12, pp. 433-464*

140 Deformity of the Ankle from Congenital Malposition of the Fibula. (Die Volkmann'sche Sprunggelenksdeformität als Folge angeborener fehlerhafter Lage der Fibula.) J. G. Chrysospathes.
141 Excision of Free Bodies in Joints. (Zur Exzision von freien Gelenkkörpern.) E. E. Goldmann.

### Zentralblatt für Gynäkologie, Leipsic

*March 19, XXXIV, No. 12, pp. 401-432*

142 Differentiation of Hemolytic Streptococci by Cultivation in Lecithin Bouillon. F. Fromme.
143 Extramedian Abdominal Incision. (Ueber einen verbesserten extramedianen Bauchdeckenschnitt bei Köliotomien.) A. Gubaroff.
144 The Eclampsia Problem. (Bemerkung zum Artikel von Dr. Alsberg in Nr. 1, ds. Jhrg.) J. Hofbauer.

### Zentralblatt für innere Medizin, Leipsic

*March 19, XXXI, No. 12, pp. 297-320*

145 *Selection of Patients for Public Tuberculosis Sanatorium Treatment. (Kritische Bemerkungen zur Auslese von Lungenheilstättenpatienten.) Zickgraf.

145. **Selection of Patients for Tuberculosis Sanatorium Treatment.**—Zickgraf is in charge of a tuberculosis station where the patients are under observation for a time for more exact diagnosis of the presence and stage of their tuberculosis before being sent to the public sanatorium. When a patient gives a negative reaction to a subcutaneous injection of 10 mg. tuberculin, he regards this as excluding tuberculosis. He has encountered 110 such cases in his experience with 1,200 applicants. The anamnesis is of the slightest importance for the diagnosis, especially coughing up blood; persons are often deceived by blood from the nose or gums, and it is possible for blood to be coughed up even in the absence of tuberculous lesions. These 110 patients who thought they had tuberculosis required rest and were given a course of tonics, etc., as most of them were neurasthenics. The German laboring classes regard a free course in a sanatorium as something very desirable, and they exaggerate, he says, if necessary to obtain it, so that these observation stations and injection of tuberculin up to 10 mg. are proving valuable aids in eliminating those not needing specific treatment.

### Gazzetta degli Ospedali e delle Cliniche, Milan

*March 8, XXXI, No. 29, pp. 305-312*

146 *Efficacy of Camphoric Acid in Treatment of Sweats in Tuberculosis. (I sudori profusi nella tubercolosi polmonare.) E. Levi.

*March 10, No. 30, pp. 313-320*

147 Efficacy of Camphor Bromid in Chorea. (Due casi di corea di Sydenham guariti col bromuro di canfora.) G. Ghetti.

146. **Camphoric Acid in Treatment of Sweats in Tuberculosis.**—E. Levi reports 20 cases to demonstrate the efficacy of camphoric acid in treatment of the sweats in phthisis. He gives 2 gm. (30 grains) in two doses during the day or evening, and found it effectual in many cases in which all other measures had failed to relieve. The sweats are probably due to a number of factors acting on the centers for respiration and transpiration, and the camphoric acid seems to influence them all while it is well borne and causes no symptoms of intoxication. He kept up this treatment until the sweats entirely disappeared. Camphorated alcohol rubbed into the skin is also useful, he states, in aiding the effect with other drugs, but their combined action is far less powerful than the camphoric acid alone.

### Policlinico, Rome

*March 20, XVII, No. 12, pp. 355-380*

148 Experimental Research on Production of Cartilage in Healing of Fractures. R. Merlani.
149 Treatment of Puerperal Fever by Intravenous Injections of Mercuric Chlorid. V. Forli.
150 Infantile Splenic Anemia from Leishmann Parasites. (Kala-azar?) G. Donzello.
151 Two Cases of Lipoma in the Mesentery. A. Giampaoli.

### Riforma Medica, Naples

*March 7, XXVI, No. 10, pp. 253-280*

152 *Blood Findings in Animals Long Given Small Doses of Quinin. (Ricerche sul sangue degli animali sottoposti a piccole e ripetute dosi di chinina.) D. De Sandro.
153 Calculus in Diverticulum in the Urethra. A. Reggianini.

152. **Influence on the Blood of Long-Continued Small Doses of Quinin.**—The tabulated details of extensive research in this line on dogs at Rummo's medical clinic at Naples demonstrate, DeSandro asserts, that small doses of quinin have a favorable effect on the blood even when long continued. The proportion of hemoglobin increased in the dogs, as also the number of red corpuscles and an active leucocytosis of polynucleated cells was observed. The daily dose of quinin approximated 0.4 gm. for each 70 kilograms of weight (about 6 grains to 154 pounds of weight); this is the dose generally given by the mouth in the prophylaxis of malaria. It was injected subcutaneously into the dogs. When the daily dose surpassed this an injurious influence on the blood was soon apparent.

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## Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

THE OPTIC NERVE AND THE ACCESSORY SINUSES OF THE NOSE. A Contribution to the Study of Canalicular Neuritis and Atrophy of the Optic Nerve of Nasal Origin. By Prof. A. Onodi of the University of Budapest, Member of the Hungarian Academy of Sciences. Authorized Translation by J. Luckhoff, M.D. Cloth. Price, $3.50 net. Pp. 101, with 50 illustrations. New York: William Wood & Co., 1910.

DIE FORENSISCHE BLUTUNTERSUCHUNG. Ein Leitfaden für Studierende, beamtete und sachverständige Aerzte und für Kriminalisten. Von Dr. Otto Leers, Assistent der königlichen Unterrichtanstalt für Staatsarzneikunde an der Universität Berlin. Paper. Price, 6 marks. Pp. 212, with illustrations. Berlin: Verlag von Julius Springer, 1910.

EPIDEMIC POLIOMYELITIS. Nervous and Mental Disease Monograph Series No. 6. Report on the New York Epidemic of 1907. By Collective Investigation Committee. Paper. Price, $2. Pp. 119, with 14 illustrations. New York: The Journal of Nervous and Mental Disease Publishing Co., 1910.

THE FIFTH REPORT OF THE CANCER COMMISSION OF HARVARD UNIVERSITY. (Founded by Caroline Brewer Croft, June 16, 1899). Formerly the Caroline Brewer Croft Fund Cancer Commission. Paper. Pp. 297, with illustrations. Boston: The Medical School of Harvard University, 1909.

MEDICINE IN THE COLONIES. By William S. Wadsworth, M.D. A Paper Read before the Pennsylvania Society of the Order of the Founders and Patriots of America. [Secretary, T. A. Van Dyke, Jr., Union League Club, Philadelphia.] Jan. 14, 1910. Paper. Pp. 16.

A COURSE OF LECTURES ON TUMORS GIVEN UNDER THE AUSPICES OF THE CANCER COMMISSION OF HARVARD UNIVERSITY. (Founded by Caroline Brewer Croft, June 16, 1899). Paper. Pp. 80, with illustrations. Boston: Medical School of Harvard University, 1909.

PRACTICE OF OSTEOPATHY. Its Practical Application to the Various Diseases of the Human Body. By Charles H. Murray, A.B., Author of "Genuine Osteopathy," etc. Half Morocco. Price, $3.50. Cloth, $2.50. Pp. 338, with 107 illustrations. Elgin. Ill., 1909.

DIE PROCTO-SIGMOSCOPIE UND IHRE BEDEUTUNG FÜR DIE DIAGNOSTIK UND THERAPIE DER KRANKHEITEN DES REKTUM UND DER FLEXURA SIGMOIDEA. Von Dr. H. Strauss in Berlin. Cloth. Price, 7.50 marks. Pp. 149, with illustrations. Leipzig: G. Thieme, 1910.

LA TENSION ARTÉRIELLE EN CLINIQUE. Sa Mesure: Sa Valeur Séméiologique. Par le docteur Louis Gallavardin, Médecin des Hôpitaux de Lyon.—Paper. Price, 4 francs. Pp. 206, with 70 illustrations. Paris: G. Steinheil, 2, rue Casimir-Delavigne, 1910.

NERVOUS STATES, Their Nature and Causes. By Paul Dubois, M.D., Professor of Neuropathology at the University of Berne. Authorized Translation by Edward G. Richards. Cloth. Price, 75 cents. Pp. 101. New York: Funk & Wagnalls Co., 1910.

TRANSACTIONS OF THE CONNECTICUT HOMEOPATHIC MEDICAL SOCIETY. Organized 1851. Incorporated 1864. Fifty-ninth Annual Meeting, New Haven, May 18. Semi-Annual Meeting, New Britain, Oct. 19, 1909. Paper. Pp. 145, with illustrations.

ANNUAL REPORT OF VASSAR BROTHERS' HOSPITAL, READE PLACE, POUGHKEEPSIE, N. Y. Founded by Matthew Vassar, Jr., and John Guy Vassar. Incorporated June, 1882. March 1, 1909, to March 1, 1910. Paper. Pp. 28.

TWENTY-EIGHTH ANNUAL REPORT OF THE STATE HOSPITAL FOR THE INSANE AT WARREN, PA. For the Year Ending Nov. 30, 1909. To the Board of Commissioners of Public Charities. Paper. Pp. 129, with illustrations.

FORTY-FOURTH ANNUAL REPORT OF ST. FRANCIS' HOSPITAL. East 142d Street, New York City. Under the Charge of the Sisters of the Poor of St. Francis. For the Year 1909. Paper. Pp. 39, with illustrations.

THE INTERNATIONAL MEDICAL ANNUAL. A Year-Book of Treatment and Practitioner's Index. Twenty-Eighth Year, 1910. Cloth. Price, $3.50. Pp. 762, with 108 illustrations. New York: E. B. Treat & Co.

AN OUTLINE OF INDIVIDUAL STUDY. By G. E. Partridge, Ph.D., Formerly Lecturer in Clark University. Cloth. Price, $1.25 net. Pp. 240. New York: Sturgis & Walton Co., 1910.

AN ACCOUNT BY THE MILK AND BABY HYGIENE ASSOCIATION TO MARCH 1, 1910. Paper. Price, 15 cents. Pp. 37, with illustrations. Boston: Milk and Baby Hygiene Association.

REPORT OF THE COMMISSIONER OF EDUCATION FOR THE YEAR ENDED JUNE 30, 1909. Vol. II. Cloth. Pp. 1373. Washington: Government Printing Office, 1910.

TRANSACTIONS OF THE AMERICAN CLIMATOLOGICAL ASSOCIATION. For the Year 1909. Vol. XXV. Cloth. . Pp. 287, with illustrations Philadelphia, 1909.

EXTRACT FROM THE THIRTIETH ANNUAL REPORT, NEW YORK STATE DEPARTMENT OF HEALTH, 1909. Paper. Pp. 56.

THIRTY-FIFTH REPORT OF THE SALEM HOSPITAL FOR THE YEAR 1909. Paper. Pp. 39.

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## *Original Articles*

# A PLEA FOR HOSPITAL REORGANIZATION

GRAHAM LUSK
NEW YORK

Let us agree that we are all truly desirous of promoting scientific medicine. How is its development to be accomplished? It seems that the following propositions are axiomatic if the science of medicine is to be truly fostered.

1. The scientific physician or surgeon must have a continuous service in one hospital and in one only.
2. Appointment to the position of visiting physician or surgeon to a great hospital should be dependent on a reputation for accomplished work.
3. In the hospital, preferably on the other side of the hall opposite the hospital wards, there should be laboratories for careful scientific investigation and for carrying forward research regarding the causation and cure of disease.
4. There should be some endowment to pay for brains.

All have heard of these propositions, but how much serious concentrated attention has ever been given to them. To what extent has the system been permitted to drift along in the old ways of the fathers? The development of a New York lawyer is not dependent on the development of French, German, or Chinese law, but it is dependent on purely local conditions as they exist in this country. For example, the legal position of the railways in Berlin is quite different from that of the railways in Washington. Typhoid fever in Berlin, however, is the same typhoid as occurs in Washington. Physicians can learn much if they will adopt a world viewpoint. A progressive New Yorker should fight to destroy the local conditions which fetter his progress and suck his life's blood.

The continuous service is absolutely essential to progress. The wards must be the glory and the pride of the master-mind in charge. They must be a part of his reputation, a part of his joy of living. The head nurse should not be the principal person who is in continuous control. All present know this, and yet few will even think about it, much less act on it. It is so much easier to go to sleep and forget all about it. And while New York is dully sleeping, if it were awake it would take cognizance of the great examples of productivity set by the continuous services of the Johns Hopkins and Ann Arbor Hospitals. Other places which have adopted the continuous service are Pennsylvania, Minneapolis, Iowa City, Cleveland, Galveston and St. Louis. In St. Louis a new hospital with $5,000,000 is assured and in addition to this a children's hospital is to be built, with one hundred and fifty beds. A new medical school on the highest lines will be developed there. Also the resignations of the whole faculty are in the hands of the authorities. And this state of affairs has only roused the East by striking terror into the hearts and homes of some of our medical colleges lest they lose their very best men for whom during so many years they have so illy provided. Let us get together then and make a life of scientific progress possible in a New York hospital. Do not think, however, that the mere promotion of a practitioner of medicine to a continuous service is going to transform him into an advanced medical thinker. Success depends on the selection of the proper type of man who has had the proper training.

Regarding appointment to the service of a great city hospital there is room for much improvement. There should be a complete revolution in the present method. The right to inherit a position should be entirely eliminated as a factor. In general, the promotion of an assistant to the place of the master merely means the promotion into a prominent position of a younger man who more than likely owes his appointment not to his vigorous intellectuality, but rather to his submissive attitude during the days of his tutelage. This is a very widespread evil, this right to inherit. The cure for this is a greater migration of men among the medical institutions of this city and country. A man should not be cut off from a distinguished career in New York because his reputation has been founded in Syracuse or in New Haven. It seems that there must be a great strengthening all along the line if the rule were made that no assistant could ever succeed his chief. Then to rise, the assistant must through his capacity excite sufficient admiration to be called to take charge of a smaller institution. If he again succeeds he might then become eligible for a high position as one of the great masters of medicine in New York City. The scheme would do away with much that is scandalous regarding appointments to hospitals and medical schools in this country, and would inspire hospital trustees and givers to medical charity with a new confidence in the disinterestedness of medical men. This scheme is not utopian, or the mere dream of an idle extremist, but it is a part of the competitive system which has caused the rise of modern German medicine. By such a method you can help to vitalize scientific medicine. The man who rises to highest achievement in this country should be offered the highest reward in the shape of appointment to chairs in medical schools and places in hospitals in this great city. Were hospital trustees sure that such a procedure would be faithfully carried out, there would be no friction between them and their medical boards.

With regard to the arrangement of a hospital for scientific research, the laboratory should be across the hall from the wards, or, at any rate, easy of access to the wards. In such laboratories great work is done in

Germany. New hospitals should provide for such laboratories in order to attract the best men of the rising generation, some of whom have been thoroughly trained in the fundamental sciences of medicine, and have sufficient creative ability to have new ideas. With men of this class in charge of hospital wards, the laboratory becomes a hotbed for the development of young men along the highest lines. And the best young men will flock to such a standard wherever raised. There never was a more attractive opportunity than that offered here in New York to do the right thing in the right way. And yet the years roll by and the old traditions stand protective of the old rotten system, blinding the eyes even of the honest and sincere and placing a deadening inertia over medical progress. And, finally, there must be some small endowment to pay for the brains concerned in such an establishment as this. The visiting physician should spend at least half his day in his wards and laboratory or with students of medicine, and failing this, should be retired. All others connected with his wards should spend their entire time in the service of the patients and the laboratories and the more experienced should be paid salaries. Here they can make a reputation for themselves. Here they can acquire fame at a time of life when new ideas come easily and rapidly. Here they can also be taught to curb their fancies properly. General adoption of any such plans as have been outlined must come slowly if at all. They must ultimately be adopted either through intellectual appreciation of their value, or in imitation of a hospital like the new Rockefeller Hospital, which is to be established on these principles.

One should not consider such a scheme as one of fanciful idealism. It is simply the substitution of work for fame in the place of work for gold during the early life of our best young men. The true ideal is yet higher.

And no one shall work for money
And no one shall work for fame
But each for the joy of working.

# NITROUS OXID AND OXYGEN IN MAJOR SURGERY

## A NEW APPARATUS FOR THEIR ADMINISTRATION *

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To Horace Wells belongs the credit for first using nitrous oxid for anesthetic purposes; yet it is not probable that he realized the importance of his discovery. The enthusiasm over ether and chloroform as general anesthetics put a check for some time on the use of the gas. About 1863 Colton revived interest in the subject and was successful in administering the gas in dental work. The confidence of the public was soon obtained and since that time nitrous oxid anesthesia in dental practice has been firmly established. Although the gas has been used as an anesthetic in minor surgical work, its use in major surgery has until recently been limited.

At the meeting of the American Medical Association in 1907 Dr. A. D. Bevan, Chairman of the Section on Surgery and Anatomy, gave an address on nitrous oxid in major surgery. He told of his experience with the gas in a variety of major surgical operations and made a plea for an extensive trial of this agent. In his address,[1] however, Bevan does not mention the use of oxygen in combination with nitrous oxid as an anesthetic in major surgery. It is to this subject that I desire to call attention, as the combination makes an anesthetic which has certain advantages over ether and chloroform.

The use of oxygen in combination with nitrous oxid was first suggested by Dr. Edmund Andrews of Chicago in 1868. For some unknown reason little attention was paid to the suggestion, although Andrews demonstrated its value. Within the past few years interest in this subject has been aroused and there seems to be no doubt that this anesthetic is destined to become more popular and to be more extensively used.

Various investigators have carried on experiments in order to determine how nitrous oxid acts when it is taken into the blood. Kemp,[2] after numerous experiments, reached the conclusion that nitrous oxid was held in solution by the plasma, that the gas was a specific anesthetic and was not dependent on asphyxia for its results. With a view to determining the blood changes caused by nitrous oxid Hamburger and Ewing,[3] who have made a careful study of the subject, both clinically and experimentally, conclude that the hemoglobin is not permanently reduced, that anemia is not produced, and that hemolysis is not increased. They state "in a comparison of the three anesthetics from the standpoint of blood changes we conclude that nitrous oxid causes no permanent effects of any significance; that ether causes more harmful changes (slight anemia and marked decrease in coagulation time); that chloroform causes the most harmful results (hemolysis and production of distinct anemia)." It seems clear that, so far as any alteration in the blood is concerned, nitrous oxid is preferable to ether or chloroform.

Postoperative complications, such as pneumonia, bronchitis, nephritis and acidosis, sometimes follow the administration of ether and chloroform. As regards these complications, the nitrous oxid and oxygen combination has a distinct advantage. Nausea and vomiting are of less frequent occurrence following the use of this agent. Still another advantage is the greater safety of this anesthetic. While the mortality from ether and chloroform, when administered by a skilled anesthetist, is not high, yet deaths do occur occasionally even when the administration is by an expert. Bevan gives the mortality from the gas as 1 in 50,000. When oxygen is administered with the gas it is much safer and I am able to find only one death reported from this anesthetic. The element of safety should merit consideration.

When the pure gas is administered, anesthesia is rapidly produced and is accompanied by symptoms of asphyxia. The cyanosis which appears is of a very different character from that which sometimes occurs during the administration of ether and chloroform. In the latter case cyanosis is the result of interference with the action of the heart. It is a condition which demands attention and is the cause of alarm on the part of the anesthetist. Cyanosis from nitrous oxid is an entirely different condition and is due to lack of oxygen in the blood. The condition is transient and readily disappears when air or oxygen is admitted. The cyanosis of itself is not a dangerous condition, although it is not a pleasing sight. This appearance of a patient under nitrous oxid is

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* Read at meeting of the Medical Society of Milwaukee County, Jan. 14, 1910.

[1] Bevan, Arthur Dean: Nitrous Oxid as an Anesthetic in Major Surgery, The Journal A. M. A., July 20, 1907, xlix, 197.

[2] Kemp: Brit. Med. Jour., 1897, ii, 1480.

[3] Hamburger, W. W., and Ewing, F. E.: The Blood Changes Incident to Surgical Anesthesia, with Special Reference to Those Induced by Nitrous Oxid, The Journal A. M. A., Nov. 7, 1908, ii, 1586.

probably one reason why the gas has not become popular with the medical profession. It is different with the dentists and it is not the cause of alarm from their standpoint. In fact, many dentists are accustomed to administer the gas until they obtain a marked degree of cyanosis. The mask is then cast aside, the tooth extracted and after a few inspirations of air the patient has regained his normal appearance. The dentist is accustomed to see this cyanosis; he knows that it is not a serious condition and it does not worry him. With physicians it is different, and it is not an easy matter to overcome the prejudice which exists in their minds on account of this appearance of the patient.

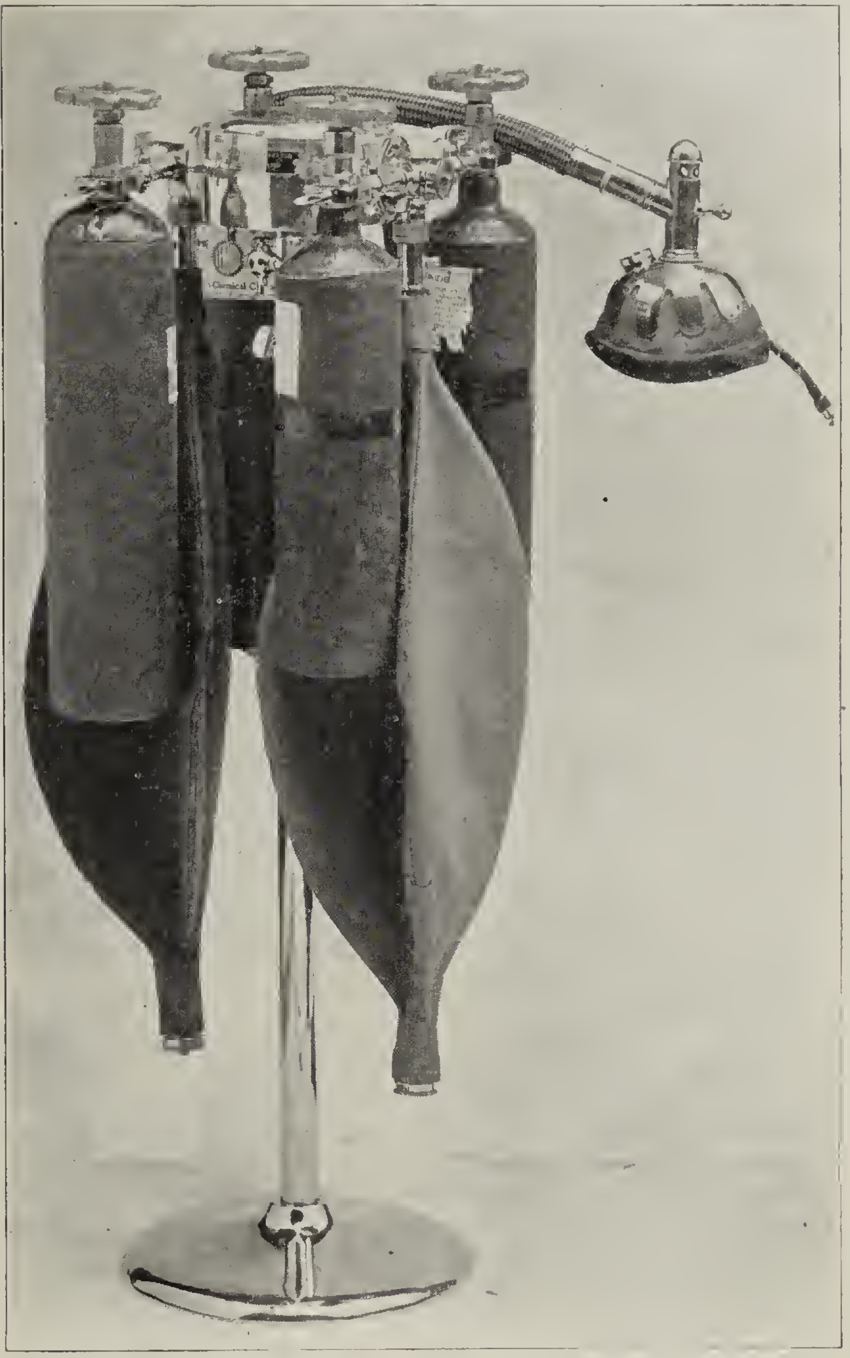
Should convulsive movements occur during the administration, it is a warning to stop the gas and admit air; otherwise dangerous asphyxiation may arise. It is impossible to administer pure gas continuously for any length of time without the admission of air. After a few inspirations of air, the cyanosis lessens, the patient moves and is soon awake unless more gas is given. In prolonged administration of gas and air this process is repeated again and again. In reality it is putting the patient asleep, allowing him to recover partially, then repeating the process. It requires the greatest skill to maintain anesthesia under such conditions, and it is at best not very satisfactory..

By using oxygen instead of air we can maintain better anesthesia and the appearance of the patient is much improved. The degree of cyanosis and the time required to produce anesthesia are in direct proportion to the amount of oxygen used. Hewitt[4] says that gas and air anesthesia is distinctly preferable to that produced by nitrous oxid, although the best form of anesthesia is attainable only when oxygen and not atmospheric air is mixed with nitrous oxid.

It may be asked why it is better to use oxygen instead of air with gas. The explanation is simple. We know that the air which we breathe contains about 20 per cent. oxygen, of which 4 per cent. is taken up by the blood. The amount of nitrogen in the air is about four times the amount of oxygen present. If we administer air with nitrous oxid, in order to obtain the normal amount of oxygen from the air, it is evident that the gas will be much diluted, being only about 80 per cent. It is not possible to obtain good anesthesia with 80 per cent. nitrous oxid. In order to produce anesthesia we must exclude the greater portion of the air. As a result cyanosis promptly appears. By using oxygen instead of air the situation is entirely changed. Thus if we use 4 per cent. oxygen we are able to administer 96 per cent. nitrous oxid, and with such a mixture good anesthesia can be maintained and the cyanosis is to a large extent eliminated. This fact is easily demonstrated. In actual administration 4 per cent. oxygen is not sufficient to overcome the cyanosis entirely and it is advisable to increase the amount of oxygen according to the condition of the patient. Hewitt says that the best anesthesia is obtained with 6 per cent. or 7 per cent. and that it requires 11 per cent. oxygen to eliminate cyanosis entirely.

At the present time nitrous oxid and oxygen is the best anesthetic for short operations, as the reduction of a fracture or dislocation, the opening of abscesses, etc. I have administered this anesthetic for such conditions, but it is to its use in major surgery that I wish to call attention. During the past two years I have administered the gas in a number of major surgical operations. My first experience was with a fixed mixture containing 2 per cent. oxygen. This was satisfactory in some cases; in others it was not, because the amount of oxygen could not be varied. At other times mixtures containing 3 per cent. and 5 per cent. were used, but the results were the same. It was apparent that, if the amount of oxygen could be regulated according to the condition of the patient, much better anesthesia could be secured. With this object in view I have devised an apparatus which I wish to explain. By means of this apparatus nitrous oxid may be given pure or oxygen may be administered with it in any proportion from 1 per cent. to 15 per cent.

The apparatus consists of a mixing-chamber which is supported on a stand composed of four parts. The mixer is made of aluminum and to it are attached the brass supports for the tanks. It contains a chamber which is filled with hot water in order that the gas may be warmed before it is inhaled. Provision is made for two cylinders, each of nitrous oxid and oxygen, also two bags which serve as reservoirs for the gases. By means of an easily regulated valve the amount of oxygen can be easily varied from 1 per cent. to 15 per cent. or more if desired. A rubber hose leads from the mixer to the inhaler. The entire apparatus weighs nineteen pounds and can be carried in a small suit-case or in the special case which has been made for it. It has several advantages over other appliances of a similar character. It is lighter and is more portable—two important features.



Nitrous-oxid-oxygen apparatus.

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[4] Hewitt: Anesthetics, p. 297.

It is easily operated and there is nothing to get out of order.

In what class of cases is nitrous oxid and oxygen indicated? Crile[5] has called attention to the use of this anesthetic in certain so-called handicapped patients. He says:

> The natural immunity of the patient is little if at all impaired by nitrous-oxid-oxygen anesthesia, as contrasted with a distinct impairment under ether anesthesia. Likewise there is less surgical shock under nitrous-oxid-oxygen than under ether anesthesia. In patients handicapped by infection or by a previous impairment of the central nervous system, nitrous oxid permits a safer operation than does ether.

His position is well taken, as it is especially in this class of cases that the gas is indicated. In the aged, in persons suffering from acute infections, in cases of nephritis or diabetes, and in patients who have suffered from nausea and vomiting this is the anesthetic of choice. Teter[6] of Cleveland, who has probably had the largest experience in prolonged administration of the gas, has reported over 13,000 administrations, of which over 1,000 have been for major operations. In the larger cities of the country this anesthetic is rapidly coming into more general use. Its greater safety has been proved, and this is a fact that should not be ignored.

Although this anesthetic has certain advantages over ether and chloroform, yet there are some contraindications to its use. In prolonged operations it should not be used in persons who drink or smoke to excess. In emphysema, asthma, in marked arteriosclerosis and in cases in which there is any obstruction to respiration it is not indicated. In prolonged operations on children under 8 years of age the gas is not desirable.

My own experience with the gas has been in a variety of cases, among which are the following: prostatectomy, both perineal and suprapubic, nephrectomy, appendectomy, abdominal and vaginal hysterectomy, colostomy, lithotomy, salpingectomy, dilatation and emptying the uterus, amputation of the leg, herniotomy, etc. The youngest person to whom I have administered it was 3 years, the oldest 86. The longest administration was one hour and fifty-four minutes. The following cases will serve as illustrations:

Case 1.—F. B., aged 64. The operation was a suprapubic prostatectomy by Dr. Gustave Kolischer. The anesthesia lasted thirty minutes. The patient awoke before leaving the operating-room and there was no discomfort from the anesthetic.

Case 2.—J. W. B., aged 86. The operation was a double herniotomy by Dr. H. Reineking. The duration of the anesthesia was one hour thirty minutes. The patient took the anesthetic nicely and awoke about five minutes after the gas was stopped.

Case 3.—H. M. M., aged 65. The operation was a suprapubic prostatectomy by Dr. H. A. Sifton, the anesthesia lasting twenty-five minutes. For more than twenty-four hours this patient had not voided urine and the bladder was greatly distended with bloody urine. His temperature was high and he was not a good subject for anesthesia.

Case 4.—B. S., aged 76. Colostomy was performed by Dr. F. H. Munkwitz, the anesthesia lasting thirty minutes; there was no post-operative discomfort.

Case 5.—Mrs. F., aged 25. The operation was the dilatation of the uterus and removal of a dead fetus, by Dr. R. W. Holmes. Anesthesia lasted fifty-nine minutes. This patient was suffering from a severe toxemia and should be classed with "handicapped patients."

Case 6.—Mrs. H., aged 76. Appendectomy was performed by Dr. W. T. Nichols. The anesthesia lasted thirty minutes and there was no discomfort following.

Case 7.—H. S., aged 50. The operation was a herniotomy by Dr. D. J. Hayes. The anesthesia lasted one hour eleven minutes. This patient was suffering from nephritis.

Case 8.—Mrs. V., aged 37. Vaginal hysterectomy was performed by Dr. R. G. Sayle, the anesthesia lasting one hour fifty-four minutes. Although this patient had been sick after a previous anesthetic she was not sick at this time and stated that the recovery from this was like waking from a natural sleep.

Satisfactory as this anesthetic is in selected cases, yet it is not entirely free from objections. One of the greatest objections to its general use is the expense. It requires considerable skill to administer the gas successfully, and one skilled in its use is not always available. Even when it is administered by one experienced in this work, the anesthesia which results is not as complete as with ether or chloroform. Sometimes it is almost impossible to obtain sufficient relaxation of the abdominal muscles. While this may be due to poor technic on the part of the anesthetist, yet it is not always the case. The incompleteness of the anesthesia is at times a hindrance to the operator, but it is less so as he becomes accustomed to this anesthetic. The color of the blood is dark, but this condition is of short duration and is not a cause for alarm.

It seems that this anesthetic is destined to come into more general use than at present. When we consider that it is the safest of all anesthetics, does it not merit some consideration in the choice of an anesthetic? It is not disagreeable to take and the short time necessary to get the patient asleep is an advantage over ether and chloroform. As a preliminary to ether it has a wide field.

### CONCLUSIONS

Nitrous oxid and oxygen is the safest of all anesthetics.

Postoperative complications are less frequent after this anesthetic.

Its more general use should be encouraged.

498 Murray Avenue.

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## PLEURAL EFFUSIONS

### AN ORIGINAL MEANS OF DRAINAGE IN PURULENT CASES WITHOUT RESECTION OF RIB *

A. J. COLTON, M.D.
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BUFFALO

Effusion in the pleural cavity occurs under a great variety of conditions and circumstances. It may be serous, fibrinous, sanguinous, purulent, or a combination of two or more of these, such as serofibrinous, seropurulent, serosanguinous or sanguinopurulent.

The character and nature of the effusion depends somewhat on the cause of its production and the virulence of the germ with which it may be associated. It may be unilateral, bilateral, diffuse, localized or sacculated, depending also somewhat on the character of the effusion and the cause of its production. The unilateral effusion is by far the most common.

The etiology is even more varied than the character of the effusion. It occurs in all ages, the infant being more prone to purulent effusion and the adult to the serous form. It may be caused by a simple pleurisy, traumatism, tuberculosis, nephritis, rheumatism, typhoid fever, pericarditis, malignant growths of the kidney or other organs, ovarian tumors, cirrhosis of the liver and various other conditions.

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[5] Crile: Wisconsin Med. Jour., August, 1909.

[6] Teter, Charles K.: Thirteen Thousand Administrations of Nitrous Oxid with Oxygen as an Anesthetic, The Journal A. M. A., Aug. 7, 1909, liii, 448.

* Read before the Buffalo Academy of Medicine.

Purulent effusions occur frequently in infants and children after pneumonia; hence, when they develop they are often mistaken for unresolved lung tissue. I recall several instances of this kind in which empyema followed pneumonia and the condition was diagnosed as incomplete resolution or consolidated lung.

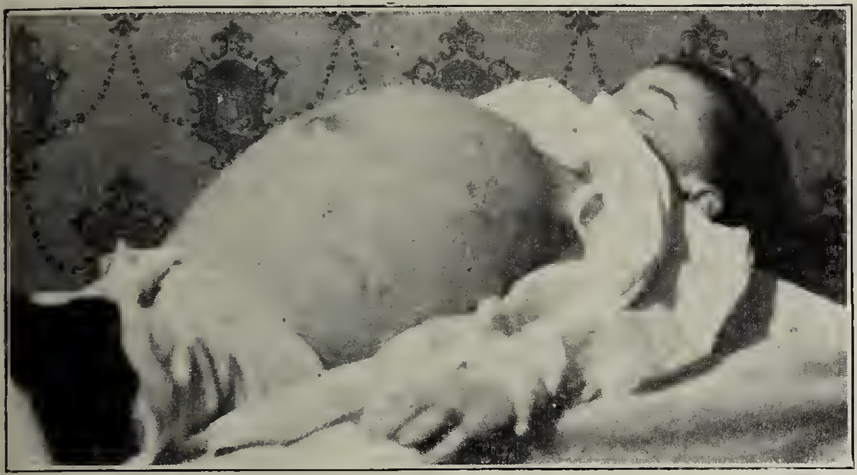

Fig. 1.—E. C., aged 5; sarcoma of kidney producing a serosanguinous effusion of the pleura, same side.

The most certain means of determining the existence of fluid and its character is by the use of an aspirating needle. If the needle be made sterile and the skin through which it is to be introduced is thoroughly disinfected it may be used with impunity, although Opie recently has stated that the removal of the fluid during the inflammatory stage may cause the leucocytes to break down, and change the serous exudate to a purulent one without any bacterial invasion, the serum seemingly having a restraining effect in preventing pus formation. Carelessness in the use of the needle will frequently cause a serous fluid to become purulent, or too deep an introduction of it may produce a condition known as pneumothorax.

The failure to obtain fluid is not conclusive evidence that it is not present. The failure may be due to the use of too small a needle, or its introduction in the wrong spot, the effusion being sacculated, or a faulty position of the patient; therefore, a good-sized needle should be used with the patient in a sitting posture.

Occasionally serous effusions, and purulent ones, too, when due to the pneumococcus, may be absorbed if in small quantity. Notwithstanding that it may be absorbed in a few instances when left to Nature, and its absorption greatly assisted by the use of drugs, I believe that in cases in which effusion is positively determined it should be relieved by mechanical means and not left to Nature, thereby running the risk of a collapsed lung or general sepsis.

If the fluid be serous, the simplest means of removal is by a Potain aspirator; but if the effusion be purulent, aspiration is useless and thorough drainage must be used.

### DRAINAGE AND RESECTION

In cases of empyema in which the patient is desperately ill and septic, it has always seemed to me a too heroic and shocking method to have an inch of rib resected when the patient is in need of every spark of vitality and the most favorable conditions to recover. Scharlau[1] reports 56 consecutive cases in which the patients were operated on by primary exsection of a rib, of which number 18 died, a mortality of 33 per cent.

Various forms of drainage have been used to obviate the necessity of the resection of an inch of rib, but all methods under my observation or knowledge were failures. Rubber tubing is frequently tried, but the tubing will become compressed by the closing together of the ribs after the evacuation of the pus, and drainage is shut off. If there is sufficient space between the ribs, the tubing will become bent on itself by the expansion of the lung, crowding the pulmonary pleura against the end of the tubing, and thus shut off drainage. A soft catheter is sometimes introduced and will drain until the large mass has come away and the lung expands and the ribs come together; then the soft catheter becomes useless, and exsection of a piece of rib has to be finally resorted to and a soft rubber drainage inserted. Soft tubes, besides failing to drain, frequently work loose and are lost in the pleural cavity, and their removal requires a much more serious operation than the resection of a rib.

### AUTHOR'S METHOD OF DRAINAGE

To obviate this I have made a tube which I believe will do away with resection of a rib in at least 85 per cent. of the cases. I have used it in a great many cases, and in every instance drainage was complete and a perfect recovery of the patient followed. It is very easy of introduction, and in an adult can be introduced under local anesthesia, either by the infiltration method or by freezing. If, on account of fear of pain, a general anesthetic is used, it is not necessary to crowd it to the point of surgical anesthesia. The technic is very simple. After the diagnosis of purulent effusion has been made the patient is prepared in the following manner:

*Operation.*—All clothing above the waist is removed and the patient is placed on the side of the table corresponding to the side in which drainage is to be made. The patient should be brought well to the edge of the table so that the operator may work easily and freely without turning the patient on his unaffected side. This I consider a very important point, whether the patient is to take a general anesthetic or not, as it gives the patient free use of his good lung; whereas, if he were laid on the side of his good lung the patient is put in greater danger from his inability to breathe. I have seen patients become cyanosed and moribund when placed on the side of the good lung for operation for empyema, and I am, therefore, very cautious in this matter. Under the back of the patient is to be placed a Kelly pad. The part is then scrubbed with ethereal soap and wiped with a clean aseptic towel or piece of absorbent cotton. The patient is not to be placed on a slab and exposed to a general scrub, which would cause a general blanching of the skin and congestion of the internal organs, and increase

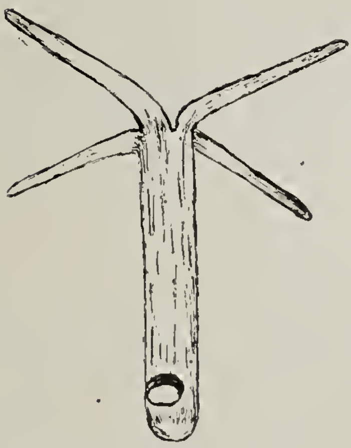

Fig. 2.—The author's empyema-tube.

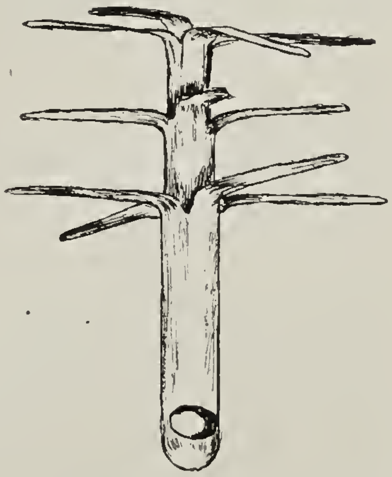

Fig. 3.—In nests of three.

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[1] Arch. Ped., August, 1897.

very much the danger from an already overworked and impeded heart. The advantage gained by the more thorough and complete asepsis is more than counterbalanced by the time consumed in scrubbing the patient and the extra amount of shock that is produced by exposure and resulting internal congestion.

After a speedy preparation, if the pus be not sacculated, the point of selection for the introduction of the tube is in the seventh or eighth intercostal space in the midaxillary line where the ribs are usually farthest apart and most easily separated, and the chest walls thinnest. A linear incision is made in the interspace parallel to the ribs, between which the tube is to be introduced.

The incision should be from one to two inches long, through the skin and intercostal muscles, care being used to avoid cutting the intercostal artery which lies on the under side of the rib. By hugging the knife to the superior surface of the rib this is easily avoided. When the incision is made down to the pleura the opening in the pleural cavity is made simply large enough to admit the tube. When the opening is made I usually take a pair of dressing or artery forceps and introduce them into the opening to separate the ribs and start the pus. The tube is then introduced until the pus runs freely.

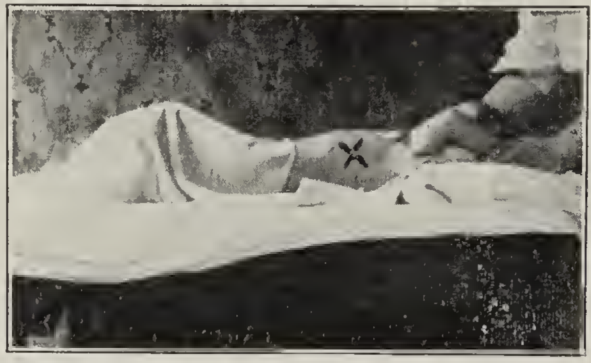
Fig. 4.—Drainage-tube introduced in a case of empyema following pneumonia; patient aged 4.

If the tube is too long and injury is feared to the opposite pleura, gauze can be wound around the tube externally to limit the extent of its introduction. After the pus is thoroughly evacuated a loose dressing of gauze and a thick layer of absorbent cotton are laid over the tube to absorb the discharge and held in place by adhesive strips, and this covered by a bandage. The dressings should be changed daily for a few days. If at any time the tube should become plugged it can be easily removed, cleaned, sterilized and reintroduced without any pain to the patient, by applying a few drops of a 4 per cent. solution of cocain.

In none of my cases have I ever attempted to wash out the pleura. I believe that this is a dangerous procedure and should rarely be used. In all of my cases recovery has been rapid and uninterrupted and no relapses have occurred.

The average length of time for the use of the tube has been about twenty-one days.

The tube should be made of silver in nests of three sizes (Figs. 2 and 3), the diameter of the tube as well as the length being varied; the one can be used that is most suitable to the case under consideration. I have never had any difficulty in introducing this tube in patients, even in infants.

In presenting this paper I have not attempted to give an exhaustive discussion of the subject; I have purposely omitted many salient features, such as hygiene, morbid anatomy, therapeutics, diagnosis, and pathology and various modes of treatment. This can be read in any text-book in a much more pleasing manner than I can present it.

### SUMMARY

Effusions in the pleural cavity are not to be diagnosed solely by flatness on percussion; neither is the respiratory murmur always absent on auscultation, as is popularly believed.

The most reliable method of diagnosing fluid and its character is by the aid of an aspirating-needle, and this is not always to be relied on.

The point which I wish to bring out in this paper is the drainage of purulent cases by means of a tube without resection of a rib, whereby the operation is changed from one of a major type to a simple, minor one, reducing very much the time required in doing it as well as the dangers accompanying it, thereby considerably lessening the mortality.

25 East Ferry Street.

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## A NEW METHOD OF DEMONSTRATING THE CAPSULES OF BACTERIA *

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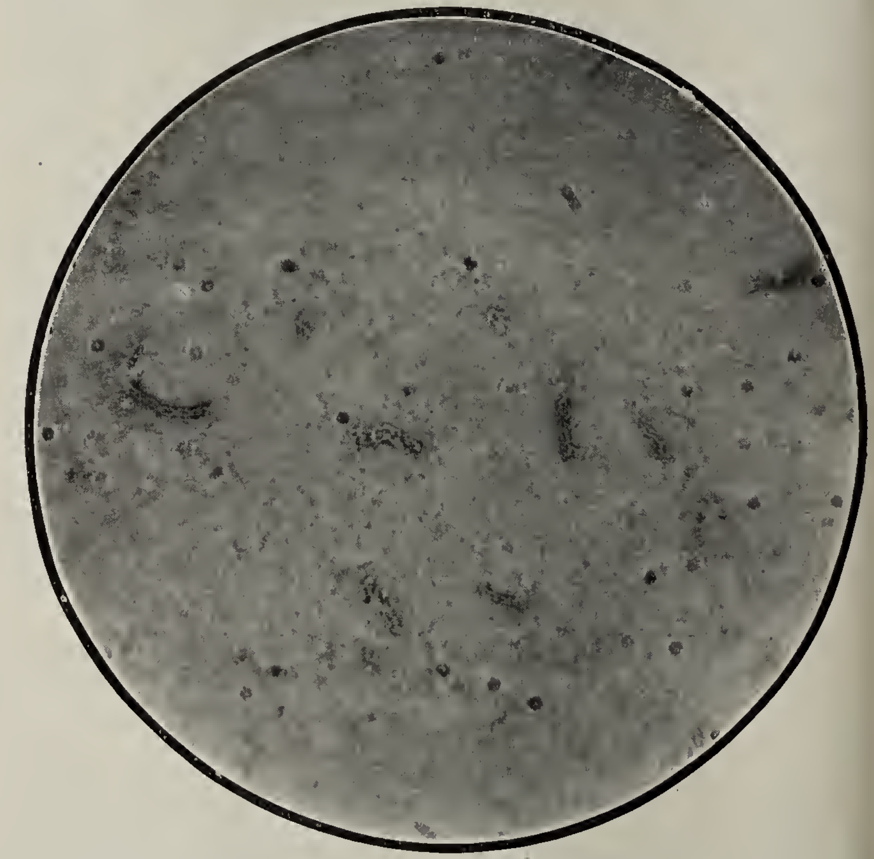
The most satisfactory methods at the present time for the staining of capsules of bacteria are those of Welch and Hiss. The method of Welch depends on the precipitation, by glacial acetic acid, of the mucin composing the capsule. The acid is then replaced by aniline gentian violet, which is added repeatedly, and finally washed with a 2 per cent. solution of sodium chlorid. Hiss employs ascitic fluid in making the smear. After drying and fixing in the flame, the film is covered with a 5 per cent. solution of gentian violet, stained for a few seconds and then washed with a 20 per cent. solution of copper sulphate.


Pneumococci demonstrated by India-ink method; from ascitic bouillon culture, twenty-four hours' growth.

The present method is an application of the principle involved in the India-ink "stain" for the *Spirochæta pallida*. The latter was adopted by Hecht and Wilenko early in 1909 and reported by Frühwald.[1]

The chief difficulty in the demonstration of bacterial capsules by the various stains proposed is the same as that encountered in the demonstration of the *Spirochæta pallida*, namely, an easy differentiation of the structural outlines in the stained film in which they are fixed. The principle of dark-field illumination overcame the difficulty in so far as the spirochete was concerned but did not prove sufficiently simple in application for general adoption outside of the laboratory. A drop of the approved ink of Günther Wagner makes the demonstration quite possible for anyone possessing a 1/12 inch homogene immersion lens. A drop of ink on a slide is rubbed up with a drop of serum, from a chancre, for instance, and is then drawn out into a fine uniform film. The spirals of the spirochete, being of appreciable thickness, are not covered by the ink and therefore stand out clearly against the dark background.

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* From the Pathological Laboratory of the Roosevelt Hospital, New York City.

[1] München. med. Wchnschr., Dec. 7, 1909.

In the routine examination of throat smears of syphilitic patients in this hospital it was noticed that the numerous bacteria of the mouth were quite as clearly indicated and the idea of demonstrating the capsule of the pneumococcus presented itself. Various methods of applying the ink were tried; first, staining the bacteria in suspension, adding the ink and drawing out into a film; second, mixing bacteria with ink and drawing out into a film as for spirochetes, allowing to dry and then floating stain on the inked surface. The second method is applicable to the demonstration of pneumococci in viscid sputum. The following method is proposed as that followed by the best results:

1. Make a thin smear of sputum, pus or bacterial culture in usual manner on a clean slide and allow to dry in air.
2. Fix by passing through flame in the usual manner.[2]
3. Stain with aniline gentian violet for five minutes, or stain as for Gram, *i. e.*, aniline gentian violet, iodin, alcohol, water, acid fuchsin.
4. Wash with distilled water and blot with filter-paper.
5. Place a drop of India ink in center of stained smear, and draw to one end of smear by means of a strip of cigarette paper one-half inch in width.
6. Allow ink to dry, add a drop of immersion oil and examine with 1/12 inch lens.

The pneumococci or encapsulated organisms will appear in a light-brownish background, the bodies staining deeply, the capsules faintly. The circumference of the capsules will be found to be surrounded by a condensation of fine ink particles which happily intensifies the effect. The physics of this phenomenon is readily understood. The bodies of the bacteria stand somewhat above the general level of the film. The ink in its fluid condition collects about the bacteria in the same way as water rises on a glass rod to form a negative meniscus.

The capsules may be demonstrated quite as well if the film is stained in an unfixed condition, a somewhat longer time being required for staining. Other stains, such as aqueous solution gentian violet and carbol-fuchsin, may be used, or, if pneumococci are to be demonstrated in blood-smears from mice, Jenner's stain may be used. In washing off the stain sterile water seems to have little or no effect in causing a shrinkage of the capsules in either fixed or non-fixed films. A 2 per cent. sodium chlorid solution or 20 per cent. copper sulphate solution may be used, but these cause an apparent granulation of the ink. A very small drop of Günther Wagner's (Wein and Hanover) India ink of the grade known as Peliken No. 541 will suffice. If the ink is too thick it may be diluted by adding a few drops of distilled water. Higgin's General Drawing Ink may be used but is much inferior. As the ink has a tendency to dry rapidly the process of coating the stained smear may be facilitated somewhat by applying the ink with a platinum loop in a line corresponding to the narrower dimension of the smear. Cigarette paper of uniform texture is employed, as one obtains in this way a very thin and uniform coating of ink. The edge of the paper is brought into contact with the line of ink and as soon as capillary attraction is established the paper is drawn over the surface of the bacterial film. But a few seconds are necessary for ink to dry. A drop of cedar-oil is placed directly on the surface of the ink, a cover-slip being unnecessary.

A portion of the smear is allowed to remain uncovered by the ink for the purpose of comparison. For example, if a Gram stain has been made the capsules may be demonstrated at one end of the slide and the question of the Gram properties decided at the other end.

A quicker method which gives good results consists in gently steaming with 5 per cent. aqueous solution of alcoholic gentian violet, pouring off excess, blotting and coating with ink. If this method is used one must not mistake the peripheral zone of a non-capsulated bacterium, where light is more readily transmitted, for a capsule. Any uncertainty which may arise in this manner may be overcome by comparing the size of the body of the presumably encapsulated organism with its size in the portion of the smear not coated by the ink. Often a slight change of focus will clear the difficulty.

The capsules—of the pneumococcus, for instance—are demonstrated best in cultures of ascitic bouillon or blood-serum or from blood of inoculated mice. In making smears from blood-serum or other media it is well to utilize the water of condensation.

If the smear contains a variety of organisms the differentiation of capsulated and non-capsulated organisms is rendered simple. The non-capsulated bacteria show no zone of lighter stain about their bodies, but on the contrary are surrounded by a condensation of the ink.

The selection of a suitable ink is of utmost importance. The two essentials are, first, that there be a certain amount of ink in solution, and, second, that the ink particles in suspension be of uniform and extreme fineness.

The method has been found of especial value in demonstrating capsules in old cultures of pneumococci. If a smear stained by the Hiss of Welch method is coated by the ink the capsules are found to stand out clearly in many cases.

Attempts to demonstrate flagella of organisms have been unsuccessful, both in stained and unstained films.

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# SPASTIC PARALYSIS *

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Spastic paralysis may be either a symptom of a functional neurosis or the result of an organic lesion. If the latter, its existence indicates an involvement of the pyramidal tract somewhere between the cortex of the brain and the anterior horns of the spinal cord. It seems best to discuss first the various lesions from which spastic paralysis may result and then briefly to describe those points which are of assistance in differentiating them from the purely functional morbid states.

Spasticity and the exaggeration of deep reflexes which is associated with it are both the result of increased muscular tonus, the latter, in turn, being caused by the cutting off of the influences of regulation centers. The exact location of these centers has not been definitely determined, although there can hardly be any doubt that one of them—and that perhaps the most important one—is to be found in the cortex of the brain, while others are supposed to exist in the pons, the nucleus ruber, the spinal cord, the semicircular canals and the cerebellum. Increased muscular tonus may result in a slight stiffness only, so slight that it becomes evident only on voluntary movement, or it may lead to contractures so intense as to make all movement impossible. All conditions lying between these two extremes are usually designated as spastic paresis or spastic paralysis. We do, however, find that more or less weakness of the muscles almost invariably accompanies their rigidity. If the lesion causing the palsy destroys the myelin sheaths of the nerve fibers, but leaves at least some of the fibrillæ intact, then that symptom which is known to all as "intention tremor" is supposed to result.

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[2] This may be omitted; if so, allow stain to act for ten minutes.

* Read by invitation before the Chicago Orthopedic Society, Jan. 13, 1910.

The syndrome which results from destruction of the pyramidal tract alone is seen in its purest form in three morbid conditions: in the later stages of cerebral hemiplegia, in the primary lateral sclerosis of Erb and Charcot and in Little's disease. To the first of these I shall revert when discussing spastic paralysis of cerebral origin.

The Erb-Charcot malady usually begins during the second or fourth decade of life and is very slowly progressive. In it the spasticity in the legs dominates the clinical picture, while the paralysis is but slightly marked. Associated movements are frequently observed. The deep reflexes are greatly increased and show a tendency to jump to the opposite extremity. The cutaneous reflexes are usually intact or moderately decreased. The symptoms gradually reach higher levels, so that in the later stages we may find rigidity in the upper extremities as well as in some of the muscles controlled by cerebral nerves. Sensation, vasomotor and trophic nerves, sexual function, bladder and rectum show no deviation from the normal. In this disease the pathologist finds a primary sclerosis of the pyramidal tracts.

Senile spastic paralysis, resulting in very similar symptoms in at least some cases, is due to arteriosclerotic changes within the cord. Because of this pathologic basis, the syndrome is prone to be less pure than in the disease just described. In some rare instances of what is known as hereditary or family spastic paralysis we meet with virtually this same group of symptoms; and here, too, the microscope shows a degeneration of the upper motor neuron.

Little's disease, infantile spastic diplegia, is a disease in which again spasticity is the dominant feature. There is little, if any, paralysis. The legs are more markedly affected than the arms. The symptoms, which become noticeable very early in life, show a marked tendency to regression. Unfortunately this does not apply to the mental defect, which constitutes the saddest feature in such cases. Almost invariably either some prenatal deleterious influence or a premature, difficult or prolonged parturition can be found as etiologic factor. In some instances the disease seems due to an agenesis of the pyramidal tracts; in other cases a diffuse gliosis with increase in the number of blood-vessels in brain and cord, but without any circumscribed changes, has been found.

Combined with other symptoms we find the syndrome of spastic paralysis in most cases of disseminated sclerosis, in various forms of myelitis as a result of secondary degeneration of the pyramidal tracts, and from the same cause in compression of the spinal cord. Similarly to the other symptoms of general paresis may be added a spastic paraplegia.

In multiple sclerosis we find optic atrophy, or less frequently optic neuritis. Temporary paralysis of extrinsic eye muscles may occur. The pupils are often unequal in size, rarely rigid. Nystagmus or nystagmoid movements are often present. There is paresis with rigidity, often paraplegia. The deep reflexes are increased, the Babinski phenomenon often marked. The abdominal reflex is said by Mueller to be very frequently abolished even in the very early stages. My personal experience leads me to believe that the importance of this latter symptom has been rather exaggerated. Intention tremor and scanning speech are considered among the cardinal symptoms. Disturbances of cutaneous sensation may be lacking entirely; when present are usually slight and often evanescent. Occasionally neuralgic pains have been observed. The rectum and sexual function are but rarely affected in the early stages; micturition, however, is often impaired. Involuntary laughing and crying, apoplectiform attacks, ataxia, loss of memory and other slight mental defects, headache, not infrequently simulating megrim, are other symptoms worthy of mention.

In acute myelitis we find usually fever, slight pain in back, a feeling of fatigue, and paresthesias in legs in the early stages. Since the most common localization of the morbid condition is in the dorsal region of the cord, paralysis of the lower extremities often results, which is flaccid in the beginning, but soon becomes spastic. Twitching of muscles is commonly seen in the paralyzed limbs, both of spontaneous origin and after sensory stimulation. Both the deep and the cutaneous reflexes are increased. There is usually more or less complete loss of sensation below the seat of the lesion. The sphincters are almost invariably involved, bed-sores occur early and are very troublesome, and the occurrence of optic neuritis has been reported in a number of cases.

Chronic myelitis produces practically the same symptoms, but they appear more gradually. Fever is absent, unless caused by some complication like cystitis and decubitus.

Syphilitic myelitis may produce a great variety of clinical manifestations, which are partly due to involvement of the meninges, the spinal roots and the cord proper. It is differentiated from other forms mainly by the history or evidence of past luetic lesions, the existence of symptoms suggestive of multiple foci of disease, the great variability in the intensity of the symptoms, the preponderance of nocturnal pain, the frequency with which certain extrinsic eye muscles are paralyzed, the fact that the pupils are probably never perfectly normal, and—if all else fails—by the therapeutic test.

Compression of the spinal cord through fractures, dislocation or distortion of vertebræ causes a flaccid paralysis when the trauma results in a complete transverse lesion. Incomplete destruction of the cord located above the lumbar region results in spastic paralysis of the lower extremities with increased deep reflexes, partial loss of sensation and with pains radiating into the paralyzed extremities and paresthesia. The sphincters are usually—though not invariably—affected. The history of an injury would make the diagnosis an exceedingly simple one were it not for the fact that spinal hemorrhage may produce exactly the same symptoms. Where there exists a palpable deformity of the spinal column or where the Roentgen ray demonstrates its presence, this difficulty does, of course, not exist.

Tuberculous spondylitis is encountered more frequently early in life. Tuberculous foci in other parts of the body can usually be detected. A trauma to the spinal column often determines the localization of the process. In one of my own cases a woman with tuberculosis of the lungs and the bladder fractured a vertebra while attempting to lift a heavy box from the ground. Here a latent lesion must have weakened the diseased bone. The malady first causes dull pain along the spine, then rigidity of the same with sensitiveness to heat and pressure. Neuralgiform pain and paresthesia later change to hypesthesia or anesthesia. Atrophic paralysis of the muscle results. Here, too, if the seat of the lesion be above the lumbar enlargement, a flaccid paralysis of the lower extremities is followed by spasticity with increased myotactic irritability. Both sphincters usually suffer early.

Tumors may produce a very similar combination of symptoms, and this is especially true of carcinoma of the vertebræ. This latter is practically always metastatic, and a search for the primary lesion and consideration of the patient's age will prevent diagnostic errors.

When a lesion of the pyramidal tract occurs simultaneously with one of the posterior columns, we have added to the spastic paralysis more or less disturbance of sensation, both deep and superficial, of coordination and of the function of bladder and rectum. This occurs in the so-called combined system disease, sometimes in disseminated sclerosis, in dementia paralytica, diffuse myelitis, and in arteriosclerotic processes within the cord. Of these, only the first is to be described briefly here. Combined system disease may develop very rapidly or have a more chronic onset. Most often paresthesia or slight pain mark its beginning. Paresis of the extremities with spasticity, increased deep reflexes, associated movements, contractures, impairment of muscle, joint and bone sensation, ataxia, cutaneous anesthesia or hypesthesia, loss of control over bladder and rectum result; in some instances involuntary laughing and crying, dysarthria, nystagmus, vertigo and cerebellar ataxia follow an upward extension of the pathologic process.

Involvement of the pyramidal tracts plus anterior horns produces the clinical picture of amyotrophic lateral sclerosis. This disease usually begins between the thirtieth and sixtieth year of life and produces a very slowly progressive spastic paralysis, not infrequently unilateral in the earlier stages, combined with a degenerative atrophy of muscles, first seen, as a rule, in the small muscles of the hand. Fibrillary twitching, quantitative and later qualitative changes in the reaction to the electrical current are the rule. During the terminal stages bulbar symptoms, such as dysarthria, dysphagia, paralysis of the soft palate and of the tongue with fibrillary twitching and atrophy in the latter organ, weakness of the muscles of mastication and of the face are far from uncommon.

The central gray matter of the cord may suffer, together with the motor paths; and this combination we find in syringomyelia and sometimes in intraspinal hemorrhage. In typical cases of the former disease, atrophy of the muscles of the upper extremities, beginning in the small muscles of the hand and gradually spreading toward the trunk occur, together with spastic paralysis of the lower extremities. On the sensory side, pain and temperature sense are prone to suffer most. Trophic disturbances are common (Morvan's disease) as are those of the vasomotor nerves. Scoliosis and deformities of the thorax rarely fail to appear. Rectum, bladder and the sexual function suffer early. Bulbar symptoms often complicate the clinical picture. Sensory disturbances in the face, nystagmus, enophthalmus, ptosis and miosis have frequently been observed. In hematomyelia, once established, we may find absolutely the picture just described. The outset of this disease is, of course, very sudden, usually apoplectiform. In nine-tenths of all cases a history of trauma can be elicited, but in typhoid fever, hemophilia and pernicious anemia spontaneous hemorrhage into the cord has been observed. The symptoms are most marked within a few hours after the onset. Then there is always more or less improvement, unless the malady terminates fatally very soon.

Finally lesions outside of the cord proper may lead to spastic paralysis by pressure on that organ. This occurs, for instance, in tumor of the spinal column or the membranes, and then we often obtain a history of neuralgiform pains existing for some time, not infrequently for years before the appearance of other symptoms. Occasionally tremors of the muscles with rigidity and tonic contractions precede the more characteristic indications of a compression of the medulla spinalis. The spinal column itself is usually markedly sensitive to pressure, often also to extreme temperatures. In that rare disease which is known as "pachymeningitis cervicalis hypertrophica" the symptoms are absolutely those of a slow compression of the cervical cord. Almost invariably there is a history of luetic infection. Its extremely slow progress differentiates this trouble from others causing similar phenomena. Its duration is often from fifteen to twenty years.

An attempt at giving, however briefly, the differential diagnosis of cerebral troubles which cause spastic paralysis of the extremities is impossible here, since it would mean a review of practically the entire pathology of the brain. Palsy from cerebral disease is spastic. To this there is only one exception of real practical importance: During the first few days—rarely for a week or more—of ordinary apoplexy we find the useless muscles flaccid, but very soon their tonus returns and increases beyond the normal. This is true especially of those cases in which hemorrhage, embolism or thrombosis are the basis of the functional defect. In tumor or abscess of the brain, in encephalitis, etc., we are more liable to meet with spasticity from the very onset, and this is especially true of those lesions which involve an irritative process in the cortex. That cerebral disease causes hemiplegia most frequently, but may produce monoplegia or diplegia, need hardly be emphasized here.

With a brief consideration of those points which assist in differentiating organic from functional, i. e., hysterical spastic paralysis, I may conclude these remarks. First of all, permit me to call attention to the important fact that functional and organic disease may be combined in the same person, so that the existence, for instance, of stigmata of hysteria does not necessarily prove all nervous manifestations in that individual to be purely functional. I have seen an organic peripheral palsy of the facial nerve associated with functional paralysis of both extremities of the same side, a functional loss of cutaneous sensation in extremities affected by muscular dystrophy, etc.

The patient's age, the condition of his cardiovascular system, of his kidneys, his heredity, the existence or absence of previous evidence of a hysterical temperament, stigmata of hysteria, are often of diagnostic value. Fever, that large group of symptoms which are included under the terms of aphasia, the presence of conjugate deviation of the head and eyes, are, of course, evidence of organic disease. Monoplegias of hysterical origin usually follow injury to the paralyzed extremity, something that can hardly occur in organic lesions. Facial paralysis is very rare in the functional, very common in ordinary hemiplegias; but one must be careful not to mistake a spasm of the mimic muscles for their palsy. It should be remembered, too, that in spastic paralysis due to destruction of tissue the deep reflexes are almost invariably increased, the superficial ones decreased or lost. True clonus does not occur in hysteria. Sensory disturbances are usually more profound in functional disease than those found from lesions of the brain. This we must concede, even if we do not believe with Charcot that all hemianesthesias in hemiplegias are purely hysterical.

A word about the significance of the Babinski reflex: Many neurologists see in it absolute and convincing proof of an organic lesion; others claim to have seen it in hysterical cases. My personal experience compels me to agree with the minority. I am certain that I have found a typical Babinski phenomenon in several cases of hysterical paralysis.

The condition of the abdominal reflexes is often a most important help in differential diagnosis. As already stated, they are decreased or lost on the paralyzed side in hemiplegias. It is claimed by most competent observers that such a change is never seen in purely functional trouble, even if there be anesthesia of the abdominal integument.

Since we rely to so large an extent on the condition of the deep reflexes in our diagnosis, it may be well to mention that a unilateral increase of tendon reflexes has been seen in hysterical monoplegia and hemiplegia and bilateral temporary loss of the same in a few instances of hysterical paraplegia. Decrease of both knee-jerks is far from uncommon in hysterical patients who have been bed-ridden for a long time and whose quadriceps muscle shows atrophy from inactivity. Very important is the difference in gait in the two forms of hemiplegia. While the hysterical patient will drag his leg along like an inert body, he who suffers from true palsy will bring it forward with that peculiar semicircular swinging movement with which all are familiar.

The influence of suggestion on the existing disability often clears the situation. But we must not fail to remember that even organic paralysis is influenced to a marked degree by excitement or mentally depressing conditions. That the presence of reaction of degeneration or, in the early stages of the malady at least, even quantitative changes in the reaction to the electrical current, is conclusive evidence of organic trouble, goes without saying.

103 State Street.

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**A Comparison of Municipal Expenditures in Health Matters.**—In an article on "Revenues and Expenditures of Cities," Prof. Charles E. Merriam (*University of Chicago Magazine*, March, 1910) finds by a comparison of figures that American cities lay more stress on fire protection and less on charities and correction than do European cities, and that Boston and London seem to have more in common as regards the importance of health administration than do Boston and Chicago. Although per-capita expenditures for recreation in Glasgow and St. Louis are identical, yet in the former city about two and a half times as much is obtainable for the same outlay as in the latter city. New York and Vienna agree in ascribing more importance to schools than do Glasgow and Philadelphia. The greater importance given to fire protection in American cities is said to be due to the more flimsy construction, and the lesser importance of charities and corrections is ascribed to the lesser amount of poverty and the greater development of private charities.

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# ANIMAL EXPERIMENTATION IN RELATION TO OUR KNOWLEDGE OF SECRETIONS, ESPECIALLY INTERNAL SECRETIONS*

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## INTRODUCTORY REMARKS

Progress in pure science and in industry brings essentially luxurious delights to mind and body; the object of advance in the science of medicine, however, is in the first place to procure indispensable necessities for life and health. Necessities certainly come before luxuries. Ought we not expect to find sane humanity devoting its energies above all to the furtherance of progress in the domain of medicine? Unfortunately, just the reverse seems to be true; medical science again and again has to struggle with obstacles in its forward march. These obstacles are not only those which are wilfully thrown in its path by ignorant, ill-balanced and noisy individuals of both sexes; even the noble tendencies of pure science not infrequently have been quite obstructive to a wholesome development of the science and practice of medicine. The root of the evil is that not many have a vivid conception of the immensity of the gap which existed and still exists between what medicine really ought to be and what it was and largely still is, nor a proper conception of what the small group of workers have actually accomplished in the various departments of medicine.

In the following pages I shall give an outline of the progress made in our knowledge of glandular secretions, especially of the marvelous progress made in a brief time in our knowledge of internal secretions. By this outline I intend to demonstrate the inestimable service which experiments on animals have rendered to that feature of the science of medicine. The authenticated facts in this paper may thus be instrumental in disproving insinuations and accusations often raised against animal experimentation by two diametrically opposite camps: high science and low ignorance; the former frequently insinuating that the results are not sufficiently exact to be ranked as scientific work, and the other that animal experimentation has never been of any use either to science or to the practice of medicine.

The term "internal secretion" has been in use less than two decades, and the instructive facts which are covered by that term began to make their appearance not much longer than a quarter of a century ago. The knowledge of this form of secretion, young as it is, compares favorably with the knowledge of glandular secretion in general, which can look back on a history of nearly four centuries. The following two factors are responsible, I believe, for the marvelous progress of this new chapter of experimental medicine. In the first place, the recent investigations of the ductless glands were carried on purely by biologic methods of research. The second factor is to be found in the important fact that these investigations had the great advantage of a harmonious cooperation of critical animal experimentation, scientific clinical observations and intelligent analysis of surgical results. I lay great stress on the biologic character of the method of investigation as an important factor in the progress of medicine. To my mind even the growth of our knowledge of glandular secretion in general can be traced back essentially to the purely biologic investigations which in the course of the slow development of the medical sciences in the past few centuries were carried on spasmodically. I shall attempt to illustrate this statement by some data, but before doing it I shall try to elucidate what I mean by the term of pure biologic research.

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* This paper is one of the series prepared for and reprinted by the Council on Defense of Medical Research of the American Medical Association for circulation among the public. Thirteen of these pamphlets are now ready, taking up the relations of animal experimentation to ethics, diagnosis, cancer, vaccination, the live stock industry, tuberculosis, typhoid, dysentery, rabies, surgery, internal secretions, protozoan tropical diseases, etc.

### BIOLOGIC METHOD OF RESEARCH

The marvelous growth of the natural sciences since the sixteenth century can be traced back to the scrupulous observation of the following two simple requirements of methods of observation: (1) The phenomena of nature have to be studied by actual observations, and (2) the correlations of these phenomena have to be established according to their respective merits and free from any extraneous considerations. The first requirement needs no discussion; it is evenly applicable to the investigations of all the divisions of natural science. The second requirement, however, presents different aspects in the different domains. As far as the inorganic world is concerned, the requirement is quite simple; it is directed chiefly against the inveterate interference of metaphysical theories with the interpretation of natural phenomena, and the requirement of freedom from such interference is here self-evident. Science has to deal with the provable; and since metaphysics avowedly deals with unprovable problems, it is evident that these two domains cannot coincide. It is different, however, when dealing with the phenomena of the living world. The correlation of these phenomena can be studied in the first place as in the inorganic world, exclusively with relation to themselves, without regard for extraneous domains. This method of study of the phenomena of the living world I designate as the purely biologic method of research. The living phenomena, however, can be also studied with a view of reducing them to phenomena of the inorganic world. This line of study I would designate as the physicochemical study of biology.[1] It is evident that in the latter line of investigation of living phenomena the rational requirement of freedom from extraneous considerations suffers a serious setback.[2]

The history of medical science shows that there was, consciously or unconsciously, a continual struggle between the followers of the two methods of investigation, sometimes the one, sometimes the other gaining the supremacy. This is not the place to enter on the history of this struggle; nor shall I attempt to dwell here on the merits of each side. There can be no doubt that both methods are absolutely legitimate, in fact, indispensable, and ought to supplement each other. I wish, however, to record here my opinion that, as a matter of fact, medical science in all its aspects has profited so far vastly more from the purely biologic researches than from the physicochemical researches in biology. This statement certainly holds good with reference to our knowledge of internal secretions; but, as stated above, it is true also, at least to a large degree, for glandular secretion in general.

### GLANDULAR SECRETION

Previous to the new era in anatomy all small semisolid brown structures in the body were designated as glands. The filtration of the blood was the function assigned to these little lumps of tissue. With the regeneration of anatomy by Vesalius and other anatomists of the sixteenth century the distinction was made for the first time between secreting and blood glands. The physiology of secretion, however, did not benefit very much from the great progress made in anatomy. In the sixteenth century even the brain was considered as a secreting organ: it picked out the vital spirits from the blood and secreted mucus through the lamina cribrosa into the pharynx. Studies on the dead body alone, the chief object of study in the sixteenth century, could not reveal the real action of the living gland. It was not until the middle of the seventeenth century that the knowledge of glandular secretion began to assume a rational scientific aspect. Many writers trace this knowledge back to Malpighi's work on the liver, which was published in 1665. It is, however, a fact that important communications were made on the secreting glands previous to the appearance of Malpighi's work. It was the marvelous discovery of the circulation by Harvey, proclaimed to the world in 1628, which started the physiologic studies on the glands. Harvey discovered the circulation by studying it in living animals. This gave a great stimulus to the employment of animal experimentation in the study of the phenomena of life, and for many decades there was a rich harvest of discoveries of important facts in physiology.[3] By experiments on animals Johann Georg Wirsung (or Moritz Hoffmann) discovered in 1642 the duct of the pancreas, Thomas Wharton discovered (in 1652) the duct of the submaxillary gland, Nicolas Stenson discovered (in 1662) the duct of the parotid gland and also the lachrymal duct, and Rivinius (in 1679) discovered the ducts of the sublingual glands. De Graaf succeeded in 1664 in collecting pancreatic juice from the living animal, and Brunner discovered (in 1686) the glands of the duodenum, designated by his name. Malpighi (1628-1694), besides his great work on the liver, the gall-bladder, the bile ducts and on the kidneys, studied also the sweat and sebaceous glands of the skin. All these discoveries led up to the conception of (an external) secretion by glands provided with ducts. In contrast to these glands another group was designated as ductless glands, including in this group at first even the lymph glands. After the discovery by Aselli (1623) of the chyle-bearing vessels, and the discoveries by Pequet (1651), by Budbeck (1652) and by Thomas Bartholinus (1653) of the lymph vessels, receptaculum chyli and the thoracic duct, the lymph glands were separated for good from the other glands. The ductless glands comprised then the spleen, thymus, thyroids and adrenals.

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[1] The physicochemical study of biology should not be confounded with the employment of physicochemical methods in biologic research. All researches of function are necessarily carried on by physical or chemical methods. For instance, the removal of an organ is a physical, and the injection of an extract of this organ is a chemical method; at the same time the object of such investigations is of a purely biological character; it tries to establish the importance of that organ for the life of the animal. But the attempt to ascribe the function of an organ to some well defined chemical constituent of that organ, for instance, to ascribe the normal action of the thyroid gland to its iodine content, belongs to the chemical studies of that organ. It is a fact that even distinguished physiological writers are not infrequently guilty of confounding the employment of physicochemical methods in the study of biology with the physicochemical studies of biology.

[2] In these attempts to reduce the living phenomena simply to those of physics and chemistry even traces of metaphysical dictates can sometimes be detected, if we keep in mind that the interference of materialistic metaphysics is not much less deleterious to wholesome studies of natural sciences, than the interference of spiritualistic metaphysics.

[3] Animal experimentation was then a much less dangerous occupation for the investigator than the study of anatomy on a human cadaver. The leaders of human destiny at that age had no hestitation in killing men and even mutilating their dead bodies for any trivial reason, but objected to the use of the dead bodies of men when medicine and science could profit by it—just as the misguided of both sexes of our own day are ready to kill and maltreat all sorts of animals for personal profit, sport or vanity, but manifest a perverse moral indignation when such animals are used for the benefit of medicine and mankind.

Near the close of the seventeenth century the biologic researches into the nature of glands came to a standstill. Physico-chemical investigations and interpretation of living phenomena came to the front, and iatrophysicists and chemiaters held the stage for a good many years. In fact, all pure biologic researches seemed to have become silenced, at least greatly overshadowed, by the tendencies of physico-chemical investigations of biology, which gradually forged their way to the front in the course of the seventeenth century. The mathematical and physical sciences possessed a lustre given to them at that epoch by the brilliant astrophysical researches of Galileo (1564-1642) and Kepler (1571-1630). The good work of Borelli (1608-1679) on animal motion, which was based on purely mechanical principles, the mechanico-biologic investigations of members of the newly organized Royal Society, for instance, the demonstration by Robert Boyle (1627-1691) of the danger of the vacuum to life, the demonstration of Robert Hooke (1635-1703) of the importance of artificial respiration, or the introduction of transfusion by Richard Lower (1631-1690)—all these factors were instrumental in demonstrating the fruitfulness of mechanical and physical analysis of living activities. The significance of chemical processes had begun to impress the minds of medical men already in the previous century by the aggressive teachings of Paracelsus (1490-1541). Under the influence of the teachings of Van Helmont (1577-1644), the discoverer of carbonic-acid gas; of Franciscus Sylvius (1604-1672), the founder of the first chemical laboratory, and of their pupils, chemical interpretation of biologic phenomena developed into a leading system.

For a very long period iatrophysicists and chemiaters struggled for supremacy in the fields of biology and medicine, pushing pure biologic research nearly entirely out of sight. During the eighteenth century practically no progress was made in the knowledge of glandular secretion. It is true that at about the middle of that century some experiments on gastric secretion were carried out on aimals by Reaumur (1683-1757), by John Hunter (1728-1793), and especially by the celebrated Abbé Spallanzani (1729-1799). But these experiments dealt chiefly with the process of gastric digestion and the nature of gastric juice; they did not concern themselves with the character of the glands and the act of secretion. The first important biologic investigation of secreting glands came to light in 1830; it was the celebrated comparative anatomic study of the secreting glands in the entire animal kingdom by Johannes Müller. About a decade later the animal cell was discovered; this gave a great stimulus to pure biologic researches, but they were essentially of a morphologic nature. The studies of the functional side of life became dominated, however, even more than ever by the physicochemical conceptions of that epoch. The brilliant physicophysiologic investigations of Du Bois Reymond, Helmholtz and Ludwig and their pupils, at about the middle third of the last century, were especially instrumental in establishing the absolute reign of mechanical conceptions in the domain of physiology. It was in harmony with these physical tendencies that secretion was looked on, as in olden times, as a mere mechanical process of filtration. A great deal of energy has been spent and brilliant experimental work done in support of this contention. Did these marvelous efforts greatly enrich our knowledge of the processes of secretion with actual facts? I believe that the attitude of Heidenhain[4] in assuming a "vital activity" of the epithelial cells was by far more fruitful in this direction. With the assumption of a vital activity Heidenhain claimed nothing else but the right to study living phenomena with reference to themselves. He did not deny that this vital activity might be explained one day by some new physical and chemical laws. He merely found it more profitable to study at present the living phenomena as they are, preferring no physicochemical interpretation to a premature interpretation by imperfectly known inorganic laws. Thanks to these efforts of Heidenhain and his followers, considerable progress has been made in the recognition of the processes of secretion and the intracellular changes accompanying them. We have thus now recognized the fundamental fact that secretion is a specific function of the glandular cells, just as contraction is a specific function of a muscle cell. The difference between the various secretory products has its origin in the specific secretory activities of the cells belonging to the different secretory organs.

I shall, of course, not enter here on a recital of the great amount of work done in the last sixty years on glandular secretion. I believe, however, that it is perfectly safe to state, as I did above, that the important facts which we know at present with regard to glandular secretion in general were discovered chiefly by means of purely biologic investigations.

### THE FUNCTION OF DUCTLESS GLANDS

Since the discovery of the ducts of the various secreting glands, the spleen, thymus, thyroid and suprarenal glands were grouped together, as stated before, under the term of ductless glands. That term is still in use in the literature, except that in this group the spleen is now replaced by the pituitary body. The glands of this group have been known for more than four centuries. What are their functions and do they have any? Schäfer[5] tells us of the satirical comments made by Montesquieu nearly two hundred years ago on various essays offered in solution of the prize question: What is the use of the suprarenal glands? "Perhaps chance may some day effect what all these careful labors have been unable to perform," says Montesquieu. More than a century later we find the brilliant physiologist, Magendie,[6] telling his hearers:

> I have nothing to say on the suprarenal capsules. Since nobody any longer believes in *atra bilis* the capsules have ceased to be its secreting organ. . . . What function does the thyroid gland have? Nobody knows it. . . . That organ surely deserves the investigation of physiologists. . . . *Does it not attain in cretins an enormous size*[7] while the other organs become reduced?

However, we need only go back less than three decades to find the same profession of ignorance by competent authors. In the well-known work by Herrmann published in 1883,[8] it is stated in one line that we know nothing of the functions of the thyroids and adrenals. However, it was in the very same year that the "chance" came of which Montesquieu wrote. The precious chance came in the first place as a culmination of various activities with reference to the significance of the thyroid glands. But the light which was shed on the vital importance of these glands lit up the entire field of internal secretion which had remained impenetrably obscure for many past centuries.

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[4] Heidenhain: Hermann's Hanhb. d. Physiol., v, Part 1.

[5] Schäfer: The Oliver-Sharpey Lecture, Brit. Med. Jour., May 30, 1908.

[6] Magendie: Leçons sur le système nerveux, 1841.

[7] Italics mine. We know now that the opposite is true.

[8] Handbuch d. Physiol., v, 2.

### THE IMPORTANCE OF THE THYROID GLANDS

In the course of the preceding centuries numerous theories were put forward regarding the significance of the thyroid glands. However, already at an early part of the last century various writers, among them especially Hofrichter,[9] analyzed these theories and discarded them. The theory which in the second third of the last (19th) century gradually gained most favor was the one put forward in the eighteenth century by Prochaska, namely, that the thyroid as well as the adrenal glands had, like the thymus, no significance for extrauterine life. It is true that already in the fifties of the last century experiments were published indicating the great importance of these glands in adult life. We shall speak of these experiments later more fully. These publications made, however, no impression on contemporary physiology. That science was dominated then, as stated before, by physicomechanical conceptions and manifested neither great interest in pure biologic researches nor special confidence in their results. There was (and still is) an ever-present tendency among the approved physiologic investigators to ascribe such results to some inadequate technic or to some carelessly overlooked secondary factor.

The first step in the new direction was made within the clinical domain, at first without apparent bearing on our question. In 1873 Sir William Gull[10] reported 5 cases of middle-aged women who had a cretinoid appearance, a more or less bulky form and other symptoms which characterized these cases as presenting a separate and new type of disease. In 1878 W. Ord,[11] who had had similar cases under observation since the sixties, reported one case which came to autopsy. The most striking finding was the mucin-like masses in the subcutaneous tissue which caused Ord to designate the new type of disease as myxedema. Among the post-mortem findings of this case atrophy of the thyroid glands was noted. The next contribution came from the surgical domain. With the general introduction of antisepsis at the beginning of the seventies, surgeons ventured to extend their activities to regions which formerly seemed to be inaccessible to their interference. Large goiters which are prevalent in some regions, especially in Switzerland, were now treated by radical operation. In April, 1883, Kocher,[12] of Berne, gave an extensive report of the after-effects of such complete removals of goitrous glands. The patients showed a peculiar complex of symptoms which Kocher designated as cachexia strumipriva. He looked then on the symptoms as being due to some degree of asphyxia caused by this operation. A few months before Kocher's report appeared Jaques Reverdin[13] of Geneva, made a similar but less extensive report, which, however, seems to have at first passed unnoticed. In November of that year Felix Semon[14] called the attention of the Clinical Society of London to the similarity of the symptoms of the postoperative cachexia with those of myxedema and suggested that in both cases the complex of symptoms might be due to an absence of the thyroids, which glands, therefore, may be of fundamental importance to the life of the human adult. This statement made such a deep impression on the society that a committee was appointed to investigate the entire subject. It should be mentioned that a few months before Reverdin,[13] in a second communication, recognized the similarity of the two types of phenomena and designated the complex of symptoms which follows the complete removal of the goitrous thyroids as operative myxedema. This communication also escaped general notice. But it was the means of calling forth the statement of Schiff,[15] who was then professor of physiology at Geneva, that in experiments made by him as early as 1856 he found that many of the animals succumbed after the complete removal of the thyroid glands. These results he communicated at first to the academy at Copenhagen and later made them known in a separate communication which appeared in 1858.[16] These communications apparently made not the slightest impression on contemporary physiology. Schiff[17] now repeated and extended his former experiments and found that especially in dogs the complete removal of the thyroids is mostly a fatal operation, the animals dying with symptoms quite similar to many of those observed after complete (surgical) removal of goitrous thyroids in human beings. A statement of great interest was soon made by P. Bruns.[18] He discovered in the literature from the sixties a report by P. Sick[19] of a case of complete removal of goitrous thyroids in a young boy.

He hunted up the operated subject and discovered that the patient, who was now at the end of the thirties, had the size and appearance of a mentally and physically backward boy—a surgical cretin. Autopsies of natural cretins then revealed the further fact that the thyroid glands were deficient in these cases.

These various communications brought to light the following series of new facts: (1) natural absence of the thyroids in adults causes myxedema; (2) natural absence of the thyroids in children causes arrest of growth and cretinism; (3) complete removal of the normal thyroids in animals is a fatal operation; (4) complete surgical removal of the goitrous glands in children causes surgical cretinism; (5) complete removal of these glands in adults causes surgical myxedema. These facts indicated clearly enough that the thyroid glands are of fundamental importance to the health and life of man and animal. Schiff,[20] however, brought forward still stronger evidence in favor of this thesis. He implanted in the peritoneal cavity of an animal one of its own thyroids and found that this animal survived for a long time the removal of the second thyroid—a sure proof that the fatal result of the complete removal is caused by the absence of the function of the thyroid gland and is not due to secondary lesions caused by the operation.

In the following years numerous experimental investigations in animals confirmed the main facts. The most extensive and important of these investigations were those of Victor Horsley,[21] then a member of the abovementioned committee appointed by the Clinical Society, and of Ferdinand Fuhr.[22] As an instructive fact we shall mention that these experimental investigations were carried on mostly by non-official physiologists. Of the official physiologists it was H. Munk[23] alone who took an active share in this work, and this with the persistent claim that the observed results were due to an irritation of the adjoining nerves during the "careless" removal of the thyroid glands. There were also a few reports of experiments in which no profound effects were observed to follow the complete removal of the thyroids. Some of these reports, however, were based, as Fuhr conclusively has shown, on erroneous observations. The submaxillary glands were removed instead of the thyroids. Other failures could be explained by the facts that either the removal was in fact not complete, some parts of the thyroid remaining behind, or that in these cases there were some accessory thyroids which had not been removed.

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[9] Hofrichter: Meckel's Arch. f. d. Physiol., 1820, vi, 186; Fuhr: Arch. f. exper. Path. u. Therap., xxi.

[10] Gull: Tr. Clin. Soc., 1873, vii.

[11] Ord. W.: Tr. Clin. Soc., 1878, xiii.

[12] Kocher: Arch. f. klin. Chir., 1883, p. 254.

[13] Reverdin: Rev. méd. de la Suisse romande, 1883.

[14] Semon: Tr. Clin. Soc., November, 1883.

[15] Schiff: Rev. méd. de la Suisse romande, 1883.

[16] Schiff: Untersuchung über die Zuckerbildung in der Leber, etc., Würzburg.

[17] Schiff: Arch. f. exper. Path., xviii.

[18] Bruns, P.: Samml. klin. Vortr. (Volkmann's), 1884, No. 244.

[19] Sick: Württemb. med. Cor.-Bl., 1867, No. 25.

[20] Schiff: Rev. méd. de la Suisse romande, 1884.

[21] Horsley: Suppl. Tr. Clin Soc., 1888, xxi.

[22] Fuhr: Arch. f. exper. Path. u. Therap., 1886, xxi, 387.

[23] Munk: Sitzungsb. d. Berl. Akad. d. Wissensch., 1887, p. 823; 1888, p. 1059

All these investigations had in the first place the one important practical result, that surgeons stopped the practice of complete removal of goitrous glands. This they could do the more readily, since the investigations brought the important fact to light that the presence of only a small part of the thyroid was sufficient to keep up its function and to obviate the ill-effects of the removal.

The complete removal of goitrous glands was followed not only by serious chronic symptoms, but also by severe acute attacks of tetany, terminating sometimes fatally. Seven such deaths were reported from the celebrated clinic of Billroth in Vienna alone.[24]

The above-mentioned experiments of Schiff on the implantation of the thyroid in the abdominal cavity of dogs gave rise to the attempts of various surgeons to cure operative and normal myxedema by grafting pieces of human thyroid, removed at operations, into the peritoneal cavity or in the subcutaneous tissue of such patients. The most striking result of such a procedure was reported by H. Bircher[25] in one case. After each new implantation practically all pathologic symptoms disappeared for a long period. The success, however, was not permanent. Apparently the grafted fragments did not resume at the new place the function of the thyroid; they gradually became absorbed. The fact, however, that during the absorption of the grafted pieces the symptoms of the cachexia were kept in abeyance gave rise to the idea that the administration of an extract of the thyroid might perform a similar office. The first attempts to test this idea were made by Colzi[26] and by Vassale,[27] who injected such extracts intravenously into animals. In 1891 George Murray[28] established the important fact that subcutaneous injection of thyroid extract in man is capable of abolishing all the symptoms of myxedema. This was followed by the announcement of Howitz,[29] in July, 1892, and by Mackenzie[30] and Fox,[31] in October of that year, that the same result can be obtained by the administration of the thyroid gland, even cooked, by the mouth. The last named communications demonstrated that the effective principle of the gland is destroyed neither by heat nor by digestion. It was further evident that the action of the gland was not specific, inasmuch as the extract of glands of various species of animals acted favorably on human patients. These statements were soon generally confirmed all over the world and thyroid therapy became a well-settled fact.

We thus learn an impressive lesson. While the mere reasoning of many brilliant minds carried on for four centuries shed no light on the significance of the thyroid gland, the intense activity of modern experimental medicine managed to bring to light in less than ten years the following important facts with regard to these glands: (1) the thyroids are of fundamental importance to life and health; (2) a new disease was established: the "natural" atrophy of the thyroid in adult life leads to myxedema; (3) the real nature of a well-known disease was recognized: cretinism is infantile myxedema; (4) complete removal of goitrous thyroids during infancy leads to cretinism and their removal during adult life may bring on either myxedematous cachexia or tetany; (5) surgeons learned two important lessons: on the one hand, not to perform a radical removal of the goitrous glands, and, on the other hand, that the ill-effects can be obviated by leaving behind a small part of the gland; (6) extract of the thyroid gland is capable of removing the symptoms due to the natural or artificial absence of this gland. In short, by the methods of biologic research we learned in less than ten years a great deal of the physiology, pathology and therapy of the thyroid glands.

The studies were fruitful in many other directions, which, however, can be only indicated here by a few words. By experiments on animals and by observations on human beings it was found that the unrestricted administration of thyroid extract brings on a condition which is very similar to that pathologic complex known as exophthalmic goiter or Graves' disease. This fact led up to the conception that Graves' disease consists in the normal overproduction of the thyroid function—hyperthyroidism. This conception was fruitful in developing medical and surgical therapeutic measures on which we cannot dwell here.

Furthermore, it was found that thyroid extract has a therapeutic value in diseases other than myxedema and cretinism, for instance in obesity, scleroderma and some other skin diseases.

In the course of all these investigations the important discovery was made by Baumann,[32] in 1895, that the thyroid contains iodin in an organic compound which some believe to be closely connected with the main function of the gland. It was further found that the thyroid extract exerts a certain influence on the resistance of some animals to some poisons and that this influence is in proportion to the iodin content of the gland.[33]

There is, however, one brilliant chapter in the investigations of the thyroid which should be told in somewhat greater detail. The above mentioned investigations on the thyroid left some unexplained points. The effects of the radical removal of the thyroids in human beings were far from being uniform; sometimes myxedematous and sometimes tetanic symptoms prevailed. In animals the effects of the removal of the thyroids were nearly exclusively of a tetanic character. Finally the most puzzling fact was the apparent harmlessness of the removal of the thyroids in some species of animals, as, for instance, in rabbits. At first the idea suggested itself that with regard to the importance of the thyroid there was a difference between carnivorous and herbivorous animals. Further animal experimentation, however, threw a flood of new light on these puzzling problems.

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[24] See Anz. d. k. k. Gesellsch. d. Aerzte in Wien., 1883, No. 31. If the animal experiments which shed so much light on our subject had been carried out before the attempts were made by surgeons to perform the complete removal of goitrous glands in human beings, a great deal of misery and many deaths might have been spared. Experiments on various species of animals should be extensively performed before any new serious operation on human beings may be attempted. But while nobody thinks of dictating by law to the surgeon what operations he may or may not perform, there are individuals all over the world who wish to have laws enacted suppressing or crippling experimentation on animals. What a perversion of reason and morals!

[25] Bircher, H.: Samml. klin. Bortr. (Volkmann's), 1889, No. 357.

[26] Colzi: Sperimentale, 1884.

[27] Vassale: Centralbl. f. d. méd. Wissensch., 1891, p. 14.

[28] Murray: Brit. Med. Jour., Oct. 10, 1891.

[29] Howitz: Lancet, 1892, ii, 1213.

[30] Mackenzie: Brit. Med. Jour., Oct. 29, 1892.

[31] Fox: Brit. Med. Jour., Oct. 29, 1892.

[32] Baumann: Ztschr. f. physiol. Chem., xxi, 319.

[33] Hunt, Reid: Studies on Thyroid, Bull. No. 47 Hyg. Lab.

## HE PARATHYROID GLANDS OR THE EPITHELIAL BODIES

Sandstroem[34] discovered in 1880 small definite bodies onsisting of cell masses in proximity to the thyroids. Ie gave them the name of parathyroid glandules. andstroem assumed that these cell masses represent ndifferentiated embryonal thyroid tissue. Very little ttention was paid to these bodies until 1892, when ley[35] conceived the hypothesis that these bodies play an nportant rôle in the phenomena following the removal f the thyroids. On the basis of this hypothesis he disovered the important fact that after the removal in abbits of the two free parathyroids, in addition to the emoval of the thyroid glands, well-defined tetanic maniestations occur also in these animals. Removal of the hyroid glands alone or of the two parathyroids alone is ot followed by any untoward symptoms. The comunications of Gley were instrumental in bringing out a arge number of researches dealing with the significance f the parathyroids, of which we shall mention here only wo. A. Kohn[36] brought out by careful histologic invesigations that there are most frequently four parathyoids, two of which are frequently imbedded in the tisue of the thyroid glands. The removal of the thyroids, herefore, also removes two of the parathyroids, and the emoval of the thyroids and parathyroids in Gley's xperiments meant complete removal of all the parathyoids. Kohn established further that the parathyroids o not represent an embryonic stage of the thyroid tisue, but are independent bodies composed of epithelial ells, and he suggested the name of epithelial bodies for he parathyroids. The second series of important esearches were those of Vassale and Generali,[37] who eported a long series of experiments in which they suceeded in removing in animals either the thyroid tissue lone or the parathyroids alone, and arrived at the conlusion that the removal of the thyroids alone leads to yxedematous symptoms, and the removal of the epitheal bodies alone leads to tetanic symptoms. It cannot e claimed that this problem is even now completely olved. But the mass of evidence at hand is overwhelmngly in favor of the view, that the epithelial bodies are ndependent organs, the removal of which favors the nset of tetanic manifestations, and there can hardly be ny doubt that the tetanic symptoms following in some ases the radical removal of the thyroids are due to the imultaneous removal of all the parathyroids or the proound interference with their vascular supply. The varibility of the anatomic relations of these bodies with the yroid glands explains the variations in the surgical and xperimental results. As to the functional relations of ese two organs to one another, some believe that they re entirely independent of one another; others again ssume that there is a definite interdependence between yroids and parathyroids; but as to the nature of interependence some believe with Gley that it is supplemenary; others that it is antagonistic in character. The ubject is not yet settled and we need not dwell on it.

This new theoretical knowledge brought about by anial experimentation is commencing to bear important ractical fruit. In the first place surgeons are at work devise methods of operation which permit the removal f the thyroid without injuring or interfering with the lood-supply of all the parathyroids. Furthermore, surical and medical methods are studied, by means of hich the evil consequences can be adequately dealt with. Surgeons abroad and in this country[38] are trying to develop methods of grafting the parathyroids; they have been implanted in the abdominal cavity, in the spleen and in the cavities of the long bones. The success, however, will become complete when surgeons learn to graft the organs (and the thyroids) by means of an end-to-end vascular suture by the now well-known method which was introduced into surgery, especially by the experimental work of Alexis Carrel. There are also some promising medical methods of treatment for the deficiency of the parathyroids. According to Beebe,[39] the nucleoproteids of the parathyroids are capable of controlling the tetanic convulsions following the removal of the parathyroids. Furthermore, MacCallum and Voegtlin[40] discovered that the postoperative spasms can be controlled by the administration of calcium. Through the investigations of Erdheim[41] it was found that, in rats at least, the ablation of the epithelial bodies leads to some disturbance of the calcium metabolism. MacCallum and Voegtlin believe that the removal of the parathyroids leads to a deficiency of calcium in the body. While this theory may be incorrect, the fact is that the administration of calcium relieves the tetanic symptoms. MacCallum and Voegtlin established this fact in their experiments on animals. Calcium already has been used with success in postoperative tetany in human beings. In fact, calcium proved to be useful in the treatment of tetany in children due to other causes than the removal of the parathyroid.

Experimental medicine may well point with pride to this achievement. Little bits of tissue, the existence of which was not even known three decades ago, were recognized as organs of great importance to life and health, and medicine and surgery are already far on the road in learning how to avoid their injury and how to mend the evil consequences of such injuries. It is impossible to conceive how such knowledge could have been acquired without animal experimentation.

## THE SUPRARENAL GLANDS

These ductless glands were described by Eustachius in 1543. Although thus known to medicine more than four centuries, our knowledge regarding their functional significance is, as stated above, of recent date. It began with a clinical observation. In 1855 Addison described a disease which is now known by his name, in which the adrenals were found to be affected. In the following year Brown-Séquard[42] published experiments showing that the removal of both capsules in animals leads invariably to an early death of the animal. The results of Brown-Séquard were, however, soon controverted by Phillipeaux[43] and by Harley,[44] who found that white rats survive the removal of the adrenals. These and other authors believed that the suprarenal capsules had no function to perform in post-uterine life and that death which sometimes followed removal of these glands was due to a stimulation of the adjoining nerves or to a peritoneal inflammation—that familiar interpretation which has obstructed the progress of many a discovery in physiology and medicine, and which was instrumental in postponing our knowledge of the significance of the suprarenal glands to life for nearly thirty years. After the revelations which came to light in the eighties regarding the importance of the thyroid glands, experiments on the suprarenal glands were taken up again by many observers. In the main the problem is now well settled; the suprarenal capsules are vital organs; after the removal of both organs from animals under most careful surgical precautions the animals die invariably at periods varying from a few hours to a few days. The most extensive and convincing series of experiments were carried out by Strehl and Weiss.[45] We know now also the reason why Phillipeaux and Harley could not confirm the observations of Brown-Séquard; the white rat possesses along its back inside the abdomen various accessory masses of cells similar to that of the suprarenal capsule. These accessory masses are apparently sufficient to keep up the function after the loss of the main bodies.

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[34] Sandstroem: Jahresb. f. Anat. u. Physiol. (Hoffmann and chwalbe's), 1881.

[35] Gley: Arch. de physiol. norm. et path., 1892.

[36] Kohn, A.: Arch. f. mikroskop. Anat., Bd. 44, 1894.

[37] Vassale and Generali: Arch. ital. de biol., xxv, xxvi.

[38] Halsted: Jour. Exper. Med., xi.

[39] Beebe: Proc. Soc. Exper. Biol. and Med., iv, 64.

[40] MacCallum and Voegtlin: Bull. Johns Hopkins Hosp., March, 1908; Jour. Exper. Med., xi.

[41] Erdheim: Mitt. a. d. Grenzgeb. d. Med. u. Chir., xvi.

[42] Brown-Séquard: Compt. rend. Acad. d. Sc., 1856, xliii.

[43] Phillipeaux: Compt. rend. Acad. d. Sc., xliii, xliv.

[44] Harley: Med. Times and Gaz., 1857, p. 564.

Many studies were also carried on with injections of extracts of the suprarenals; these injections failed to keep up the life of the animals deprived of these glands. Neither has grafting of the suprarenals proved so far a real success. The experiments with injections of suprarenal extracts, however, brought to light a great discovery. It is the now familiar fact of the various and profound physiologic effects which suprarenal extract is capable of exerting on the animal body. It ought to be stated that this discovery also came about through the initiative of a clinician. Dr. Oliver administered to patients by the mouth extracts of various organs and observed by the clinical instruments which he employed that they exerted a definite influence on the blood-vessels. After a consultation with Professor Schäfer they started a systematic investigation on animals which led to their great discovery of adrenin.[5] We need not discuss here the great importance which this extract has attained as a therapeutic agent in medicine and surgery; it is now common knowledge.

This active extract is obtained from the medullary portion of the adrenals, secreted apparently by its specific cells. By various reactions and methods this extract has been traced, step by step, on its way from the cells to the blood in the vein of that gland. The internal secretion of this gland seems thus to have been, so to say, directly demonstrated. The cells of the medullary portion of the adrenals are similar to those found in the carotid gland, in Zuckerkandl's gland and in some sympathetic ganglia. They all have in common an affinity for chromic acid—hence the name chromaffin cells—and exert a similar physiologic action, for instance, a rise of blood pressure. The medullary portion shows also embryologically a relationship to the sympathetic nervous system. It is assumed by some[46] that the action of adrenin (adrenalin) on organs which are innervated by the dorso-lumbal portion of the sympathetic nervous system is similar to that of the action of the corresponding sympathetic nerve fibers on smooth muscle.

Reports are gradually increasing, showing the relations of the conditions of the medullary portion of the gland to various pathologic and toxicologic states (chloroform poisoning, shock, nephritis, etc.). We shall not dwell here on these details. We are in the midst of a great chapter, and the future has yet a great deal in store for our knowledge. In fact, we know as yet nothing of the significance of the cortex of the gland. But we have certainly learned a great deal about that gland in a remarkably short time. We know now that it is an absolutely vital organ, that it exerts its physiologic influence by emptying its secretion directly into the bloo and we have learned to obtain from it an extract whi is of immense practical and scientific importance. The important facts have been learned by animal experime tation, and we could never have learned them in a other way.

### HYPOPHYSIS

This gland is very small, weighs about half a gra and is hidden away in a most inaccessible manner in t sella turcica. The older anatomists ascribed to it t fanciful function of secreting mucus, hence the term pituitary gland. In more recent times—until 1886— was looked on as an evolutionary remnant, a sort of us less appendix of the brain. It consists of two parts, larger anterior part, containing glandular epithelial cell and a posterior part, which contains some nervous el ments and no epithelial cells. Since Rathke (1833) an Mihalkovits (1874) it has been generally recogniz that both parts are embryonically developed from diffe ent origins; the anterior part coming from the posteri pharynx and the posterior part from the midbrain.

It was again clinical medicine which began to she light on the function of the pituitary body. In 1886 Marie[47] called attention to the occurrence of a new di ease which he termed acromegaly and which was foun to be associated with tumors of the hypophysis. Th most striking sign of this disease is the overgrowth certain parts of the skeleton, especially the extremiti and the lower jaw; hypertrophy of the connective tiss is also present. The statements of Marie were confirme by many other observers. Furthermore, it was foun that gigantism, that is, an increase of growth whic leads to unusual stature, is in most cases associate with tumors of the pituitary body and a concomita enlargement of the sella turcica. These clinical observ tions, which clearly indicated that the pituitary gland in some way connected with the growth of the body an exerts, therefore, a physiologic function on the growin and grown-up animal organism, led to various series experimentation, of which we shall mention here briefl only two. In the first place, the attempt was made study the effect of the removal of the gland. Until few years ago these attempts seemed to be futile, as th various investigators obtained contradictory result which was not surprising considering the immense diffi culties with which the experimenters were confronte in their attempt to reach that hidden gland withou endangering the life of the animal. About three year ago, however, Paulesco[48] worked out an apparently satis factory method of getting to the pituitary body throug the temporal bone. The results, which were arrived a by Paulesco himself and which were extensively con firmed, among others by Harvey Cushing,[49] seem to b uniform and reliable. Briefly stated, they are as fol lows: Complete removal of the hypophysis leads invari ably to the death of the animal within forty-eight hour after the operation. Reaching the gland and handlin it has no effect. Neither does the complete removal o the posterior part seem to have any effect. On the othe hand, the complete removal of the anterior part has th same invariably fatal effect as the complete removal o the entire gland. Leaving behind a small portion of th anterior part saves the animal's life. We thus hav positive evidence that the hypophysis, like the thyroids parathyroids and the suprarenal capsules, is an orga indispensable to the life and health of the animal.

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[45] Strehl and Weiss: Arch. f. d. ges. Physiol. (Pflueger's lxxxiv, 107.

[46] See Elliot: Jour. Physiol., xxxii.

[47] Marie: Rev. de méd., 1886, p. 298.

[48] Paulesco: Jour. de physiol., 1907, ix.

[49] Cushing: The Journal A. M. A., 1909, liii, 249.

The second line of investigation, which was carried out by Schäfer[50] and his associates, by Howell[51] in this country, and by many other investigators, deals with the effects of injections of extracts of the pituitary body. The results as they stand to-day are as follows: The extracts cannot save the life of the animal after removal of the gland. Extracts made of the anterior part exert no definite influence on the animal. On the other hand, extracts made of the posterior part have a definite influence on blood-pressure and, independently of the blood-pressure, also on the urinary secretion. We need not enter here into the details of the nature of this influence, but it is in no way comparable with the marvelous influence of the extract made of the medullary portion of the adrenals. The striking outcome of these investigations for the present is that the part which is essential to life exerts no influence by its extract, and the part which exerts such an influence seems to be unessential to life. It is evident that the action of the normal organ is not identical with the action of its extracts—a lesson which is not yet well learned by some writers who deal with the significance of iodothyrin or adrenin.

With reference to the relation of tumors of the hypophysis to acromegaly and gigantism, we have at present still two contending theories. One assumes that the changes in the growth of the organism are due to a destruction or diminution of the function of the gland; the other theory assumes that the increase of growth is due to a greater stimulation of the function of the gland, assuming that the tumor, at least at its beginning, is of the nature of hyperplasia and benign in character.

As to the therapeutic application of these results, we have stated already that injection of the extract is of no avail in saving the life of the animal after the complete removal of the hypophysis. I am not aware of any attempts to graft this gland. But there is very promising beginning in the surgical treatment of the diseases due to the pathologic condition of the hypophysis. There are already on record a few successful cases of removal of tumors of the pituitary gland in which, of course, some fragments of the gland were purposely left behind. We are here only at the threshold of a new era.

Recently good results were also reported from treatment of shock, uterine hemorrhages, etc., by injection of extracts from the infundibular portion of the hypophysis.

### THE THYMUS

It is true that this ductless gland gradually atrophies during extrauterine life, but it is also true that it persists for a long time after birth. With our present knowledge of the importance of the other ductless glands we are hardly justified in assuming that the thymus is a worthless fetal remnant. But we have to acknowledge that as yet there are no reliable observations or experiments which indicate clearly that the thymus has a function in postuterine life.

*(To be continued)*

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**Pemphigus.**—There is need of further investigation of the entire group of pemphigus eruptions, along the lines of modern research; it is not sufficient to merely employ observation. The following studies should be made: 1. General metabolism. 2. Toxicity of sweat. 3. Bacteriologic examination of blood, bullas, urine, feces. 4. Agglutinating power of blood.—H. H. Hazen, in *Journal of Cutaneous Diseases*.

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[50] Schäfer: Croonian Lecture, Proc. Roy. Soc., London, 1909, lxxxi.
[51] Howell: Jour. Exper. Med., 1898, iii.

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# BILHARZIASIS IN THE NEW WORLD *

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The building of the Panama Canal by the United States government has furnished an excellent opportunity for the exhaustive medical study of the surrounding races imported and engaged in its construction. A group of West Indian Islands, Central America, and the northern and western parts of South America, have been heavily drawn on for contract laborers. The systems of physical, clinical and pathologic diagnoses carried on in its great base hospitals at Colon, and especially at Ancon, have furnished the necessary data for the determination of almost every known tropical disease indigenous to these races. In this research of medicine the determination of the intestinal flora and parasitology has engaged by extended microscopic research its fair share of study in patients representative of a tropical section, and in no essential way do the results seem to differ from discoveries made in the tropics of the Old World.

Among these intestinal parasitic diseases uncinariasis (hookworm infection) has been far the most prevalent. Tricocephaliasis and ascariasis are very common. Amebiasis is frequent, but not so fatal as in the Philippines. The *Cercomonas intestinalis* (a ciliated monad) is very frequent; a few scattered cases of *Balentidium coli* have been found. The various forms of *Tænia*, the *Tænia saginata*, *Tænia solium* and *Bothriocephalus latus*, are well represented among the parasites of the Spanish laborers from the Mediterranean region.

The three first-mentioned diseases and amebiasis are already well known in the Southern states, where in North and South Carolina, eastern Tennessee and Georgia, and the entire fringe of gulf states, ankylostoma disease (hook-worm) is of comparatively common occurrence. Amebiasis is frequently observed in southern Louisiana and Texas, notably in New Orleans, Galveston and other gulf ports. Trichocephaliasis is not so frequently discovered, while the subject of this paper, bilharziasis, is unknown in the United States and until very recently even in America itself.

Stiles says that the human blood-fluke *Bilharzia* has been found but twice in America, once in a "Midway" patient in Chicago, during the world's fair, and once in New York City. Another case is recorded from Georgia (the patient a Boer), with evident infection outside of the United States. There is no evidence or report of cases showing that the disease has any foothold outside of the tropics, either in America or the Old World.

Among these interesting parasites discovered in the stool examination work on the isthmus most unexpectedly turns up the *Schistosoma hæmatobium*, *Bilharzia hæmatobium*, *Distoma hæmatobium*, the parasite of bilharzia disease, or the "disease of Egypt." Now rediscovered and destined to take its prominent place in the intestinal parasitology of the New World, until as late as 1904 its appearance in America was unknown. Scheube, in his "Diseases of Warm Countries," speaks of it as a disease only of the Old World, notably Egypt, where one-half the inhabitants suffer from it. Allbutt, in his "System of Medicine," says: "The distribution of bilharzia is Ethiopic." The "Encyclopedia of Medicine" and Buck's "Reference Hand-book of Medical Sciences" do not mention its appearance in the Americas. Manson, in "Tropical Medicine," fails to note its existence in America until his latest book, in 1904. Jackson, in his work on tropical medicine, 1906, is the first author to note its comparative frequency on the American continent and its dependencies.

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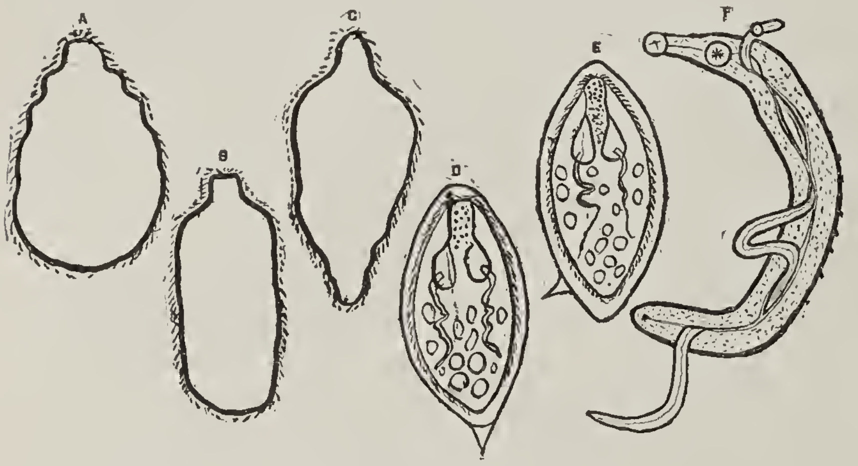
* Read before the Isthmian Canal Zone Medical Association, April, 1909.

### GEOGRAPHICAL DISTRIBUTION

Formerly supposed to be restricted exclusively in its habitat to Africa, where, as just stated, in Egypt it infects a majority of her people, and is found at one-third of all autopsies, it has spread to the natives and residents of the Uganda, Congo, Tunis, Abyssinia, Sudan, Natal and the interior. It is also found in Mecca, which, through the pilgrimages, is the distributing-point for Syria, Persia and Arabia. In India and China it is now known to have a foothold in the port cities, and the Philippines are not exempt. On the Isthmus of Panama, according to statistical records obtained from the Chief Sanitary Office, it has been reported 104 times, as follows: 3 times in 1904, 4 times in 1905, 9 times in 1906, 62 times in 1907, 19 times in 1908, and 7 times in 1909. These statistics are obtained from approximately 30,000 stool examinations.

Its geographical or racial frequency has been observed by me to be in the following order: First, the French group of islands lead; Guadaloupe and Martinique have furnished the greatest proportion of all cases. Following these, Antigua, Trinidad, Demarara, Barbadoes and Jamaica, with least frequency in the two last islands. Dutch Guiana has also furnished one or two cases, and probably more would be found in the inhabitants of the three Guianas were it not for the small number of laborers hailing from that region. Porto Rico also furnishes an infecting center (report of B. K. Ashford).



A, B, C, Bilharzia embryos, showing alterations in shape (after hatching) by which locomotion is accomplished; D, bilharzia ovum from urine, showing terminal arrangement of spine at posterior extremity; E, bilharzia ovum from feces, showing lateral arrangement of spine near posterior extremity; F, *Bilharzia hæmatobium* trematode, showing male and female worm and relation of sexes.

The paucity of cases discovered and discoverable in America, compared with old-world frequency, gives rise to the inference that bilharzia was originally an old-world disease. It has been suggested that its origin on this continent was the importation of Hindoo laborers for work in English colonies in Trinidad and British Guiana. This may have been the deciding initial focus. Again, it is to be remembered that the negroes of the New World were originally imported from Africa.

If either view be accepted, the existence of the parasite in America has been of comparatively short duration—at the longest not over 200 years.

### THE STRUCTURE AND LIFE-HISTORY OF THE HÆMATOBIUM

Unlike most trematodes, which are hermaphrodite, this is a two-sexed organism. Milk-white in appearance, round and pointed at both ends, it measures about 1 cm. in length—one-third of an inch. Both sexes are provided with suckers. The female is longer than the male. The anterior half is white in color, the posterior half is gray with brown longitudinal stripings, which indicate the position of the intestinal canals. The worm is hematophagous, and the intestine is frequently filled with blood, which accounts for its darker color posteriorly. The anterior part of the body of the male is tapered off and flattened, while the thick posterior part of the body has a cylindrical appearance with its edges curving inward toward the abdomen, whereby a groove or not quite closed tube—the canalis gynæcophorus—is formed, and which serves for the reception of the thin female worm. At the termination of this canal a sexual opening is situated in the male. The sexual fluid is discharged into the canal and taken up through the sheath of the female by imbibition. The back surface of the male is provided with small spinous papillæ, and by this means the males cling to the walls of the veins during their wanderings in search of a permanent place of residence, which they find mainly in the pelvis.

When young the sexes live apart; when mature the female enters the gynecophoric groove or canal of the male. Within this canal the female remains completely hidden at times. At other times, owing to its greater length, it protrudes, mainly the posterior extremity, from the gynecophoric groove.

The reproductive units are eggs, which have the form of a compressed spindle somewhat inflated in the middle. They are slightly yellowish in color and measure 0.16 cm. in length—about 1/200 of an inch. Compared with other ova they are about three times the length of the *Uncinaria,* twice the size of the *Ascaris,* and six times that of the *Trichocephalus dispar.* At the posterior pole one finds a short, irregular tip, a spine, which in the eggs discharged in urine is terminal. In those discharged from the intestines it is generally slightly lateral. Each egg contains a mature embryo, cylindrical in form with a conical anterior tip surrounded with numerous fine cilia. A rudimentary intestinal canal and the germ cells posterior are readily distinguished.

These embryos are easily hatched by placing the eggs in fresh water. In a variable length of time, usually of short duration, a hazy motion is exhibited at the anterior extremity of the egg. This is caused by the action of numerous cilia near the mouth. Rupture of the placenta and shell generally occurs near the middle and in a longitudinal direction. The theory has been advanced that the cause of hatching is the lessened specific gravity of the surrounding media, the urine and feces. The activity of the embryos is very great, and even under the microscope they remain alive for a considerable period of time. I have observed motility for at least six hours after hatching them. This movement of the cilia is not necessary for locomotion, as this is brought about by alteration of the body shape.

Fresh water seems to be essential for the birth and continued existence of the embryo, but beyond this fact in the life-history and cycle of the parasite we know little or nothing. What or where its special intermediary habitat is before re-entrance to the human host is entirely speculative and conjectural. The fact that it seems to live only in fresh water and for only two or three days would indicate, however, that this intermediate host is a mussel, snail, fish or fresh-water vegetable.

The life-history of the worm is a long one. Evidence of infection has presented itself in patients who have long resided away from the infecting area. In one case in which the patient left his native country, Egypt, as a boy, the ova were still found nine years afterward in the last drops of his urine, although all signs of hematuria had stopped.

### ETIOLOGY

Natives are known to be more often attacked than foreigners, males than females and country than city people. The manner of infection is conjectural. It is presumed that the parasite is taken into the stomach either with impure drinking-water or some mollusc, fish, or vegetable. This is the view of Bilharz. Others ascribe it to bathing. The greater frequency of it in males, those who work in water most, as farmers, fishers or gardeners, favors the idea that, like guinea-worm disease, it may be acquired by bathing or working in or with water; while its frequency in country people and its comparative rarity in cities like Cairo and Alexandria, which have a purification system for their water-supply, favors the belief that it is a water-borne disease. In Egypt one observer notes that it is commonest in the summer months after the overflow of the Nile, but others fail to corroborate this view. Its period of incubation in the human being appears to be short; and symptoms of the disease have appeared within four weeks of the possibility of infection.

### HABITAT IN MAN AND PATHOLOGY

The portal vein is the principal habitat of the adult parasite, but the young worms are also found in the liver, in the intestinal veins, in the bladder walls, and pelvic blood-vessels of both sexes. In the lungs the blocking of blood-vessels from the ova and surrounding infiltrations give rise to deposits, which may be mistaken for tuberculous deposits. Cirrhosis of the liver and biliary calculi may be caused by the presence of the parasite. Serious disturbances arise from the attachment of the parasites to the walls of the urinary passage, or their adjacent organs. Dangerous hemorrhage may occur in the bladder, owing to irritation of the fluke or its terminal-pointed ova. Cystitis and urethritis are common complications and often the parasite is the starting-place of stone. Observation of one series of cases, that of Collordi in Egypt, demonstrated bilharzia as the starting-point in 80 per cent. of a series of cases of lithiasis. In the severer cases there may exist, with extension, the entire symptom-complex of "surgical kidney" or "surgical bladder." When the intestinal tract is involved, the symptoms resemble those of tropical dysentery. Several such cases have appeared in the wards of Ancon Hospital. In the severe cases nutrition suffers and the patient becomes run-down and cachectic. A patient recently admitted to Ward 20 beautifully illustrated the destructive tendencies of the disease. The following is a report of this case:

Case 1.—The patient, W. H., chart No. 54215, black, an Antiguan, aged 35, was admitted into Ancon Hospital Feb. 10, 909. He had a sharp attack of fever, headache and chills on admission, temperature 104, pulse 120, respirations 28, with ender spleen and liver, a badly coated tongue, and bronchitis. Glandular enlargement was general, and he had a chronic orchitis on the left side. The blood was negative for the malaria plasmodium, and all urine examinations were negative for bilharzia or evidence of nephritis. Stool examination showed numerous specimens of bilharzia, with lateral-spined ova, and a few of uncinaria. The clinical malaria yielded rapidly o appropriate medication—quinin grains 30 daily—but about the tenth day he developed some dysentery. Daily examinations of the stool showed the presence of pus, mucus, epithelial cells and large numbers of bilharzia. Under bismuth, gram doses three times daily the dysentery cleared up, and the patient left the hospital on March 4, three and one-half weeks after admission.

The patient complained that at least once a month he had attacks of dysentery and passed blood and mucus. He is still under observation for bilharziasis and is passing the ova in large numbers.

There is no doubt in my mind that this is one of the group of cases in which the trematode now under discussion plays an important part in provoking a recurrent dysentery, and thereby temporarily disables the individual.

Among other cases of bilharziasis admitted into Ancon may be cited the following:

Case 2.—Patient 31185, A. S., was a Barbadian, aged 24; he was admitted to Ancon Hospital, Sept. 5, 1907, with the following history:

On the isthmus seven months, second time in the hospital; sick for four days with dysentery, passing mucus and blood, six or seven stools in the day, and the same at night; headache, fever, vomit and backache—malarial symptoms. Abdomen tender, not tympanitic; lungs, liver, spleen and heart, negative. Tongue coated; blood-vessels markedly sclerotic; urine with a trace of albumin and hyaline and granular casts, specific gravity, 1010. Temperature was 101.8; pulse 102.

Stool examination showed the presence of ascaris ova, bilharzia ova, blood, pus, and epithelium. Fever declined until the seventh day after admission, when it reached normal. The stool record showed nine stools the day of admission; fourteen the second day; eleven the third; ten the fourth; nine the fifth; ten the sixth; nine the seventh; five the eighth; three the ninth, and an average of two or three a day until the patient was discharged on the twenty-eighth day after admission. Milk diet, saline irrigations, twice daily, discontinued on the tenth day, and quinin grains 30 daily, with absolute rest in bed, was the line of treatment followed. A Widal test on the fifth day was negative. Recovery was uneventful, and the patient left the hospital on October 3, twenty-eight days after admission.

Interest in this case is of paramount importance, because of the fact that the bilharzia ova discovered in the stool were terminal-spined. This is the second case of which I have knowledge in which terminal-spined bilharzia ova have been found in the stool examinations of patients admitted into Ancon Hospital. The diagnosis in this case was corroborated by at least two other physicians working in the same laboratory at the same time—Dr. J. P. Bates and Dr. James Melton.

In order that no mistake might be made as to the source of the specimen, special arrangements were made to insure its accuracy of origin. The specimen of stool examined on September 7 was obtained after special instructions had been given the orderly to see that there should be no mixing of stool or urinary evacuations, with the result that on microscopic examination, terminal-spined bilharzia ova were again found in the stool. Further to exclude the probability of urinary contaminations, specimens of urine were obtained on September 5, 7, 13 and 16 and centrifuged, with the result that they were all negative for bilharzia ova. The extraordinary interest which attaches to this particular case rests on the fact that, according to the literature, terminal-spined bilharzia ova are found practically only in urine, and intestinal bilharzia are almost always lateral-spined. The "Reference Handbook of Medical Science" goes so far as to define the difference that urinary bilharzia ova always are terminal-spined, and intestinal bilharzia ova always lateral-spined. Manson does not agree with this, nor does the citation of the above case comport with the previous opinion.

Through the courtesy of Dr. John Lawler, of Ancon Hospital, I have the privilege of reporting another case which I studied carefully. The patient is an inmate of the insane asylum, a female. Lateral-spined bilharzia ova have been found in the urine of this patient, as well as in the stool. As no fistula has been discovered between the urinary and intestinal tracts, it is a fair presumption that the ova by some mistake in their wanderings reached the urinary instead of the intestinal tract. Fecal matter is not passed in the urinary discharges.

As it is against precedent and the literature for us to believe that lateral-spined ova are normally passed into the bladder, it will take an internal examination to clear this pathologic mystery. The patient is tuberculous and her demise expected within a year; she will undoubtedly yield an interesting autopsy.

A study of her case evokes the interesting discussion concerning a duality of urinary and intestinal bilharziasis. Are there two distinct diseases caused by different trematodes? This is a much-mooted point by workers on this subject at the present time.

It is explained that the difference in the position of the spines is brought about by different mechanical conditions in which parental worms ovulate, or by differences of pressure in altering the position of the ovum in respect to the duct of the shell-gland. Manson questions the value, if any, of this mechanical theory, and boldly states his belief that difference of the eggs indicates difference of species. In furtherance of his view he recalls a recent discovery of an entirely different species found in Asia, the *Schistosoma cattoi.* This new fluke, like the more familiar *Bilharzia,* also infests the portal circulation, but, unlike *Bilharzia,* it lies on the arterial side of the circulation. Further, its eggs bear no spine at all, although, like the lateral-spined *Bilharzia,* they are always extruded into the bowel. In addition, its life-history is better known, and its discovery in the domestic animals, notably the cat, may give a further clew to the discovery of the life-history of its more dangerous rival, the *Hæmatobium.*

### PROGNOSIS AND TREATMENT

As regards prognosis and treatment, the disease, though obdurate and relapsing, is generally not fatal. So far on the isthmus the discovery of the conditon has been mainly only an incident of routine stool examination, and it plays little or no rôle in the patient's appearance at the hospital. Its severity depends on the degree of infection. In cases of moderate intensity, appropriate treatment of a general character is sufficient to effect amelioration, and in many cases the disease is self-terminating. Anthelmintics and other medicaments of similar nature have no place in treatment.

In urinary bilharziasis the watchword should be to beware of surgical interference. An examination of the urine will quickly make the diagnosis, and the disease, except for grave complications, should be left alone.

In conclusion, we may note that the expansion of medical America toward the tropics has brought into prominence peculiar worm and parasitic bowel diseases of man. To an already long list of American parasites we may now add *Bilharzia.*

The study of a branch of medicine for long relegated to legends of ancient pathology and almost mythology with some nations will take a new impetus from the American exploitation of the tropics in Panama. And inasmuch as the increasing frequency of relationship between our own country and the South puts us under the obligation of acquiring some knowledge of an exotic pathology, in which parasitic diseases, especially of the bowel, play a prominent rôle, it is not amiss that careful study be devoted in America to this distasteful but essential branch of medical knowledge, and that all cases should be reported.

Note.—In the discussion of this paper, Dr. Henry Carter, director of hospitals on the Isthmus of Panama, reported a case of bilharziasis which he observed in San José General Hospital in Costa Rico. This case was attended with severe dysentery, and the ova on microscopic examination were especially numerous. Dr. Samuel T. Darling of Ancon Hospital also reported a case in a man who had but recently come from Brazil. Since the presentation of this paper I have had a case reported to me from Lima, Peru. This widespread distribution of bilharziasis in America indicates that it is another pandemic tropical disease, though fortunately at present it is of slight economic importance.

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# GONORRHEA: PRIMARY FACIAL INFECTION WITH AXILLARY INVOLVEMENT

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An unusual and interesting case of gonorrhea involving the lymphatic glands surrounding the external iliac artery was reported in The Journal about four and a half years ago by Dr. J. A. Nydegger[1] of the U. S. Public Health and Marine Hospital Service; and last year Dr. E. F. Wright[2] reported a case of sycosis apparently of gonorrheal origin. The following case, while of itself interesting as a curiosity, acquires additional interest from the fact that it appears to fill in, more or less appropriately, the gap between the two above recorded observations. At the same time it seems to open up the question of the regions tributary to the axillary lymphatic glands. All medical science is built on the observations and deductions of cause and effect, and any link of evidence seeming to verify causal relationship is necessary to the chain. This is my excuse for reporting the following case.

*History.*—On Feb. 10, 1910, a man, aged 36, married, with two children, to my own knowledge of good habits and denying any previous gonorrheal infection, presented himself complaining of a swelling in the upper part of the axilla just posterior to the outer border of the pectoralis major. He had been seen by another physician not actively practicing, who had diagnosed the swelling as axillary abscess, and referred the patient to me to open it. The history was to the effect that it had been first observed six days before, when about the size of a marble, and (so the patient averred), soft.

*Examination.*—The swelling was about the size of a hen's egg, ovoid, resembling it in shape. There was no fluctuation, but rather a leathery tough feeling, with no redness or heat apparent. It was intensely tender and seemed adherent to the overlying skin in the central portions. The patient's temperature at the time I saw him (late afternoon) was 101.6, pulse about eighty. A blood examination showed hemoglobin and red cells practically normal, with a leucocytosis of 17,000; the differential count showed polynuclears 76 per cent., small mononuclears 8 per cent., large 14 per cent., eosinophils 2 per cent. The patient denied any history of injury to the arm or breast on the affected side, and the closest examination failed to reveal even the slightest scratch in the regions supposed to be tributary to the axillary lymphatic system. The only abnormalities that could be found were four small pimples; the lowest in the median line just below the chin, three-quarters of an inch above the upper border of the thyroid cartilage; two on the side of the face about an inch posterior to, and a little higher in level than, the angle of the mouth; and the fourth, almost entirely healed, in the temporal region at the hair margin. All were on the same right side of the body as the affected gland. A little pus could be squeezed out from the three lowest; smears were made and all were cleaned out with phenol. Looking again more carefully at the axillary swelling, I felt convinced that pus was present, and incised quite deeply into the center of the swelling. No pus was found, and it was not considered advisable under existing circumstances to undertake any extensive dissection of the axilla in the search for it, the patient's financial status being such as to preclude removal to a hospital until it was more certainly demanded. The incision cut through a mass of swollen and apparently hypertrophied cutaneous tissue, and the appearance given was such that one was inclined to doubt if any pus was present deeper, whether one had not rather to deal with a cellulitis.

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[1] Nydegger, James A.: An Unusual Gonorrheal Complication, The Journal A. M. A., Sept. 23, 1905, xlv, 920.

[2] Wright, Edward F.: A Case of Sycosis, Probably Due to the Gonococcus, The Journal A. M. A., June 19, 1909, lii, 1996.

*Course of Disease.*—I was loath to relinquish the idea of pus, and for five days hot antiseptic poultices were constantly applied, the incision was kept open and considerable serum drained therefrom. During this period the patient was seen twice daily, and remained in about the same general condition. The morning temperature would be normal, the evening rising to 100.5 or 101.8 the highest observed. The tumor in the axilla grew slowly and steadily circumferentially; but, possibly by contrast with its increased area, seemed flatter. It was, however, much less tender, and could be grasped between the thumb and four fingers much as one could grasp the detached heel of a slipper, which it much resembled in size, thickness and leathery consistency. In the meantime the bacteriologic examination of the material squeezed from the pimples had shown the presence of a mixed infection of staphylococci and diplococci, chiefly intracellular, which further examination showed to be gonococci. Working on this clew we got from the patient a more complete history, to the effect that he had not used any towels but his own for some months past; that he always shaved himself; had not lent his razor to another, or used any but his own. Under still more careful questioning he remembered that he had noticed the first pimple, that highest on the forehead, just about a week after having his hair cut in a certain barber-shop, and that at that time he had had a scratch on the head in that region. The lower pimples had appeared consecutively in the order of their arrangement from above downward. These data took some time to acquire; during the interval blood examinations were made daily. The leucocytosis remained almost stationary, falling a little. On the fifth day, the incision was slightly enlarged without result so far as finding pus was concerned, and a dry cup was applied for possibly one hour. The wound was dressed and the patient sent home. At the next visit he reported that the dressing felt wet, and he was of the opinion that something had broken. The wound was found to be exuding a considerable amount, possibly a tablespoonful, of thick yellowish pus. The wound was again cupped, irrigated and under appropriate antiseptic treatment made an uneventful recovery. The pus obtained showed on bacteriologic examination abundant gonococci.

I am indebted to Dr. E. C. Gilbert, of Santa Barbara, who saw the case with me and followed it throughout, for much help in arriving at an accurate diagnosis and in searching the literature; also to Dr. E. L. Leonard and Dr. L. B. Stookey of the Pathological Laboratory of the City of Los Angeles for independently confirming the bacteriologic findings.

About a year previously I saw a somewhat similar case in the person of a boy presenting himself with a leathery swelling of the whole lower lip which had started from a pimple just below one corner of the mouth, the pus having spread and tunneled across the lip to the opposite corner. Here again the offending organism was the gonococcus, and working on this clue the infection was traced to a camp towel used also by a boy suffering from urethral discharge, presumptively gonorrheal.

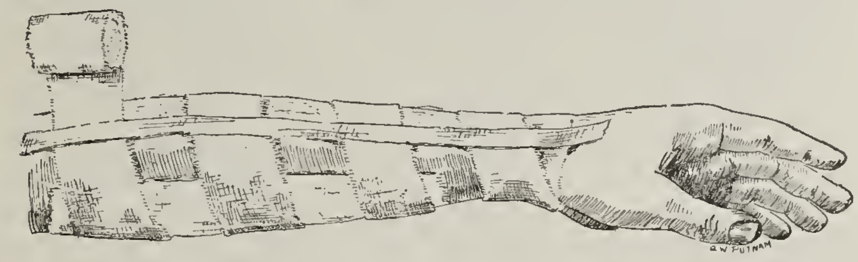
1225 State Street.

## A FIRM BANDAGE

G. W. PUTNAM, M.D.
AURORA, ILL.

We all have our troubles attempting to fix a bandage on the limb or body of a patient who is not disabled for work and who is engaged in active labor; this is especially difficult in case of the forearm, elbow, calf, knee and thigh. We all have tried fixing the completed bandage with adhesive strips or safety-pins, but, in spite of these, we are generally dismayed to see the condition of the bandage when the patient returns to our office for redressing of the parts afflicted. The bandages do not hold because they have no firm foundation on which to hold; they slip and slide with the motion of the body until they become loosened and untidy. Working on this hypothesis, I have devised a method of applying a bandage in these cases, which I have found efficient.

Take, for example, a burn on the ventral surface of the forearm. Cover the wound with the proper dressing, fix a 1½-inch roller bandage with three turns at the wrist; make turns of the roller until the elbow is reached, leaving about a 1-inch space between each turn. Take three adhesive strips ½ inch wide and long enough to extend 1 inch beyond the approximal and distal turns of the bandage, and apply them over the bandage and arm on the lateral and dorsal regions of the forearm, parallel to the long axis and extending onto the hand and about the elbow-joint. Now return to the wrist with a few turns of the roller and finish the bandage as a reverse spiral and fix with a pin or tie. Carrying out this idea of making a fixed foundation, very substantial bandages can be applied to almost any region of the body.



A firm bandage.

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## A NEW MODE OF FORMATION OF BETA-OXYBUTYRIC ACID IN THE ANIMAL ORGANISM *

H. D. DAKIN
NEW YORK

Beta-oxybutyric acid is very generally believed to be formed in the animal organism by the oxidation of butyric acid and normally undergoes further oxidation with production of aceto-acetic acid, which in part loses carbon dioxid with formation of acetone. The changes may be represented as follows:

$$\underset{\text{(butyric acid)}}{CH_3.CH_2.CH_2.COOH} \rightarrow \underset{\text{(beta-oxybutyric acid)}}{CH_3.CH(OH).CH_2.COOH} \rightarrow$$

$$\underset{\text{(aceto-acetic acid)}}{CH_3.CO.CH_2.COOH} \rightarrow \underset{\text{(acetone)}}{CH_3.CO.CH_3 + CO_2}$$

The oxidation of beta-oxybutyric acid to aceto-acetic acid has been shown[1] to be effected by an enzyme present in the liver which may be roughly purified and whose action is accelerated by the addition of oxyhemoglobin. The object of the following note is to record the results of experiments showing that the reverse change, namely, the reduction of aceto-acetic acid to beta-oxybutyric acid also occurs in the animal organism.

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* From the Laboratory of Dr. C. A. Herter, New York.

[1] Wakeman and Dakin: The Decomposition of Beta-oxybutyric Acid and Aceto-acetic Acid by Enzymes of the Liver, Jour. Biol. Chem., 1909, vi, 373.

Sodium aceto-acetate prepared by the saponification of aceto-acetic ester with caustic soda was injected intravenously into cats and small dogs. In experiments in which a quantity of about 10 gm. of aceto-acetic acid in the form of its sodium salt (8 per cent. solution) was injected intravenously in the course of four to six hours, the urine secreted during this period was found to contain over 1 gram of levo beta-oxybutyric acid. Beta-oxybutyric acid was extracted with ether and identified by its levo-rotation, by its conversion into crotonic acid, melting point 73° C. and by its oxidation to acetone with chromic acid.

It is clear, therefore, that beta-oxybutyric acid and aceto-acetic acid are mutually interconvertible in the animal organism according to whether oxidation or reduction takes place. Since beta-oxybutyric acid, when present in the urine of diabetics, is almost invariably accompanied by aceto-acetic acid, it is possible that some part of the former acid may be derived by the reduction of aceto-acetic acid. An attempt will be made to investigate this question experimentally. It is possible that the reduction of aceto-acetic acid to beta-oxybutyric acid may represent a step in the hitherto unknown series of reducing reactions which must be associated with the synthesis of fat from simpler substances.

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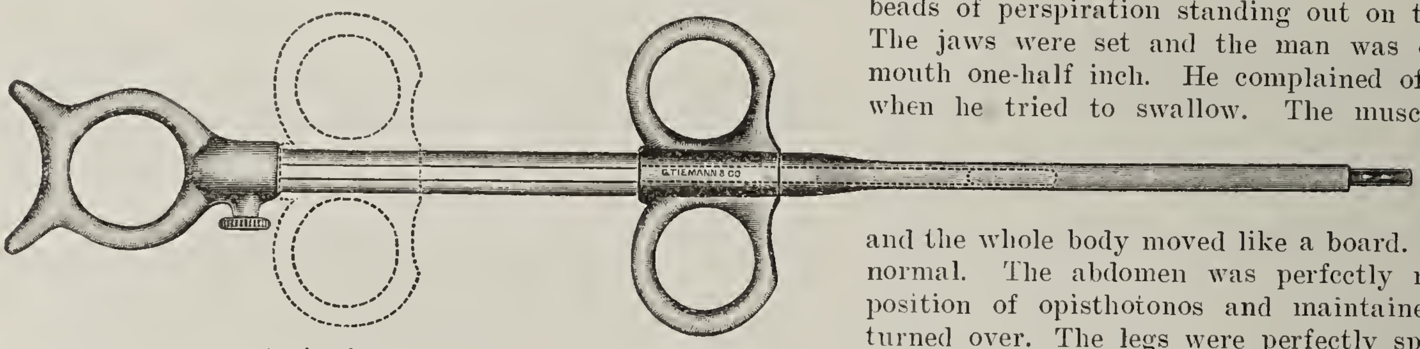
# A SIMPLE TONSIL SNARE

CURTIS C. EVES, M.D.
PHILADELPHIA

In constructing the instrument shown in the accompanying illustration it was my desire to produce a tonsil snare simple in construction yet efficient in every way.



A simple tonsil snare.

The snare is composed of three parts: a hollow seamless steel canula of two sizes; the upper larger size has two bilateral slits extending the whole length to allow the second piece, the finger holds, attachment to the wire-carrier which slides easily through the smaller size of the canula. The holes in the end of the wire-carrier are made conoidal in shape, thus preventing any slipping of the wire. The third piece fits like a cap over the large end of the canula, and has provision for the reception of both thumbs; it is held in place by a small thumb screw. By loosening this screw, the snare is easily taken apart, in three pieces, for cleaning.

The snare has no screw or ratchet apparatus; the necessity for these is done away with in the construction by the size of the canula, the style of grip and the centric pull.

In a series of over five hundred pairs of tonsils removed from adults and children, which were dissected free from adhesions, the snare proved satisfactory in every case. By grasping the instrument with the first two fingers and the thumb of the right hand, the operator has perfect control of the wire loop, which can be accurately adjusted and tightened in place by shortening the grip of the right hand. The left hand can grasp the snare in a similar manner to that of the right, with the fingers in the concavities below the rings and the thumb in the concavity above the end ring.

By firmly tightening the grip of both hands the tonsil is easily removed.

1834 Pine Street.

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# HYSTERICAL TETANUS

DAVID B. ROBINSON, M.D.
KANSAS CITY, MO.

The following case may prove of interest since it shows hysteria in one of its most unusual and interesting phases.

*Patient.*—C. M., male, aged about 40, was admitted to the wards of the Philadelphia General Hospital suffering from what was suspected to be tetanus. The nearness to the Fourth of July, together with the clinical aspect and examination of the case all helped strengthen this diagnosis.

*Condition on Admission to Hospital.*—On admission, July 11, 1909, the patient complained of inability to open the mouth, with rigidity of the muscles of the neck, back, legs and abdomen. No wound was demonstrable on any part of the body. Temperature was 101 F., pulse 96, and respiration 24.

*History.*—Family and previous history were negative. He stated that he had used alcohol and tobacco to excess all his life. He was drunk on the Fourth of July and slept in a stable that night. The following morning his throat felt sore and he had some pain in the abdomen. On the next day his jaw became stiff and later the muscles of his back, abdomen and legs. The next day he was unable to walk and had to go to bed. He had great difficulty in swallowing. He was markedly constipated.

*Physical Examination.*—The patient was well-developed and well-nourished. All the muscles of the body except the arm and facial muscles were rigid. The skin was very moist, large beads of perspiration standing out on the forehead and neck. The jaws were set and the man was only able to open his mouth one-half inch. He complained of a great deal of pain when he tried to swallow. The muscles of the neck were spastic. He could be picked up by the back of the head and the whole body moved like a board. Heart and lungs were normal. The abdomen was perfectly rigid. He lay in the position of opisthotonos and maintained this rigidity when turned over. The legs were perfectly spastic, and he held his feet in a position of talipes equinovarus. There was no ankle or patellar clonus; no Babinski sign. Sensation to touch, pain and temperature was normal all over body. There was incontinence of urine.

*Treatment.*—The patient was at once given 30 c.c. of antitetanic serum and 20 c.c. repeated for several doses with no apparent change for the better. On the second day, the actual cautery, with suggestion, was tried, with decided change in the patient's condition. This treatment was continued for three or four days with such good results that the spasticity almost entirely disappeared and the patient could move about at will. In five days he was discharged, walking from the hospital and eating in a normal manner.

The locking of the jaw, the extreme rigidity of the trunk and legs with opisthotonos, extreme constipation, characteristic temperature and pulse with clammy skin and profuse perspiration all go to make up the symptom-complex of tetanus, the convulsions alone being absent. That the patient responded so promptly to suggestion through the medium of the actual cautery is very interesting.

603 Bryant Building.

# A CASE OF SPLENOMYELOGENOUS LEUCEMIA IN AN IGORROTE

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Medical Inspector, Bureau of Health for the Philippine Islands; Acting Chief, Baguio Hospital.

BAGUIO, BENGUET, MOUNTAIN PROVINCE, PHILIPPINE ISLANDS

I report the following case to call attention to the presence of a comparatively rare disease in an uncivilized race in a remote corner of the globe; and to emphasize the value of careful routine examination over snap diagnoses.

Baguio is situated up in the Benguet mountains of the Island of Luzon. This country is inhabited by the wild mountain tribes who, until the advent of the Americans, seldom saw a white man. Moreover there was little, if any, mingling with the more civilized Christian tribes inhabiting the lowlands. Only during the past five years has the famous Benguet road made this region more accessible and brought representatives of other nationalities into closer contact with the Igorrotes.

*Patient.*—An Igorrote, aged about 40 (they never know how old they are), presented himself at the hospital clinic complaining of a large mass in his abdomen. Little history could be obtained, but the superintendent stated that the patient had been coming to the hospital off and on for over two years, and that the tumor had gradually increased in size.

*Examination.*—This revealed a bulging abdomen, the bulging being more marked on the left side, and due apparently to a splenic tumor occupying the greater part of the left side of the abdominal cavity, and extending 4 cm. to the right of median line, in the umbilical region. The tumor was hard and nonsensitive to pressure. The patient showed considerable anemia and emaciation.

Blood Examination: Unfortunately a complete blood count was not made at this time, but a stained smear was examined and the following note recorded: Red blood cells show moderate poikilocytosis, and a few nucleated reds, chiefly megaloblasts. White blood cells are enormously increased in number, and show a preponderance of neutrophilic myelocytes, large numbers of polymorphonuclear leucocytes, many large mononuclears, many mast-cells, and a few eosinophils—clearly the picture of splenomyelogenous leucemia.

After three months the patient had not appeared again at the clinic, so that no further observations have been made.

The superintendent states that during the previous two years this patient had been examined by other physicians who had diagnosed the case as malarial splenomegaly and prescribed quinin and ergot. If a blood examination had been made, the diagnosis could undoubtedly have been established long before, but because malaria is such a common tropical disease, it is very easy for physicians to make a snap diagnosis instead of taking the time for a blood examination.

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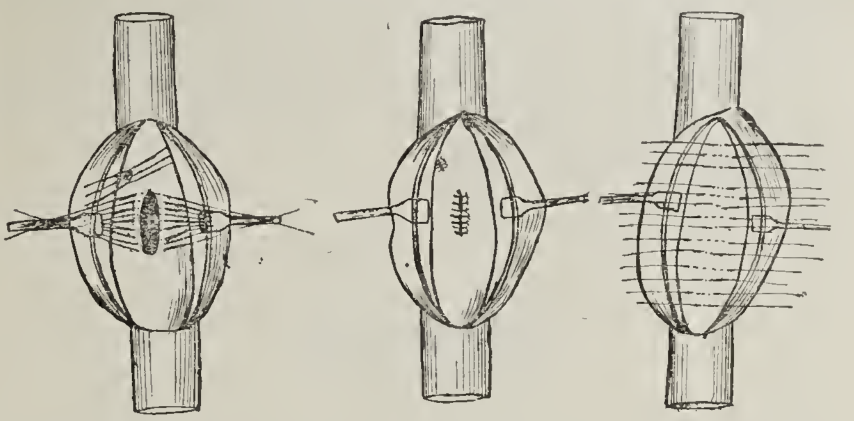
# ENDO-ANEURISMORRHAPHY OF POPLITEAL RESTORATIVE TYPE*

A. P. CRAIN, M.D.
SHREVEPORT, LA.

*Patient.*—J. L., a middle aged colored man, came to my ward in the Shreveport Charity Hospital with a non-pulsating tumor in the popliteal region said to have been caused by traumatism, hand-car having run over the leg six or eight months previous. The patient also gave syphilitic history with well-defined signs. Although aneurism was suspected, a positive diagnosis was not made, as pulsation was inappreciable, bruit absent on account of blood-clots and $x$-ray failing to reveal anything of a positive character. The patient was, however, prepared for this operation.

*Operation.*—After the circulation was cut off, an incision was made over the tumor in the long axis of the limb. On entering the sac a fairly well-organized clot, almost filling the cavity but not completely stopping the circulation, was removed, and a hole the size of a dime was found opening into the main channel of the artery, through which the little finger could be passed and pushed to some little distance. Nature was beginning to show her wonderful curative power and no doubt would have accomplished the result later on. Since the wall of the artery appeared to be in very good condition I decided to try the restorative type, knowing that should I fail I could then do the obliterative and accomplish a cure. After cleansing the wound thoroughly of clots I closed the orifice as well as two collateral openings with interrupted Lembert sutures of chromic catgut No. 2; I also reinforced this with a continuous stitch of the same material. The tourniquet was then taken off and the wound tested for leakage. After a few minutes I noticed a little oozing and I again reinforced this by another fold and row of sutures which succeeded in keeping it absolutely dry.



Endo-aneurismorrhaphy of popliteal restorative type; A, aneurism with collateral opening (a) and opening into main vessel (b); sutures untied; B, openings closed and sutures tied; C, tiers of Lembert sutures placed one above the other closing sac. First row is put in the length of the sac and tied, a fraction of an inch above this row another is placed, and so on, until the sac is closed. The skin is then sutured over this. All sutures used were Lembert's (interrupted reinforced by a row of continuous sutures).

In the closure of sac, I deviated a little from Dr. Matas' original method simply to see whether a little original idea of my own would work or not. Instead of enfolding the sac as Dr. Matas does, I simply used a row of interrupted Lembert sutures on one side near the bottom, taking in the floor of the sac and coming out of the other side at the same point at which I started. This row of Lembert sutures was made in the long axis of the tumor. Now a fraction of an inch above this I made another row of Lembert sutures like the first, and still another, and so on until the sac was closed; I then whipstitched the edges together with catgut and sutured the skin over this with silkworm gut; no drainage.

*Postoperative History.*—The leg was put up in an extension splint for ten or twelve days, at the end of which time stitches were removed and, save one small stitch abscess, the patient made a splendid recovery. The dead space of the sac was entirely obliterated and after the patient had been kept under observation for one month he was discharged as cured. I instructed him to report to me should he experience any trouble; and since it has been about six or eight months I take it that he is all right.

I do not consider this method of closure of the sac any better than Dr. Matas' as far as results are concerned, but it is much simpler and easier to do and an experiment that worked well.

## CONCLUSIONS

These crude drawings accompanying this article were copied from Bickham's "Operative Surgery;" they are

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* Read before the Surgical Section of the Southern Medical Association, Nov. 9-11, 1909, at New Orleans, La.

Dr. Matas' original drawings. Any type of this operation endo-aneurismorrhaphy offers the following advantages.

1. Union takes place between the serous surfaces lining the sac (the arteries being mesoblastic).

2. The sutures take good and strong hold in the walls of the arteries.

3. The technic is simpler; there is less traumatism in elimination of any ligature and no disturbances of sutures in vicinity of aneurismal sac; collateral circulation is preserved and circulation of main artery preserved in favorable cases; usually there is prompt healing by approximation of skin to floor of sac.

4. According to my experience in this case any method which will obliterate the dead space will do to close the sac, since the success of the operation depends on thoroughly closing the openings and colaterals.

5. Excessive sac walls may be cut away to a certain extent so as to facilitate matters and to keep the wounds from appearing too bulky.

206 Continental Bank Bldg.

## Therapeutics

### EPISTAXIS

Hemorrhage from the nasal passages, nosebleed, may be of all grades, from the most trivial to the most dangerous. It may consist of only a few drops of blood, and may cease spontaneously, or it may be so abundant and so rapid as to imperil life, or even to result in death.

In most cases, the hemorrhage is caused by some local lesion in the nose, but in some cases it is due to a general disturbance of nutrition, or to disease of some other organ. In a few cases an abnormal general condition and a local lesion may each have a share in producing the hemorrhage.

Epistaxis may occur in the course of the acute infectious diseases, often in the early stage of typhoid fever, in diphtheria, measles and the other exanthemata, malarial diseases, and influenza; in the chronic infections, such as tuberculosis and syphilis, especially when ulcerative processes are localized in the nose. It may also occur in general diseases characterized by deterioration of the blood, such as hemophilia, purpura hemorrhagica, or the hemorrhagic diathesis, anemia, chlorosis, pernicious anemia, leucemia, scurvy, and jaundice; in diseases characterized by high blood-pressure, such as arteriosclerosis, chronic interstitial nephritis, and hypertrophy of the left side of the heart; and in diseases accompanied by venous stasis, because of the difficulty of the return of blood to the right heart as occurrs in cardiac disease with failure of compensation, some forms of nephritis, and hepatic disease, especially cirrhosis. Finally it occurs, though rarely, as a vicarious discharge to take the place of suppressed menstruation.

Among the local conditions the most common is ulceration of the mucous membrane of the nasal passages. These ulcers are often due to chronic nasal catarrh, and are usually situated on the cartilage of the septum at its anterior and inferior part.

Although there may be bleeding from any part of the nostrils, the vast majority, perhaps as much as 90 per cent., of all bleeding comes from the mucous membrane of the anterior part of the septum. Sharp, bony outgrowths from the septum and from the turbinates may cause ulceration and consequent bleeding. Adenoids are probably rarely the cause of epistaxis. Syphilis may cause bone ulceration and bone necrosis and be the cause of an epistaxis. Rhinoliths, or nasal concretions, are a rare cause of nasal hemorrhage.

Traumatism is, of course, a frequent cause of hemorrhage, especially fracture of the nasal bones and consequent laceration of the nasal mucous membrane. There may, of course, be hemorrhage from the nostrils in fracture of the base of the skull. Abrasions of the mucous membrane often occur from picking the nose, or from accidental or intentional introduction of foreign bodies into the nostrils.

Polypoid growths are frequent in the nose and tend to recur, and often cause bleeding, especially when connected with the septum. Various other growths, both benign and malignant, can occur in nostrils and may be the cause of hemorrhage.

The *New York Medical Journal,* August 28 and September 4 and 11, 1909, published a series of papers on the treatment of epistaxis. The composite advice of these writers is contained in the following recommendations.

When called to treat a patient who has nosebleed the first thing to do is to try to stop the bleeding; the details of the history of the case may be elicited later.

One writer (Henry I. Berger, Indianapolis), insists that the physician should not become excited, and that he should gain the confidence of the patient and the friends. Another recommends that the onlookers who are not actually engaged in assisting in the treatment should be induced to leave the room.

If the patient is walking about, frequently blowing his nose and wiping it to see if the bleeding has stopped, he should be made to sit in a chair with his head inclined forward, so as to diminish the tendency of the blood to flow backward into the pharynx, and also to encourage the blood to collect and clot in the posterior part of the nose. By carefully wiping the blood from the anterior openings of the nose, it should next be determined in which nostril the bleeding is taking place, as it does not usually occur in both at the same time.

Having determined in which nostril the blood is escaping, and remembering that the bleeding point is usually on the anterior and inferior part of the septum, remembering also that pressure on the bleeding point is the most efficient way of checking hemorrhage, the physician should press the ala of the bleeding nostril firmly and continuously against the opposed side of the septum. At the same time cold applications may be made to the nose and back of the head and neck.

While the physician is employing this maneuvre, and waiting to see whether it proves effective, he has a chance to consider whether it is really desirable to stop the hemorrhage, or whether it would be better for the patient to allow it to continue.

This point is discussed by Dr. W. A. Wallace, of Spartanburg, S. C., who says: "We base our treatment primarily on the existing blood pressure. When the nosebleed is present with a blood pressure at or below 160 mm. we are at liberty to use measures to stop the hemorrhage. If the blood pressure is above 160 mm. we must use general treatment, for in these cases local treatment is contraindicated."

"In cases of the second class, that is, those cases of epistaxis in which there is blood pressure of 160 mm. or more, we are not permitted to use local treatment, because the nose-bleed is simply Nature's safety valve acting to prevent a cerebral hemorrhage. In these cases our aim should be to assist Nature in relieving the high pulse tension; and in the majority of cases venesection is indicated, especially so when we have indications of an impending cerebral hemorrhage, such as dizziness, headache, and distended temporal veins. In the less severe cases we may use an ice cap to the head, and at the same time the hot mustard foot bath. Morphin, gr. ⅛, subcutaneously, is, as a rule, required to quiet the patient. There are three important points which should always be borne in mind in treating epistaxis accompanying high blood pressure. First, do not attempt to check the hemorrhage with local applications to the nose. Second, always treat the kidneys on account of the existing nephritis. Third, use an eliminative treatment, such as saline cathartics, to remove the nitrogenous retention that is causing the high blood pressure and resulting in epistaxis."

In the absence of a blood-pressure apparatus, the physician must, by such examination as he is able to make, without an exact determination of the blood pressure, and by inquiries in regard to the way in which the different organs are performing their functions, decide whether it is better to check the hemorrhage at once or to allow it to continue for a time.

If it is determined to stop it, and the pressure of the ala nasi against the septum does not affect this result, then the blood and clots should be removed, and the interior of the nose carefully examined by means of a speculum and reflected light from a head mirror, or by direct illumination with electric light, if either are at hand, in order, if possible, to discover the exact site of the hemorrhage.

The bleeding nostril may be cleansed in several different ways. Some prefer pledgets of absorbent cotton wound on small pieces of wood, or on wooden toothpicks, and held in forceps. The cotton may be used dry, or moistened with an antiseptic or astringent solution. Others prefer to cleanse the blood from the nostril by using a syringe with hot saline solution or diluted solution of peroxid of hydrogen.

Having determined the exact situation from which the bleeding takes place, there is opportunity for a choice of any one of many local applicants. If the bleeding surface is of limited area, as for example an ulcer, the actual cautery may be applied, but care must be exercised that it be kept at a cherry red heat. Chromic acid, trichloracetic acid, and nitrate of silver are recommended by some. The local application of Monsel's solution. Liquor ferri subsulphatis, is recommended, and is often efficient, but is probably justly condemned by others. A 5 per cent. solution of nitrate of silver is sometimes useful. The official solution of hydrogen dioxid and solutions of suprarenal preparations are often effective.

If the bleeding area cannot be definitely found, or if the preparations applied do not stop the bleeding, resort must be had to the use of tampons. Here again there is a wide range for choice of individual methods. In many cases tamponing from the front of the nose will prove effective. For this narrow strips of sterile gauze may be used, to which a string is attached to facilitate their removal, or the so-called Bernay's sponge may be employed. This is inserted into the nostril while dry and then moistened so that it swells up and exerts pressure. The strips of gauze may be moistened with sterile saline solution, or suprarenal solution. The nose should be packed full so as to get the effect of pressure. The gauze also encourages clotting of the blood.

Some use styptic cotton, but this is not very satisfactory and has some objectionable features.

Dr. Albert L. Hall, of Fulton, N. Y., has had gratifying results from the use of puff ball in the nasal passages. It often stops the hemorrhage, and can be removed by means of the syringe with very little danger of starting up the hemorrhage. This is something which must always be guarded against when once the hemorrhage has stopped. Too great curiosity to learn the exact condition of affairs within the nose not infrequently results in the recurrence of a hemorrhage which was stopped only with great difficulty.

In the meantime, if the bleeding is severe, the limbs may be constricted close to the body, so as to retain as much blood as possible in them, and so diminish the pressure and the amount of blood in the nasal vessels.

If this tamponing from the front of the nose proves ineffective it is necessary to resort to the application of a tampon in the posterior nares. The traditional way of accomplishing this is with the aid of a Bellocq's sound. If this instrument is not at hand, a soft urethral catheter, to the eye of which a heavy silk ligature if fastened, may be substituted for it. This is passed along the floor of the nose, until it can be seen in the pharynx below the soft palate. It is then grasped with a pair of long forceps, and drawn into the mouth. Securing the ligature, the catheter is withdrawn through the nose leaving the ligature with one end hanging from the nose and the other from the mouth. It is wise to have this ligature double, so that if for any reason one is inadequate, the other can be used. One of these ligatures is tied, a distance of eight or ten inches from its end, to a roll of gauze or absorbent cotton large enough to fill up the posterior entrance to the nasal passage, some say "as large as a walnut"; others, "one and a half by one inch in size." By the aid of the ligature this is drawn back through the mouth and up against the posterior entrance to the nose, the adjustment being aided by the finger of the physician passed through the mouth and back of the soft palate. After this is snugly in place the anterior part of the nose should be packed from the front.

If skilfully done, this will stop the hemorrhage. The next question which arises is how long shall these tampons be allowed to remain in the nose. All agree that they should not be allowed to remain more than three days, and most advise their removal after one day. If they are left in the nose too long, there is danger that infection will be set up in the nose or the accessory sinuses. The removal must be done with great care, for there is danger that the hemorrhage will recur, and it may become so severe as to necessitate another application of the tampons after thorough cleansing of the nasal passages with an antiseptic solution.

If the patient is very nervous and restless, a hypodermic injection of one-eighth of a grain of sulphate of morphin is often of advantage.

When the hemorrhage tends to recur, and there is low blood pressure, when there is cardiac debility, and especially when there is lack of good compensation in valvular disease, digitalis or strychnin, or both, are valuable aids in preventing hemorrhage.

The after-treatment of these patients must never be neglected. Any local cause for the hemorrhage—an ulcer, dilated veins, hypertrophied turbinates, bleeding polyps, etc.—should be carefully treated and removed if possible. Any disturbance of the other organs of the body should be investigated and relieved.

Often the loss of blood, and in some instances predisposing conditions in the blood, furnish a strong indication for administration of iron and other tonics.

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[*For other information see second page following reading matter*]

SATURDAY, APRIL 30, 1910

## THE GENERAL PRACTITIONER, THE SPECIALIST AND THE PUBLIC

That there is a tendency among the members of the profession studying and practicing different branches of the science and art of medicine to drift apart and to lose sympathy with each other is a matter of frequent observation. The exclusive reliance of the specialist on the journals devoted to his special subject, which the general practitioner does not read, has contributed not a little to this lack of sympathy among the members of the profession. The laboratory man, the experimenter, wrapped up in the problems which he is attempting to solve, fails to keep in touch with the rest of the profession. The surgeon is apt to feel that the practice of medicine is subsidiary to his art. The men practicing the various specialties are each prone to believe that his branch is the pivot about which the practice of medicine revolves. The general practitioner feels little interest in any of them. It is only when some epoch-making discovery or procedure crystallizes the efforts, perhaps, of numerous workers applying themselves over a long period of time that the average practitioner realizes the value of the laboratory investigator's efforts and their application to his work. The surgeon and the men practicing the allied special branches come more in contact with the general practitioner, but often the latter looks on his specializing colleagues as necessary evils—necessary because he must refer to them the cases beyond his skill. Taking the material view of it, he feels that for a very brief service they exact an honorarium for which he would have to labor long and hard. When they attend society meetings he finds that they read long-winded papers on technical subjects in which he has no particular interest or which he does not understand, or they seek to magnify the importance of their particular specialties.

As a matter of fact, the general practitioner and the specialist need each other, and the best interests of medicine are served when they all meet and freely exchange views on their daily work and discuss subjects of interest to the whole profession. The researchers should show themselves frequently at medical meetings and tell the general profession what they are trying to accomplish and how they are endeavoring to do it. The supposed mystery and the difficulties of their work will be cleared up to the general profession, and in many instances, no doubt, the experience of the general practitioner will give the investigator exactly the clue needed to solve the problems on which he is working.

The men of greater opportunities, whether surgeons, internists or specialists, should go more frequently to the state, district and county societies. They should get off their scientific high horses and talk more about the little things of their work—the things that touch the general practitioner in his daily practice—and not always about the big operations, or the procedures and technic to be employed in the difficult and the rare cases. By works and words the specialists should seek to avoid creating the impression which sometimes prevails that when they go to medical meetings it is for the purpose of furthering their personal interests along the line of their specialties. They should all take more interest in medical-political affairs and the common interests of the profession. The claims of the larger affairs of public hygiene and health are becoming daily more insistent and demand the aid of the leaders of thought in the profession, and, indeed, of the whole profession.

This is one of the large and important fields in which the activities of the profession in future are to be exercised. A bill recently introduced in Congress to create a department of public health with a portfolio in the cabinet shows the importance which these matters are assuming in the public mind. There are other important public matters of a medical nature still demanding the attention of the profession, such as medical education and legislation and the protection of the public from medical frauds. All these questions, for their best solution, require a united profession, cooperating in closest harmony along all the lines of scientific, professional and political-medical endeavor.

## LIGHT ON SHAKESPEARE'S MEDICAL INFORMATION

One of the most interesting features of Shakespeare's plays is the amount and variety of information with regard to medicine in his time which they contain. Shakespeare evidently knew the names and uses of many drugs. He mentions aconitum, ginger, camomile, the mints, savory, marjoram, the worts, wormwood and many others. He speaks of "potions of eysell" or vinegar given to ward off infection.[1] In "Othello" he mentions two hypnotic drugs;[2] and in "Romeo and Juliet" the use of the sleeping-potion suggests anesthesia.[3]

Of course, one need not accept the conclusion of some bewildered commentators, who rashly infer that Shakespeare must have been a physician, or at least a medical student. It should be remembered that an empirical knowledge of drugs and their uses (which, after all, was the only kind of knowledge on that subject possessed even by physicians of that day) was not monopolized by the medical profession down to the seventeenth century and even later. In the practical education of carefully instructed women of high and low degree, cookery and other housewifely arts were scarcely more a matter of course than was the care of the sick; and this latter included prescribing for the commoner diseases. Country ladies were expected to keep well-stocked drug-closets and to be ready to dispense remedies to their families or dependents. The old village wives gathered herbs and simples and concocted medicaments. Formulas were handed down in families. One need only conjecture that Shakespeare as a boy often loitered about while his mother was at her household duties, or sometimes listened to the old women's gossip in or about Stratford, to realize that most of the information in his plays concerning drugs and their uses may easily have been absorbed unconsciously in his early youth.

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[1] Whilst, like a willing patient, I will drink
Potions of eysell, 'gainst my strong infection.
Sonnet 111.

[2] Not poppy nor mandragora
Nor all the drowsy syrups of the world
Shall ever medicine thee to that sweet sleep
Which thou ow'dst yesterday.
Othello, Act III, Sc. 3, l. 330.

[3] Romeo and Juliet, Act IV, Sc. 1.

The hint in regard to the circulation of the blood in Brutus' speech about "the ruddy drops that visit my sad heart"[4] indicates knowledge of another grade, for anatomy and physiology were mysteries to all but a few of the deeply learned. "Julius Caesar" was written before the publication of Harvey's "De Motu Cordis et Sanguinis;" but Shakespeare's words, of course, do not imply knowledge of the true route of the circulation, as explained by Harvey, but only that general conception of the blood as a circulating fluid, in some way propelled by the heart, which was current in pre-Harveian times. Here, again, one is not required to assume that Shakespeare was a specialist in order to account for his possession of an idea which was the common property of scholars and which must have appealed to the constructive imagination of such a mind as his.

The descriptions of mental disease in Shakespeare's plays, moreover, show astonishing force, veracity and discrimination. It would seem that he must have had unusual opportunities for the study of diseased minds. Once more, however, the difference in times and customs must be taken into consideration. The insane in those days were not necessarily shut away from the sight of normal men. Here a violent maniac was "bound and laid in some dark room" by those responsible for him, as Antipholus of Ephesus was confined when suspected of lunacy by his wife; there a harmless lunatic roamed the country like crazed Lear and "poor Tom o' Bedlam;" while elsewhere a hapless creature like distraught Ophelia lived unrestrained amid her ordinary surroundings. It is probable that insane people were no rare sight anywhere in Shakespeare's day; but it appears, according to some documents recently brought to light and published[5] by Professor Wallace of the University of Nebraska, that Shakespeare may have had an exceptional number of cases of insanity brought under his view. These manuscripts, the records of a case in the London Court of Requests in 1612, show that Shakespeare lived for some years with a Huguenot family named Mountjoy at the corner of Silver and Muggle (now Monkwell) Streets. At the north end of Muggle Street was Ambrose Nicholas' almshouse, which probably, like many other almshouses in that day and since, sheltered insane as well as sane paupers.

Another interesting field for conjecture is furnished by the fact that Barber-Surgeons' Hall stood almost opposite to Shakespeare's residence on Muggle Street. It seems not unlikely that he may have come into contact with some of the members of the Guild of Barber-Surgeons, and that some, at least, of his medical knowledge may have been gained from this contact.

Perhaps, after all, we weary ourselves overmuch in seeking to find the specific sources of the amazing variety of knowledge displayed in Shakespeare's plays. Genius does not amass laborious loads of foreign learning, but selects what it needs with the sure instinct which guides the bee to the flower. Shakespeare's medical knowledge, if measured even by contemporary professional attainments, probably would have been found but scanty, like his "small Latin and less Greek." It is the unhesitating sureness with which he used what he did know that makes his work a marvel for all time.

## THE SANITARY SIDE OF THE GARBAGE QUESTION

In an American city of five hundred thousand population the refuse amounts to about three hundred thousand tons per year. This includes the garbage proper, or swill, ashes and miscellaneous rubbish.

From a sanitary point of view the proper disposal of a city's waste has a bearing on disease that cannot be waved aside lightly. The garbage, a fermenting and decomposing mass with a sour, noisome odor, is offensive enough to demand prompt and careful removal; and even though it does not directly "breed" disease, it does furnish a breeding-place for flies and food for rats and other disease-transmitting vermin. Boards of health, therefore, are entirely justified in demanding stricter regulations concerning the handling and collection of this material.

The care of the garbage in the household and its collection are even more important for sanitation than is its final disposal. Boards of health should require householders to keep kitchen refuse in tight, well-covered cans. These should be emptied at least daily in summer, and scalded out at frequent intervals. A good way to disinfect a garbage-can and to prevent odors is to burn it out with a fire of old paper. The collecting-cart should be water-tight and carefully covered. In these days of metallic carts it is a disgrace for any city to use the old leaking and reeking wooden vehicles. The employees who gather the materials should be clothed in decent, clean khaki-colored uniforms. The uniforming of such a sanitary corps of "brown-wings" will add a little to the cost, but will pay for itself.

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[4] Julius Caesar, Act. II, Sc. 1.
[5] Wallace, C. W.: Harper's Month. Mag., March, 1910.

Most of our cities have had sad experience in the burning of garbage by the so-called "American method," known as incineration. Of two hundred and twenty-five incinerating furnaces erected in the United States about half have been abandoned because they became intolerable nuisances. The cause of this is the burning of the garbage at a low temperature. In order to correct this imperfection of the low-temperature incinerator, secondary fires have been introduced into some of them, to burn the secondary gaseous products of combustion, but with only partial success. Meanwhile European cities, both British and Continental, have demonstrated that it is possible to burn garbage at a high temperature (above 1,250 F.) under forced draft without the least complaint from those living in the neighborhood of the "destructors." In the English destructor the ashes and garbage are burned together. This has several advantages. It simplifies the collection; the ashes absorb the moisture from the swill, a process of desiccation which retards or restrains fermentation; while on the other hand the moisture from the swill wets the ashes and prevents them from blowing about. Although the ashes have been through the fire, they still contain much unconsumed carbon that will burn under forced draft, and at the very high temperature thus produced. The resulting ash is mostly in the form of a vitreous clinker that makes splendid material for filling, paving or concrete. Many of these destructors are placed in the heart of European cities, thereby shortening the haul and diminishing the cost. The caloric value of mixed garbage and ashes is surprisingly large and the heat may be used for municipal purposes. These destructors are now in successful operation in three American cities and municipalities (New Brighton, Long Island; Seattle, Washington, and Milwaukee, Wisconsin), and two in Canada (Westmount, a suburb of Montreal, and Vancouver, B. C.). The destructor at Milwaukee, which is just finished, is the largest of its kind.

A few cities (Cleveland and Columbus, Ohio), use the method of "reduction," and obtain a profit from the grease and the tankage, the latter being of value as fertilizer. About 5 per cent. of American garbage may readily be extracted in the form of grease.

The remaining refuse consists largely of paper, cardboard, twine, boxes, wood, old shoes, rubbers, rags, tin cans, bottles, all of which have a market value that more than repays sorting them out. Colonel Waring long ago showed that about 90 per cent. of such waste may be reclaimed for commercial uses.

Many of our overgrown cities still use the village method of disposing of ashes and rubbish on dumps. This method is clearly objectionable, and is an evidence of backwardness in municipal sanitation and civic pride. Our American cities would do well to look to this problem of collecting and disposing of their waste in an orderly, unobjectionable and sanitary manner.

## PUBLIC SUPPORT OF NATIONAL HEALTH LEGISLATION

In the campaign now being carried on for the establishment of a national department of health, the emphatic endorsement of the general public is of the utmost importance. For twenty-five years past, the medical profession of the United States, both as individuals and as an organization, have been urging the importance and necessity of such legislation. The position of the profession on this question is, therefore, so well known to members of Congress that the influence of physicians is to a certain extent discounted. Members of Congress are perfectly willing to admit the demand for such legislation as far as the medical profession is concerned. What is needed, however, to convince them of the importance of such legislation is a positive expression of opinion from prominent business and professional men outside of the medical profession. It is, therefore, of the utmost importance that physicians interested in the passage of adequate public health legislation by Congress should use all proper means to secure expressions of opinion from prominent business men, lawyers, judges, educators and others of influence. If the members of Congress can be shown that a strong popular demand for such legislation exists and that it is based on a thorough understanding of the necessity of federal regulation of public health, there will be no question as to the adoption of such legislation.

# Medical News

## CONNECTICUT

**State Society to Hold Meeting.**—The annual meeting of the Connecticut State Medical Society will be held at New Haven, May 25 and 26. Dr. Samuel D. Gilbert is president and Dr. Walter R. Steiner, Hartford, is secretary.

**Society Meetings.**—The one hundred and seventeenth annual meeting of the Windham County Medical Association was held Thursday, April 21, at the Hotel Hooker, Willimantic. The meeting was called to order and the annual address made by the president, Dr. John Weldon, of Willimantic. Two new members were admitted to membership. Dr. William L. Higgins, of South Coventry, and a member of the Connecticut State Legislature, spoke on recent medical legislation. The following officers were elected for the ensuing year: President, Dr. George M. Burroughs, Danielson; vice-president, Dr. James L. Gardner, Central Village; secretary-treasurer, Dr. J. Hobart Egbert, Willimantic; state delegates, one year, Dr. Robert C. White, Willimantic; two years, Dr. Seldom B. Overlock, Pomfret; councilor, Dr. John B. Kent, Putnam; and censors—three years, Dr. Robert C. Paine, Thompson; two years, Dr. Owen O'Neill, Willimantic; one year, Dr. Clarence E. Simonds, Willimantic.——At the one hundred and eighteenth annual meeting of the Fairfield County Medical Association, held in Bridgeport, April 12, the following officers were elected: President, Dr. Herbert E. Smyth, Bridgeport; vice-president, Dr. William L. Griswold, Greenwich; secretary, Dr. Frank W. Stevens, Bridgeport; treasurer, Dr. James D. Gold, Bridgeport; councilor, Dr. Samuel M. Garlick, Bridgeport; and censors, Drs. Edward M. Smith, Bridgeport; David C. Brown, Danbury, and Samuel Pierson, Stamford.——At the one hundred and eighteenth annual meeting of the Middlesex County Medical Association, held in Middletown, April 14, the following officers were elected: President, Dr. Matthew W. Plum-stead, East Haddam; vice-president, Dr. Daniel A. Nolan, Middletown; clerk, Dr. Arthur B. Colebun, Middletown; censors, Drs. John E. Bailey and James H. Kingman, Middletown, and Miner C. Hazen, Haddam; and delegates to the state society, Drs. Charles B. Young, Middletown, and George N. Lawson, Middle Haddam.

## ILLINOIS

**Meeting of State Society.**—The Illinois State Medical Society will meet at Danville, May 17-19. Dr. George W. Crile, Cleveland, Ohio, will deliver the address on surgery.

**Board of Health Created.**—The city of East Moline has created a board of health, and Dr. Henry J. Love was made health commissioner. The other members of the board are Mayor Johnson and the city marshal.

**Epidemics.**—An epidemic of fourth disease has made its appearance at Princeton, thirty cases having occurred.——Twenty cases of pneumonia have occurred at the Illinois Southern Hospital for the Insane, located at Anna. The epidemic is now under control.

**Medical Library.**—At the last meeting of the Rock Island County Medical Society, through the efforts of Drs. Louis Ostrom and William H. Luedwig, Rock Island, a medical library was established, to be located in the Denkmann Memorial Building at Augustana College.

**Medical Society Meeting.**—At the meeting of Hamilton County Medical Society at McLeansboro, April 13, Dr. Paris M. Nation, McLeansboro, county coroner, was elected president; Drs. William W. Hall and Harry W. Dale, McLeansboro, vice-presidents; Dr. Charles M. Lyon, McLeansboro, secretary-treasurer; Dr. Harry W. Dale, McLeansboro, delegate to the state society, and Dr. Marion C. Dale, McLeansboro, alternate.

**Personal.**—Dr. John W. Dobson, Bloomington, has been elected county physician of McLean county.——Dr. George W. Burch has been appointed examining surgeon for the marine corps at Quincy.——Dr. Frank H. Jenks, acting superintendent of the Elgin State Hospital, has resigned and will assume charge of the Rockford Sanitarium operated by the late Dr. Penn Ransom, who was killed in an automobile accident.——Dr. Edwin A. Weimer, Peoria, was fined in the police court for failure to report a case of smallpox.

### Chicago

**Detention Home Quarantined.**—The dependent children and delinquent girls' section of the Juvenile Detention Home is under quarantine on account of measles and diphtheria. The cases are mild and there is no danger of the disease spreading.

**Save the City Water Supply.**—An important measure for safeguarding health in Chicago was advanced in Congress April 19, when the Mann bill, prohibiting the dumping of refuse in Lake Michigan within eight miles of the shore, was ordered favorably reported in the House by the Interstate Commerce Committee. This is one of the measures strongly urged by Health Commissioner Evans.

**Henrotin Statue Unveiled.**—A bronze statue of Ferdinand Henrotin, founder of the hospital which bears his name, was unveiled April 19, at the Henrotin Memorial Hospital, La Salle avenue and Oak street. The statue was the gift of the Chicago Polyclinic and was wrought by Mrs. Philo R. King. Dr. John W. Chew, head of the staff, presided at the unveiling, and Dr. William T. Belfield, a former associate of Dr. Henrotin, delivered the address.

**Personal.**—Dr. Niles T. Quales, of the Chicago Norwegian Colony, has been decorated by King Haakon VII of Norway, with the Order of St. Olaf, in recognition of the extensive charitable work carried on by Dr. Quales among his countrymen.——Dr. John A. Stevenson, charged with pandering, was freed of the charge in municipal court, April 20.——Dr. Archibald Church has resigned as consulting neurologist to the Washington Park Hospital.——Dr. Joseph Zeisler has been elected a corresponding member of the Societa Italiana di Dermatologia e Sifilografia.

**Plan for Contagious Disease Hospital.**—Three hundred members of the Chicago Day Association, including society women and men of wealth, met at the First National Bank Building, April 22, and made preparations to collect a large fund for the building of a hospital for contagious diseases. Dr. William A. Evans, health commissioner, addressed the meeting on the necessity for this hospital, calling attention to the fact that at present the city's sick poor had no place to go except to the county hospital, and there accommodations are insufficient. The proposition that the city and county build a contagious disease hospital was halted by Corporation Counsel Brundage by reason of lack of funds on the part of the city. A committee of the hospital commission, consisting of Drs. William A. Evans and William L. Baum, recommended that the city take care of tuberculosis cases in the early stages and that the county take care of cases in the last stages.

## INDIANA

**Epidemic of Measles.**—Terre Haute is reported as having a severe epidemic of measles.

**Health Officers to Confer.**—Dr. John N. Hurty, Indianapolis, secretary of the State Board of Health, has issued formal notice to all health officers of the state, announcing the annual conference to be held in Indianapolis, May 10.

**Undertakers Must Fumigate Houses.**—Dr. Joseph P. Seale, health officer of Fairmount, has notified the undertakers of the city that in the future when they take charge of a body where death is due to tuberculosis, the house must be correctly fumigated following the funeral in accordance with the state law.

**Personal.**—Dr. Frank F. Hutchins, Indianapolis, and Burton D. Myers, Bloomington, have gone to Europe for the study of nervous diseases.——Dr. O. P. Mercer, Reelsville, has been appointed surgeon for the Vandalia Railroad with headquarters at Indianapolis.——It is reported that Dr. S. Kenosha Sessions, physician at the Southern Indiana Hospital for the Insane, has been dismissed for failure to report the birth of a child to an unmarried attendant at the hospital. Dr. Munson, formerly located in India in the service of the British government, has succeeded Dr. Sessions.——Dr. Charles L. Thomas, Logansport, has sued an automobile company for $50,000 damages for injuries received while riding in a car being demonstrated by the defendant company.——Dr. William D. Schwartz, Portland, has been appointed secretary of the board of health.——Dr. Frank P. Norbury, Kankakee, Ill., president of the Mississippi Valley Medical Association, addressed the Allen County Medical Society on "Medical Quackery," April 19.

## IOWA

**Distributing Stations for Antitoxin.**—The Iowa State Board of Health has made arrangements to establish stations for the distribution of diphtheria antitoxin at cost.

**Oppose Lengthening School Year.**—The Iowa State Board of Health has gone on record as opposing the plan to lengthen the school year. The board asserts that the health of the child is paramount and that the increased school year will be detrimental.

**Personal.**—Dr. Jasper E. Guernsey, Olin, has been appointed local surgeon for the Chicago, Milwaukee and St. Paul Railroad.——Dr. Albert H. Peterson has been reappointed health physician of Ottumwa.——Dr. George W. May has been appointed health physician of Cascade.

**State Society Meeting.**—The Iowa State Medical Society will meet at Des Moines May 18 and 19. Dr. John B. Murphy, Chicago, will be the guest of the society. The influence of public school life on the physical development of the child will be one of the principal topics for discussion.

**Society Meeting.**—The thirty-seventh semi-annual meeting of the Washington County Medical Association was held at Washington, April 13. Dr. Joseph H. Hull, Washington, was elected president; Dr. William H. McLaughlin, Riverside, secretary-treasurer, and Drs. Edmund R. Jenkins, Washington; George W. Hay, Washington, and George W. Dosh, Brighton, censors.

## KANSAS

**Antituberculosis Society at Topeka.**—The Topeka Antituberculosis Society, with A. A. Godard as president, was organized April 13. A constitution and by-laws were adopted, and addresses were made by D. M. Fisk, of Washburn College and Mr. Deacon, of the State Board of Health.

**Society Meetings.**—The Golden Belt Medical Society held its semi-annual meeting in Salina, April 8. The following officers were elected: Dr. Oliver D. Walker, Salina, president; Drs. W. D. Whitmer, Abilene, and James D. Colt, Manhattan, vice-presidents; Dr. Louis O. Nordstrom, Assaria, secretary, and Dr. Winfield S. Harvey, Salina, treasurer (re-elected).

**Public Health Meeting.**—At a public health meeting at Wellington, under the auspices of the Sumner County Medical Society, Dr. Samuel J. Crumbine, Topeka, secretary of the Kansas State Board of Health, delivered an address on the subject "Water and Soil Pollution." Other public questions were discussed by members of the society, Ex-Judge W. T. McBride and Senator George Hunter. A resolution was passed that congressmen from Kansas be requested to support the bill establishing a national bureau of public health.

## MAINE

**Gift to Maine State Sanatorium.**—Mr. E. D. Chamberlin, of Massachusetts, has given $15,000 to pay the debts of the Maine State Sanatorium Association, and in addition, has placed the sum of $200,000 in the hands of three trustees, the income of which is to be used for the running expenses.

**Transfer of Tuberculous Insane.**—Ten men and eleven women tuberculous insane patients have been transferred from the Maine Insane Hospital at Augusta, to the Eastern Maine Insane Hospital, Bangor, under the direction of Drs. Sturgis and Carl J. Hedin, Augusta. A new building has been provided at Bangor for the tuberculous patients.

**Personal.**—Dr. Ralph A. Parker, Auburn City, and Dr. Herbert S. Sleeper, Lewiston, members of the medical staff of the Central Maine General Hospital, Lewiston, have been appointed on the staff of the Auburn Antituberculosis Association.——Dr. Thomas F. Conneen, Portland, has gone to New York, and will go thence to Germany for study.——Dr. Harry W. Mitchell, superintendent of the Eastern Maine Insane Hospital, Bangor, has resigned, to take effect June 15. He has been appointed superintendent of the Danvers Insane Hospital, Danvers, Mass.

## MARYLAND

**New Cottages to Be Erected.**—Steps will be taken at once to erect four new cottages, each to accommodate 75 patients, at Springfield Asylum for the Insane, Sykesville.

**Officers Chosen.**—At the annual meeting of the Section on Medicine and Surgery of the Medical and Chirurgical Faculty of Maryland, Dr. Joseph C. Bloodgood was chosen chairman; Dr. Alexius W. McGlannan, secretary-treasurer, and Dr. George A. Fleming, a third member of the committee, all of Baltimore.

**Symposium on Hookworm.**—A feature of the annual meeting of the Medical and Chirurgical Faculty, April 27, was a symposium on hookworm disease. The speakers were Prof. William H. Welch, Dr. Charles W. Stiles, and the secretaries of the state boards of health of Maryland and North Carolina.

**Medical Missionaries Safe.**—News has been received that Dr. and Mrs. Edward H. Hume, missionaries, who were compelled to flee from Changsha to Hankow, China, when the Chinese burned the buildings of the Yale University Mission a few days ago, are safe. Dr. Hume is a medical graduate of Johns Hopkins, and his first missionary work was in India. After a year and a half there he went to Changsha to found a mission.

**Reunion of Alumni.**—Cards have been sent out for a reunion of the alumni of the Johns Hopkins Medical School, on May 6 and 7. There are about 600 graduates and this will be their first meeting since 1893, when the school was opened. The object is to effect a permanent organization. There will be scientific and medical discussions. The committees are in charge of Drs. Thomas R. Brown and J. H. Mason Knox, Baltimore, and Joseph H. Pratt, Boston.

**Hospital Report.**—According to the thirty-second annual report of the Presbyterian Eye, Ear and Throat Charity Hospital, 842 patients were treated in the hospital and 10,539 cards were distributed to dispensary patients, during the past year. The number of visits to the hospital was 35,248; the daily average of patients in the dispensary was 110. Since the establishment of the hospital, 32 years ago, there have been 278,711 patients and 1,000,853 visits.

**New Buildings for Johns Hopkins.**—Announcement is made by the Johns Hopkins trustees that they are ready to start active work towards erecting the new buildings at Homewood, the new site in the northern suburbs. The architects have been selected to draw plans. The buildings will cost $1,700,000 and will be the most extensive ever proposed for an institution in Baltimore. The initial plan calls for a group of six, two to cost $250,000 each and four to cost $150,000 each.

**Personal.**—A verdict of $1,000 was awarded against Dr. James L. Truax, Baltimore, for alleged maltreatment of a broken arm.——Dr. Solomon C. Katzoff, Baltimore, was painfully bruised by being thrown from his carriage in a runaway accident, April 19.——Dr. Isaac T. Coston has been elected mayor of Pocomoke City for the third consecutive term.——Dr. Thomas McCrea, associate professor of medicine in Johns Hopkins Medical School, was operated on for appendicitis at Johns Hopkins Hospital, April 21.

**Health Officers Appointed.**—The county commissioners of Baltimore County have appointed the following: County health officer, Dr. James F. H. Gorsuch, Fork; district health officers, Drs. Arthur H. Mann and Henry F. Shipley; Henry A. Naylor, Pikesville; Harry M. Slade, Reisterstown; D. M. Resh, Beckleyville; Joseph S. Baldwin, Freeland; Eugene W. Heyde, Parkton; Benjamin R. Benson, Cockeysville; Richard C. Massenburg, Towson; J. T. Payne, Phœnix; James F. H. Gorsuch, Fork; William E. McClanahan, Baltimore; Frank H. Ruhl, Landsdowne; William F. Clayton, Baltimore, and John W. Harrison, Middleriver.

**For Widows and Orphans.**—The Ladies' Auxiliary of the Widows' and Orphans' Fund turned over to the Medical and Chirurgical Faculty, at its annual meeting, April 26, $1,047.91, as the results of the year's work. The fund is a permanent one and the interest alone is used for the relief of widows and orphans of deceased physicians. Mrs. Joseph H. Branham is president. The fund is independent of the Board of Managers of the Home for Widows and Orphans, a charity founded by the State Medical Society. At the annual meeting, April 22, receipts of $110 were reported. Mrs. Eugene F. Cordell was elected president. It is the plan to locate the home ultimately in the suburbs of Baltimore.

**Society Meetings.**—The Montgomery County Medical Society elected the following officers April 19: President, Dr. William L. Lewis, Kensington; vice-president, Dr. J. Dudley Morgan, Chevy Chase; secretary-treasurer, John L. Lewis, Bethesda; censors, Drs. Claiborne H. Mannar and Frederick N. Henderson, Rockville; delegate to the State society, Dr. James E. Deets, Clarksburg, and alternate, Dr. Otis M. Linthicum, Rockville. Addresses were made by the retiring president, Dr. Otis M. Linthicum, and Dr. G. Milton Linthicum, president of the Medical and Chirurgical Faculty of Maryland.——At the meeting of the Baltimore County Medical Society, held at Mount Washington, April 22, Dr. William H. Welch, president of the American Medical Association, spoke on the good work accomplished by The Journal in the war against injurious nostrums. Of 1,000 proprietary medicines examined 400 were found to be frauds and most of the remaining 600 have been changed, and thus made acceptable. He also spoke of the work done by the Association for the improvement of medical education. "The influence of the American Medical Association," he said, "is most powerful, and I rank it ahead of the state medical boards. Improvements in this line are rapid and I predict a great future for this country in higher medical education."

## MISSOURI

**Will Move to Jefferson City.**—After May 1, the office of state bacteriologist will be moved to Jefferson City, where Dr. Newton McVey will conduct the work of the laboratory.

**Plan Change in Health Board.**—Kansas City is contemplating abolishing the health board and putting the work of that board under a health commissioner with full authority to act.

**Society Meeting.**—The Saline County Medical Association met at Marshall, April 12, and elected the following officers: Dr. William Harrison, Marshall, president; Drs. John R. Hall, Marshall, and Frank A. Howard, Slater, vice-presidents; Dr. Roy H. Dyer, Marshall, secretary; Dr. Frank A. Howard, delegate to the state convention at Hannibal in May.

**Personal.**—Dr. Abra C. Pettijohn, Brookfield, has been appointed superintendent of St. Joseph Hospital for the Insane.——Dr. William A. Clark, Jefferson City, has been appointed division surgeon of the Missouri Pacific and Missouri, Kansas and Texas Railway, with headquarters at Jefferson City.——Dr. Samuel A. Poague, Clinton, has been appointed surgeon for the M. K. and T. Railroad, with headquarters at Clinton, in place of Dr. John H. Britts, deceased.——Dr. Eugene Cohn, St. Louis, has been appointed superintendent of the State Hospital for the Insane at Anna, Ill.

## NEBRASKA

**Hospital Opened.**—St. Luke's Hospital, an institution having accommodations for 30 patients, has been opened in North Platte.

**Personal.**—Dr. John A. Parmenter, Morse Bluff, has been appointed physician at the Hastings Insane Asylum.——Dr. J. Clyde Moore, Jr., Lincoln, has been appointed clinical assistant at the University of Nebraska College of Medicine.

**State Conservation Congress.**—The State Conservation Congress, held in Lincoln March 29 and 30, was addressed by Drs. Waite and Wilson, of Lincoln; Mackaye, of Norfolk, and Quigley, of North Platte. The doctors advocated a state lecturer on tuberculosis and venereal diseases, a state sanatorium for tuberculosis and a state-wide system of medical inspection of schools. The congress adopted resolutions favoring these measures.

**Society Meetings.**—The Nebraska State Health Association, which is an organization of the public health officers of the state, will meet in Lincoln, May 9 and 10. All persons interested in the betterment of public health are invited to be present.——The Harlan County Medical Society met March 9, at Alma, and elected the following officers: Dr. Thomas E. Massey, Huntley, president; Dr. C. Herbert Munger, Republican City, vice-president; Dr. Samuel M. Baker, Alma, secretary-treasurer, and delegates to the state society, Drs. William L. Sucha, Orleans, and Thomas E. Massey, Huntley. A physicians' protective association was formed at the meeting. ——The physicians of Brown, Rock and Keyapaha counties organized a medical society for those counties, at Bassett, April 4. Dr. George O. Remy, Ainsworth, was elected president; Dr. Jonathan J. Evans, Springview, vice-president, and Dr. Charles H. Root, Bassett, secretary-treasurer.——The Knox County Medical Association held its annual session at Creighton, April 6, and elected Dr. Czar C. Johnson, Creighton, president; Dr. Roy Crook, Winnetoon, vice-president; Dr. John B. Bates, Verdigris, secretary-treasurer, and Dr. Willard K. Clark, Niobrara, censor. A uniform system of fees was adopted for all towns of the county. The next meeting will be held in Bloomfield in October.

## NEW YORK

**Free Bed Fund for Loomis.**—At an entertainment given by the Loomis Sanatorium Guild in the Waldorf-Astoria, New York City, the sum of $2,700 was raised for the free bed fund of the Loomis Sanatorium, Liberty.

**Sale of Cocain Restricted.**—Governor Hughes has signed the bill providing that persons who sell or furnish cocain or eucain as permitted by law on a physician's prescription, shall, at the time of sale give to the purchaser a certificate stating the seller's name and address, the name and address of the physician on whose prescription the drug was furnished, and the date of sale and the amount sold.

**A Women's Hospital.**—Mrs. O. H. P. Belmont has just opened what is said to be the first hospital managed entirely by women at Hempstead, L. I. Mrs. Belmont gave to the hospital, as a memorial to Mr. Belmont, nearly the entire $50,000 which the building cost. This hospital will not only be managed by a board of women but has a woman superintendent and will have women house physicians.

**Personal.**—Dr. William L. Russell has been appointed superintendent of the Long Island State Hospital at Brooklyn to succeed Dr. Oliver M. Dewing.——Dr. Stephen Smith, New York City, has been reelected vice-president of the State Board of Charities for the eighth term.——Dr. Francis S. Swain has been appointed health officer of Corning to succeed Dr. Edward W. Bryan.——Dr. David M. Totman, health officer of Syracuse, has been appointed, by the state commissioner of health, medical expert on the diagnosis of contagious diseases, particularly smallpox.

### New York City

**Bequests.**—The will of the late William Hymans of this city leaves $1,000 to Mount Sinai Hospital and $5,000 to Beth Israel Hospital. At the death of Mrs. Hymans, Mt. Sinai will receive $5,000, the Montefiore Home $5,000, and the Lebanon Hospital $1,000.

**Medical Society Loses.**—Paul Schmidt, who was arrested some time ago on the charge of practicing medicine without a license, brought suit against the New York County Medical Society for $100,000, and a verdict in his favor was rendered to the amount of $7,500.

**Hospital Alterations.**—Plans have been filed for extensive alterations to the Skin and Cancer Hospital at Second avenue and Nineteenth street. The two adjoining buildings have been purchased. The improvements will include a home for nurses and employees which will cost $3,000.

**Personal.**—Prof. F. Lange of the University of Munich is here to attend the orthopedic congress in Washington, May 3-6. Speaking before the Section on Orthopedic Surgery at the Academy of Medicine, Professor Lange stated that America stands first among nations in its elaborate methods of caring for crippled children.——Dr. Salvatore Romano, an Italian physician, pleaded guilty to the charge of perjury in connection with the trial of an Italian counterfeiter. He was paroled for sentence.——Dr. and Mrs. W. H. Fox, Dr. Edward W. Pinkham and Dr. and Mrs. John A. Hartwell have sailed for Europe.

**Another Dinner for Dr. Jacobi.**—Dr. Abraham Jacobi was the guest of honor on the eightieth anniversary of his birth at a dinner at the Hotel Astor April 24, given by the trustees, the Alumni Association, and the physicians of the German Hospital and Dispensary. Dr. Jacobi was presented with an engrossed set of resolutions. In the afternoon of the same day three hundred persons gathered at Mount Sinai Hospital in celebration of the fiftieth anniversary of his connection with that hospital. It was announced that the endowment fund had been collected on the income of which they expected to establish a library in the hospital to be called the Abraham Jacobi Library. The bronze bust of Dr. Jacobi on exhibition in the main foyer had been presented to the doctor by the medical and surgical staff as a token of esteem.

## OREGON

**Hospital Additions.**—An annex to St. Vincent's Hospital, Portland, costing $200,000, is completed and ready for occupancy.——Mr. Horace C. Henry, a wealthy contractor of Portland, has given $100,000 and forty acres of land for the establishment of a cottage sanatorium for the treatment of tuberculosis.

**Personal.**—Drs. J. H. and Charles Brewer, Salem, have gone to Europe for study.——Dr. Harry F. McKay, Portland, has been appointed a member of the State Board of Medical Examiners, to succeed Dr. William H. Byrd, Salem.——Dr. Robert J. Pilkington has been appointed city physician of Astoria, to succeed Dr. Clara Reames.——Dr. Frank H. Vincil, Roseburg, has been appointed local pension examining surgeon. ——Dr. Harvey J. Clements, Salem, has been appointed medical director of the Oregon State Tuberculosis Sanatorium.

## PENNSYLVANIA

**State Helps Many Consumptives.**—The physicians of the State Tuberculosis Dispensary in Hazleton report having thus far discharged forty-two patients as cured.

**Railroad Relief Fund.**—The Lehigh Valley Railroad announces that $85,689.30 was paid from the relief fund in the year 1909 for the benefit of the company's employees, leaving a balance of $28,099.91. In thirty-two years the contributions have amounted to $1,485,973.02. Of this the employees have paid half and the company half.

**School Inspection.**—State Health Commissioner Samuel G. Dixon has completed the medical inspection of rural schools in Dauphin, Cumberland and Lancaster counties. This work will form a basis for the examination of school children in rural districts throughout the entire state. Twelve thousand five hundred and fifty-five children were examined in 572 schools; 2,439 children presented one or more physical defects, tending to handicap them in school work; 1,929 showed defective vision; 249, defective hearing; 284, defective nasal breathing, and 55 presented conditions which indicated tuberculosis.

### Philadelphia

**Officers Elected.**—The officers of the Woman's Hospital Medical Society for the current year are: President, Dr. Sarah H. Lockrey; vice-president, Dr. M. Louise Diez; treasurer, Dr. Annie L. Conner; secretary, Dr. Mary Thomas Miller.

**Jefferson Alumni Dinner.**—The annual dinner of the Alumni Association of the Jefferson Medical College will be given at the Bellevue-Stratford Hotel, June 4. A special feature of the dinner will be the reunion of the classes graduated from 1880 to 1910.

**Testimonial Dinner to Dr. Tyson.**—Physicians from all over the eastern part of this country will do honor to Dr. James Tyson, when a large dinner will be given, May 5, at the Bellevue-Stratford. Dr. William Campbell Posey, of 2049 Chestnut street, is treasurer of the committee.

**Charitable Bequests.**—The estate of Thomas Irwin, valued at $6,700, is left in trust under his will to two sons and at the death of second of these the principal is to go to St. Mary's, Presbyterian and Episcopal Hospitals.——The will of the late Harriet B. Labe devises $300 to the Jewish Hospital Association for a free bed and $200 to the Jewish Foster Home and Orphan Asylum.

**Consumption on the Increase.**—According to the week's report of Health Department issued April 23, there was a slight decrease in the number of deaths from those reported the week preceding. There was one death from smallpox, the first since the epidemic of 1905. But a feature of the report was the great increase in the number of cases of consumption, from 79 last to 129 this week.

**Smallpox Warning Issued.**—Owing to the discovery of two cases of smallpox on April 17, an appeal has been made to the public by the bureau of health to cooperate with the department in preventing the spread of the disease. It is urged that a physician be called in on the appearance of any illness of the slightest suspicious character. Dr. Andrew A. Cairns, chief medical inspector, declared that the small-pox on Front street was of the most malignant type he had seen in years. He said that the fact that the disease had existed in the city for over three weeks unknown to the health authorities proved that grounds exist for the request.

**Personal.**—Dr. James T. Rugh has been appointed consulting orthopedic surgeon at the Charity Hospital, Norristown.——Dr. Fritz Lange, professor of orthopedic surgery at the University of Munich, director of the University Orthopedic Polyclinics and superior surgeon to the Royal Hospital for Cripples of Bavaria, visited this city Monday and Tuesday, April 25 and 26. A clinical lecture on flatfoot was given by him at the Jefferson Hospital, Monday morning, and one on the same subject the following day at the orthopedic clinic of the University Hospital. Tuesday, from 2 to 4 p. m. he spent at the Orthopedic Hospital and later that afternoon inspected the Widener Home for Crippled Children.——Dr. James A. Irwin sailed for Europe April 23.——Dr. John M. Swan will become resident medical director of the Glen Springs at Watkins, N. Y., May 1.——Dr. J. Chalmers DaCosta has resigned from the staff of the Philadelphia General Hospital and Dr. Hubley R. Owen has been appointed in his place.——Dr. Leo S. Rowe of the Wharton School, and Dr. Charles H. Frazier of the Medical School of the University of Pennsylvania were named to represent the university at the forthcoming celebration of the one hundredth anniversary of the independence of the Argentine Republic during the summer.

## TENNESSEE

**Personal.**—Drs. John Allen Gentry, John B. Steele, and M. A. Meacham have been appointed interns at the Erlanger Hospital, Chattanooga.

**Conference of Health Officers.**—The first conference of State, City and County Health Officers was held in Nashville, April 6 and 7. Seventy-four of the ninety-six counties of the state and twenty-five cities and towns were represented at the conference. The members were welcomed by Governor Patterson. Among the subjects discussed were pellagra, hookworm and tuberculosis, and resolutions on these subjects were passed. A resolution was also passed and a committee appointed looking toward the securing of legislation to define the duties of health officers and to regulate their pay. Dr. Charles W. Stiles, of the Rockefeller Institute, gave an illustrated lecture on the hookworm. A permanent organization was effected and the following officers elected: Kirby S. Howlett, Franklin, president; Dr. George W. Booker, Knoxville, vice-president, and Dr. Blackburn G. Tucker, Nashville, secretary-treasurer.

## UTAH

**Goiter in Utah.**—The appearance of an epidemic of goiter in San Pete, Iron, Sevier and Cache counties during the past year has led the State Board of Health under Dr. Theodore B. Beatty to investigate the cause. Dr. John Sundwall, professor of anatomy at the University of Utah, has conducted the investigation. He found that in the small town of Monroe, 80 per cent. of the female population and 5 per cent. of the males were afflicted. In certain districts further south, it is found that more than half the women were affected. Dr. Beatty states that chemical tests show no constituents in the water not found in other regions where goiter is not prevalent. Geologic conditions will also be investigated.

## VIRGINIA

**Loving Cup Presented.**—At a meeting of the Lynchburg Medical Society, held April 4, a loving cup was presented to Dr. Rawley W. Martin.

**Resolutions in Memory of Dr. Kinney.**—At a special meeting of the Roanoke Academy of Medicine, resolutions of affection and respect for the late Dr. Jefferson Kinney, a charter member of the academy, were adopted.

**New Building for State Sanatorium.**—The State Board of Health has let the contract for six new buildings at the State Tuberculosis Sanatorium at Catawba. When completed, this will give the sanatorium a capacity of 112 patients.

**Gifts to University Medical College.**—Dr. Stuart McGuire, Richmond, has given $10,000 toward a fund to rebuild the University College of Medicine, recently destroyed by fire. The fund will soon be completed and building will begin.

**Personal.**—Dr. E. P. Amiss, Harrisonburg, returned home April 6, after undergoing a successful abdominal section at Union Protestant Infirmary, Baltimore, five weeks before.——Dr. Davis, second assistant physician at the Eastern State Hospital, Williamsburg, has been promoted to first assistant to succeed Dr. Rea Parker, resigned.——The board of the State Epileptic Colony has elected Dr. Albert S. Priddy, Keyesville, former superintendent of the Southwestern State Hospital at Marion, superintendent of the colony. He takes charge at once.

**Society Meeting.**—At a meeting of the Northampton County Medical Society, held in Cape Charles recently, the following officers were elected: President, Dr. Edmund W. P. Downing, Franktown; vice-president, Dr. Bertram H. Gilmer, Townsend; secretary, Dr. Carlisle L. Nottingham, Cape Charles, and treasurer, Dr. William L. Dalby, Bridgetown.

**Richmond College Merger Abandoned.**—Because of failure to effect an agreement the University College of Medicine and the Medical College of Virginia will not be merged as has been announced, but will continue their separate existence. It is reported that the former will erect a new building on the site of that which was destroyed by fire last January.

**Hookworm Found in School Children.**—At the request of Dr. A. C. Fisher, Emmerton, Dr. C. W. Stiles and Charles G. Crane, of the United States Health and Marine-Hospital Service, examined 39 white school children from a school in the Washington District, Richmond county, to determine the frequency of hookworm infection. Of these 23 were boys and 16 girls. It was found that 37, or 94.8 per cent., harbored hookworms, as demonstrated microscopically. Seventeen pupils, or 43.5 per cent., lived in homes not provided with any privy. The remaining 22 live on farms with a surface privy open in the back. Nineteen reported having had ground itch. 12 deny ground itch, and 8 report that they do not know. The 37 infected spent their entire lives on the farms.

## WISCONSIN

**Janesville Without Health Officer.**—The city council of Janesville voted recently to reduce the pay of city physician to $50 a year. The physicians all refused to accept the office at that figure and demand that it should be raised to $300.

**Personal.**—Dr. Orlando P. Sala, Bloomington, is seriously ill, as the result of cerebral hemorrhage.——Dr. Louis M. Warfield, Wauwatosa, formerly of St. Louis, has been made assistant superintendent and pathologist to the Milwaukee county hospital.

**Epidemics in State Institutions.**—The Insane Asylum at Mendota and the Northern Hospital, Oshkosh, are reported to have small epidemics of typhoid fever.——The State Home for Dependent Children, Sparta, is under quarantine for scarlet fever, there being 24 cases in the institution.

**Physicians Sentenced.**—Dr. Charles W. Beemer, Kenosha, who was arrested more than a year ago on a charge in connection with the death of a young woman, pleaded guilty and was fined $500 and costs.——Dr. William Jennings, Stevens Point, pleaded guilty to having committed arson, and was sentenced to three years in the penitentiary at Waupun.

**Society Meetings.**—The Iowa County Medical Society met at Dodgeville, April 7, and elected the following officers: Dr. Walter S. Lincoln, Dodgeville, president; Dr. John P. Parmley, Mineral Point, vice-president; Dr. William M. Gratiot, Mineral Point, secretary-treasurer, and Dr. Homer D. Ludden, Mineral Point, Dr. F. L. Crikelair, Hollandale, and Dr. Dennett B. Hamilton, Ridgeway, censors.

## GENERAL NEWS AND COMMENT

**Awarded a Gold Medal.**—The Royal College of Surgeons of England has awarded a gold medal to Dr. Robert Fletcher, principal assistant librarian of the Library of the Surgeon General's Office, Washington, D. C., in recognition of his distinguished services in connection with the indexing of the catalogue of that library.

**Typhus Investigator Ill with the Disease.**—Dr. H. T. Ricketts, of the University of Chicago, who has been in Mexico for several weeks conducting research into the etiology of typhus fever, is ill with that disease; the latest reports of his condition are favorable, however. Of the success of Ricketts' researches our readers are aware through his papers on this subject published in The Journal recently.

**Tuberculosis Sunday.**—The National Association for the Study and Prevention of Tuberculosis is the agency which drafted into the crusade the ministers, priests, rectors and rabbis of the country. It furnished them with information, which was presented in thousands of the churches of the United States, April 24, showing the ignorance that fosters the great white plague, that claims 200,000 victims every year in this country. An immense number of leaflets were distributed. Medical men, especially sanitarians, occupied the pulpits in many cases.

**Monument to Dr. Crawford W. Long.**—At Jefferson, Ga., April 21, a monument to Dr. Crawford W. Long was unveiled in the presence of a distinguished gathering of members of the Medical Association of Georgia, which was in session this week at Athens. The monument is in commemoration of the fact that Dr. Long was one of the first to use ether as a general anesthetic. James M. Venable, the patient on whom Dr. Long first operated under ether, is still living. Miss Emma Long, a daughter of Dr. Long, drew the cord which unveiled the monument. Dr. Woods Hutchinson of New York was the principal speaker.

**Coming Meetings.**—The Congress of American Physicians and Surgeons, with its component societies, the American Association of Genito-Urinary Surgeons, American Association of Pathologists and Bacteriologists, American Climatological Association, American Dermatological Association, American Gynecological Society, American Laryngological Association, American Medico-Psychological Association, American Neurological Association, American Ophthalmological Society, American Orthopedic Association, American Otological Society, American Pediatric Society, Association of American Physicians, and American Surgical Association, will meet in Washington, D. C., May 3-5.

**Death of Dr. Carpenter.**—The *British Journal of Children's Diseases* announces the death of its editor and founder, George Carpenter, M.D., London, 1890; M.R.C.S., England, and L.S.A., 1885; M.R.C.P., London, 1889; a member of many scientific societies and a prolific writer; at one time editor of *Pediatrics*, an Anglo-American journal devoted to diseases of children; who died suddenly at his home in London, March 27. His death is a notable loss to all those who study diseases of children, not only in Great Britain, but throughout the entire world.

## LONDON LETTER

London, April 16, 1910.

*(From Our Regular Correspondent)*

### The New President of the College of Physicians

Sir Thomas Barlow, physician-in-ordinary to the king, has been elected president of the Royal College of Physicians in succession to Sir Douglas Powell. This office is the most important that can be held by a physician in Great Britain and is an ancient one dating from the year 1518. The appointment is only for one year, but as it has from the earliest period been customary to reelect the existing president for a number of years the total number of presidents to date is only 99. The ceremony of election is a quaint one. There are no nominations but each of the fellows present writes the name of the person he prefers on a slip of paper and places it in an urn provided for the purpose. Should a name be placed in the urn by two-thirds of those present its bearer is elected forthwith. In the contrary case a ballot is held in respect of the two whose names figure most often and a majority in favor of one decides the election. Among the most famous presidents are Linacre, Caius, founder of the college of that name at Cambridge, Glisson and Sir Thomas Watson. The greater number of the presidents have passed into oblivion and the fact that so few have achieved enduring fame can be explained by the fact that the election has been determined less by brilliancy of attainments than by level-headedness and unimpeachability of character in all respects, social and scientific. Even election to the fellowship is a more searching test than admission to the most exclusive club, and election to the presidential chair entails a still more rigorous scrutiny. Indeed men of world-wide eminence who seemed in every way marked out for the office have failed to obtain it because of some act, which though it could not be called an offense, was deemed by some of the fellows not in keeping with the best traditions of the college. Thus one distinguished man was not elected owing to the suspicion that he had not been so careful as he should have been as to the way his name had been used in connection with a business company. The present holder of the office is one of the most distinguished physicians of the day and he has made many valuable contributions to medical science. He is best known for his discovery of infantile scurvy (Barlow's disease). The office of President of the College of Surgeons approaches in social importance that of President of the College of Physicians, but it does not quite equal it, partly because it is seldom held for a term of years and partly because a physician ranks somewhat higher than a surgeon as his calling is associated with a university education and greater scholarship, while a surgeon is essentially a craftsman descended from the old barber-surgeons. However, the modern transformation of surgery from an art into a science has rendered this distinction rather shadowy.

### Deaths Under Anesthesia

In a previous letter to The Journal an account was given of the report of a committee appointed by the government to inquire into coroners' inquests. This committee has now issued a further report on deaths under anesthesia. Leading anesthetists, such as Dr. Hewitt, Dr. Buxton and Dr. Silk; eminent surgeons, such as Sir Victor Horsley, Mr. Pepper and Mr. Clinton Dent; physiologists, such as Sir Lauder Brunton and Dr. Waller; and leading dentists were examined. The perils of anesthesia have attracted attention because of the great increase in the number of deaths under it in recent years. In 1866 the number of deaths registered as occurring in this manner was 5; in 1905 it was 155; in 1908, 235. But no absolute deductions can be drawn from these figures. As the law now stands, it is not compulsory to report a death under anesthesia administered for a surgical purpose; all that is necessary is to assign some cause for death. A distinction has to be drawn between death from an anesthetic and death under an anesthetic. Under anesthesia a person may die from the action of the anesthetic, from surgical shock, or from hemorrhage, or from a combination of these or other causes, such as asphyxia from the tongue slipping back, or regurgitation of food. Without investigation, it is impossible to say how far the anesthetic is the cause of death. The number of operations has increased much in recent years, and no statistics exist to show their relation to the number of deaths under anesthesia. Still, when all sources of error are allowed for, there appears to be an increasing number of deaths under anesthetics, and some of them are due to preventable causes. The committee thinks that every death under anesthesia should be reported to the coroner, who should exercise his discretion as to whether an inquest is necessary or not. As the law now stands, the administration of anesthetics is under no regulation. Apart from criminal intent, a bonesetter, a "beauty doctor," or a quack of any kind is as much at liberty to administer an anesthetic as a physician. Their only disadvantage is that if an accident occurs, the fact that they are not qualified is material evidence on the question of negligence. The committee thinks that this is a serious menace to the public, and that the administration of anesthetics should be regulated by law. It is urged that it should be made a criminal offense for any unqualified person, who is not acting under the personal supervision of a qualified physician, to administer a general anesthetic. But the committee does not think that registered dentists should be deprived of the right, which they have always had, to administer nitrous oxid. All dentists have to undergo a preliminary medical examination, and if training in the administration of nitrous oxid is made compulsory the public would be sufficiently protected. As many of the accidents which have occurred in connection with the administration of this anesthetic have occurred when the same person both administered the gas and operated; no person should attempt to do both.

With regard to methods employed in administering anesthetics there was curious difference of opinion among the expert witnesses. Some were of opinion that the way of safety lay in keeping the anesthesia light and that the anesthetic should be pushed only to the point of abolishing pain; others thought that the anesthesia should be profound, otherwise the danger of surgical shock was increased. The conclusion is drawn that the administration is not an exact science, and that the surgeon is between the Scylla of shock and the Charybdis of paralysis of the vital centers. With regard to the choice of an anesthetic, there is no consensus of opinion. Chloroform is largely used in England and still more largely in Scotland. Of the greater safety of ether there was much evidence; one witness declared it to be seven times as safe as chloroform. But it was regarded as unsuitable for the very young and the very old, and in cases of bronchial trouble. Instruction, both practical and theoretical, in the administration of anesthetics, the committee thinks, should be an obligatory part of the medical curriculum.

### The Antituberculosis Campaign

Though the antituberculosis campaign has been carried on in Great Britain with great activity in many directions, little has been done in the way of establishing dispensaries for tuberculosis, which are so common on the continent of Europe.

Yet the first dispensary appears to have been founded in Edinburgh, in 1887, by Dr. R. W. Philip. It began in a humble way, as a nucleus of the antituberculosis organization in that city from which there has now developed an elaborate organization consisting of (1) the dispensary; (2) a sanatorium of 100 beds; (3) 60 beds for advanced patients set apart in the fever hospital; (4) a working colony for cured patients; and (5) compulsory notification of the disease. The program of the dispensary includes not only the ordinary treatment of tuberculosis patients, but the visitation of patients at their homes by a physician and specially trained nurse for the purpose of treatment and of investigation into the state of the dwelling and the general conditions of life, and also into the risk of infection of others. Not until last year, when the Paddington Dispensary for Tuberculosis was founded in London, was any attempt made to follow the example of Edinburgh. In London, the annual number of deaths from tuberculosis is over 6,000, and it is estimated that there are 60,000 patients suffering from the disease of whom 24,000 are incurable and 36,000 curable. Of those curable, Dr. Williamson, medical officer of the Paddington Dispensary, estimates that in only 6,000 is the disease sufficiently advanced to show itself by characteristic symptoms and signs. To render the antituberculosis campaign effective, an effort should be made to search out and treat the remaining 30,000. As tuberculosis has been found, with few exceptions, to be a domestic disease, these persons should be found among the relatives of the definitely consumptive. It is the great merit of the Paddington Dispensary that it attempts to supervise the home life of tuberculous patients and search there for "contacts" who may be in an early stage of the disease. A specially trained nurse visits the homes and prepares an elaborate report on the character of the neighborhood and the house, which includes such details as general aspect (clean, damp, dusty, smelly), number of windows (can they open and are they kept open by day and by night?). Does the patient sleep alone in bed or alone in the room? If he has moved within two years, what were his previous addresses? Have there been any illnesses or deaths in the house? What is the health of the other inmates? What precautions are taken to disinfect? Are there tubercle bacilli in the dust of the room? There is no doubt that this home supervision constitutes a great advance in the campaign against tuberculosis. Unfortunately, the hospitals have at present no means of adopting it. However, St. Mary's Hospital, which is situated near the Paddington Dispensary, realizing the great value of the method, is sending its consumptive patients to the dispensary for the purpose of obtaining its benefits.

### Outbreak of Cerebrospinal Meningitis in London

London is threatened with an outbreak of cerebrospinal meningitis, a disease from which England has long been free, though, as recorded in previous letters, outbreaks occurred in 1907 in Scotland and Ireland. Already four deaths from the disease are reported from widely separate parts of the metropolis.

## PARIS LETTER

*(From Our Regular Correspondent)*

Paris, April 15, 1910.

### Educational Medical Trips to Health Resorts

Tours of medical study among the mineral springs and climatic resorts of France have been organized since 1899 to familiarize foreign and French physicians with French health resorts. These extremely numerous and varied resorts have been divided into five groups, according to their geographical situation. Each year in the first two weeks of September, a tour is conducted among the resorts situated in one region. The only persons allowed on these tours are physicians and their wives, and French and foreign medical students. The time is so arranged that each resort may be studied without waste of time from the following points of view: (1) visit to the springs and establishments under the direction of the physicians of the locality; (2) lecture on the therapeutic application of the waters and the other therapeutic features, such as climate, altitude, exercise, mechanotherapy, etc.; (3) excursion to gain a view of the general configuration of the country.

The medical tour of 1910 will take place from September 1 to September 15, under the scientific direction of Professor Landouzy, dean of the Paris college of medicine. It will comprise the resorts of Savoy and of the Dauphiné: Hauteville, Evian, Thonon, Saint-Gervais, Salins-Moûtiers, Brides, Pralognan, Challes, Aix-les-Bains, Marlioz, LeRevard, Allevard, La Motte, Uriage. For all particulars, inquiry may be addressed to Dr. Carron de la Carrière, president of the Société d'Hydrologie Médicale de Paris, 2, rue Lincoln, Paris, France.

### Dedication of the Monument to Horace Wells

On March 27, under the presidency of Professor Dastre, member of the Académie des Sciences and of the Académie de Médecine, a monument was dedicated to the memory of the American surgeon-dentist Horace Wells, who in 1844 conceived the idea of applying to dentistry the anesthetic properties of nitrous oxid, which had been discovered under the name of "laughing gas" by Humphrey Davy in 1799. The method of Horace Wells was, however, perfected by Paul Bert, whose researches led to the possibility of obtaining a lasting general anesthesia by the mixture of nitrous oxid with oxygen. The monument is by the sculptor Bertrand Boutée, and is erected in the Place des Etats-Unis. The bust of Wells stands on a pedestal of white marble, on which is sculptured a medallion bearing the head of Paul Bert. It bears the inscription "A Horace Wells, novateur de l'anesthésie chirurgicale."

### Third Congress of Practitioners

The third organized meeting of the rank and file of the profession to discuss exclusively practical questions met at Paris, April 7-10, with Dr. Gairal of Carignan, president of the Union des Syndicats médicaux de France, in the chair. There were 1,100 members enrolled, not counting the inscription of a certain number of medical associations. The first meeting of the kind, held at Paris in 1907, was attended by 1,500 members and the second, at Lille in 1908, by 1,200.

#### UNRESTRICTED CHOICE OF PHYSICIAN

The discussion of this subject, introduced by Dr. Bolliet of Lyons, ended in the adoption of resolutions endorsing the unrestricted choice of the physician in the sick benefit and mutual aid societies, and the treatment of the well-to-do among the members of the aid societies on the basis of ordinary patients. Dr. P. Vallat of Joinville-le-Pont dealt with the question of the free choice of the physician in the large corporations, asserting that the medical service of the great companies as at present organized fails to respect the dignity and the individual liberty of the sick, while it is at times accessible to the influence of the powerful to the detriment of the humble and of the physician's independence. He therefore proposed, and his resolution was adopted, that the unrestricted choice of the physician should be made compulsory in the administration of public and private services and industrial undertakings.

#### REFORM IN THE METHODS OF MEDICAL TEACHING

The agitation on this subject which has been maintained for some years in the French medical profession found utterance at the meeting, and the attacks, often rather discourteous, directed against the "officials" rendered decidedly uncomfortable the situation of the few professors, such as Drs. Pinard and Hayem, who felt it their duty to take part in the meeting. Dr. Lafontaine of Bordeaux in his paper insisted especially on the necessity of the suppression of the *agrégation* and protested against the present system of the *concours* and the favoritism which governs it. The essayist thought that the reform in medical teaching ought to be the work of practitioners themselves, and that it could be brought to a satisfactory conclusion only by the medical syndicates. The question, he believed, ought to be entrusted to a committee on reform, composed of equal numbers of those already holding medical offices and of representatives chosen by the practitioners at large. Professor Pinard expressed regret at seeing an antagonism between the "officials" and practitioners; for his part he knew only physicians. He feared that the campaign undertaken against the instruction in the medical colleges would bring discredit on physicians and reduce their prestige. He protested also against the statement that favoritism played an essential part in the *concours*. He declared himself personally a strong partisan of the system of the *concours*, which might be improved, but ought not to be suppressed. In spite of this wise advice, however, Dr. Lafontaine's conclusions were adopted.

The meeting, moreover, passed the resolution that for questions of medical instruction the Conseil médical supérieur de l'Instruction publique is an incompetent institution from a medical point of view since among its fifty-three members there are only three physicians and it ought to be replaced by a superior medical council composed of members of the teaching body and of an equal number of delegates chosen by the various professional societies.

### ABORTION FROM THE MEDICOSOCIAL POINT OF VIEW

In his paper, Dr. G. Bertillon of Maisons-Laffitte showed the constant increase of the number of abortions. Professor Lacassagne estimated that there are at Lyons 19,000 abortions to 450,000 births, and that the number of induced abortions in Paris each year is not less than 150,000. Abortions are practiced especially by the midwives, who are too numerous to be able to earn a livelihood. The essayist, therefore, proposed to limit the number of midwives in order to shield them from unwholesome temptations. This resolution was adopted by the meeting, but the other two conclusions of the paper, one in regard to the oversight of midwives and the other in regard to the compulsory report of every miscarriage, natural or induced, were rejected. Professor Pinard especially protested energetically against every proposition to do away with the obligation of professional secrecy and to make a spy of the physician.

### LIMITATION OF THE NUMBER OF MEDICAL STUDENTS

The meeting, while voting against the idea of a *concours* of admission for entrance to the medical colleges, believed that it was necessary to limit as much as possible the number of medical students, which is continually increasing. Accordingly it resolved (1) that the examinations should be more severe and every student who fails three times at one examination should be definitively excluded from all the medical colleges, and (2) that the number of colleges and schools, which have increased greatly since 1870, should be reduced.

### SANITARY LEGISLATION

The meeting resolved that the responsibility of reporting epidemic diseases should rest solely on the head of the family or the one who takes his place, instead of on the physician as at present. Another resolution adopted demanded that the director of a bureau of hygiene should be a physician and one who had practiced medicine for at least five years.

### ORGANIZATION OF THE HOSPITALS

Dr. L. Archambault of Paris emphasized especially the excessive centralization of the Assistance publique (Public Charities) and recommended the system of the autonomy of each hospital. After the reading of this paper and several other communications on the administrative organization of hospitals in foreign countries, and especially a communication from Dr. Koenig of Paris on the organization of the hospitals in the United States, and trained nurses, the meeting adopted the following resolutions: 1. In each hospital the physicians should have an active part in the administration. 2. The hospital should have administrative and financial autonomy and should be governed directly on the spot, and not from a distance and on paper by an irresponsible administration. 3. In France, as in certain foreign countries, the chief should be a physician aided by an administrative assistant. 4. These resolutions were to be sent to all the hospital physicians in France with the request that they sign a petition demanding from the ministry of the interior, in the interest of patients, the autonomy of the hospitals. 5. The vigilance committee is to study the causes of the bad administration in French hospitals and to communicaté the results to the press.

## BERLIN LETTER

(*From Our Regular Correspondent*)

Berlin, April 6, 1910.

### Industrial Insurance Discussion

The organized medical profession has been summoned to meet in Berlin, April 17, for the discussion of the provisions of the new bill for imperial industrial insurance. So far as can be judged from expressions in the medical press, it is recognized that the new bill introduces many important improvements over the first, but on the other hand, there are some essential demands to be met, without which peace between physicians and the sick benefit societies (Krankenkassen) cannot be expected. Especially there is a demand for a more favorable attitude of the law toward the free choice of physicians. It is to be expected that the medical association at this special session will express itself to this effect.

### Permanent Commission for International Medical Congresses

The permanent commission for international medical congresses, appointed at Budapest, held its first executive sitting, March 29 and 30, at the Hague. Delegates were present from Germany, France, England, Italy and Holland. The chief matter of business was the provisions for the full meeting, that is to take place later. The subject of discussion was a suitable organization of international congresses, especially so as to avoid collision between general and special congresses.

### Personals

Professor Krönig, of Freiburg, has unexpectedly declined the call to the directorship of the gynecologic clinic at the Charité, as successor of Bumm. It is rumored that there is an understanding that the Baden government will soon build a new gynecologic clinic at Freiburg for Professor Krönig and under his direction.

The surgeon, M. Hirschberg, of Frankfort, died recently, at the age of 67. On his return from the annual meeting of the Gesellschaft für Chirurgie he was attacked with heart failure in the carriage that was taking him home. Hirschberg was a well known surgeon who has shown much scientific activity.

Professor Schutz, director of the pathologic institute at the Berlin veterinary college, celebrated April 16 the semicentennial of his professorship. He is well known in human pathology, especially for work on the etiology of tuberculosis.

### Annual Meeting of the German Surgical Society

In Easter week, as usual, the German Roentgen Society, the Orthopedic Society and the German Surgical Society met in Berlin. In addition there occurred this year the first meeting of the Society for the Care of Cripples, which was largely attended by physicians, ministers, teachers and the superintendents of homes for cripples.

Of all these meetings, that of the Gesellschaft für Chirurgie was most interesting. Among the most important subjects there was first the "Surgical Treatment of Epilepsy." The Berlin surgeon, Professor Krause, who is recognized in consequence of wide experience as one of the foremost authorities in the field of surgery of the central nervous system, reported on the non-traumatic form. He based his report on 88 cases which he had treated during the last 8 years. Of these 50 were cases of Jacksonian epilepsy. All cases due to acute infection and to hysteria were excluded from surgical treatment. Only such cases as are due to new formations or occur as a sequel of infantile cerebral paralysis or in which the etiology is doubtful, are suitable for surgical treatment. In all cases of these three groups excision of the focus of the muscle group that is first affected is to be undertaken. The center is to be determined by faradic stimulation of the exposed motor region by long slender electrodes and a current so weak that it produces only sensation but no fibrillary contractions when applied to the tip of the tongue. The extensive paralyses that appear immediately after the operation gradually recede. Krause obtained 5 complete cures and many improvements. In general epilepsy the results were not so favorable. In these cases he made Kocher's operation (formation of a valve —*Ventilbildung*). Professor Tilmann of Cologne advised primary trephining at the point of injury in the treatment of traumatic epilepsy. He operates always in one stage. In his 26 cases 60 per cent. of the patients were cured, 10 per cent. improved, and 7 per cent. died. In the discussion Professor Garrè (Bonn) warned against too early recourse to operation in genuine epilepsy, lest the operation fall into disrepute. Only such cases should be submitted to operation as have withstood all the resources of internal therapy. Professor Braun (Göttingen) reported a case of traumatic epilepsy in which the patient was operated on by removal of part of the cortex twenty years ago and has since remained well. He recommends caution in the interpretation of successes after operation on account of the possibility of spontaneous improvement and cure.

Professor W. A. Freund, formerly director of the gynecologic clinic at Strasburg, now of Berlin, discussed the "Surgical Treatment of Stenosis and Rigid Dilatation of the Thorax." Both these deformities of the thorax occur as primary affections and produce injurious effects on the lungs. The first deformity is attributable to an arrest of development of the left costal cartilages. The result of this is a functional disturbance and change of form in the apex of the lung which invite the tubercle bacilli to settle there. Changes in the costal cartilage are also the cause of rigid dilatation of the entire thorax. Pulmonary emphysema is brought on by the position of the thorax in inspiration produced in this way. Not every tuberculosis of the lung nor every case of emphysema, however, is to be attributed to a primary deformity of the chest. The operative mobilization of the upper opening of the chest by excision of a piece of the cartilage of the first rib, imitating the mobilization which sometimes occurs spontaneously, produces a change in the apex of the lung and makes the cure of tuberculosis possible. The operation should be made only in case the tuberculous affection does not extend below the cartilage of the second rib. For mobilization of a rigid thorax, resection of pieces of the costal cartilages from the second to the fifth is recommended; but this chondrotomy is only indicated when atrophy of the lungs and of the diaphragm has not occurred as a result of the emphysema. The determination of the latter condition is possible according to the investigations of Professor Mohr (Halle), by ordinary clinical methods, including *x*-ray examination and spirometry. The forms of rigid thorax occurring in consequence of muscular spasm, as in the paralytic thorax and in the aged, should not be operated on. Bronchitis and bronchial asthma furnish no contraindication, but the contrary is true of disturbances in the circulation which cannot be removed by internal remedies. The operation should, moreover, be undertaken only in case the rigidity is of a really high grade.

Von den Velden (Düsseldorf) reported 10 operations for rigid dilatation of the thorax. Pieces of the cartilages of the second to the fifth rib were removed from the right side. The immediate result was striking in all cases and the permanent results were entirely satisfactory. Bronchitis was cured, the lung capacity increased at least 600 c.c., cyanosis disappeared, and even dilatation of the right heart was diminished. Seidel (Dresden), Friedrich (Marburg) and Stieda (Halle) reported permanent successes; other surgeons have had less favorable results.

The operation for appendicitis also received attention at this meeting. Professor Kümmell of Hamburg emphasized the fact that in opposition to the late attempt by Sonnenburg to treat beginning appendicitis in a more conservative manner, the surgical stand for early operation must be decisively maintained. It is not possible to draw a certain conclusion as to the pathologic process in the appendix from the symptoms present in the beginning of the affection or to make a correct prognosis in the early stage. Neither the leucocytosis nor the viscosity of the blood nor Arneth's blood picture permit a certain prognosis at an early stage. Kümmell warns, with especial earnestness, against the treatment by castor oil, recently reintroduced by Sonnenburg in the beginning of appendicitis. In a large series of cases he had found only 0.5 per cent. mortality after early operation, but the entire mortality of interval operations, if abscesses and peritonitis are included, rises to 6 per cent. The danger of interval operation is underestimated by practitioners. The mortality in case of abscess and peritonitis amounts to 20 per cent. Sonnenburg gave great weight to the prognostic importance of the leucocytes, not so much the absolute number as the distribution of the individual forms outside of the blood. The higher the relative number of mononuclear leucocytes the more unfavorable are the chances for the system. Only from a study of these biologic conditions and by a control of his views in many cases of mild appendicitis had he given castor oil in the expectant cases. He had no intention of introducing a new general treatment for acute appendicitis. As a practicing surgeon he advocated unconditionally the early operation. The justification of his trials in the hospitals is furnished by the fact that the mortality in his institution is not higher than that in other places. Professor Kocher of Bern agreed in all points with the views of Kümmell. According to his experience Arneth's blood formula gives no information so long as the disease is confined to the appendix itself. It is decisive only when the affection has become more extensive and then the most favorable time for operation has already passed. The other speakers expressed the same views so that the president of the congress, Professor Bier, was able to determine at the close of the debate that in this important question of early operation there was absolute unanimity in the position of surgeons.

In the treatment of "Tuberculosis of the Peritoneum" Professor Friedrich (Marburg) on the ground of experimental investigations, had injected into the peritoneal cavity as much as 20 c.c. of official glycerin in children, in adults as much as 40 c.c. and repeated the injection as many as eight times. His impression was that the course of the disease was very favorably influenced. The tuberculin treatment was very warmly recommended by others. Professor König (Altona) and Hohmeyer made a report on the present status of spinal anesthesia on the basis of a collective inquiry among leading German surgeons. Half of the German surgeons who have employed it no longer use it. In 2,400 cases which are included in the report, stovain, tropacocain and novocain were chiefly used. Side effects were frequently observed. The speakers came to the conclusion that spinal anesthesia should be employed only when local anesthesia and primary ether anesthesia, the *Aetherrausch*, are not possible and the inhalation method is contraindicated.

## VIENNA LETTER

(*From Our Regular Correspondent*)

Vienna, April 7, 1910.

### Women and Children in Factories

The report of the social committee of the Austrian parliament has been now issued; the part dealing with the work done by women and children is very interesting. About 39 per cent. of all the school children are employed in household or factory industries. The country school children are much oftener made laborers at an early age than those residing in cities, because the rural population is not so much under supervision as in cities; we have in this country compulsory schools, but the inspectors in the country are sometimes, especially during the summer, very lenient. On the other hand, the lack of laborers is felt more keenly in the country than in towns; the proportion of children's labor must be considered as an exponent of the social standards of the various parts of population. Similarly, factory work done by women is a proof of the degree of social development. The Austrian law now prescribes that night work must not be done by girls under 18; formerly the limit of age was 16. Even then females are to be kept away as much as possible from work of this kind unless necessity (accidents, war, abnormal weather) compels it. In each instance the inspector of labor must be informed of the fact, and if such employment exceed two weeks the magistrates must give their written permission, for a period not exceeding forty days in the year. In seasonal work only sixty days may be permitted. A woman past the fifth month of pregnancy may under no circumstances be employed at night work, nor any woman who has a child less than two months old.

### Conference on the Care of the Feeble-Minded

The fourth meeting of the Austrian Society for the Care of the Feeble-Minded was held a few days ago in Vienna, and was very interesting, being composed of all classes of persons engaged in practical and theoretical work of this kind—medical men, teachers, inspectors of schools, and special tutors. The necessity of special institutions for feeble-minded persons was recognized in this country not longer than twenty-five years ago. Since then philanthropists and magistrates have erected one or more institutions of this kind in nearly every capital city of the Austrian states. More than 50 per cent. of all children who were inmates of such institutes twenty-five to fifteen years ago, have become fit for a lunatic asylum or are certified lunatics under family care. Only 20 per cent. of all feeble-minded persons, who have received special instruction, are able to earn part of their living and thus to lessen the burden of their family. Nearly all the other 30 per cent. perished before attaining the age of 35. The blind, the deaf-mute and the crippled were also considered in the proceedings of the congress. There are in Austria all together eight large institutions for deaf-mute children, and the teaching is oral, without exception; the results are as a rule excellent as regards the possibility of keeping up a conversation, and several pupils of these schools have been able to attain good positions in social or commercial life. They are not feeble-minded; nor could the blind be included logically among the subjects of the conference, but they were considered.

Prof. von Wagner read a paper on his method of treating idiots with extract of thyroid. There are in certain Austrian mountain districts colonies of these unhappy individuals. The professor has been appointed by the government to investigate the problem, and by giving the thyroid extract, it has been possible to improve the mental activity, the growth and general health of 80 per cent. of all idiots in this country. In children, an increase of the height by 2 to 5 inches within one year, with a striking gain in intelligence was observed nearly without exception. Prof. von Wagner recommended the use of thyroid in all cases of feeble-mindedness of uncertain etiology.

### Lunatics and Political Difficulties

The political difficulties of the government in Bohemia have led to a curious result in the Bohemian lunatic asylums. As there was no budget granted in this country, the expenditures to be controlled by the budget cannot be made. All grants to medical institutes, all public buildings had to be stopped, and all patients paid for by the Bohemian revenue have had to be recalled from the hospitals. Among them were 820 lunatics, who were dismissed from asylums, in order to save expenses. This grotesque act, rather satirical than humorous, is perhaps meant only to bring the political parties to their senses. But at all events the danger of releasing insane persons has caused tremendous indignation all over the country, especially in medical circles, and the Diet of Bohemia is bitterly blamed for such an absurd decision.

# Pharmacology

## REVISION OF THE PHARMACOPEIA

### Preliminary Report from the Committee of the Section on Obstetrics and Diseases of Women

On Dec. 19, 1909, Dr. John G. Clarke, Chairman of the Section on Obstetrics and Diseases of Women of the American Medical Association, appointed the undersigned committee to suggest such changes in the Pharmacopeia, as the experience of gynecologists and obstetricians throughout the country would seem to justify. The following preliminary report of the results of our investigation are now presented in order that the information gained may be utilized at the meeting of the Pharmacopeial Convention, held May 10, at Washington. The final report will be submitted to the members of the Section, at the regular meeting of the Association in Saint Louis, June 7.

In order that the recommendation of this committee might go to the Pharmacopeial Convention, not merely as the opinion of one or two members but as an expression of the approval or dissent of several hundred members of this Section, it was decided to employ the return-postal ballot to find out what was the opinion of the majority. Through the generosity of The Journal of the American Medical Association the necessary printing and mailing was done without any expense to the Section. In order that all the members might vote with an intelligent understanding of the important points involved, there was sent to each member the following circular:

"As a member of this Section you are asked to express your opinion regarding the advisability of admitting certain preparations more generally used in the practice of your specialty into the 1910 revision of the U. S. Pharmacopeia. The special committee, appointed by our chairman, Dr. John G. Clarke, to consider the subject of these proposed changes, has deemed it best to take a vote of the members of the Section on the important points involved before March 25, so that the report can go to the Pharmacopeial Convention in May as expressing in great part the opinion of this Section.

"If this were not done and the report not submitted until the regular meeting of this Section in June, its influence on the Pharmacopeial Convention would be lost. It would be manifestly unjust and unwise to include in our Pharmacopeia any preparation whose name is trademarked or whose mode of manufacturing is patented. To obviate this very serious drawback in our copyright laws, we must employ the expediency of introducing these substances into the Pharmacopeia under new names.

"Your committee has therefore deemed it wise for you to express your opinion, not, for instance, on the relative merits of ergone, ergotol, ernutin, etc., but on the desirability of a purified concentrated preparation of ergot. If the physicians of the country think such a preparation a necessity, it becomes the duty of the committee on Revision of the Pharmacopeia to suggest a method of manufacture, standard tests, and a suitable name. What applies to ergot is true of the other six preparations concerning which you are asked to express your opinion. The technical difficulties regarding an accurate method of standardization can be safely left to the Committee on Revision. What your committee desires to know is which of these preparations have so far proved their usefulness as to justify inclusion in the Pharmacopeia.

"Your vote can readily be expressed on the enclosed postal card as directed. Please return it at once, so that the vote may be as complete as possible."

This circular was enclosed in an envelope, together with a post card addressed to the chairman of the committee, on the back of which was printed the following:

Do you favor the introduction into the next Pharmacopeia of the following. Indicate YES or NO by a cross (X):

YES NO 1. A purified concentrated preparation of ergot for hypodermic use (such as ernutin, ergone, etc.).
YES NO 2. A non-irritating silver solution (such as argyrol, protargol, etc.).
YES NO 3. A liquid preparation of the adrenal gland (such as adrenalin, adrin, etc.).
YES NO 4. A preparation of cotarnin (such as stypticin, styptol, etc.).
YES NO 5. A less toxic form of cocain (such as eucain, novocain, stovain, etc.).
YES NO 6. An extract of ovarian tissue and of the corpus luteum (such as lutein, etc.).
YES NO 7. A counter-irritant preparation similar to ammonium ichthyol-sulphonate (ichthyol).
YES NO 8. Do you favor a simplified name for hexamethylenamin (hexamin)?

Do you favor retention of the following preparations found in the 1900 Pharmacopeia? Specify by a cross (X) which you would retain: Gossypii cortex, viburnum prunifolium, viburnum opulus, cerii oxalas, glyceritum hydrastis, zea, uva ursi, hedeoma, oleum hedeomæ, vinum ergotæ.

Owing to the large number of members of this Section The Journal felt that it would suffice to send the circular and postal card, to every other member on the list of membership. Of the 500 communications thus sent out, replies were received from 196. The interest shown in the subject is indicated, not merely by the number of replies, but by the care taken in the consideration of each special topic brought up for discussion. In many instances, the vote was not merely expressed by "yes" or "no," but by additional comments. An analysis of the vote cast follows:

1. A purified concentrated preparation of ergot for hypodermic use.

The vote on this question was, 182 yes; 13 no; not voting, 1. Which one of the various methods in isolating the active principle of ergot will prove to be best is a question to be determined by the members of the Committee on Revision. The essential thing is that the preparation shall be free from inactive or irritating substances; that it should be aseptic and concentrated, so as to be suitable for hypodermic use, and that physiologic standards should be required to test its efficiency.

2. A non-irritating silver solution. The vote was 186 yes, 7 no, and 3 not voting. The irritation caused by the injection of silver nitrate in cases of cystitis, and in the prophylactic measures employed against ophthalmia of the new-born has led practitioners to favor the less irritating silver solutions, such as argyrol, argentamin, etc. It would seem that considerable difficulty will be found in establishing accurate chemical tests for the proper manufacture of such a preparation of silver, but that it is wanted by the profession is clearly shown by the vote.

3. A liquid preparation of the adrenal gland. The vote was 185 in favor, 5 against, and 6 not voting. Physiologic tests will be required to determine the efficacy of this product also.

4. A preparation of cotarnin. The fact that 31 of the replies left this question unanswered would indicate that a considerable percentage of the profession is still ignorant of its value as a uterine hemostatic. Nevertheless, the fact that of the remaining 165 votes, 123 favored the introduction of this substance into the Pharmacopeia, and only 42 opposed it, would justify its recommendation by the committee.

5. A less toxic form of cocain. There seemed to be practical unanimity of opinion regarding this substance. One hundred and seventy-six favored its introduction, 12 opposed it, and 8 did not vote. The great number of preparations of this sort that have been put on the market justify the belief that some equally good method of isolating a less toxic form of cocain, can be worked out by the Committee on Revision. It is hoped that, in naming this substance, a short synonym will be provided, in order to facilitate its competition with the proprietary substances already on the market.

6. An extract of ovarian tissue and of the corpus luteum. Of all the substances submitted to vote, this was the only one that failed to secure more than a bare majority. There were 99 voting yes, 67 voting no, and 28 not voting. If the Pharmacopeia is to include only these drugs that have the unequivocal indorsement of the profession, we are not justified, from the vote, in recommending the inclusion of an ovarian extract into the Pharmacopeia. It is probable that in the next five or ten years, our knowledge of the manufacture and physiologic action of these organic extracts may be so much improved as to justify their admission into the Pharmacopeia, but for the present we ought to assume a conservative standpoint.

7. A counter-irritant preparation similar to ammonium ichthyol-sulphonate. The vote stood, 166 yes, 19 no, and not

voting 8. There seems to be no reason why this substance should not be admitted to the Pharmacopeia, as its use in gynecology, as well as in other conditions, has been sufficiently demonstrated. Owing to the copyright laws in this country, it would not be advisable to introduce the substance into the Pharmacopeia under its ordinary name of ichthyol. The chemical name, on the other hand, is too cumbersome for the practitioner's use. We trust that some simple synonym, of not over three syllables, will be adopted.

8. A simplified name for hexamethylenamin. One hundred and eighty-one favored a simplification, 9 opposed it, and 6 did not vote on this question. The nomenclature of substances in the Pharmacopeia is of considerable importance. It should serve two purposes: one, to indicate the correct chemical composition of the preparation, as nearly as possible; the other, to give a short easily remembered name, for everyday use, by the practitioner. These abbreviations of chemical terms should not, as in the case of hexamethylene tetramine, consist merely of the elimination of two syllables ("tetra"), but the name should be cut down to such a simple form as "hexamin," even if, chemically, such an appellation means little or nothing. If the U. S. Pharmacopeia is to compete with proprietary medicines, its terminology must be simplified for use by the busy general practitioner.

Ten substances in the Pharmacopeia, primarily used by gynecologists, were placed on the postal card ballot, with the view of determining whether they should be retained in the next edition of that book. The vote on these ten products was as follows:

1. Hedeoma.—The vote was 179 in favor of exclusion, 17 of retention.
2. Oleum hedeomæ.—The vote was 179 to exclude it and 17 to retain.
3. Vinum ergotæ.—The vote was 173 to exclude it and 23 to retain it.
4. Zea.—The vote was 171 to exclude it, 25 to retain it.
5. Gossypii cortex.—The vote was 154 to exclude it, 42 to retain it.
6. Glyceritum hydrastis.—The vote was 137 to exclude it, 59 to retain it.
7. Viburnum opulus.—The vote was 128 to exclude it, 68 to retain it.
8. Uva ursi.—The vote was 118 to exclude it, 78 to retain it.
9. Cerii oxalas.—The vote was 79 to exclude it, 117 to retain it.
10. Viburnum prunifolium.—The vote was 71 to exclude it, 125 to retain it.

There can be no question that physicians, as a whole, do not use the first five of these preparations enough to justify their retention in the Pharmacopeia, and likewise no question but that cerium oxalate, and viburnum prunifolium apparently give results in the hands of many physicians, so that they should be retained. What disposition should be made of the remaining three preparations (glyceritum hydrastis, uva ursi, and viburnum opulus), may be left to the discretion of the Committee on Revision.

Fred J. Taussig, Chairman.
Henry T. Byford.
Guy L. Hunner.

## PHENOLPHTHALEIN

Phenolphthalein has long been used as an indicator in chemical reactions, but its use as a therapeutic agent[1] is comparatively new. When its laxative properties were first discovered it was exploited as a proprietary in Germany, and it was not long before the enterprising manufacturers in this country saw in it a potential gold mine and now nearly every proprietary drug manufacturer in this country has coined a proprietary name for it and is exploiting it, either alone or in combination with one or more other laxatives, and with more or less unwarranted claims.

Phenolphthalein itself has certain pretty well defined properties, but when a little of some other drug has been added wonderful therapeutic possibilities are claimed for the combination. The drug also has a definite market value and the pure substance in the form of powder, tablets or pills could not be sold at a price greatly in excess of the market value. Thus manufacturers, from business policy, add to it other drugs.

There are now on the market numerous more or less secret and "fancy" preparations of phenolphthalein for which a price is charged out of all proportion to the value of the preparation. Among these are Phenolphthalein Laxative (El Zernac Co.), Exurgine (sold by Bischoff & Co.), Probilin (Schering & Glatz), Prunoids (Sultan Drug Co.), Laxine (Columbus Pharmacal Co.), Phenolax Wafers (Upjohn Co.), Laxaphen (Parke, Davis & Co.), Phenalein (Pax Chemical Co.), Thalosen (Abbott Alkaloidal Co.), Laxothalen Tablets (Pitman-Myers Co.), Veracolate (The Marcy Co.) and a number of others, perhaps. And additional preparations are still coming out.

Some of the preparations contain only the phenolphthalein with a coined non-descriptive proprietary name attached, but most of them contain in addition one or more of such drugs as cascara, sulphur, prune, senna, salicylic acid, ipecac and aromatics. The exploitation of phenolphthalein in this way gives opportunity to the manufacturers to make all sorts of strong claims, some of them directly contradictory, for their preparations. For instance, Phenolax, which is said to contain phenolphthalein and cane sugar, is claimed to be "a great success for all forms of constipation, intestinal atony and hepatic torpor." Of Laxothalen, which is said to contain phenolphthalein, aromatics and sugar, it is stated that "its action is confined to the bowel and it has practically no hepatic action." Of Prunoids, which is said to contain phenolphthalein, cascara, de-emetized ipecac and prunes, we have the old familiar statement that "the harmonious blending of the several ingredients will give results that cannot be obtained through their use separately, nor will their use be followed by after-constipation."

At the time phenolphthalein was beginning to be exploited in this country The Journal[2] suggested that physicians who wished to try the remedy should prescribe it under its own name and not under fancy, coined names. Since phenolphthalein occurs in the form of an insoluble and tasteless powder there is no reason why special pharmaceutical preparations of it should be placed on the market. It can be prescribed in powder form, in pills, capsules or tablets. Thus given, the true therapeutic action of the drug would be apparent and its actual value arrived at.

The vice of this unscientific habit of prescribing names instead of drugs is stated in a forcible way in a letter received from Dr. V. E. Simpson, a teacher of materia medica and therapeutics in the medical department of the University of Louisville. He says:

"Recently P. D. & Co.'s representative left on my desk a sample labeled 'Laxophen.' The formula given is: phenolphthalein, gr. viii; salicylic acid, gr. 3/5, in each fluid ounce, 'incorporated in a palatable chocolate base.' Now, in the first place, this name is one that the public will easily learn and will soon call for; in the second place, it is not a name that carries with it even a suggestion of its contents; and, finally, the physician acquires the habit of mechanically prescribing names instead of drugs, and in the burdening of his memory with the myriad of fantastic labelings he finds it impossible to remember even the drugs any one contains, much less the exact proportions of those drugs. Then suppose that a consultation is had; the consultant asks what is being given and the attendant answers that he is giving 'laxophen.' The consultant, perhaps, has not been sampled and inquires about it; the attendant must answer, 'Oh, it contains some phenolphthalein and a salicylate, but I have forgotten the exact proportions. I have the literature on my desk. Had he used U. S. P. and N. F. remedies, which the consultant and every other doctor in the land has access to and should have some knowledge of, this embarrassment would not occur.'"

All of the above should remind the physician that he should write simple prescriptions, for drugs whose action he knows, adapted to the particular case and not the money-making combinations under fanciful, non-descriptive names exploited by the proprietary manufacturers. In this way he will not only save money for himself and his patients, but he will be giving them exact and effective treatment, he will know exactly what he is giving and learn for himself its effect, and he will be following the only method which entitles him to be called a scientific physician.

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[1] Those who wish to study the action and use of this drug further will find references to articles in The Journal as follows: The Journal, Jan. 5, 1907, pp. 64 and 70; March 30, 1907, p. 1133; April 20, 1907, p. 1351; Nov. 21, 1908, p. 1782; Nov. 28, 1908, p. 1886. The first page mentioned discusses the introduction of phenolphthalein into medicine.

[2] The Journal, March 30, 1907, p. 1133.

# Correspondence

## The Careless and Criminal Use of the Mercuric Chlorid Tablet

*To the Editor:*—The report in The Journal, April 9, of a peculiar case of mercurial poisoning prompts me to make this communication. Such cases are not so uncommon as Dr. Lankford thinks. The use of these tablets has become common and druggists sell them without observing the requirements of the law as to the sale of poisons.

Several years ago a girl was given these tablets by her physician for a vaginal wash, with oral instructions as to their use. She ignorantly inserted a 7½ grain tablet into the vagina. As she suffered great pain, another physician was called in, who finding the cause, used local washes to allay the effects. Later, symptoms of mercurial poisoning developed. I then came into the case and attended the patient until she died some two weeks later. The case pursued the course so well described by Dr. Lankford. Last year a young farmer from an adjacent county came here with his bride. He procured a supply of "antiseptic" tablets from a druggist of his county and after intercourse with the young wife placed a tablet in the vagina. Result, death some ten days after in one of our hospitals. The husband was indicted for murder, convicted of involuntary manslaughter, and is serving out his time in jail. In his testimony he said that he and the girl had been having illicit intercourse for some time and that they had been using some kind of antiseptic tablet to prevent pregnancy and that he was ignorant of the difference between the two kinds.

A druggist told me that he had seen reports of several such cases in his journals. A married patient consulted me about using a wash recommended to her by one of her friends to prevent conception. To my astonishment she brought out an unbroken bottle of 7½ grain antiseptic bichlorid of mercury tablets containing several hundred. How or where she procured them I did not learn. After my talk to her, however, she did not use them.

A young man visiting in the city at the annual encampment of one of the semimilitary orders, procured at a drug-store some "blue" tablets to use after a visit in the red light district; also some migrain tablets for a headache, from which he was suffering. He carelessly took the blue tablet; prompt attention at the drug-store by one of our physicians saved him. While he was being treated in the rear of the store another young man of the same order entered in front to get blue tablets for similar uses, but he failed to get them. I know of one case of fatal mercurial poisoning from long-continued bichlorid vaginal douches, ordered by a surgeon and kept up by the patient's family physician.

Doubtless there are many cases in which the bichlorid "blue" tablets are kept near the fountain syringe for use to prevent conception. So it behooves physicians and druggists to exercise caution as to prescribing and dispensing these very actively poisonous but innocent looking tablets.

W. H. Sharp, Parkersburg, W. Va.

## A Proposed Section on Genito-Urinary and Venereal Diseases

*To the Editor:*—While attending the last meeting of the American Medical Association at Atlantic City I presented a resolution, which had previously been unanimously passed by my state society, requesting the House of Delegates to organize a new section to be known as the Section on Genito-Urinary and Venereal Diseases. I briefly enumerated then the reasons for the organization of this section. I shall recapitulate a few of the most important reasons. At present anyone presenting a paper on a genito-urinary subject might be assigned to the Section on Surgery, where we all know it would receive rather an indifferent reception. One presenting a paper on syphilis would be assigned to the Section on Dermatology. At the last meeting the Section on Cutaneous Medicine and Surgery changed its name to Section on Dermatology; hence a close demarcation in classification would naturally exclude syphilis, as syphilis is not a skin disease exclusively just because it has a skin manifestation, any more than it is a nervous disease because it is an etiologic factor in producing paresis and locomotor ataxia. Syphilis is a disease of the whole organism and no cell in the body enjoys immunity from its attack. I consider genito-urinary diseases and syphilis more closely allied than are skin diseases and syphilis, as genito-urinary specialists as a rule treat more syphilis than do dermatologists. The laity classify genito-urinary diseases and syphilis together, and therefore they call on the genito-urinary specialists, and not the dermatologists, when afflicted with any venereal disease. Our standard American text-books on the subject, such as White and Martin, Taylor, Keys, etc., include genito-urinary diseases and syphilis, and these authors are the ones that are more frequently quoted as authority on syphilis than any of our dermatologists. This same rule holds good with most of the European authorities.

When I presented my resolution it was referred to the Committee on Sections, and here it met with opposition from the Section on Cutaneous Diseases and Surgery and the American Urological Association. The latter was a surprise. The Section on Cutaneous Diseases and Surgery thought that the Section on Genito-Urinary Diseases and Venereal Diseases would take syphilis away from their section, when on reflection, they might know, they can go on in either section and have as many papers on syphilis as desired, the two sections would not conflict at all. The Section on Nervous and Mental Diseases last year had a symposium on the new pathology of syphilis. Syphilis is a disease that can be discussed in any section of the American Medical Association, as it does not belong exclusively to any one. The American Urological Association thought that the section was intended to disrupt that society and it made such a bitter protest that in the interest of peace and harmony it was invited to come in as a body and participate in the transactions of this new section, but it passed a resolution rejecting the offer. As the American Urological Association is an independent organization, and in no way related to the American Medical Association, it has no right to dictate what section should exist in the American Medical Association. Furthermore, the American Urological Society is purely, as its name implies, a urological society, and will not allow any papers on its program that take up the discussion of the genital portion of the urinary tract, such as an article on any genito-urinary disease of gonorrheal origin. The papers as a rule consist of articles on the capital surgery of the kidneys, prostate and bladder, whereas an average genito-urinary specialist has several hundred cases of the minor genito-urinary diseases in his office work to one of a capital nature.

The section I desire to be organized is to be more strictly a section for the study of genito-urinary and venereal diseases, such as diseases of the spermatic cord, prostate, urethra, external and internal genitals, whether of gonorrheal origin or from any other cause. Possibly the term "andrology" would be appropriate and more acceptable to some. The work in this section would in no way conflict with the American Urological Association or the Section on Dermatology, but would encompass a class of diseases that would be of interest to the genito-urinary specialists and of great interest to the general practitioner, as they frequently meet this class of diseases in daily practice. It is not my object to create any antagonism and I think that after mature reflection the members of the American Medical Association will see that such a section can be organized without antagonizing any other section and be productive of excellent work.

The committee last year returned the resolution to the House of Delegates, which approved it, stating that if one hundred members would sign a petition requesting the organization of such a section the section would be created. As I was a member of the House of Delegates and will be again this year at the coming meeting in St. Louis, I wish to present the resolution again for approval and desire the support of all members of the American Medical Association who are interested. I therefore ask all members who are in favor to write me in the following form:

*To the Hon. House of Delegates:*

I hereby approve of the organization of a new section to be created in the American Medical Association, to be known as the Section on Genito-Urinary and Venereal Diseases and pray you will organize such a section at your next meeting in St. Louis, June, 1910. If such a section is organized I will give it my support.

Name..............................
City..............................
County..............................
State..............................

I shall appreciate receipt of these by return mail, so I can attach the replies to my petition to be presented to the House of Delegates at the coming meeting in St. Louis. in June.

Eugene Carson Hay, Hot Springs, Ark.
102 Exchange Street.

### A Proposed Section on Physical Forces in Medicine and Surgery

*To the Editor:*—A petition will be presented to the House of Delegates at the St. Louis session asking that a section be created in which the physical forces, of whatever nature, in their relations to medicine and surgery, may have adequate opportunities for presentation and discussion. This petition has already been largely signed. As the time available to secure additional signatures is now short I would like those in sympathy with this movement to write to me, or to Dr. William S. Newcomet. 3501 Baring street, Philadelphia, at once, stating their interest in the matter and promising to support the section if formed, and these letters will be added to the petition.

G. Betton Massey, Philadelphia.
1801 Chestnut Street.

### Finger-Nail Palpation

*To the Editor:*—I have practiced for several years past the method of perpendicular nail palpation of artery walls accredited to Wertheim-Salomonson in The Journal, April 16, page 1345. I consider it far more satisfactory and accurate than the usual method of palpating with the pulp of the fingers, and especially so in deep-seated or slightly hardened arteries, and to make sure when there is no hardening present.

W. F. Rochelle, Jackson, Tenn.

## Book Notices

Diseases of Genitourinary Organs. Considered from a Medical and Surgical Standpoint, Including a Description of Gonorrhea in the Female and Conditions Peculiar to the Fmale Urinary Organs. By Edward L. Keyes, Jr., M.D., Clinical Professor of Genitourinary Surgery, New York Polyclinic Medical School. Cloth. Price, $6. Pp. 975, with 195 illustrations. New York: D. Appleton & Co., 1910.

This is practically a new work and embodies what has been proved reliable of the newer technic of the last few years. Operative procedures are grouped in a separate chapter and are described in an excellent manner. There is a chapter on the care and sterilization of various instruments, and the book throughout emphasizes the necessity of acquiring a true aseptic conscience, which is unfortunately still too rare among men handling pus cases. The importance of thorough, systematic and careful examination is emphasized and special attention paid to the laboratory side of diagnosis. Dr. Keyes makes a plea not only for an etiologic diagnosis, but for an exact, localizing, anatomic one as well. In discussing treatment a nice sense of discrimination is shown and principles are taught that can be easily followed.

There is a chapter on syphilis which is out of place in a work of this sort; also one on chancre and one on chancroid. Methods for determining the renal function are compared and the results analyzed, the phloridzin test and the importance of urea are emphasized. Gonorrhea is discussed from every angle—its social aspects, prophylaxis, relation to marriage, its real gravity, and remedies to limit its spread. There is also included a chapter on gonorrhea in women, which is a welcome addition. Stock vaccine is recommended in treatment, especially in cases complicated by epididymitis. The extragenital complications are briefly described, but arthritis should have been more fully gone into. Prostatitis, vesiculitis, stricture, stone, tuberculosis, are all treated in an excellent manner. Nephrectomy is advocated as the ideal treatment for renal tuberculosis, but in the epididymal infection expectant or palliative treatment is the plan to be followed. Epididymectomy may have to be performed, but rarely castration.

The illustrations are for the most part good, but those illustrating the passage of sounds are poor. There should have been more of them and more explicit directions with each picture.

The book is concise and free from padding. It covers the field of genitourinary diseases as nearly as any one work can, is lucid and up to date and has a smooth, readable style. It is an excellent book in every way.

Serum Diagnosis of Syphilis and the Butyric Acid Test for Syphilis. By Hideyo Noguchi, M.D., Associate Member of the Rockefeller Institute for Medical Research, New York. Cloth. Price, $2 net. Pp. 173, with 14 illustrations. Philadelphia: J. B. Lippincott Co., 1910.

In this book the author treats the serum diagnosis of syphilis with a special view to the needs of laboratory workers, physicians and students. For this purpose he gives, first, a careful account of the essential facts in regard to hemolysis by serum and then of the power of combination of antigens and antibodies to fix complement and in that way to prevent hemolysis. The explanation, step by step, of complement-fixation on which the Wassermann test and all its variants are based is admirably clear and precise. The technical details of the Wassermann method and of the method recommended by the author (Noguchi's modification) are given with painstaking accuracy, and various phases of the tests are illustrated by ingenious diagrams that will serve to facilitate the comprehension of the tests by the uninitiated. The author does not permit himself to wander off into theoretical discussions. Even the surprising fact that various non-specific substances may take the part of antigen, quite as well as extracts of syphilitic liver, thereby upsetting to a degree the theoretical considerations on which the test is based, precipitates only the suggestion that these non-specific substances play an intermediating rôle between the real syphilis antigen and antibody present in syphilitic serum. The now well-established diagnostic value of the Wassermann reaction is shown by means of tabulations of the results obtained by various investigators. The last chapter is devoted to the author's butyric acid test for syphilis. There is an extensive bibliography and also a useful glossary of the terms commonly employed in discussions of immunity. The book fills a need and fills it well; it will be of great use to all who are interested in the serum diagnosis of syphilis.

Minor Ophthalmic and Aural Technique. By Alfred Nicholas Murray, M.D., Chicago, Assistant in the Department of Otology and Laryngology, Rush Medical College. Cloth. Pp. 233, with 98 illustrations. Price, $3.00. Chicago: Cleveland Press, 1909.

The author of this book is to be congratulated on the happy manner in which he has arranged, in so concise a form, the many elementary and useful hints on the eye and ear for the student in medicine. The great majority of practitioners have never had, and many students are not now getting, the training in ophthalmology and otology that they ought to get; consequently one must welcome every effort to help. We can scarcely forgive the author for using illustrations so poorly done as Figs, 8, 15, 19, etc., in this age of splendid art work, when semidiagrammatic illustrations would do so much better. The few words on anatomy and physiology could well be dispensed with, and a few references to works on the subject substituted. Although this work is classified as an elementary book, such diseases as gonorrheal ophthalmia and ophthalmia neonatorum are not given the attention which their importance demands. The treatment given is altogether too meager for any book whose pretensions are beyond those of a quiz compend. Two pages on eye-strain and ocular headaches is a decided slight to these distressing conditions, when six pages are devoted to an appendix on eye instruments. A reversal of this allowance would be more in keeping with what the reviewer takes to be the object of the volume. Diagram 65 is incomprehensible to any but an expert, and the illustrations of the malleus, incus and stapes are not what one has a right to expect when good ones can be had for the asking. No mention is made as to the use of the ophthalmoscope in general medicine, which is a very serious omission. The book, however, will be a useful help to the student and busy doctor, neither of whom have time nor perhaps the inclination to consult large works on these subjects.

Handbook of Diseases of the Ear. For the Use of Students and Practitioners. By Richard Lake, F.R.C.S., England, Surgeon, Diseases of Ear, etc., London School of Clinical Medicine. Third Edition. Cloth. Price, $2.75 net. Pp. 238, with 66 illustrations. New York: William Wood & Company, 1910.

In the diagnosis, prognosis and treatment of diseases of the middle and internal ear and the mastoid a complete and accurate history of the patient is of greater importance, perhaps, than in diseases of almost any other anatomic structure or function. In this handbook, after giving a brief description of the more important anatomic points, Lake lays emphasis on the points to be brought out in the history-taking, and then describes special symptoms and their import, the bearing of nasal disease on aural disease and the function of hearing, gives in a clear manner the methods of testing the acuteness of hearing and describes the instruments used for this purpose and for the examination of the ear in general. The diseases of the ear and the possible intracranial complications are then described and the treatment indicated.

The descriptions of the different surgical procedures are given in a separate chapter, the different mastoid operations being especially well treated, as are the operative measures for the improvement of hearing in the chronic troubles, and the management of deaf-mutism. There is a chapter on otosclerosis and one on the influence of diseases of the middle ear on life insurance. The physician who expects to do operating in this difficult special field would of course consult larger works and gain experience in hospital, clinical and cadaver work. The book has an index, an appendix contains formulas for various solutions, powders, ointments, etc., to be used in ear diseases, numerous helpful illustrations, beside four colored plates showing numerous views of the tympanic membrane in various middle ear conditions.

A System of Clinical Medicine. Dealing with the Diagnosis, Prognosis and Treatment of Disease, for Students and Practitioners. By Thomas D. Savill, M.D., Physician to West End Hospital for Disease of Nervous System. Second edition revised by the author, assisted by Frederick S. Langmead, M.D., Casualty Physician to St. Mary's Hospital, and Agnes F. Savill, M.D., Casualty Physician to St. John's Hospital for Diseases of the Skin. Cloth. Price, $7. Pp. 963, with 172 illustrations. New York: Longmans, Green & Co., 1909.

The first edition of this book, in two volumes, was printed in 1903 and reviewed in The Journal at that time. · This edtion is in one volume but contains about the same amount of material as the first. Since the two editions come so far apart, many changes were required by the rapid advances in medicine. The author has attempted to make these changes, but he admits that he has not given as much time to the revision as could be wished. In some respects the book shows this lack, as many articles no doubt might have been rewritten with advantage to eliminate dead timber and such designations as acute and chronic dyspepsia or gastritis, gastralgia, etc., terms which are still used, while calling attention to the more modern views in regard to gastric diseases. Treatment is given very brief space in most instances, consisting of the most general indications of what may be done. The chapter on nervous diseases is more complete and satisfactory than some others, which is accounted for, perhaps, by the fact that Dr. Savill gives especial attention to nervous diseases in his practice. Recent laboratory methods are sufficiently covered for a work of this kind. The original plan of the book is followed, subjects being approached from the view of symptomatology, symptoms then being traced to their causes, that is, the various diseases. The book is a useful and helpful one for the practitioner and the advanced student.

Urgent Surgery. By Félix Lejars, Professor Agrégé à la Faculté de Médecine de Paris. Translated from the Sixth French Edition by William S. Dickie, F.R.C.S. Cloth. Pp. 617, with 20 full-page plates and 994 illustrations. Vol. I. Price, $7 net. New York: William Wood & Co., 1910.

It is evidently the author's intention to divest surgery of the terrors it has for the average practitioner—but he is doing so at the expense of results. In the first place, by urgent surgery he does not mean emergency surgery—and to perform all the operations described in this book, years of practice and observation are necessary. Practically every condition for which surgical intervention is called for receives consideration here. The book is, therefore, really a text-book of surgery, written in a most readable style, avoiding all theoretical discussions, giving no bibliography, no description of new and untried methods—merely a discussion of the indications and the technical details. The advice given is good and no fault can be found with the methods described, but it is questionable whether the mere reading of a book will make the general practitioner—for whom it was written—sufficiently proficient to perform a gastro-enterostomy or a hysterectomy or a craniectomy or an esophagotomy.

Examination of the Urine. A Manual for Students and Practitioners. By G. A. DeSantos Saxe, M.D., Instructor in Genito-urinary Surgery, New York Post-Graduate Medical School and Hospital. Second edition. Cloth. Pp. 448, with illustrations. Price, $1.75 net. Philadelphia: W. B. Saunders Company, 1909.

This little manual is essentially technical and will be valuable to the practitioner in his daily routine. It not only tells what to do, but how to do it, and what the findings mean. The clinical aspect of uranalysis is emphasized. Many chapters have been practically rewritten and new subjects have been introduced, such as the pentoses, Cammidge's reaction, methods of preserving and staining urinary sediments, and preparing sediments for bacteriologic examination. New chapters have been added on urethral shreds, vesicular sago-bodies, diabetes, and toxemias of pregnancy, and a concise account of the modern methods of functional renal diagnosis has been incorporated. Plates of the Vogel and indican color scales are inserted in the book.

The Simple Carbohydrates and the Glucosides. By E. Frankland Armstrong, D.Sc., Associate of the City and Guilds of London Institute. Cloth. Price, $1.20. Pp. 112. New York: Longmans, Green and Co., 1910.

This is one of a series of monographs on biochemistry, edited by R. H. Aders Plimmer and F. G. Hopkins. It is intended to assist the student who wishes to make a thorough study of the carbohydrates and to whom much of the recent literature on the subject is not readily available. It presupposes an acquaintance with the elementary facts and would be difficult reading to one who is not thoroughly acquainted with the theories of modern physical and organic chemistry. The monograph will be of special value to the advanced student of physiologic chemistry and of physiology, but little of its material is at present utilizable by the medical practitioner.

Klinische Immunitätslehre und Serodiagnostik. Ein Lehrbuch für Aerzte. Von Dr. A. Wolff-Eisner. Paper. Price, 3.60 marks. Pp. 186, with 5 illustrations. Jena: Verlag von Gustav Fischer, 1910.

This book has its origin in lectures given by the author to physicians. It emphasizes the clinical and diagnostic importance of the facts of immunology and has but little to say about serum therapy and protective inoculation. Special emphasis is laid on the subject of hypersusceptiblity and on the clinical phenomena ascribed to this state. On the whole, the presentation is rather rough and fragmentary; and whether that is the best form by means of which to try to arouse the interest of "the busy practitioner" in the practical importance of the phenomena of immunity may well be doubted.

Handbook of the Diseases of the Nose and Throat. By Eugene S. Yonge, M.D., Physician to the Manchester Hospital for Consumption and Diseases of the Throat. Cloth. Pp. 407, with illustrations. Price, 9 shillings net. Edinburgh: William Green & Sons, 1909.

While the author of this book modestly states that it is intended solely for use in general practice, it is nevertheless a work of interest to the specialist also. The text is concisely written and conveys a fair working basis for the guidance of the general practitioner, though it is to be regretted that the descriptions of operations are not given in more detail. It is illustrated by 52 plates, most of which are excellent and add materially to the value of the text.

## Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

### NUMBER OF CRIMINALS, INSANE, ETC., IN INSTITUTIONS IN THE UNITED STATES

*To the Editor:*—Can you give an approximate estimate of the number of persons in reformatory, penal, idiocy and insane institutions in the United States?

J. H. Mackay, Norfolk, Neb.

Answer.—The above query was referred to the Director of the Bureau of the Census, Hon. E. D. Durand, who replies:

"According to the returns of a census of the insane and feebleminded in institutions, there were in hospitals of the United States on Dec. 31, 1903, 150.151 insane patients, and during the year 1904 49,622 were admitted and 41.733 were discharged. On page 3 of the report it is stated that the statistics of paupers in almshouses for 1904 give 11,807 inmates as insane; and unquestionably a diligent search would have shown a larger number of insane persons who had not passed into the care of any institution. The figures for Dec. 31, 1903, and for those admitted during the year 1904 are for patients in public and private hospitals treating only the insane or having a separate department for the treatment of this class of patients. In institutions for the feeble-minded there were 14,347 patients on Dec. 31, 1903, and 2,599 were admitted during 1904, while 1,435 were discharged. The term 'discharged' includes those actually discharged and also those who died or were transferred to other institutions.

"Our report on prisoners and juvenile delinquents in institutions shows that there were 81,772 adults in penal institutions of the United States June 30, 1904. These included prisoners in U. S. civil prisons, state prisons and state and county penitentiaries, reformatories for adults, county and municipal jails, prisons and workhouses. Persons imprisoned for debt were not included. On the same date there were 23,034 juvenile delinquents in institutions.

"We shall be pleased to furnish your correspondent with our reports on 'The Insane and Feeble-minded in Institutions' and on 'Prisoners and Juvenile Delinquents in Institutions,' if he would like to have them, on receipt of his request."

## The Public Service

### Medical Department, U. S. Army

Changes for the week ended April 23, 1910:

Dawe, C. W., 1st lieut., M.R.C., April 14, left Ft. Thomas, Ky., en route to take station at Plattsburg Barracks, N. Y.

Snyder, Craig R., capt., April 14, left Ft. McHenry, Md., on two months' leave of absence.

Graham, George D., dental surgeon, April 14, reported for temporary duty at Ft. Omaha, Neb.

Hughes, Leonard S., M.R.C., granted an extension of leave for one month and ten days.

Birmingham, Henry P., 1st lieut. col.; Gandy, Charles M., lieut. col.; Keller, William L., major, to meet at West Point, N. Y., on May 24, 1910, or as soon thereafter as practicable to make physical examination of cadets.

Carter, Edward C., lieut. col., died April 14, 1910, Army and Navy General Hospital, Hot Springs, Ark.

Sievers, Robert E., 1st lieut., M.R.C., on arrival at San Francisco, from the Philippine Islands, and completion of duty with the 23rd Infantry, will proceed to Ft. Warren, Mass., for duty.

Craig, Charles F., capt., ordered to Ft. Monroe, Va., for the purpose of investigating the water-supply at post, and on completion of this duty to return to his station in this city.

Pinkston, Omar W., capt., granted leave of absence for ten days.

Stark, Alexander N., major, granted leave of absence for fourteen days.

Michie, Henry C., M.R.C., granted leave of absence for two months, on surgeon's certificate of disability.

Koyle, Fred T., M.R.C., on arrival at San Francisco and completion of duty with 23rd Infantry, will proceed to Ft. Screven, Ga., for temporary duty, and on arrival of Major Roderic P. O'Connor, Medical Corps, is relieved from duty at Ft. Screven and authorized to avail himself of the leave of absence heretofore granted him.

Nichols, Henry J., capt., detailed to represent the Medical Department of the Army at the annual meeting of the American Society of Pathologists and Bacterioloists, to be held in Washington, May 3 to 5, 1910.

King, Edgar, 1st lieut., the leave of absence heretofore granted him is extended fifteen days.

Hollingsworth, Robert M., dental surgeon, granted leave of absence for two months.

### Medical Corps, U. S. Navy

Changes for the week ended April 23, 1910:

Holcomb, R. C., surgeon, detached from the *Solace* and ordered to the *Delaware*.

Dunbar, A. W., surgeon, ordered to duty at the Naval Dispensary, Washington, D. C.

Pugh, W. S., Jr., P. A. surgeon, detached from the *Tacoma* and ordered home to wait orders.

Baker, M. W., P. A. surgeon, detached from the *Nebraska* and ordered to the *Connecticut*.

Bishop, L. W., P. A. surgeon, detached from the navy yard, New York, and ordered to the *Tacoma*.

Old, E. H. H., P. A. surgeon, detached from the Naval Dispensary, Washington, D. C., and ordered to duty at the Naval Medical School Hospital, Washington, D. C.

Halloway, J. H., P. A. surgeon, detached from the *Connecticut* and ordered to the navy yard, New York.

Riddick, W. J., asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the *South Carolina*.

Phelps, J. R., asst.-surgeon, detached from the *South Carolina* and ordered to the *Solace*.

Wentworth, A. R., medical inspector, commissioned medical inspector, with the rank of commander, from Feb. 5, 1910.

Cecil, A. B., asst.-surgeon, detached from the *Wisconsin* and ordered to the *Nebraska*.

Geiger, A. J., P. A. surgeon, detached from duty at the Naval Hospital, navy yard, Mare Island, Cal., and ordered to duty at that yard.

Lumsden, C. P., medical inspector, detached from duty at the navy yard and Naval Hospital, Pensacola, Fla., and ordered to the naval recruiting station, Chattanooga, Tenn.

Fitts, H. B., medical inspector, ordered to the navy yard, Pensacola, Fla., and to additional duty at the Naval Hospital at that place.

Edgar, J. M., medical inspector, detached from duty on board the *Connecticut* as fleet surgeon of the Atlantic fleet and ordered to command the Naval Hospital, Boston.

McCormick, A. M. D., surgeon, detached from the *Michigan* and ordered to duty on board the *Connecticut* as fleet surgeon of the Atlantic fleet.

Snyder, J. J., surgeon, detached from the *Rhode Island* and ordered to the *Michigan*.

Rodman, S. S., surgeon, detached from the naval recruiting station, Chattanooga, Tenn., and ordered to the *Rhode Island*.

Benton, F. L., surgeon, detached from the *Buffalo* and ordered to the *Philadelphia*.

Ames, M. H., P. A. surgeon, detached from the navy yard, Portsmouth, N. H., and ordered to the Asiatic station.

Dorsey, B. H., P. A. surgeon, detached from the *Philadelphia* and ordered to continue other duties.

Foster, T. G., P. A. surgeon, detached from the *Buffalo* and ordered to duty at the Naval Hospital, Mare Island, Cal.

Minter, J. M., P. A. surgeon, detached from the first provisional of marines, expeditionary forces, and ordered to continue other duties.

French, G. R. W., asst.-surgeon, detached from the Naval Hospital, Mare Island, Cal., and ordered to the *Albatross*.

Lee, A. E., asst.-surgeon, detached from the *Albatross* and ordered to duty at the Naval Hospital, Mare Island, Cal.

Huff, E. P., asst.-surgeon, detached from the *Villalobos* and ordered to the *Charleston*.

Noble, D. H., asst.-surgeon, detached from the *Charleston* and ordered to the *Villalobos*.

### Public Health and Marine-Hospital Service

Changes for the week ended April 20, 1910:

Carter, H. R., surgeon, granted 3 days' leave of absence from April 14, 1910.

Anderson, John F., P. A. surgeon, granted 3 days' leave of absence from April 18, 1910, under Paragraph 189, Service Regulations.

Lloyd, B. J., P. A. surgeon, granted 7 days' leave of absence from April 13, 1910.

Creel, R. H., P. A. surgeon, relieved from duty at Evansville, Ind., and directed to proceed to Seattle, Wash., and report to the commanding officer, Revenue Cutter *Tahoma*, for duty.

Collins, G. L., P. A. surgeon, leave of absence for 1 month from April 14, 1910, amended to read 1 month from April 21, 1910.

Spratt, R. D., P. A. surgeon, granted 1 day's leave of absence, April 5, 1910, on account of sickness.

Frost, W. H., P. A. surgeon, granted 1 day's leave of absence, April 16, 1910, under Paragraph 191, Service Regulations.

Ashford, F. A., P. A. surgeon, granted 15 days' leave of absence from May 7, 1910.

Hotchkiss, S. C., asst.-surgeon, bureau order of March 5, 1910, to proceed to Honolulu, Hawaii, revoked. Directed to report to the commanding officer, Revenue Cutter *Bear* for duty.

Turnipseed, D. C., asst.-surgeon, relieved from duty at Baltimore and directed to proceed to San Francisco and report to the commanding officer, Revenue Cutter *Perry* for duty.

Bailey, C. A., acting asst.-surgeon, granted 6 days' leave of absence from April 12, 1910.

Bingham, E. O., acting asst.-surgeon, granted 15 days' leave of absence from May 6, 1910.

Hollman, H. T., acting asst.-surgeon, granted 2 days' leave of absence from March 31, 1910, under Paragraph 210, Service Regulations.

Hume, Lea, acting asst.-surgeon, granted 10 days' leave of absence from April 12, 1910.

Lawhorn, C. C., acting asst.-surgeon, granted 25 days' extension of leave from March 12, 1910, on account of sickness.

Townsend, W., acting asst.-surgeon, granted 7 days' leave of absence from April 14, 1910.

Walker, R. T., acting asst.-surgeon, granted 18 days' leave of absence from April 25, 1910.

Watkins, McD., acting asst.-surgeon, granted 2 days' leave of absence from April 13, 1910.

Wright, F. T., acting asst.-surgeon, granted 15 days' extension of leave from March 18, 1910, on account of sickness.

Boards of medical officers were convened to meet on April 25, 1910, for the purpose of making physical examinations of officers of the Revenue-Cutter Service as follows:

San Francisco: Surgeon James M. Gassaway, chairman; P. A. Surgeon R. E. Ebersole, recorder.

Portland, Me.: Surgeon C. E. Banks, chairman; Acting Asst. Surgeon A. F. Stuart, recorder.

Wilmington, N. C.: Surgeon C. H. Gardner, chairman; Acting Asst.-Surgeon W. D. MacMillan, recorder.

## *Medical Economics*

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

### Many Organizations of Physicians and Laymen and Many Newspapers Endorse Department of Health

During the past week the following county medical societies and other organizations have adopted resolutions endorsing the Owen bill: Fourth District Medical Society of South Dakota; Washington County, Arkansas; Washington County, Tennessee; Montgomery County, Arkansas; Alameda County, California; King County, Washington; LaClede County, Missouri; Tolland County, Connecticut; Jefferson County, Iowa; Sebastian County, Arkansas; Montcalm County, Michigan; Clinton County, Missouri; Blue Earth County, Minnesota; Columbus, Ohio, Academy of Medicine; Knox County, Kentucky; Fannin County, Texas; Jackson County, Missouri; Dawson County, Montana; Lincoln County Nebraska; Sequoyah County, Oklahoma; Hampden District, Massachusetts; Marion County, Missouri; McLean County, Kentucky; McCracken County, Kentucky; Henry County, Indiana; Wayne County, Michigan; the Hannibal Commercial Club of Hannibal, Mo.; Chamber of Commerce of Duncan, Okla.; Woodward Commercial Club, Woodward, Okla.; Board of Education, Paducah, Ky.; Protestant Ministerial Association, Paducah, Ky.; General City Council, Paducah, Ky.; Hobart Chamber of Commerce, Hobart, Okla.; Mayor and City Council, Sweetwater, Tex.; Health League, Lorain, O.; Board of Health, Ft. Smith, Ark.; Muscatine Commercial Club, Muscatine, Ia.; Tuscaloosa Board of Trade, Tuscaloosa, Ala.; Chamber of Commerce, Seattle, Wash.; Commercial Club, North Platte, Neb.; and the Glendive Commercial Club of Glendive, Mont.

Many petitions containing the signatures of prominent business men, politicians and influential citizens have also been sent to the members of Congress.

The following are some newspaper comments:

The Flint, Mich., *Daily Journal* says editorially, "Possibly in no branch of the public service is there a greater need for uniform laws and better interstate relationship than in the supervision of public health. . . . Remarkable strides have been made during the past ten years owing to a better public appreciation of the tremendous danger which results from neglect in this regard. Out of this campaign of education, which has been carried on by physicians and the press, has come an insistent and we believe, an intelligent demand for federal supervision of our health departments. The urgent need of such a department or bureau is quite generally appreciated. We need a central office, the sole functions of which shall be the safeguarding of public health by means of scientifically searching inquiries and the adoption of preventive remedies and measures."

The New York *Press* said, editorially: "It is worth while to note that the bill to create a national department of health, with a cabinet officer at its head, was introduced into the Senate by Senator Owen, of Oklahoma, a southern Democrat, and early in life under the influence of the tradition that national activities should not be extended. But like other men, he perceives that what the nation can only do or can better do it should do and on the health matter he does not hesitate to declare himself a nationalist. Disease is spread through the pollution of interstate streams. It is conveyed through a lack of sanitary regulation in relation to interstate commerce. Pestilence comes in from abroad and there is need of common regulations. A central organization of dignity and importance will have a most potent influence on the health departments of states and cities that will seek its advice and cooperation. It will be a force for uniform legislation and uniform administration. Its effect, in this regard, will be comparable to that of the Department of Agriculture in the agricultural field, a department whose indirect work is quite as valuable as the direct. . . . There are approximately three million people in this country prostrate from preventable disease. The tax on industry therefrom is greater than the entire burden of government. Here is an interest certainly broad enough to justify national activity and to abate in some measure the prejudice that exists against the creation of new governmental departments and the enlargement of the cabinet. . . . It can hardly be doubted that if there was a minister of public health, and [if] hygiene was thus nationally recognized, there would be a great stimulus everywhere to the warfare against disease."

The Minneapolis *News* said, editorially, April 12: "Minneapolis has joined a national movement to secure proper governmental conservation of the public health. . . . The government maintains no well organized, centralized and efficient department for coping with the subject of public health. There are various agencies but they are scattered and subordinated. . . . The movement for a federal department of public health is now well under way and the sooner it is demanded by the people at large, as well as by physicians, the sooner it will be realized."

The Beaver Falls, Pa., *Tribune* says, editorially: "The introduction by Senator Owen of a bill calling for the establishment of a federal department of health under the secretary of health, who shall be a member of the cabinet, is the entering wedge in a campaign that should be prosecuted vigorously until the desired end has been attained. . . . That congress has not acted along this line heretofore is believed to be due to an impression that there was no great public demand for such action. But public sentiment has changed in recent years. The people are waking up to the need of health conservation and members of congress are being urged to exercise their influence for the much desired reform. The people of the United States should have a department of health and the present session of congress should not adjourn until the necessary legislation has been enacted."

The Denver *Post* says, editorially: "Senator Owen, of Oklahoma, has introduced a bill providing for the organization of a department of health, which would rank equally with the already existing departments. The national platforms of the Republican and Democratic parties both endorsed the creation of some such machine of public hygiene. President Taft has given the proposal his approval. But the Owen bill is not an administration measure. It will certainly meet with opposition from many quarters. You can help it not a little by writing to your representatives, and the senators, saying a word in its favor. A department of health must be created sooner or later and the sooner the better."

### Other Department of Health Bills

Hon. Charles E. Creager of Oklahoma introduced into the House of Representatives, April 15, the same bill as that introduced into the Senate by Senator Owen of Oklahoma, providing for a Department of Public Health with a Secretary of Public Health in the Cabinet.

Hon. James S. Simmons of New York introduced, April 22, a bill (H. R. 24827) to establish a Department of Public Health. Mr. Simmons' bill, while drawn along much the same lines as that of Senator Owen, contains a number of points of difference. Section 1 provides for a Commissioner of Public Health with a salary of $7,500 instead of for a Secretary of Public Health who shall be a Cabinet officer. Section 2 of the Simmons' bill provides for a Director-General and subordinates instead of for assistant secretaries, while Section 3 is practically the same as the same section in the Owen bill except that the regulation of animal diseases, which in the Owen bill was made a part of the duties of the Department of Health, is omitted in the Simmons' bill. Section 5 of the Simmons bill is practically a condensation of Sections 6, 7, 8 and 9 of the Owen bill. This section reads as follows:

> *Section 5.*—That it shall be the duty and province of the Department of Public Health to supervise all matters within the control of the Federal Government relating to the public health transferred

by or under this Act to such department. It shall gather data concerning all matters relating to the public health, establish chemical, biologic and other standards necessary to the efficient administration of that department, impose and enforce federal quarantine regulations, and give due publicity to all matters necessary to the protection and preservation of the public health which are strictly within the constitutional obligations of the United States, cooperating, so far as practicable, with the health authorities of the several states of the Union. It shall be the duty of the Commissioner of Public Health, on proper requisition, to provide any medical, sanitary or other health service required by another department of the Government, and all departments, except the Department of War and the Department of the Navy, requiring medical, surgical, sanitary, or other similar services shall apply to the Commissioner of Public Health therefor wherever it is practicable.

## County Secretaries Conferences

The custom of holding an annual conference of the county secretaries and executive officers of the state organization, either in connection with the annual session of the state association or at some time during the winter, is becoming more common and is deserving of encouragement. The success of an organization depends on the executive ability of the officers in charge of the society work; of these the county secretary is by far the most important. Anything, therefore, which can be done to increase his efficiency or to lighten his labors is deserving of encouragement.

In a number of states, particularly Pennsylvania, Ohio, Illinois, Iowa, Missouri and Michigan, these conferences have become established features of society work, having been held consecutively in some states for several years. A number of other states are arranging to hold such conferences in connection with their approaching meetings.

### MICHIGAN

The annual conference of the county secretaries of the Michigan State Medical Society was held in Detroit on January 13. The proceedings appear in the *Journal of the Michigan State Medical Society* for April.

Dr. A. E. Bulson, Jackson, Mich., councilor of the second district, spoke on "Medical Organization Work," emphasizing the importance of the county society which, he said, "must be a living torch in the community, in the front rank fighting superstition and ignorance, ever ready to uphold the honor and dignity of the profession, and the betterment of society. The accomplishment of these results calls for the cooperation of every member. The secretary may direct the work but he must have the support of the entire membership."

Dr. W. T. Dodge, chairman of the council, spoke on "The Councilor's Relation to the County Society," advising the councilors to make themselves thoroughly familiar with conditions in their districts but not to interfere in county society affairs needlessly and especially not to assume a dictatorial attitude.

Dr. Archie MacKinnon, secretary of the O. M. C. O. R. O. Medical Society (a society covering six counties), of Lewiston, discussed "The Business Affairs of the County Secretary."

"Postgraduate Work" was discussed by Dr. Wilfrid Haughey, the new secretary of the state society, who gave the experience of the Calhoun County Medical Society with postgraduate work. In this county there are three cities, two of them being twenty-six miles apart. Accordingly, a postgraduate class was organized in each city. For the first year the society outlined its own course of study. The second year the Battle Creek Medical Club was organized as a branch of the Calhoun County Medical Society, and the postgraduate course recommended by the American Medical Association was adopted. This has since been followed with much success.

Dr. Frank C. Kinsey, of Three Rivers, spoke on "Ethical Problems of the County Secretary," discussing advertising, eligibility to membership in county societies, the mistakes of young practitioners and other ethical problems which come before the county organization.

Dr. V. A. Chapman, of Muskegon, described the plan followed in the Muskegon-Oceana County Society. In making up the program the names of members are taken in alphabetical order and each member is made responsible for a certain meeting for which he writes and reads a paper, and supplies such entertainment for the society as he wishes. If he desires, he may invite a member of the profession from outside the local membership to take his place.

Dr. B. R. Schenck, the retiring secretary, spoke on "The Relation of the County Society to the State Society," emphasizing the importance of a uniformity of membership requirements and of simplicity in membership requirements.

### IOWA

The third annual conference of the council, presidents and secretaries of county medical societies was held at Des Moines, January 25, the proceedings appearing in the *Iowa Medical Journal*, for March.

Dr. J. F. Herrick, of Ottawa, discussed programs, emphasizing the importance of following a definite system of study in arranging programs so that the county society might be a real postgraduate school to its members.

Dr. J. W. Kime, of Fort Dodge, discussed the systematic campaign against tuberculosis now being carried on in Iowa by the State Board of Control, the Iowa State Medical Society, the State Board of Health and the State Laboratory, urging the appropriation of a certain fund by the state to carry on this work.

Dr. Henry G. Langworthy, of Dubuque, secretary of the Dubuque County Medical Society, discussed the advisability of county societies establishing business bureaus for the collection of bills, etc., outlining the plan adopted by his county society which has proved successful.

A local attorney was designated as the representative of the members of the society to conduct the business bureau. He calls on members every three months for a statement of accounts. He also keeps a separate file of each physician's accounts and correspondence, making quarterly returns directly to him. No suits are brought on accounts without authorization from the physician. Each physician's account is open to his inspection at any time but to no one else. Commissions are paid the attorney for all accounts which he collects or for amounts paid to physicians on accounts which are in his hands. All accounts in the hands of the attorney are at any time open to the audit of the committee of the county society. Commissions are paid to the attorney ranging from 50 per cent. on collections of 2 dollars or under, to 20 per cent. on collections over 10 dollars, the expenditures of conducting the office being borne by the attorney.

Dr. J. C. Cooper, Villisca, president of the Montgomery County Medical Society, spoke on "What I Want or Expect of My County Society," urging regular meetings, systematic work and development of the social side of the county organization.

## POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
Bowling Green, Kentucky

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

### Ninth Month—Third Weekly Meeting

#### Diseases of the Larynx

Acute Laryngitis: Diagnosis, treatment.

Subacute Laryngitis.

Chronic Laryngitis: Diagnosis, treatment.

Laryngitis Sicca.

Edematous Laryngitis: Etiology, treatment.

Acute Infectious Diseases of the Upper Air Passages: Influenza, diphtheria, erysipelas. Pathologic changes in upper air passages due to scarlet fever, measles, variola, rubella, typhoid, malaria, etc.

Chronic Infectious Diseases of the Upper Air Passages: Syphilis, symptoms of primary, secondary and tertiary stages. Lesions in nose, in pharynx, in larynx. Hereditary syphilis, symptoms, diagnosis. Tuberculosis, diagnosis in nasal, in laryngeal tuberculosis. Lupus.

Neoplasms of the Upper Air Passages: Benign tumors found in nose, in pharynx, in larynx. Malignant tumors in nose, in pharynx, in larynx.

# Society Proceedings

## COMING MEETINGS

Amer. Assn. of Genito-Urinary Surgeons, Washington, D. C., May 3-4.
Amer. Assn. of Pathologists and Bacteriologists, Washington, May 3-5.
American Climatological Association, Washington, D. C., May 3-5.
American Dermatological Association, Washington, D. C., May 3-5.
American Gynecological Society, Washington, D. C., May 3-5.
American Laryngological Association, Washington, D. C., May 3-5.
Amer. Medico-Psychological Association, Washington, D. C., May 3-5.
American Neurological Association, Washington, D. C., May 3-5.
American Ophthalmological Society, Washington, D. C., May 3-4.
American Orthopedic Association, Washington, D. C., May 3-5.
American Otological Society, Washington, D. C., May 3-5.
American Pediatric Society, Washington, D. C., May 3-5.
American Surgical Association, Washington, D. C., May 3-5.
American Therapeutic Society, Washington, D. C., May 5-7.
Association of American Physicians, Washington, D. C., May 3-5.
Congress of Amer. Phys. and Surg., Washington, D. C., May 3-5.
Connecticut State Medical Society, New Haven, May 25-26.
Illinois State Medical Society, Danville, May 17-19.
Iowa State Medical Society, Des Moines, May 20-21.
Kansas Medical Society, Topeka, May 4-6.
Louisiana State Medical Society, New Orleans, May 3-5.
Missouri State Medical Association, Hannibal, May 3-5.
Montana State Medical Assn., Hunter's Hot Springs, May 11.
National Association for Study of Epilepsy, Baltimore, May 7.
Nebraska State Medical Association, Lincoln, May 10-12.
New Hampshire Medical Society, Concord, May 12-13.
North Dakota State Medical Association, Grand Forks, May 10-11.
Ohio State Medical Association, Toledo, May 11-13.
Oklahoma State Medical Association, Tulsa, May 10-12.
Rhode Island Medical Society, Providence, May 31.
Texas, State Medical Association of, Dallas, May 10-12.

## TENNESSEE STATE MEDICAL ASSOCIATION

*Seventy-seventh Annual Meeting, held at Memphis, April 12-14, 1910*

*(Continued from page 1406)*

### Discussion on Prostatic Hypertrophy

DR. S. R. MILLER, Knoxville: I have had the same experience that the specialist has, and that is the operative treatment of prostatic hypertrophy is as a rule very satisfactory, while the palliative treatment is extremely unsatisfactory. In all the cases that I can recall there was decided enlargement of the prostate and the patients submitted to operation, the results being very satisfactory. I have tried massage in prostatic hypertrophy, but have not had good results from it.

DR. J. A. CRISLER, Memphis: I have been particularly interested in Dr. Lewis' statement concerning the examination of the prostate and the conditions in the bladder prior to operation in these obstructive cases. I think we should speak of this condition as an obstructive prostate and not merely as an enlarged prostate; many of the enlarged prostates do not cause obstruction. In the cases I have had under observation, probably less than 40 in number, I have been unable in most of them to pass any kind of instrument into the bladder. These patients have been referred to me after the enlargement of the prostate had become very advanced, and when there was no possible way for the physician in charge to draw off the urine. All of us must agree with Dr. Lewis that we ought to make a careful diagnosis and a careful examination of the patient prior to operation, and when it is borne in mind that a large percentage of these cases occur in men over 60 and 70 years of age, a number of them having bad hearts, having some albumin and casts in the urine, and the urine being ammoniacal, an operation should not be undertaken until careful examination has been made to determine the condition of the various organs.

DR. JOHN L. JELKS, Memphis: One phase of this subject has not been touched on, which I think worthy of consideration. Some years ago, I called attention to a sacculated condition of the anterior wall of the rectum in many cases of prostatic enlargement and irritability. In a number of these cases in old men with prostatic enlargement, there is a hemorrhoidal tumor or a marked vascular pathology and sacculated condition in the anterior quadrant of the rectum. In these cases, I have resorted to anterior proctotomy which consisted of touching up the anterior wall of the rectum, which was sacculated, and producing a similar effect on the male bladder as would be produced on the female bladder by anterior colporrhaphy.

DR. E. H. MARTIN, Hot Springs, Ark.: In discussing chronic prostatitis Dr. Livermore mentioned some cases in which the patients complained of pains in the legs. I do not think he went far enough in this regard. I think the disease which we ordinarily know as chronic gonorrheal rheumatism is due to prostatic disease. In many of these cases the prostate is entirely overlooked when the man consults a physician with a characteristic history of pains in the bottom of his feet, pains running down the legs and involvement of some extremity.

DR. RICHARD A. BARR, Nashville: I was glad to hear Dr. Lewis emphasize prostatic obstruction as contrasted with prostatic hypertrophy. In a few patients I have treated there was marked prostatic obstruction without any hypertrophy. While I have not had any experience with cancer of the prostate, I have seen the mistake made of operating for cancer of the prostate when simple hypertrophy existed.

DR. J. W. HANDLY, Nashville: In the incontinence which follows the operation for prostatic hypertrophy or obstruction, my experience and observation do not corroborate the beautiful results which have been depicted in connection with these cases. I have seen a number of cases of prostatic obstruction and prostatic hypertrophy, and many of those I have seen have been followed by incontinence that lasted sometimes 3 or 4 or even 5 or 6 months, necessitating the wearing of a rubber urinal. I do not like to see the statement made that when we remove the prostate such a patient, at the end of 30 days or more, is able to pass urine in the normal way. I think that few patients do.

### Clinical Significance of Silent Fluids in the Thoracic Cavity

DR. FRANK A. JONES, Memphis: During 12 years' experience at a large out-clinic, with 7 years' service in hospital work, I have been impressed with the fact that these fluids are frequently not recognized, especially when critical physical examination of the chest has not been made. These silent fluids may be serous, serofibrinous, purulent, or hemorrhagic. They may come on acutely or chronically. They are most frequently complications and sequelæ of acute or chronic renal lesions or of pulmonary and abdominal tuberculosis. In the out-clinic service, syphilis is often complicated with a tuberculous process. Cardiac lesions of whatever nature giving rise to failing compensation in the production of hydrothorax in my experience are always active and the physical findings are distinctive and typical. In tuberculous peritonitis with effusion when the process has not been active in the pulmonary tree, I have found in most instances bilateral pleurisy with effusion, latent in nature. In these cases, there are no circulatory or respiratory disturbances that would direct attention to its presence. The patient has neither dyspnea, cyanosis, cough, bulging of intercostal spaces, nor fixation of the chest walls. In chronic interstitial nephritis with its concomitant cardiovascular degeneration in men past middle life, silent hydrothorax is often overlooked. In my clinical experience the withdrawal of these silent tubercular effusions, when the temperature remains near normal, and when the constitutional disturbances are not marked, converts this latent picture into a volcanic panorama. The patient rapidly declines by the acute pneumonic phthisis route. On the other hand, when the fluid is silent and systemic infection active, free incision to promote drainage is clearly indicated. Those silent fluids as the result of inflammatory action not giving rise to symptoms can be explained on the ground of their gradual development.

### Amebiasis, Complicated in One Instance by Pellagra; in Other by Eighteen Adenomata

DR. JOHN L. JELKS, Memphis: For several years I have observed skin manifestations of amebic infection and ulceration in the large intestine, but I made my first report in April, 1909, at the DeSoto County (Mississippi) Medical Society, and again in May, 1909, at the Arkansas State Medical Society. These lesions are either severally or successively erythematous, papular, pustular and edematous. They improve under treatment directed to intestinal infection and ulcerations. In one case, diagnosed by able clinicians and skin specialists as pellagra, the *Amœba hystolytica* was observed in the mucopurulent material taken from the rectum. In another case I observed eighteen adenomata in the rectum and sigmoid, complicating amebiasis. This is the second case in which I have observed adenomata. In the other case only nine tumors were found.

DISCUSSION

**Dr. George Dock**, New Orleans: This paper is especially interesting to me because I have been working with cases of dysentery and with pellagra for some time, and I have not been fortunate in seeing the combination, all the more disappointing in this respect. I early predicted that amebiasis would probably be a predisposing cause of pellagra, but my experience with the two diseases runs somewhat this way. We have had about 35 cases of distinct pellagra in New Orleans in the last season and all of these patients have had the stools examined and in many proctoscopic examinations were made. These patients were examined critically, because at the pellagra conference held last autumn one of the speakers stated that he found amebas in all cases of pellagra in the stools. Although New Orleans is a somewhat rich field for amebiasis we have not found the combination of amebiasis and pellagra to occur in a single case.

**Dr. Louis Leroy**, Memphis: I have been interested in the relationship between amebiasis and pellagra, and was very much pleased to hear the view which Dr. Dock expressed as to the almost certain parasitic causation of pellagra because that is in accord with the views which have been forced on me for some time in considering this disease. There is no doubt that amebas are frequently associated with pellagra, almost too frequently to be looked on as a coincidence. Still I believe we are not ready to decide on an etiologic relationship between the two, because we see in this locality a large number of cases of amebic infection and a relatively small number of cases of pellagra, in which the two are associated. Again, there are many cases of pellagra in which amebas are not found.

**Dr. Marcus Haas**, Memphis: My experience has been limited to about twenty cases of pellagra, and I am not willing to say that these cases were true pellagra, without going into the etiology of the disease. This manner of shooting up into the air as to the causative agent of pellagra does not help us, and will only muddle us. As to its relation to amebiasis I am not willing to agree to that at all. I believe we may have amebiasis and pellagra combined, but think it is simply a coincidence and that as a rule one disease has no relation to the other.

**Dr. William Krauss**, Memphis: I have seen a few cases of pellagra and my observations, careful as they have been, can add nothing to what has been said in the literature on this subject. There is some confusion, however, with reference to the seat of the lesions and the portals of entry. I am willing to admit that the intestinal tract is probably the portal of entry, or one of them; but so far as the symptoms are concerned the lesions we find post-mortem are a consequence, probably, of changes in the nervous system, and are not primarily due to the conditions of the gastrointestinal tract. I recall one patient who had hookworm disease, and subsequently developed pellagra, who died about six weeks after he was first brought under observation as a pellagrin, and in whom the entire intestinal tract showed no evidences of such a lesion as one would find in uncinariasis nor were any worms found at the post-mortem examination. There was a roughened-beard appearance of Peyer's patches, and a marked hyperemia of the entire intestinal wall, but that was all.

**Dr. G. C. Savage**, Nashville: At the New Orleans meeting of the Southern Medical Association the newspapers misrepresented my position in regard to what I said concerning pellagra. What I really did say was that I would just as soon believe that pellagra is a kind of leprosy as to believe it is caused by corn, but I do not believe either one.

**Dr. Newton Evans**, Nashville: It might be well in connection with Dr. Jelks' paper to report an observation which I made on some pellagrins in Nashville. Thirteen children are segregated for pellagra. I made examination of the feces of these thirteen children and in 5 of them found they had uncinariasis. I do not think this observation would have an influence in making us believe one disease is the cause of the other, and I believe that any number of children of the same class would probably give the same percentage of hookworm infection.

**Dr. E. H. Martin**, Hot Springs, Ark.: It has been intimated from Nashville that pellagra is a contagious disease. From a perusal of the literature of the subject it seems to be non-contagious, and the fact that observation of its contagiousness has been made in Nashville ought not to warrant us in going on record as believing the disease is contagious. The contagion theory of pellagra does not appeal to me.

**Dr. William Litterer**, Nashville: I think that pellagra is a separate and distinct disease, although it may be associated with other conditions, as Dr. Krauss has said. I made a postmortem examination on a case of pellagra, in which I found almost identically the conditions described by Dr. Krauss. I have found, also, later in my work, something like seven months afterward, several hookworms in the intestinal tract.

**Dr. J. D. Hopper**, Jackson: I have read a good deal on pellagra since it has been brought before the medical profession, and with all due respect to the remarks of those who have spoken, I do not think we know anything about it. The Italians claim that it is maize or corn which produces the disease. As Americans it behooves us as physicians to disapprove the maize theory, because the corn in America is one of the resources of this country, from a financial standpoint. I do not think we ought to speak of corn as the cause of pellagra until that theory is absolutely proved.

### Symptoms and Effects of Adenoids

**Dr. W. L. Simpson**, Memphis: The symptoms and effects of adenoids are not seriously enough considered. It is not necessary to wait until all the cardinal symptoms of adenoids are present before a child is given relief. It reflects on the physician when a child or infant becomes anemic, rachitic, or has ear complications, recurrent attacks of croup, or has the adenoid facies, etc., if these conditions are due to the adenoid vegetation. Particular attention should be paid to children who are not up to the standard in the school. It is always possible to tell by means of a trained finger whether adenoids are present or not.

DISCUSSION

**Dr. G. C. Savage**, Nashville: The condition described is not fully realized by a large number of the profession. In Europe this condition is fully appreciated, and that appreciation has taken the form of the erection of a monument to Meyer, who discovered the condition. I know of nothing in childhood that demands treatment more than the removal of adenoid tissue in the vault of the pharynx. Dr. Simpson stated that the presence of adenoids is responsible for inflammation of the middle ear. That is absolutely true, and the statement cannot be made too emphatic. But when the ear is inflamed an operation ought not to be done. The acute condition of the middle ear should be allowed to pass away before the removal of the adenoids is undertaken.

**Dr. T. J. Herron**, Jackson: A woman consulted me recently suffering from a severe cold. She had tympanitis and a frontal sinus abscess. She was 22 years old, and was not a mouth-breather, so far as I could determine. I began to treat the symptoms, and the frontal sinus abscess, and on examination I found she had adenoid tissue, which I removed, thereby giving great relief.

**Dr. W. L. Simpson**: One thing we should always remember is never to treat a running ear until we find whether the patient has adenoids or not.

### Trifacial Neuralgia Treated by Alcohol Injections

**Dr. W. D. Swink**, Milan: The number of injections required for the relief of pain vary from 2 to 16, and relief or cure lasts from 4 months to 3 years. Cures are more quickly realized in those patients who have not undergone surgical operations, although relief has been secured from alcoholic injections when gasserectomy and the Abbe operations have failed. The freedom from pain after injections is not so long, perhaps, as from peripheral surgical operations, but reinjections can be so easily done that palliative relief can be obtained, if not, as some operators believe, a permanent cure. When these patients fail to get relief from alcohol injections, and the advocates of this treatment believe that there are very few cases of failure if the alcohol reaches the nerves, they should not by any means be made morphin habitués, as so many of them are, but should have the intracranial operation, as advised by Spiller. This consists in division of the sensory root of the Gasserian ganglion, as performed by Frazier, Kocher and Cushing; it is less hazardous and more complete than total extirpation of the ganglion.

DISCUSSION

Dr. W. T. Black, Memphis: My experience in the treatment of trifacial neuralgia has been limited. One can readily see how deep injections of alcohol or of osmic acid would be objectionable. I think the measurements would have to be very accurately made when injecting around the great wing of the sphenoid bone. I do not see why we may not injure, in some cases, the middle meningeal artery or the small meningeal nerve which goes through the forearm ovale, and I do not see why we may not puncture some of the veins going through the foramen of Vesalius if we are not careful in measurements. The relief from these injections is only temporary. In cases in which the supraorbital nerve is involved a cutting operation is more permanent.

Dr. Duncan Eve, Jr., Nashville: My experience is limited to 5 patients with trifacial neuralgia in whom deep injections of alcohol were used; of this number I have cured 2. One patient, who has gone on for 14 months without recurrence, received osmic acid and a portion of the nerve was resected. Another patient has gone 3 months without a recurrence of the pain. One case was a complete failure. In making the injections I use the needle of Patrick. I use a dull needle instead of a sharp one, as it reduces the amount of hemorrhage.

### President's Address: The Higher Mission of the Physician

Dr. Jere L. Crook, Jackson: Health is the most valuable and most sought-after individual possession and the health of its people is the nation's greatest asset. Yet how tardily is the national conscience awakening to this stupendous fact. It is our duty and our task to teach the people this great truth, and to impress it so forcibly that legislators will be aroused to a full sense of their responsibility and give the medical profession the power in the national government which its purposes, achievements and importance demand. If convincing, tangible proof of the wisdom of this step be needed it surely can be found in the marvelous results of the sanitary campaign in Panama, under the efficient control of Dr. Gorgas. No well-informed citizen will deny that the success attending America's efforts in digging the great canal is due to the work of the sanitary corps. Modern medical science alone is responsible for our success where France failed. She had both men and money, but she had not learned how to keep her men alive and well. Dying men cannot dig a ditch or build a dam. An unfaltering faith in the mosquito theory of the causation of the tropical fevers, and an unwavering persevering persistence in the measures necessary to exterminate the cause, together with other approved, modern sanitary precautions, has converted the canal zone into a healthful, pleasant place of abode with a death-rate no greater than many cities of the United States. The canal work goes swiftly forward and presenting no insolvable engineering problems, with money and men in abundance, and the prestige of this great nation behind it, probably within five years the world will witness the wedding of the oceans and the commerce of Occident and Orient will pass through this wonderful waterway. Such a realization of the dream of the centuries could never have seemed so near but for the glorious work of the medical profession, the sacrifices of some of its noble sons—Carroll, Reed and Lazear—and the effect which a knowledge of these modern discoveries has produced on the legislative and executive branches of our government. No more brilliant and decisive example of the economic and humanitarian value of our profession could be desired. The result was attained by the members of the profession, teaching the people the truth and meaning of the mosquito theory of disease. It should be easy to induce legislators to recognize the practical value of these teaching campaigns. Our own state and many others are now sending out lecturers on fruit-growing and stock raising and building experiment stations to teach the farmers soil treatment and conservation. Surely it is reasonable and practical for an awakened public to demand that the states constantly maintain in the field a corps of medical lecturers to teach the conservation of human lives, by instructing the people how to avoid and detect disease.

### Symposium on Uncinariasis

Following the president's address there was a symposium on hookworm disease.

Dr. Charles W. Stiles, Washington, D. C., spoke of the discovery of the hookworm, the distribution of the disease and its consequences, his remarks being illustrated by numerous stereopticon slides.

Dr. George Dock, New Orleans, discussed the symptomatology and diagnosis of hookworm disease; Dr. Louis Leroy, Memphis, the clinical manifestations; Dr. G. Newton Evans, Nashville, the pathology and report of work along this line; Dr. William Litterer, Nashville, spoke of hookworm dissection, with reference to the non-oviparous female.

### Manic-Depressive Insanity

Dr. John W. Stevens, Nashville, after defining this disease, discussed the etiology, pathology, symptomatology, diagnosis and treatment. Regarding treatment he said:

Treatment should very rarely be undertaken outside an institution, the danger of suicide or injury of relatives, in response to delusions in the depressed state, and the restlessness and noisiness of the maniacal patient being too great to permit it. Because of the increased sexual excitement present in the mildly maniacal woman, the closest supervision is necessary. In the treatment of the maniacal forms the indications are to control the excessive activity and talkativeness. This is best accomplished by rest in bed, the removal of all distracting influences and the exercise of kind but firm authority. If the restlessness and talkativeness be not restrained the patient thereby increases his own excitement. The ideal method of treating an excited maniacal patient is to isolate him completely from all other patients in a quiet room, with only a single nurse, who must be possessed of such personality as to enable him to exercise authority and control of this particular individual. The patient should be made to remain in bed and his restlessness and talkativeness checked so far as possible. Every idea to which he gives expression simply serves to call up another to his mind, for which there is an equal desire for expression. When it is not always practicable to thus isolate the patient with a special nurse, the same idea should be carried out with such modifications as the circumstances demand. At times it will be necessary to resort to sedative measures. Excellent results follow the use of the hot or cold pack, or the prolonged warm bath. Sulphonal, trional, chloral and the bromids are safe and effective sedatives for these patients. They should be kept in bed until the tendency to over-activity and talkativeness has in a large degree disappeared, and after being allowed up excitement and irritation should be avoided. In the milder types of mania it is frequently a good idea to confine the patient in bed for a period, in order to get control of him. In the care of the depressed cases there are no particular points to be borne in mind except those with which we are all familiar in the care of such patients. The danger of suicide must always be borne in mind and the patient watched accordingly. The occurrence of physical symptoms and indications for treatment must be met, as in other diseases, the same principle governing us.

### Treatment of Salpingitis

Dr. J. Hugh Carter, Memphis: In cases of salpingitis we should get a complete history. A careful examination should be made and great care exercised in making the diagnosis. There should be thorough medical and hygienic treatment of the acute form of the disease. In the suppurative form of the disease operation should be done at once, or as soon as the inflammation has subsided, by the abdominal route.

DISCUSSION

Dr. W. T. Black, Memphis: In the beginning of these cases strictly medical treatment should be given. The principal thing about salpingitis is to know how to treat the patient, whether to operate or to wait. Undoubtedly, in the acute cases we should not operate until the patient has passed over the acute illness. If the salpingitis is due to streptococcus infection, the abscess opening down in the broad ligament or in the pelvis, I think that drainage through the vagina will be of great benefit. It is true that sometimes these patients recover without operation, or at least become symptomatically well.

Dr. L. E. Burch, Nashville: The direct cause of salpingitis is infection. There are many predisposing causes, and it is impossible to differentiate salpingitis from oöphoritis, endometritis, and peritonitis, that is, eliminating a tuberculous condition. A patient with salpingitis usually gives this history: She has been perfectly well. She is delivered of a child, and in the course of time trouble develops. On the other hand, she may have had suspicious intercourse, and trouble develops. Salpingitis, in other words, is an ascending infection, which first involves the endometrium, then spreads to the tubes, then to the ovary and to the peritoneum. In the acute stage of saplingitis the treatment is palliative. The patient should be kept on a liquid diet. She should be put in the Fowler position or the exaggerated Fowler position, and hot douches and cold applications used. If, after trying this treatment the symptoms do not subside, and there is acceleration of the pulse, and the patient's expression is anxious, and the belly begins to balloon up, and she has obstinate constipation with vomiting, then operative treatment is indicated.

Dr. J. H. Carter: I do not agree with Dr. Burch that we cannot make a diagnosis of salpingitis before the inflammation extends to the ovaries and to the broad ligaments, or cellular tissues. Gynecologists operate on these patients after they have been treated in a palliative way, and there are no adhesions and no sign of any inflammation in the broad ligaments or ovary. If we open the abdomen and find a double salpingitis and both tubes have to be removed, I do not believe we are justified in leaving the uterus. It should be removed also.

(*To be continued*)

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## CHICAGO PEDIATRIC SOCIETY

*Regular meeting, held March 15, 1910*

Dr. I. A. Abt in the Chair

### Congenital Hypertrophic Pyloric Stenosis, with Report of Case

Dr. G. L. Kaufmann: There is still much difference of opinion as to the etiology of pyloric stenosis. Some cases are cases of pure spasm, which eventually leads to hypertrophy and stenosis, while others are stenotic from the onset, the hypertrophy being secondary.

#### DISCUSSION

Dr. C. G. Grulee: The Germans regard this as a spastic condition, the hypertrophy being consecutive to the spasm. Americans regard the two conditions as being entirely separate. One foreign writer had 13 or 14 cases, of which number he was able to follow 7 of the patients for several years afterward. In each of these cases there was dilatation of the stomach and increased acidity. Of 19 patients treated without operation, 14 recovered and 5 died. Of 20 patients operated on, 14 recovered and 6 died, so that there is not much in favor of operative treatment. About 3 years ago I had a patient on whom a successful operation had been done. That child is now 4 years old and is well and strong. A gastroduodenostomy was done, and although the child had much trouble the following summer from gastrointestinal disturbance, a complete recovery was made as the result of proper feeding.

Dr. I. W. Abt: It would be interesting to differentiate clinically the cases of spasm from those of true congenital hypertrophic stenosis.

Dr. H. F. Helmholtz: In a recent publication the writer reviewed the records of every case that came to the postmortem. He could not find a single one that would confirm the ideas of a congenital stenosis. In each case there was folding of the mucous membrane, showing that there had been at one time a patulous opening of normal size. This opening had evidently been narrowed by the spasm, so that the stenosis is a secondary affair.

Dr. I. A. Abt: Is it possible that some of these cases have a relation to a spasmophilic diathesis, and that such children later show evidences of tetany or spasmophilia?

Dr. F. X. Walls: I have seen about 15 of these cases; in 12 an operation was done, and I was favorably impressed with the surgical results obtained. The children who had any degree of vitality always seemed to react well to the operation, and those who so reacted recovered. Only 2 children died soon after the operation, and 1 died about a month after the operation from acute gastrointestinal disturbance. The others are living and well. I would suggest surgical intervention as soon as I believed I was losing ground after trying the various methods of medical treatment that had been suggested.

Dr. Effa V. Davis: I would like to suggest toxemia of pregnancy in such cases. I find that children born of mothers who have been mildly toxic usually show conditions that can be traced back to the mother's toxemia.

Dr. F. X. Walls: It is stated that the mother of my patient suffered from gastric disturbance during the pregnancy, and that she took considerable amounts of acid. However, the labor was uneventful and the mother is now entirely well.

### Is Compulsory Isolation on the Premises Effective Treatment for Whooping-Cough?

Dr. J. H. Hess: Recently I was criticized by the Chicago Department of Health for allowing a child, ill with whooping-cough to go out into the streets. A somewhat similar experience about 4 years ago has caused me to think seriously about this matter. The family of the patient was told not to take the child out of the flat except by the rear entrance, but that the child might be allowed to play in the backyard. The family lived in a six-flat building. Most physicians are not reporting whooping-cough cases. I report everything, because I feel that by doing so the responsibility is assumed entirely by the Department of Health. However, it must be remembered that many of these cases do not come to the attention of a physician. The child is not ill enough, at least in the opinion of the parents, to require medical attendance; or the child is treated with prescriptions that have been secured from some other patient. The other day a little boy stopped me on the street and asked for a certificate which would readmit him to school. He had had whooping-cough, but had not had medical attention. I would suggest that all houses or apartments in which there are whooping-cough cases be placarded; that the children be taken out into the open air, tagged with a red ribbon, marked whooping-cough. This procedure was first suggested by Grandy, of Norfolk, Va., and in his experience it has proved very effective.

My experience has been that the paroxysms of whooping-cough are in part occasioned by vitiated air. These children are in better health if allowed to be in the fresh air after the paroxysmal stage has passed. The question is: Can they get sufficient fresh air within the four walls of a flat? Fresh air is the accepted treatment for whooping-cough. Instead of depending on the physicians who are not reporting their cases, make every mother an inspector, and every case is sure to be reported.

#### DISCUSSION

Dr. Heman Spalding, Department of Health: The ordinance requires that the house be placarded and the people in it quarantined. We allow adults to go about their business if they are careful not to get their clothing soiled by the child. We allow children who have had whooping-cough their liberty. Physicians confuse the treatment of a patient with the treatment of the public. We know it is the best thing for the child to go out, but we are not treating the child—we are treating the public. The question of the backyard is an open one. The child will go to the fence and convey the contagion to a neighbor, or out into the alley, and an epidemic results. I have known scores of instances where the contagion was conveyed in that way. As to tagging the child, if that were done, particularly in some parts of Chicago, a mob of children would run after that child, chase him, and try to pull the tag off. In some parts of the city we can do better work without placarding, because even the card attracts curious-minded people. We cannot improve much on our present methods of quarantine. People will hide cases, but by doing so they become law-breakers; some of them get caught at it and pay the penalty. The law requires that parents report such cases if a physician does not. This would cover the cases in which a physician is not in attendance.

DR. H. W. CHENEY: In some neighborhoods quarantine might be discretionary, to a certain extent. The patient might be allowed to go outside of the house if accompanied by the parent or nurse, so that other children could be kept away.

DR. S. J. WALKER: The object of the Department of Health is to limit morbidity and reduce mortality. In the case of infectious diseases of limited duration, this can be done more easily than in the case of whooping-cough. Whooping-cough is extremely widespread, and for two weeks the disease is in the incipient stage. During this time, the disease is spread broadcast, and as these cases are not reported, it is impossible to control that element in the spread of infection. We all know that the best thing for the patient with whooping-cough is plenty of fresh air. It is impossible to obtain enough air in a flat or house or a small backyard. I feel convinced that the mortality from whooping-cough would be much increased if strict quarantine were enforced. The morbidity, however, might be reduced by such a procedure.

DR. HEMAN SPALDING: Proper quarantine cannot be maintained in any case, except in a hospital, and there is no hospital in this city for that purpose. If one part of a park were set aside for these children, and physicians would superintend getting their patients to that place, it would be all right. One cannot trust nurses, parents, or anybody. Besides, people will say that they are not afraid of the disease. The public must be protected against itself.

DR. G. KOEHLER, Department of Health: This may be considered from two points, that of the patient and that of the public, the former in his relation to others, and the latter in its relation to the health officer. The public demands protection from disease. Health officials recognize the increased mortality from whooping-cough and measles. The mortality from scarlet fever and diphtheria is decreasing. Both these conditions must be ascribed to insufficient quarantine, in the first instance, and to effective quarantine, in the second. There is no doubt that the mortality and morbidity of whooping-cough and measles could be reduced considerably if we had effective quarantine. Unfortunately, the diagnosis cannot be made early, and many of these patients do not have medical attendance. It is during the early stages of the disease, when it is practically unrecognizable, that the contagion is spread. This nullifies all efforts that might be made afterward to control the spread of infection. The greatest harm is done before the disease is recognized. Isolation on the premises, from the health officer's standpoint, is the proper thing, and in certain localities it would be impractical to permit these patients to go out anywhere. The number of cases reported is steadily increasing, and consequently the recorded death rate is diminishing. I agree with Dr. Spalding that it would not be a good thing to tag children in certain districts, because of the attention such a tag would attract. In other districts it might be all right.

DR. I. A. ABT: Adults have whooping-cough as well as children. I have never seen an epidemic of whooping-cough in a family that the father and mother did not also get the disease; therefore, rigid quarantine would seem to be essential. Unfortunately, it is well-known that the only treatment for whooping-cough is fresh air; therefore, sanitarians should also be humanitarians. By keeping these little patients confined within a flat or house we are certainly not doing the best thing for their recovery.

DR. F. X. WALLS: It is difficult to recognize whooping-cough in the early stages; rarely does the patient go to bed. Under such conditions, I doubt that the placarding of the houses has really altered the condition, so far as one might be led to believe. There has been no reduction in mortality. The enforcement of strict quarantine would certainly help considerably, but, under conditions as they exist in whooping-cough, our efforts along the lines of a vigorous quarantine are futile. Quarantine will be opposed and the results to be desired are materially nullified.

DR. I. D. RAWLINGS, Department of Health: Placarding is the proper thing. It arouses the people in the neighborhood, and they report every suspicious case. The Department of Health had under consideration the advisability of placing a nurse in the various parks and playgrounds to detect cases of whooping-cough. These places are the breeding-grounds for the spread of infection. I do not believe that it would be wise to tag the child.

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# Medical Education and State Boards of Registration

## COMING EXAMINATIONS

ARKANSAS: Regular; Little Rock, May 10-11. Sec., Dr. F. T. Murphy, Brinkley.

FLORIDA: Eclectic; Tampa, May 2. Sec., Dr. Hiram J. Hampton, 1805 Florida Avenue.

GEORGIA: Regular; Augusta, May 2-3, Atlanta, May 4-7. Sec., Dr. I. H. Goss, 297 Hancock Avenue, Athens. Homeopathic: Atlanta, May 15. Sec., Dr. R. E. Hinman, 153 Whitehall Street.

LOUISIANA: Regular; New Orleans, May 19-20. Sec., Dr. Felix A. Larue, 211 Camp Street. Homeopathic: New Orleans, May 2. Sec., Dr. Gayle Aiken, 1102 St. Charles Avenue.

MASSACHUSETTS: State House, Boston, May 10-12. Sec., Dr. E. B. Harvey, Room 159, State House.

MISSISSIPPI: State Capitol, Jackson, May 10. Sec., Dr. S. H. McLean, Jackson.

NEBRASKA: State House, Lincoln, May 11-12. Sec., Dr. E. Arthur Carr.

NEVADA: Carson City, May 2. Sec., Dr. S. L. Lee.

NEW YORK: Albany, May 24-27. Chief of Examinations Division, Mr. Charles F. Wheelock, Albany.

TENNESSEE: Memphis, Nashville and Knoxville, May 3-4. Sec., Dr. C. A. Abernathy, Pulaski.

## New Mexico January Report

Dr. J. A. Massie, secretary of the New Mexico Board of Health and Medical Examiners, reports the written examination held at Santa Fe, Jan. 10, 1910. The number of subjects examined in was 13; total number of questions asked, 100; percentage required to pass, 75. Two candidates were examined, both of whom passed. Sixteen candidates were licensed on presentation of satisfactory credentials. The following colleges were represented:

PASSED

| College | Year Grad. | Per Cent. |
|---|---|---|
| University of Tennessee | (1907) | 85.8 |
| Gate City Medical College | (1904) | 75.4 |

LICENSED ON CREDENTIALS

| College | Year of Grad. |
|---|---|
| Chicago Homeopathic Medical College | (1883) (1896) |
| Bennett Medical College, Chicago | (1907) (1909) |
| University of Iowa, College of Medicine | (1900) |
| Hospital College of Medicine, Louisville | (1907) |
| University of Louisville | (1907) (1909) |
| Detroit College of Medicine | (1903) |
| St. Louis College of Physicians and Surgeons | (1899) (1901) |
| Columbia University, College of Physicians and Surgeons | (1885) |
| Western Reserve University | (1908) |
| Jefferson Medical College | (1907) |
| University of Pennsylvania | (1899) |
| Vanderbilt University | (1908) |

## New Hampshire January Report

Mr. H. C. Morrison, regent of New Hampshire State Board of Medical Examiners, reports the written examination held at Concord, Jan. 4-5, 1910. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 12, of whom 10 passed and 2 failed. One candidate was licensed through reciprocity. The following colleges were represented:

PASSED

| College | Year Grad. | Per Cent. |
|---|---|---|
| Baltimore Medical College | (1908) | 77 |
| Tufts College Med. School..(1907) 85; (1908) 85; | (1909) 82, | 83 |
| Boston University (1903) 90; | (1908) | 91 |
| Dartmouth Medical School | (1908) | 80 |
| University of Vermont | (1909) 80, | 89 |

FAILED

| College | Year Grad. | Per Cent. |
|---|---|---|
| College of Phys. and Surg., Boston..(1908) 71; | (1909) | 71 |

LICENSED THROUGH RECIPROCITY

| College | Year Grad. | Reciprocity with |
|---|---|---|
| University of Michigan, Homeopathic College | (1903) | Georgia |

### Oregon January Report

Dr. R. C. Coffey, secretary of the Oregon State Board of Medical Examiners, reports the written examination held at Portland, Jan. 4-6, 1910. The number of subjects examined in was 15; total number of questions asked, 108; percentage required to pass, 75; 5 per cent. is allowed for ten years of practice. The total number of candidates examined was 70, of whom 44 passed, including 4 non-graduates and 1 osteopath, and 26 failed, including 1 osteopath. The following colleges were represented:

| College | Year Grad. | Total No. Examined. |
|---|---|---|
| PASSED | | |
| Cooper Medical College (1903) | (1909) | 2 |
| Coll. of Physicians and Surgeons, San Francisco | (1902) | 1 |
| George Washington University (1905) | (1908) | 2 |
| Northwestern University Medical School | (1908) | 1 |
| Rush Medical College (1879) (1895) (1903) (1905) (1907) | (1909) | 6 |
| Hahnemann Medical College and Hosp., Chicago | (1909) | 1 |
| State University of Iowa, College of Medicine | (1908) | 1 |
| State Univ. of Iowa, Homeo. College (1897) | (1903) | 2 |
| Louisville and Hospital Medical College | (1908) | 1 |
| Baltimore University | (1897) | 1 |
| Baltimore Medical College | (1904) | 1 |
| University of Michigan, College of Med. (1892) | (1908) | 2 |
| Hamline University | (1906) | 1 |
| University Medical College, Kansas City | (1897) | 1 |
| Washington University, St. Louis | (1903) | 1 |
| St. Louis College of Phys. and Surg. (2, 1895) | (1897) | 3 |
| St. Louis University | (1908) | 1 |
| Columbia University, College of Phys. and Surg. | (1905) | 1 |
| Western Reserve University | (1908) | 1 |
| University of Oregon | (1909) | 2 |
| Willamette University (3, 1907) | (1909) | 4 |
| Jefferson Medical College (1904) | (1908) | 2 |
| Western University, London, Ontario | (1909) | 1 |
| FAILED | | |
| Gross Medical College, Denver | (1892) | 1 |
| College of Physicians and Surgeons, Chicago | (1906) | 1 |
| Hering Medical College | (1908) | 1 |
| Hahnemann Medical College and Hosp., Chicago | (1885) | 1 |
| Illinois Medical College | (1908) | 1 |
| Rush Medical College | (1903) | 1 |
| Kentucky School of Medicine, Louisville (1894) | (1908) | 2 |
| University of Louisville | (1907) | 1 |
| Baltimore Medical College (1901) | (1905) | 2 |
| University Medical College, Kansas City | (1900) | 1 |
| Barnes Medical College | (1906) | 1 |
| Kansas City Medical College | (1896) | 1 |
| Ohio Medical University | (1904) | 1 |
| Starling Medical College, Columbus | (1901) | 1 |
| Eclectic Medical Institute, Cincinnati | (1906) | 1 |
| University of Oregon (1906) | (1908) | 2 |
| Jefferson Medical College | (1906) | 1 |
| Western University of Pennsylvania (1908) | (1909) | 2 |
| Memphis Hospital Medical College | (1909) | 1 |
| Western University, London, Ontario | (1894) | 1 |
| College of Phys. and Surg., Ontario, Canada* | (1903) | 1 |

* This is an examining body; the name of college where medical work was taken was not given.

## *Marriages*

LESTER EDWIN MEE, M.D., to Miss Charlotte Grubb, both of Chicago, April 27.

HENRY M. ROONEY, M.D., to Miss May Turner, both of Los Angeles, Cal., April 6.

WILLIAM B. EVANS, M.D., to Miss Mary S. Scott, both of Philadelphia, April 20.

HARVEY M. EGOLF, M.D., to Miss Bertha Bertch, both of Liberty, Ind., April 10.

GEORGE L. PAINTER, M.D., San Francisco, Cal., to Miss Mary A. Schenck of Alameda, Cal., April 6.

HARRY B. SOBERNHEIMER, M.D., Philadelphia, Pa., to Miss Holbrook-Latham of Colorado, April 14.

JOHN A. HARTWELL, M.D., New York City, to Miss Mary Butler Fulton, of Port Chester, N. Y., April 16.

EDGAR LYONS WOODS, M.D., U. S. Navy, to Miss Grace Douglas Anderson, at Alexandria, Va., April 14.

WILLIAM PRESTON MILLER, M.D., Hagerstown, Md., to Miss Annie Louise McWilliams, at Pasadena, April 26.

ALBERT STEVENS CUNNINGHAM, M.D., Goldfield, Iowa, to Miss Myrtle Blodgett of Renwick, Iowa, recently.

HARRY FRENCH THOMPSON, M.D., Forest City, Iowa, to Miss Louise Taylor of Alden, Iowa, at Denver, Colo., April 12.

## *Deaths*

**George C. Purdue, M.D.** Medical College of Evansville, Ind., 1880; a member of the American Medical Association; the Southwestern Surgical Association and Western Surgical and Gynecological Association; surgeon-in-chief at the Wichita, Kan., Hospital; died in New York City, April 12, from peritonitis, following an operation for acute appendicitis, aged 56.

**George A. Bradbury, M.D.** Albany Medical College, 1883; a member of the American Medical Association; a practitioner of Lansingburg, Troy, N. Y., for more than twenty-five years; a member of the staff of physicians and surgeons of the Leonard Hospital; died at his home in that place, April 9, from angina pectoris, aged 53.

**George A. Evans, M.D.** Bellevue Hospital Medical College, 1873; a member of the Medical Society of the State of New York; physician to the Howard Colored Asylum, Brooklyn; one of the state medical examiners in lunacy; died at his home in Brooklyn, March 31, aged 59.

**Johnson William Hagadorn, M.D.** University of Michigan, Department of Medicine and Surgery, 1870; formerly a member of the American Medical Association; a member of the Michigan State Medical Society; died at his home in Lansing, April 17, from apoplexy, aged 70.

**James F. Fitzsimmons, M.D.** Northwestern University Medical School, Chicago, 1868; a member of the Ohio State Medical Association; a member of the board of pension examining surgeons; died at his home in Bucyrus, April 11, from angina pectoris, aged 66.

**James Oakley Pingry, M.D.** College of Physicians and Surgeons, New York City, 1868; a member of the Medical Society of the State of New York; a practitioner of Millbrook, N. Y., for thirty-five years; died at his home in that place, April 10, from paralysis, aged 66.

**Walter Forester Adams, M.D.** Boston University School of Medicine, 1900; a practitioner of Waltham, Mass., until 1907, when he removed to Rutland; died at the State Sanatorium in that place, April 1, from pulmonary tuberculosis, aged 36.

**Newton Stephen Bell, M.D.** University of Vermont, College of Medicine, Burlington, 1864; a member of the Connecticut State Medical Society; medical examiner and health officer of Windsor, Conn.; died at his home, April 11, aged 70.

**Benjamin B. Mozee, M.D.** Cincinnati College of Medicine and Surgery, 1869; a member of the Nebraska State Medical Association; of Geneva, Neb.; died at St. Luke's Hospital, Spokane, Wash., April 10, from paralysis, aged 71.

**David Madill, M.D.** Queen's University, Dublin, Ireland, 1871; of San Francisco; died in Oakland, April 9, as the result of injuries received by being struck by a Southern Pacific train near Sunol a few days before, aged 70.

**Edward Ellis Nathan, M.D.** Chicago College of Medicine and Surgery, 1905; College of Physicians and Surgeons, Chicago, 1906; died April 18, as the result of drinking cyanide of potassium, with suicidal intent, aged 26.

**Johannes Abraham Otte, M.D.** University of Michigan, Department of Medicine, 1886; formerly of Grand Rapids, Mich.; a medical missionary at Amoy, China; died of Asiatic cholera at that place, April 14, aged 48.

**James M. Barbour, M.D.** Homeopathic Hospital College, Cleveland, 187—; of Pittsburg, Kan.; a veteran of the Civil War; died in the Osawatomie State Hospital, April 6, from organic heart disease, aged 73.

**Thomas Marion Wilson, M.D.** Missouri Medical College, 1881; a member of the American Medical Association; of Eastland, Texas; died at that place, Dec. 14, 1909, from Bright's disease, aged 68.

**Lorenzo Dickson Ray, M.D.** Rush Medical College, Chicago, 1887; formerly of Gillespieville, Ohio; died at the home of his daughter in Park Rapids, Minn., April 1, from cerebral hemorrhage, aged 61.

**Charles P. Turner, M.D.** Jefferson Medical College, Philadelphia, 1851; a member of the American Academy of Medicine; died at his home in Philadelphia, April 12, from angina pectoris, aged 84.

**T. J. Gordon, M.D.** Tulane University, New Orleans, 1857; surgeon of the Twenty-second Louisiana Infantry, C. S. A., during the Civil War; died at his home in McComb City, Miss., April 2, aged 72.

**George T. Twyman, M.D.** Louisville Medical College, 1879; a member of the American Medical Association; of Independence, Mo.; died at Kansas City, Mo., April 18, from acute diverticulitis, aged 56.

**George Farquhar Jones King, M.D.** University of Pennsylvania, 1898; a member of the Rhode Island Medical Society; died at his home in Providence, April 12, from pneumonia, aged 43.

**Havillia C. Hobbs, M.D.** Eclectic Medical Institute, Cincinnati, 1881; a member of the American Medical Association; died at his home in Salem, Ind., April 18, from paralysis, aged 61.

**Frederick Stanley Dewey, M.D.** Washington University, St. Louis, 1880; formerly of Oklahoma City, Okla.; died at Edmond, Okla., April 13, from carcinoma of the larynx, aged 54.

**Thomas Holmes Kennan, M.D.** College of Physicians and Surgeons, New York City, 1868; a Confederate veteran; died at his home in Atlanta, Ga., April 10, from paralysis, aged 70.

**Horace W. Cox, M.D.** Medical Department Willamette University, Salem, Ore., 1879; formerly of Schurz, Nev.; died at his home in Corvallis, Ore., April 14, from arteriosclerosis.

**Oel Sage Musick, M.D.** Hahnemann Medical College, Chicago, 1893; Rush Medical College, 1894; formerly of Chicago; died in the Elgin State Hospital, April 9, aged 42.

**George Foster Simpson, M.D.** University of Vermont College of Medicine, Burlington, 1873; of North Adams, Mass.; died at his home, April 10, from myocarditis, aged 60.

**David Simpson Richards, M.D.** Medical School of Maine, Brunswick, 1856; died at his home in Richmond, Maine, January 7, from cerebral hemorrhage, aged 83.

**Robert LeRoy Morgan, M.D.** Syracuse University College of Medicine, 1897; formerly of Rochester, N. Y.; died at his home in Tupper Lake, N. Y., April 7, aged 36.

**William R. Curtis, M.D.** Baltimore University School of Medicine, 1887; of New Martinsville, W. Va.; died at that place, February 5, from locomotor ataxia, aged 45.

**Lawrence W. Hart, M.D.** St. Louis College of Physicians and Surgeons, 1897; mayor of Morehouse, Mo.; was shot and killed, April 12, by a political enemy.

**John Meiners, M.D.** Kansas City (Mo.) Hahnemann Medical College, 1905; of Tipton, Kan.; died at that place, January 9, from intestinal obstruction, aged 31.

**Frank Howard, M.D.** Barnes Medical College, St. Louis, 898; of San Antonio, Texas; died at that place, February 9, from cardiac apoplexy, aged 59.

**Ellington John Morgan, M.D.** Jefferson Medical College, Philadelphia, 1860; of Bainbridge, Ga.; died at that place, January 28, of influenza, aged 73.

**William Hutchinson, M.D.** Rush Medical College, 1875; formerly of Rockford, Ill.; died at the Elgin State Hospital, April 6, from paresis, aged 62.

**Edgar Pennypacker Brunner, M.D.** Hahnemann Medical College and Hospital, Philadelphia, 1869; died at his home in Philadelphia, April 8, aged 60.

**John Joseph Nolan, M.D.** St. Louis College of Physicians and Surgeons, 1895; died at his home in Nichols, Iowa, April 10, from pneumonia, aged 41.

**Cyrenius G. Clark, M.D.** University of Michigan, Department f Medicine, 1864; died at his home in Maumee, Ohio, April 5, rom prostatitis, aged 77.

**John W. Ashford, M.D.** Jefferson Medical College, Philadelphia, 1897; of Watkinsville, Ga.; died at that place, January 1, of tetanus, aged 34.

**Max Bruck, M.D.** College of Physicians and Surgeons, Baltimore, 1902; of Newark, N. J.; died in Morris Plains, N. J., Oct. 18, 1909, aged 38.

**John Haswell Rice, M.D.** Castleton (Vt.) Medical College, 852; of Pomona, Cal.; died at his home, March 21, from neumonia, aged 83.

**Cornelius Wilson Larison, M.D.** Geneva (N. Y.) Medical College, 1863; died at his home in Ringoes, N. J., April 15, from aralysis, aged 73.

**William Wheelock DeLancey, M.D.** Jefferson Medical College, 908; died in Phoenix, Ariz., March 27, from tuberculosis, ged 28.

**Andrew Fairfield Reed, M.D.** Harvard Medical School, 1874; f Arlington, Mass.; died at that place, April 15, aged 60.

**Samuel W. Vaughan, M.D.** Atlanta (Ga.) Medical College, 858; of Hot Springs, Ark.; died at that place, April 12.

**Jerome Keeley, M.D.** Jefferson Medical College, 1864; died at is home in Christiana, Pa., April 2, aged 83.

# Miscellany

## OXIDASES AND PEROXIDASES

Those processes of oxidation which take the form of slow combustions and which occur either spontaneously or under the influence of the so-called oxygen-carrier, are of great interest to physicians because such changes are probably intimately concerned in all biochemical phenomena in which oxygen is involved. It is almost exactly one hundred years since the first investigations in this field were undertaken. During this time our knowledge of such processes has greatly increased, as may be seen from the exhaustive monograph, entitled "The Oxidases and Other Oxygen-catalysts Concerned in Biologic Oxidation," Bulletin No. 59, Hygienic Laboratory, U. S. Public Health and Marine-Hospital Service, by J. H. Kastle, professor of chemistry in the University of Virginia, and formerly chief of the Division of Chemistry, Hygienic Laboratory. The following is an abstract of this bulletin: Such oxidations as occur spontaneously in air or oxygen are known as autoxidations and substances capable of undergoing such oxidation, as autoxidizable substances. In the course of such oxidations, however, it frequently happens that other substances less readily oxidizable are also oxidized along with the autoxidizable substance. In other words, it has been found that one substance often has the power to induce the oxidation of a second substance, which ordinarily is not readily oxidizable. The second substance stands to this process in the relation of an acceptor, in the sense that it combines only with that oxygen which has been rendered active by the oxidation of the autoxidizable substance.

It was early noticed that many oxidations required, in addition to the presence of oxygen or air, certain favoring conditions, such as the presence of moisture, the action of electricity, or the intervention of apparently indifferent substances, such as finely divided metals, certain oxids or the action of living organisms. In explanation of these phenomena various hypotheses have been proposed. The principal theories of autoxidation and oxygen-activation are: (1) the ozone-theory of Schoenbein: (2) the *Spaltungs-Theorie* of Hoppe-Seyler, (3) the ionization theory of Van't Hoff; and (4) the peroxid theory of Traube, Bach, Engler, Manchot and others.

According to Schoenbein, autoxidations are accomplished through the action of ozone and autoxidizable substances are such as have the power of ozonizing the air. He also accounted for the phenomenon of oxygen-carrying on the supposition that ozone is formed through the action of the carrier and from his numerous observations he was led to believe that without the presence of such substances as convert ordinary oxygen into ozone, animals would be suffocated in the midst of an ocean of the purest, but inactive, oxygen as quickly as in a vacuous space. On the other hand, from his study of putrefaction and anaerobic fermentation, Hoppe-Seyler arrived at the notion that oxygen is rendered active through the agency of nascent (active) hydrogen, which in all such processes splits the inactive oxygen molecule into two (active) atoms. With one of these the nascent hydrogen combines to form water, thereby leaving the second oxygen atom also in an active condition and ready to combine with any substance (the acceptor) capable of oxidation. He accounted for the formation of hydrogen peroxid in certain processes of autoxidation on the supposition that even water could be oxidized by the second oxygen atom and this, as afterward pointed out by Traube, constituted the weak point in this theory. The ionization theory of Van't Hoff rests on the assumption that in gaseous oxygen we have a condition of chemical equilibrium represented by the equation $O_2 = O + O$, which may be interpreted to mean that under ordinary conditions gaseous oxygen contains a certain number of dissociated oxygen molecules, and that it is to these (active) ions that oxygen owes its power to oxidize autoxidizable substances. This conception seems really to have originated with Clausius. It received experimental confirmation at the hands of von Helmholtz and Richarz, and others. To Van't Hoff, however, we are indebted for first making use of this concept to explain the distribution of oxygen between two oxidizable substances. It fails, however, to account satisfactorily for the production of peroxids during processes of autoxidation and to this extent is defective.

Finally to Traube we owe the introduction of the following new ideas on the subject:

1. In all processes of oxidation the oxygen molecule as a whole combines with the oxidizable substance to form a peroxid $H_2 + O_2 = H_2O_2$.

2. Water participates in the greater number of autoxidations, hydrogen peroxid being formed as a by-product:

$$Zn + \left.\begin{matrix} HO \\ HO \end{matrix}\right] \left[\begin{matrix} H \\ H \end{matrix}\right. + O_2 = Zn(OH)_2 + H_2O_2$$

3. The phenomenon of oxygen-carrying is due primarily to the oxidation of a second substance by hydrogen peroxid resulting from the oxidation of the carrier in the presence of water.

4. The molecule of water is first decomposed in autoxidations and the hydrogen set free combines with an entire molecule of oxygen to form hydrogen peroxid. $H_2 + O_2 = H_2O_2$.

Later Engler and his co-workers have shown that the primary change consists in the formation of a peroxid of the autoxidizable substance. This may form hydrogen peroxid in the presence of water, or may oxidize another molecule of the autoxidizable substance or may oxidize another less oxidizable substance, the so-called acceptor. Engler and Weissberg assume a partial dissociation of the oxygen molecule giving it free valences as expressed by the graphic formula — O — O —. This may occur under the influence of heat, light, electricity, or predisposing chemical affinity, as in the case of nascent hydrogen, unsaturated organic compounds, etc. This partially dissociated oxygen is ready to unite with an autoxidizable substance forming a peroxid.

Thus the peroxid theory of oxidation accounts for the phenomena of autoxidation and oxygen-carrying on the supposition that spontaneously oxidizable substances have the power to unite directly with a molecule of partially dissociated oxygen to form peroxids.

Numerous examples of such oxidations can be found in the life of plants and animals. During the absorption of oxygen by plants various substances are formed which have the power of effecting oxidations which ordinarily can not be brought about by molecular oxygen alone, such as the bluing of guaiacum, and the decomposition of potassium iodid. These substances are very unstable, being destroyed by heat, by mineral acids and by various poisons. They are called oxidases and are closely connected with the peroxidases which have the power of transferring oxygen from hydrogen peroxid, which they decompose, to other substances and also with the catalases which are able to decompose hydrogen peroxid but cannot cause the oxygen evolved from this compound to unite with other substances. Similar substances are found in animal tissues. It is believed by Portier and Sieber that the oxidases serve the purpose of defense, having the power of destroying toxins. Sieber found that the fibrin of the blood of a normal horse gives no oxidase reaction, whereas the fibrin from a horse immunized against diphtheria toxin gives a blue color with guaiacum, indicating the formation of oxidases in the blood as the result of immunization.

The bluing of guaiacum in the presence of air and certain substances which act as oxygen carriers has long been used as a test for the presence of these substances. As long ago as 1809, the bluing of guaiacum by nitric acid and also by the fresh root of horseradish was noted by Planche, and he and other French observers found similar reactions with other vegetable products and showed that this property was destroyed by boiling. These observers did not, however, recognize the relation of these changes to the oxygen of the air, but Schoenbein, after the discovery of ozone, concluded that in plants and animals there existed substances capable of activating the oxygen of the air by converting it into ozone and of transferring such oxygen from hydrogen peroxid and other peroxids to oxidizable substances. Such substances he called oxygen-exciters and oxygen-carriers. Traube in his study of fermentation recognized the ferments as definite chemical substances and divided them into three classes, one of which he called oxidizing ferments. These he found acted as go-betweens, taking oxygen from the air or from peroxids and transferring it to oxidizable substances, themselves becoming reduced. This process could be repeated over and over again, the ferment remaining unchanged but capable of transferring an indefinite quantity of oxygen to other substances. It is to Bertrand that we owe the introduction of the term "oxidase" into science. He conceived of the oxidases as enzymes with oxidizing power. Duclaux has defined oxidases as substances which at ordinary temperature and under physiologic conditions, carry oxygen rapidly to substances on which, without the intervention of oxidases, ordinary oxygen would act very slowly. The oxidases are very readily soluble in water; they are also readily soluble in glycerin but in other organic solvents thus far investigated, they seem to be insoluble. They are very unstable in aqueous solution, even in the presence of mild antiseptics. They are precipitated by alcohol and can be redissolved by water after precipitation by alcohol and drying. They are nondialyzable and show their colloid nature by adhering to precipitates (adsorption). They are impaired in their activity by temperatures slightly above that of the body (42 to 45 C.) and are completely destroyed at 100 C. Glycerin solutions of the oxidases are more stable than aqueous solutions. The oxidizing power of the different oxidases is exercised on different substances, but it is not confined to an individual substance as a rule. Thus laccase, an oxidase found in many plants, will oxidize laccol, the oxidizable substance of the lac tree, but will not affect tyrosin. Tyrosinase, on the other hand, oxidizes tyrosin to melanin, but does not affect laccol. Laccase, however, will oxidize a number of substances besides laccol, such as guaiacum, phenolphthalein, etc. Tyrosinase does not affect these reagents, but oxidizes a number of phenolic derivatives which laccase does not affect.

*Classification of the Oxidases.*—While several classifications of the oxidases have been made the following seems best adapted to present requirements:

1. Laccase: ferments oxidizing guaiacum, guaiacol, hydroquinone, phenolphthalein, tannin, etc., directly by means of atmospheric or dissolved oxygen and without the intervention of hydrogen peroxid. According to Bach and Chodat, laccase consists of a peroxidase, together with an oxygenase (peroxid).

2. Tyrosinase: ferments acting on tyrosin and related substances.

3. Aldehydase: ferments oxidizing aromatic aldehydes and related compounds.

4. Indophenol oxidase (Spitzer): ferments oxidizing a mixture of alpha-naphthol and para-phenylene diamin to indophenol and other substances.

5. The purin oxidases.

6. Glycolytic ferments, causing the disappearance of sugar from animal tissues.

In addition to the oxidases proper, we have among the related ferments and carriers the following: 1. Peroxidases: oxidizing oxidase reagents only in the presence of a peroxid, such as hydrogen peroxid. These are the indirect oxidases (Bourquelot), and the beta-oxidase of Grüss. According to Moore and Whitley, the peroxidase is the only type of oxidizing enzyme concerned in oxidizing processes occurring in living cells and tissues. 2. Catalases (Loew). These ferments actively decompose hydrogen peroxid, but are incapable of effecting the oxidation of oxidase reagents by means of the peroxid. 3. Oxygen-carriers (not true ferments). This class includes such substances as the iron-containing pigments of the blood, hemocyanin, and the gamma-oxidases of Grüss. They activate the oxygen of a peroxid, but differ from the true peroxidases in having greater stability.

*Oxidase Reagents.*—A considerable number of substances have been used as reagents for detecting the presence of the oxidases and peroxidases and a table of these is given by the author on p. 60 of his monograph. Guaiacum, aloin, phenolphthalein, etc., are examples of these reagents. Some of them have been used for quantitative purposes.

Laccase: Laccase is a ferment found widely distributed in plants, but rarely found in animal tissues, which has the power of oxidizing laccol, a constituent of the juice of the lac tree which turns brown and finally black on exposure to the air. The ferment which brings about this change has also the power of bluing guaiacum, which constitutes a sensitive reagent for detecting its presence. By this reaction its wide distribution has been ascertained. Laccase is very soluble in water and is less readily precipitated by alcohol from its aqueous solutions than tyrosinase which frequently accompanies it. It is not readily destroyed by heat. Solutions containing both laccase and tyrosinase may be freed from the latter by precipitating with alcohol or by heating to 70 C., a temperature which destroys the tyrosinase but does not affect the laccase. The activity of laccase is weakened or destroyed by the action of strong acids, hydrogen sulphid, hydrogen cyanid, and a number of other poisons. Laccase has a protein character, but there is reason to think that it is composed of two substances, one of which has the nature of a peroxid, known as oxygenase and the other a true ferment, having the character of a peroxidase. Laccase always contains a small percentage of manganese. When injected into animals it gives rise to an antibody which retards the action of laccase, but not of tyrosinase. There is some reason to think that laccase from different sources has a somewhat different composition and that when injected into animals different varieties of antilaccase are produced according to the source of the laccase injected.

Tyrosinase: This oxidase is found widely distributed in the vegetable kingdom and is present in animal tissues to a much greater extent than laccase. It produces a red coloring matter which is later converted into a black pigment. The substance oxidized is tyrosin and the pigment produced is melanin. It is believed that tyrosinase is the agent concerned in the production of pigment in the skin of animals including man and that the coloring matter of melanotic tumors is produced from tyrosin in the same manner. Tyrosinase, like laccase, appears to consist of two constituents, an oxygenase which activates atmospheric oxygen and can be replaced by hydrogen peroxid in weak solution, and the other a specific peroxidase which makes possible the absorption of oxygen by tyrosin, either from the oxygenase or from hydrogen peroxid. Some observers have found evidence of the formation of an antityrosinase in the blood serum of animals after the injection of tyrosinase and it appears that the antityrosinase which is produced after the injection of tyrosinase of vegetable origin is different in some respects from that formed after the injection of tyrosinase of animal origin.

Purin Oxidases: From the standpoint of the physician great interest attaches to the oxidation of the purin bases. The precursors of uric acid are xanthin and hypoxanthin and these are converted into uric acid by an oxidase existing in the pulp of the spleen and of the liver. This body has been separated and shown to be capable of converting xanthin and hypoxanthin into uric acid, in a current of air. It does not act, however, on the antecedents of xanthin and hypoxanthin, viz., guanin and adenin. These require first to be converted into xanthin and hypoxanthin respectively, by the removal of an amino group, a process called desamidation, which occurs under the influence of two hydrolytic ferments, known as guanase and adenase.

Peroxidases: These substances are sometimes called indirect oxidizing ferments, for the reason that they cannot accomplish the oxidation of oxidizable substances by means of gaseous or dissolved oxygen. They have the power, however, of accomplishing such oxidations through the instrumentality of hydrogen peroxid and other peroxids. There is much evidence that hydrogen peroxid has the power of uniting with other substances to form unstable peroxids which readily yield their oxygen to oxidizable substances. The peroxidases are found in all living tissues and their presence seems to be essential to the exhibition of vital properties. Seeds which no longer contain peroxidases are incapable of germinating. In the blood the peroxidases have been found especially in the white cells. The investigations of Bach and Chodat and Kastle and others lead to the conclusion that the oxidases are mixtures, composed of a peroxidase with a complex organic peroxid which has been called by Bach and Chodat an oxygenase. This may combine under the influence of the peroxidase with the oxidizable substance to which it imparts its oxygen and is again separated in a reduced form. This reduced form takes oxygen from the air to regenerate the peroxid or oxygenase.

Catalases: The catalases differ from the peroxidases in that while they decompose hydrogen peroxid the oxygen is given off in an inactive form and is incapable of producing oxidation. There is much speculation as to the nature and function of catalases and it may be after all that the statement that they cannot effect or hasten oxidation is too absolute. They may be peculiar forms of the peroxidase.

*Oxygen-Carriers Which Are Not Ferments.*—A study of the oxidations occurring in the blood shows that it contains several classes of oxidizing ferments, but is after all not dependent on these for its principal oxidizing power. Oxidases are contained in the cells which are separable by water and blue guaiacum directly. There are also found peroxidases which will only act in the presence of hydrogen peroxid and catalases which decompose hydrogen peroxid, but do not effect oxidations. All these substances are decomposed and destroyed by boiling, but the power to blue guaiacum in the presence of hydrogen peroxid remains. It is evident that the power of the blood to blue guaiacum does not depend solely on the above mentioned ferments, but must be attributed mainly to the iron containing hemoglobin or hematin. This acts as an oxygen carrier. This serves to suggest that not all the oxygen-carriers occurring in living tissues have the nature of enzymes and points to the importance of such metals as are capable of existing in two or more states of oxidation for processes of oxidation occurring in living organisms.

*Metals Essential Constituents of Oxidases and Peroxidases.*—The investigations of Bertrand have shown that laccase owes its oxidizing power to the presence of small quantities of manganese. According to Spitzer the oxidizing power of animal tissues is referable to certain nucleoproteids which they contain and the oxidizing power of these substances is in turn referable to combined iron. So far as known, the most stable and most perfect of the oxygen catalysts occurring in the animal organism contain either copper or iron. Lepinois found both manganese and iron in the oxidase of the roots and leaves of aconite and belladonna and Aso found the same to be true of the oxidase of tea leaves. According to Bach and Chodat manganese is also the active agent of the peroxidases. Some oxidases contain no manganese, but do contain iron.

It is evident, therefore, that certain metals, such as iron, manganese, or copper, one or more of them, enter into the composition of the oxygen-carriers present in the living organism as essential ingredients. These metals or their salts are capable of existing in the colloidal condition in which form they are capable of accelerating chemical processes. They may combine by adsorption with other colloids and when in such combination present many of the properties of the natural oxidases and peroxidases. Garrigou has found certain metals to exist in a colloidal condition in mineral waters. According to this author such substances possess the power of natural oxidases and to them he ascribes the beneficial results which attend the drinking of such waters and which result from more vigorous oxidations in the tissues. It seems that colloidal solutions of any metal capable of existing in two or more states of oxidation should exhibit properties similar to those shown by the oxidases. A. and L. Lumiere and Chevrotier have found that the death of animals by tetanus toxin was greatly delayed by the administration of artificial oxidases and that with a slightly acid oxidase and tetanus toxin the animal did not show the slightest sign of intoxication. Wolff has shown that certain mineral salts can play the part of peroxidases. Thus with infinitesimal amounts of colloidal ferrocyanid of iron he claims to have been able to reproduce all the reactions of the peroxidases. He points out that it acts in all respects like a natural enzyme. He also points out the important rôle that the alkalinity of the liquid plays in such oxidation phenomena. Perhaps these investigations may point the way to a better understanding of the phenomena of disease and suggest therapeutic applications which will materially enrich the armamentarium of the physician.

# Medicolegal

## "Chiropractor" Guilty of Practicing Without a License—Validity of Statute Conferring Power on Examining Board

The Supreme Court of Iowa says that the indictment in the case of State vs. Miller (124 N. W. R. 167) charged that the defendant "did wrongfully and unlawfully publicly profess to be a physician and assume the duties of a physician, and then and there wrongfully, falsely and unlawfully did publicly profess to cure and heal diseases, nervous disorders, displacements, injuries and ailments by means of a certain system and treatment known as chiropractic," etc.

He advertised as follows: "Dr. F. M. Miller, chiropractor. . . . Read carefully the contents of this booklet. It will interest you. The cure of disease. Cure of disease follows chiropractic adjustment because chiropractic removes the cause. Chiropractic is a distinct and complete drugless and knifeless system and has nothing in common with osteopathy, massage, Swedish movement or any other system. Chiropractic is successful in all forms of disease. This means your disease. If your case is numbered among those supposed impossibilities, do not despair. Try chiropractic and get well. . . . Chiropractic is a common-sense treatment. It will bear investigation. It is based on a correct knowledge of the nervous tissues. It adjusts all displacements and allows the innate builder to reconstruct the broken-down tissues."

The evidence showed that the defendant treated patients for a consideration, and that he professed to cure and heal diverse diseases by the use of his system. He gave no medicine, nor did he prescribe medicine. His system consisted of certain mechanical appliances which were used in connection with hand manipulations and an electric vibrator. The court cannot agree with the contention that the evidence wholly failed to show that any offense was committed by the defendant. The facts in the case brought it clearly within the construction given the statute in State vs. Edmunds, 127 Iowa, 333; State vs. Bair, 112 Iowa, 466; and State vs. Heath, 125 Iowa, 585. The cases from other jurisdictions cited by the defendant were, of course, not controlling. In fact, most of them were based on statutes unlike that of Iowa.

The trial court received testimony that the treatment given by the defendant was beneficial to some of his patients, but the jury were afterward instructed to disregard such evidence. The instruction was right.

The indictment was assailed on the ground that it charged no crime, but it charged a violation of the statute in substantially the language of the latter, and that was sufficient.

Nor does the court agree with the contention that the Iowa statute under which the prosecution was brought is unconstitutional. The only new question presented with regard to it was in the contention that it makes an unwarranted delegation of authority to the State Board of Health. The chapter under consideration provides that the Board of Medical Examiners shall consist of the physicians of the State Board of Health, and names the subjects that shall be covered by the examination. The physicians of the State Board of Health are appointed by the governor. Section 2582 of the Iowa Code and Supplement provides that all persons desiring to practice medicine in the state must submit to an examination, and also present diplomas from some medical school of recognized standing.

It was contended that the power thus given to the board of examiners might be so exercised as to exceed proper police protection, and because of such possibility the statute was unconstitutional. But a statute is not unconstitutional because it provides a board for certain purposes and gives such a board discretion. Such a statute does not discriminate against any class of citizens. Nor does it confer on the board of examiners arbitrary power, or enable it to discriminate in favor of any particular school of medicine. While the board acts within its reasonable discretion, it will be protected, but, when it seeks to go beyond that and to act illegally, the court will interfere. A medical board of examiners may prescribe reasonable rules and regulations for the conduct of its work. The statute itself furnishes no warrant for an unjust discrimination, and the courts will not presume for the purpose of holding it unconstitutional that the board will exceed its power, or do any unlawful act.

There was a conviction in this case of practicing medicine without a license, and there being no substantial error in the record, the judgment is affirmed.

## Duties to Sick Seamen of Masters of Small Ships

The United States District Court, in Virginia, says, in the case of The M. E. Luckenbach (174 Fed. R. 265), a steam tug, that a fireman thereon fell sick on a voyage from Newport News, Va., to Colon, Panama, when some seven days out from Colon; that the boat stopped at Colon two days, and then proceeded to Port Antonio, consuming one day en route and remaining there one day, after which it proceeded to New York, consuming seven days, and three days later the man was sent to a hospital, where it was ascertained that he had typhoid fever. The ship's master seemed to have proceeded largely on the theory that it was the man's duty either to have gone personally to see, or to have asked for, a physician, or requested to be sent to a hospital; and to have also apparently acted on the idea, in which he may doubtless have been sincere at first, that the man was only slightly sick. But in all this he manifestly failed to recognize his obligation in the premises. It was the duty of the master to look out for the care and health of the man, whether he made a request of him so to do or not; and from the testimony it was clear that the man's condition, lasting during a period of seven days before reaching Colon, was such as to require of the master, in the exercise of that degree of care, consideration and responsibility which his position imposed on him, to see what was the character of the fever from which he was suffering, and was something as to which he could not hesitate, vacillate, speculate or take chances on. Ships the size of this one having no physician on board, the crew have to look to the master for proper care and medical treatment in matters affecting their health; and, when taken ill on a voyage, the laws of humanity require that the master, having sick members of his crew in charge, should treat them with the utmost care, kindness and consideration consistent with the circumstances in which he is placed, and see that intelligent medical assistance is furnished as soon as possible. In cases of emergency, voyages have to be deviated from; and there would certainly seem to be no good excuse why, on arrival at a port with a sick man on board, medical advice should not be had at once, and the seaman sent to a hospital, if necessary. In this case not only was the negligence of the master apparent in his failure to secure proper medical aid and hospital treatment at the earliest practicable moment, but the failure to send for a physician after the arrival of the vessel at the port of New York for a period of three days was under the circumstances inexcusable, if not inhuman. In conclusion, the court thinks that an award of $1,200 would be reasonable for the suffering that the man had been subjected to and the damages he had sustained.

## What Employer's Contract for Care at Hospital Includes

The Supreme Court of Colorado says, in the personal injury case of Miller vs. Camp Bird (105 Pac. R. 1105), that the plaintiff alleged that, as a part of the contract of employment between himself and the defendant, the latter was to provide him with such medical and hospital treatment as might become necessary or proper in the treatment of any injuries he might receive in its employ. But it could not in reason be maintained that, if the defendant contracted at all, it contracted to do more than to furnish such reasonable care as the hospital at Ouray afforded. Such hospitals are not equipped with all kinds of specialists. The plaintiff would certainly not maintain that, if it became necessary for his proper treatment that he consult an eminent specialist in New York, the company was bound to furnish such specialist, either at the hospital at Ouray or in New York. It was likewise too much to say that the company was bound to furnish a specialist either at the hospital or in Denver. The company furnished such care as the hospital in Ouray afforded, and as could be reasonably expected—at least no complaint was made of it. That was all that could be required.

# Current Medical Literature

## AMERICAN

Titles marked with an asterisk (*) are abstracted below.

### Medical Record, New York

*April 16*

1 *The Essentials of the Physiology and Pathology of Digestion. I. Levin, New York.
2 The Psychology of the Consumptive. M. Fishberg, New York.
3 *Therapeutic Drainage in 185 Cases of Uterine Obstruction. A. E. Gallant, New York.
4 *Fatal Factors in Pneumonia. G. Werley, El Paso, Tex.
5 Psychiatry and the General Practitioner. P. B. Brooks, Norwich, N. Y.
6 Anomalies and Points for the Surgeon to Bear in Mind. C. F. Disen, Brooklyn.
7 Hemorrhage after Removal of the Turbinated Bodies. J. Solow, Brooklyn.

1. **Physiology and Pathology of Digestion.**—Levin points out that the main danger to the organism lies in intoxication by foodstuffs only partially digested in the gastrointestinal tract, or by products of the metabolism of bacteria always present in every segment of the digestive organs. All these toxic substances on entering into the circulation exercise a deleterious effect on every organ of the body, skin, circulatory system, even the mind. The most remarkable illustration of the dependence of every organ of the body on the functions of the digestive organs we see in pellagra. The disease is caused by faulty corn. It begins with stomatitis, continues with gastric disturbances, then with skin lesion, and finally ends with depressive insanity.

3. Abstracted in THE JOURNAL, June 5, 1909, p. 1868.

4. **Fatal Factors in Pneumonia.**—Of all fatal factors in pneumonia, lack of early, complete and continuous rest in the horizontal position is in Werley's opinion responsible for more deaths than any other one thing. A considerable mortality from pneumonia is inevitable. But the inevitable mortality is far less than what is occurring at the present time. There is no serious infectious disease against which the body has more perfect means of natural defense. If only given a good fighting chance, a complete cure is generally effected in from 5 to 10 days without the aid (?) of any "specific" whatever. The body will take care of the pneumococcus if we take care of the body. The great fatal factors in pneumonia, he says, are, half enough water; half enough air, half enough rest; and too much meddlesome medication.

### Boston Medical and Surgical Journal

*April 14*

8 *Treatment of Paralytic Deformity. R. W. Lovett, Boston.
9 *Diagnosis and Treatment of Peritonitis of the Upper Abdomen. J. B. Deaver, Philadelphia.
10 *Metabolism Experiment on an Infant after Gastroenterostomy for Congenital Stenosis. F. B. Talbot, Boston.
11 Chronic Primary Intussusception in the Adult (continued). H. W. Goodall, Boston.

8. Abstracted in THE JOURNAL, Oct. 9, 1909, p. 1225.

9. **Peritonitis of the Upper Abdomen.**—Withdrawal of all food by mouth, the Fowler position and continuous saline proctoclysis have become the recognized factors in the treatment of acute infections of any part of the peritoneal cavity. At the time of operation, proper drainage must be instituted at the operative site, and it is Deaver's practice in all cases of diffuse or diffusing upper abdominal peritonitis, to insert a glass tube into the pelvis through a suprapubic stab wound. Whatever methods may be chosen, he says, the fact remains that in early diagnosis and early treatment we may be successful; if we allow our cases to progress, the issue must be fatal.

10. **Metabolism Experiment After Gastroenterostomy.**—A male baby, aged 6 weeks, was operated on for congenital stenosis of the pylorus. At the age of 5½ months the baby weighed 12 pounds 12 ounces, having gained 4 pounds since operation. The stools were gathered on November 12, 13, 14, a period of three days, and samples of the milk ingested on November 11, 12, 13, 14, were analyzed for fat and nitrogen. The analyses are recorded in tables. The figures indicate that the digestion and absorption of the fat and nitrogen were normal in this baby three and one-half months after the operation, and they are evidence that the operation of gastroenterostomy does not change the powers of digestion of these two food components and agree with the results published by Talbot in earlier investigations.

### New York Medical Journal

*April 9*

12 *The Cammidge Reaction in the Urine. J. M. Swan and J. J. Gilbride, Philadelphia.
13 Urethrotomy. T. M. Townsend and J. J. Valentine, New York.
14 Acquired Syphilis in an Hereditary Luetic. O. L. Suggett, St. Louis.
15 Differential Diagnosis of Locomotor Ataxia. C. W. Burr, Philadelphia.
16 *Disease of the Hypophysis. F. W. Marlow, Syracuse, N. Y.
17 Infant Mortality in Obstetric Practice. I. L. Hill, New York.
18 Tuberculosis of the Hip Joint. I. D. Steinhardt, New York.
19 Principles of Roentgenotherapy. S. Tousey, New York.

12. **Cammidge Reaction.**—An experience with two cases caused Swan and Gilbride to make a study of numerous cases to determine the frequency of the occurrence of this reaction and its bearing on the diagnosis of pancreatic disease. While, as a rule, they selected patients for the purpose of this study who presented abdominal symptoms, they also performed the test in a number of cases in which the patients presented no such symptoms. They found the Cammidge reaction positive in 3 cases of pancreatic disease, in 2 cases of carcinoma of the pancreas, and in a variety of diseases besides those of the pancreas, as diagnosticated by clinical methods alone. Many of the patients were suffering from diseases of the abdominal organs: 21 out of 47, such as cholecystitis, carcinoma of the stomach and typhoid.

In many other cases in which a positive reaction was found, such as varicose ulcer of the leg, fracture of the leg, burns of the thighs, sarcoma of the inguinal lymph nodes, and valvular heart disease, arteriosclerotic processes were progressing in the patients, and enough disturbance of the circulation in the pancreas might easily have resulted so that the substance which gives the reaction would have been formed and excreted. Swan and Gilbride think it a mistake to interpret every positive Cammidge reaction as indicative of organic disease of the pancreas. They believe that the positive reaction indicates a disturbed pancreatic function, and that the substance in the urine which produces the crystals results either from disorder of the pancreatic secretion or from the elimination of small quantities of maltose or other disaccharid.

The Cammidge reaction, they say, should never be used as a guide to the performance of an operation unless the test with phenylhydrazin hydrochlorid has been done and has failed to produce in crystals. If this reaction gives no crystals and the Cammidge reaction is still positive and the patient complains of upper abdominal symptoms, particularly pain, the reaction may be looked on as a link in the chain of evidence pointing either to pancreatic disease, disease of the gall-bladder, or disease of some neighboring organ. In the absence of such symptoms the presence of the reaction even with absence of m crystals in the phenylhydrazin hydrochlorid tube should be looked on merely as an interesting discovery.

16. **Disease of the Hypophysis.**—Briefly summed up Marlow's patient, a woman, presented the following symptoms: Amenorrhea, polyuria (6 quarts in 24 hours); some thirst; some headache; numbness of the hands; and increase in fat; in addition to the peculiar defect in vision which led to the diagnosis of the disease. Her symptoms were accounted for by assuming an increase in the size of the hypophysis with a diminution of the functional activity of its anterior lobe. The assumption of increase in size was necessary to account for the visual symptoms which surely point to pressure on the chiasm. Marlow regards it as probable that the disease is either of the nature of a new growth or that cystic disease of

the anterior lobe is present, for either of these conditions would tend to diminish its functional activity. Chief interest in the case, however, lies in the marked improvement in vision which occurred after the administration of thyroid extract; the improvement, however, being limited to the visual acuteness and to the diminution of headache; the polyuria, amenorrhea and adiposity continuing.

### Medical Fortnightly, St. Louis

*March 25*

20 Rational Treatment of Typhoid. G. L. Servoss, Fairview, Nev.
21 The Physical Basis of Life: Query. J. Clements, Wichita, Kan.
22 Pyuria in Latent Genito-urinary Lesions. F. C. Walsh, San Antonio.
23 Advantages of the Urine Examination. H. R. Harrower, Chicago.

### Wisconsin Medical Journal, Milwaukee

*March*

24 Rôle of the Practicing Physician in the Defense of Medical Research. J. Erlanger, Madison.
25 Reminiscences of Some of the Earlier Medical Practice in Wisconsin. G. W. Jenkins, Kilbourn.
26 Decompression as a Primary Procedure in the Treatment of Intracranial Lesions. C. H. Lemon, Milwaukee.
27 The Eye as a Factor in the Diagnosis of Increased Intracranial Tension. N. M. Black, Milwaukee.
28 Pellagra. C. F. North, Beaver Dam.

### Montreal Medical Journal

*March*

29 Demonstration of the Trachoma Bodies. S. H. McKee, Montreal.
30 Tabes Dorsalis and the *Ersatz-Theorie*. C. K. Russel, Montreal.
31 A Critical Estimate of the Medical Education of the Day with Suggestions for the Reorganization of the Physiologic Department of McGill University. W. Mills, Montreal.
32 Louise Boureois and Some Others. H. M. Little, Montreal.
33 Five Cases of Tuberculosis of and About the Eyes. R. Kerry, Montreal.

### The Journal of Nervous and Mental Diseases, Lancaster, Pa.

*March*

34 *Protracted Cerebrospinal Syphilis with Striking Intermittency of Symptoms. J. J. Putnam and E. E. Southard, Boston, and A. H. Ruggles, Providence.
35 *Paralysis Following Relapses and Second Attacks of Diphtheria. J. D. Rolleston, London, Eng.
36 The Spasmodic Type of Syringomyelia. G. W. Howland, London.

34. **Protracted Cerebrospinal Syphilis.**—The varied problems and considerations of this case may be presented as follows: A protracted case of cerebrospinal syphilis shows at the end of 16 years after infection and 11 years after initial nerve symptoms, a multiplicity of chronic lesions, but shows few acute lesions. Search for spirochetes so far has been negative. On the basis of gross and histologic findings, the authors regard it as possible to correlate many of the various clinical features: (a) transverse myelitis, (b) intermittent cranial nerve and other symptoms with structural disorder. But there were hysterical tendencies throughout which rendered exact correlations difficult *intra vitam*. The intermittency of symptoms was striking and an enumeration of histologic possibilities is given which might account for this intermittency (acute and reparative changes in the pia mater; cellular and fibrillar gliosis, whether nuclear, periradicular, or, in some cases, intraradicular; and the corset-like contraction of whole regions subject to sclerosis, with consequent herniation of small bits of nerve tissue).

The intermittency and varied structural origin of the symptoms as well as the maintenance to the last of acute changes were reasons for optimism, the authors believed, in pushing antisyphilitic treatment. Incidentally, the postmortem data show how lumbar puncture might fail to reveal lymphocytes in cerebrospinal syphilis, provided that there is an occlusion of the intermeningeal space by adhesions above the point of puncture. The case presented a kind of reversal of the biologic tendency that the structures later evolved shall be destroyed first, since the course of lesions in this case was largely ascending throughout and the cerebral cortex was left at the last a species of shell from which the lower functioning mechanisms had been successfully scooped out by disease.

35. **Paralysis Following Diphtheria.**—In this paper, which is based on personal observations made on 1,600 complete cases of diphtheria at the Grove Hospital, an artificial distinction is made between relapses and second attacks. By a "relapse" is meant the reappearance of the disease after recovery from the initial attack, but before discharge of patient from hospital. The term "second attack" is applied to cases in which the two illnesses did not occur during a single period of detention in hospital. In all the relapses and second attacks as well as in the primary disease, the clinical diagnosis received bacteriologic confirmation, so as to exclude those cases of non-specific tonsillitis, which are not infrequent in convalescence from diphtheria.

In the 1,600 patients 27, or 1.6 per cent., had relapses, which were separated from the initial angina by intervals ranging from 3 to 14 weeks. The average date for their occurrence was about the middle of the sixth week. Two of the 27 had palatal and ocular palsies after the primary attack, but none showed any signs of paralysis after the relapse. Thirty-six, or 2.2 per cent., had second attacks, between which and the first there were intervals ranging from 3 months to 14 years. The period of predilection was the first 3 years, during which 22 of the 36 took place. In 18 the first attack had occurred in the same hospital, so that the records were available. One of the patients had paralysis during the first attack only, and 3 had paralysis during the second illness who had previously escaped any nervous sequelæ. In only one patient were both attacks followed by paralysis. Rolleston insists on the fact universally accepted by the physicians of large fever hospitals, but contested by some neurologists, that the frequency and severity of diphtheritic paralysis bear a direct relation to the initial angina. The partial immunity conferred by the primary attack and the initial dose of antitoxin was the cause of none of the relapses, displaying those features of malignancy which are manifested by severe local symptoms, deficient reaction to antitoxin and a high mortality, and are followed by a precocious paralysis, which in survivors is of unusually long duration. Second attacks, on the other hand, do not always run a mild course, since 5 such patients had severe local symptoms, and 2 developed paralysis, in one case fatal. It would seem that the immunity conferred by the first attack had been exhausted owing to the length of the interval which in these 5 cases ranged from 1 to 3 years.

### Journal Arkansas Medical Society, Little Rock

*March*

37 Uremia. J. A. Moore, Lisbon.
38 Education of the Laity. J. S. Jenkins, Pine Bluff.
39 Typhoid Fever. E. R. Dibrell, Little Rock.

### St. Louis Medical Review

*March*

40 The Abuse of Medical Charities in Chicago. C. J. Whalen, Chicago.
41 The Influence on Phagocytosis of Alterations in the Osmotic Tension of the Serum and of Electrolytes and of Non-Electrolytes. O. H. Brown, St. Louis.
42 Tuberculous Lesions Illustrated by the Roentgen Rays. R. H. Boggs, Pittsburg, Pa.
43 Tuberculosis. J. V. Shoemaker, Philadelphia.

### American Journal of Medical Sciences, Philadelphia

*April*

44 *Certain Vasomotor, Sensory, and Muscular Phenomena Associated with Cervical Rib. W. Osler, Oxford, Eng.
45 *Functions of the Pituitary Body. H. Cushing, Baltimore.
46 *An Acute Infectious Disease of Unknown Origin. N. E. Brili, New York.
47 *Adams-Stokes Syndrome of Prolonged Duration, ending in Apparent Recovery. H. C. Earnshaw, Rosemont, Pa.
48 *Two Cases of Cardiac Death. J. D. Heard, Pittsburg.
49 Influenzal Septicemia. J. D. Madison, Milwaukee.
50 *Acute Pneumococcus Meningitis. E. F. McCampbell and G. A. Rowland, Columbus, Ohio.
51 Serous Meningitis in Typhoid: Treatment by Lumbar Puncture. R. Stein, New York.
52 *Tumors of the Acoustic Nerve, their Symptoms and Surgical Treatment. M. A. Starr, New York.
53 *Treatment of Hemorrhage of the Spleen. J. G. Sheldon, Kansas City, Mo.

44. **Cervical Rib.**—Osler refers to such symptoms as redness, pain and stiffness of the arm on exertion, the origin of which was shrouded in mystery till the *x*-ray disclosed a cervical rib. In many cases the subclavian artery has been compressed in the angle between the rib and the scalenus anticus. When at rest, and with very slight muscular effort, enough blood reaches the limb, but the demand for more blood which follows exertion is not met, and there is stiffness and numbness with vascular changes. So marked may these latter be, says

Osler, that there are cases reported suggesting Raynaud's disease, and in at least seven instances local gangrene has followed. In a few cases, dilatation of the vessel, a cylindrical aneurism, or even a sacculated tumor has been present.

45. **The Functions of the Pituitary Body.**—The pituitary body is a double organ in the sense that the secretion of its anterior and solidly epithelial portion discharges into the blood sinuses which traverse this part of the gland; whereas the hyaline substance, apparently the product of secretion from the epithelial investment of the posterior lobe, enters the cerebrospinal space by way of channels in the pars nervosa. Though possessing a physiologically active principle, as shown by the results of injections, the secretion of the posterior lobe does not seem to be so vitally essential to physiologic equilibrium as that of the anterior lobe, the total removal of which leads to death with a peculiar train of symptoms which set in at an early date in the adult and after a longer interval in younger animals. Alterations in the gland, which often ultimately assume the character of a malignant growth (adenoma) but which presumably at least in their earlier stages, represent an hypertrophy, are common in clinical conditions of overgrowth (acromegaly and gigantism), and certain feeding experiments lend support to the view that these clinical states represent the consequence of hyperactivity of the pars anterior. Partial removals of the anterior lobe usually lead to obvious disturbances of metabolism often accompanied by adiposity, and in the young by a persistence of infantilism, or in adults by a tendency to lose the secondary sexual characteristics. Cushing regards it as probable that certain of the symptoms known to accompany hypophyseal disease may be consequent on a secondary change in other glands which follows the primary lesion of the hypophysis. These changes are seemingly more outspoken and more widespread after a lesion of the pituitary body than after a corresponding lesion of any other individual member of the group of ductless glands, and in view of its unusually well-protected position one might have conjectured that it must represent a vitally important organ.

46. **Acute Infectious Disease of Unknown Origin.**—Brill's paper is based on a careful clinical study of 221 patients suffering from an acute infectious disease, which was begun in 1896, and carried on since then. At that time, with a fairly large typhoid service at Mount Sinai Hospital, he noticed a type of disease occurring mainly in the summer and fall months, somewhat similar but characterized by many features irreconcilable to the picture of typhoid, such as the course (being 12 to 14 days), the temperature descent, which was mostly by crisis, the eruption, which was maculopapular and did not disappear on pressure, and the absence of the Widal reaction in this group. The disease is characterized by a short incubation period (4 or 5 days), a period of continuous fever, accompanied by intense headache, apathy and prostration, a profuse and extensive erythematous maculopapular eruption, all of about 2 weeks' duration, whereon the fever abruptly ceases either by crises within a few hours or by rapid lysis within 3 days, when all symptoms disappear. There was no evidence of the disease being directly communicable. The evidence of infection by the recovery of the offending organism in this disease is entirely wanting. The prognosis is invariably good, no deaths occurred in this series. The treatment is entirely symptomatic.

47. **Adams-Stokes Syndrome.**—The case which Earnshaw reports is that of an individual who has suffered from a number of prolonged attacks of complete auriculoventricular heart block, and who made what for a time appeared to be a perfect recovery; but very recently he suffered a recurrence of the heart-block that lasted several days and then disappeared. During the first attack nitroglycerin was given, 1/200 gr. every 2 hours. This drug was also used for a time during the second attack. There did not seem to be any effect from its use on the pulse rate. Strychnin sulphate was used in all the attacks for its general tonic effect. Morphin and oxygen were used. Counterirritation to the epigastrium in the form of a mustard plaster, infusion of scoparius, quinin, caffein, massage, potassium iodid, aromatic spirits of ammonia, cocain and cerium oxalate were also used. The patient's condition remained unchanged. Strychnin nitrate, 1/30 grain, was ordered thrice daily, and was continued for a month when it was withdrawn gradually. After a week there was no evidence of heart-block. Whether the administration of strychnin nitrate had any direct effect in causing the heart-block to disappear, Earnshaw was unable to determine. The patient had been taking strychnin sulphate, earlier in the attack, for a long time without any apparent benefit; but immediately following the administration of the nitrate the heart-block began to disappear in a most pronounced and dramatic manner. The most reasonable explanation which we have been able to formulate in explanation of the present case has been a vasomotor one, probably engrafted on some sclerotic change in the bundle of His, or its nutrient vessels. It is conceivable that if for some reason the blood supply of the bundle was temporarily cut off or diminished, it would cease functionating so long as the anemia kept up, and again take on its normal activity when its blood supply was reestablished. That there may have been some such diminution of blood supply resulting from round-cell infiltration, arterial spasm, or constriction, or alteration in local blood-pressure would be nearly as difficult to deny as it would be to prove. At all events, Earnshaw regards this as the most rational explanation which can be offered to explain the case in question.

48. **Cardiac Death.**—The first case cited by Heard appears to be a typical one of cardiac death occurring in convalescence from diphtheria. The second patient was 54 years old. She had been a healthy child up until her ninth year, at which time she had an attack of scarlet fever, moderate in its severity. There were apparently no complications, and she was subsequently in good health until 3 years later, when she passed through a severe attack of diphtheria. She was confined to bed for 4 months. The cause of this protracted illness is unknown, but the family states definitely that there were no paralyses. A short time after she was able to be on her feet again, she began to suffer from severe attacks of asthma, usually lasting 3 or 4 days. During the intermissions, of several weeks' duration, she was entirely free from respiratory disorder. She never, however, regained her previous bodily strength. When 20 years of age, she began for the first time to complain of palpitation during her asthmatic attacks, although she continued free from cardiac symptoms during the intermissions. Following a change of dwelling to a somewhat higher altitude, the attacks of asthma and palpitation greatly diminished in frequency, and she had comparative freedom for nearly 12 years, when the symptoms of cardiac insufficiency began to return and to assume the major rôle. She still had attacks of asthma and suffered from bronchitis and emphysema; but the heart was evidently somewhat crippled at this time, for she was very short of breath on exertion, and edema set in. There were frequent attacks of tachycardia, and the family later began to notice a dusky color about her lips and fingers. Her asthmatic attacks were comparatively infrequent from this time on, but the cyanosis became so marked that a sister described her as having times when her hands would be "black to the knuckles." The latter condition set in about 2 years before her death, and had no relation with the attacks of dyspnea. During the last few months there were "two occasions when the forehead and cheeks were almost black." She complained of dyspeptic symptoms and pain in the right hypochondrium. During the 2 months before her death, her sister noticed a throbbing of the veins of the neck—this an independent observation and not the result of a leading question. The skin was always sallow. She began to be apathetic, but in spite of her discomfort, was able to attend to light duties about the house.

The important point to be considered is, whether a myocarditis arising in childhood could affect the heart during so long a period as 42 years. It may be concluded with a fair degree of certainty that the cause of death was incompetence of a heart muscle, probably the seat of a chronic myocarditis. This conditon may have originated at the time of the infection with diphtheria during childhood, or, at least, the soil may have been prepared at that time for subsequent cardiac disease. That the scarlatinal infection may have exerted some unfavorable influence cannot, of course, be denied. At any rate, owing to repeated strain and in various unfavorable conditions there gradually developed the incompetence of the muscle for the work required of it. Dilatation of the right ventricle set in with relative insufficiency of the tricuspid valves; the fatal end was precipitated by a sudden increase in resistance in the pulmonary circuit, with possibly a further weakening of the muscle as a result of the action of the toxic products of a pneumococcus infection.

50. **Pneumococcus Meningitis.**—This case is typical of practically all cases of pneumococcus meningitis. The following points may be noted in regard to this disease: (1) its virulent and fatal character; 99 per cent. of all patients die; (2) the greenish-yellow character of the exudate which is markedly cellular and fibrinous in constitution; (3) the polymorphonuclear and endothelial cell infiltration of the cortex of the brain—this change is, on the whole, less marked than in the other forms of meningitis; (4) the increase in neuroglia in the subpia and in the cranial nerves; (5) the infiltration of the walls of the arteries with leucocytes and exudate, causing a spreading apart of the intima and media and in addition the infiltration of the veins with leucocytes.

52. **Tumors of the Acoustic Nerve.**—The study of the nature of the tumors found and removed has an important bearing on the prognosis in operations for brain tumor. A recent study of the pathology of acoustic tumors by F. Henschen, quoted by Starr, has shown that of 145 such tumors examined, 133 were solitary and 12 were multiple. It is interesting to note that a majority of the solitary tumors were fibromas, fibrosarcomas, or cysts, encapsulated, non-adherent, and from the standpoint of the pathologist, removable surgically. It is evident, therefore, that the danger of relapse after operation for an acoustic tumor is far less than in cases of tumor elsewhere. Henchen calls attention to the fact that the acoustic nerve is the only cranial nerve frequently affected by a tumor. He brings this fact into relation with the observation that in embryonal growth the bone tissue which surrounds the acoustic nerve is formed later than that about the other cranial nerves, at their exit, and hence that embryonal connective tissue persists around this nerve later than elsewhere. He shows that tumors of this nerve usually (in 8 cases out of 9 examined by him) have a small pedicle entering the acoustic foramen or internal auditory meatus, the nature of which is fibrous, and he suggests that it is the proliferation of this fibrous embryonal connective tissue which gives rise to the tumor. In 83 of the 145 cases examined by him, such fibrous tissue was found in the tumor. The possibility of such multiple tumors must always be regarded, Starr says, in making a diagnosis, especially as symptoms referable to the cranial nerves on both sides have not infrequently been observed, but bilateral symptoms do not always indicate multiple tumors. In cases with autopsy it has been found that pressure on the tumor on one side not only implicated the nerves on that side, but also displaced the pons and medulla toward the side so as to cause compression of the cranial nerves on the side opposite to the tumor, thus producing the bilateral symptoms. This fact should not, therefore, preclude operation.

53. **Hemorrhage of the Spleen.**—The procedure described for the treatment of wounds of the spleen consists of the application to the splenic pedicle of a large flexible clamp, the blades of which are protected with rubber tubing, tightly enough to occlude the vessels, but not to crush them. This clamp protrudes through the abdominal incision and is left in place for four hours. Then it is unlocked. If no bleeding occurs—as can be determined by the appearance of fresh blood in the wound, and the condition of the patient—the clamp is removed. The splenic wound is not treated in any way. After the splenic circulation has been shut off by the clamp, the vessels in the splenic wound empty themselves by draining into the peritoneal cavity, and their cut ends are occluded by Nature firmly enough in four hours to prevent bleeding, when the splenic circulation is reestablished by removing the clamp. If the wounded splenic vessels are prevented from emptying themselves, which can be done by tamponing or suturing the wound, the thrombosis started at the splenic wounds extends to the clamp on the pedicle and prevents the reestablishment of the splenic circulation after the clamp has been removed

## Archives of Pediatrics, New York

*March*

54 The Cutaneous Tuberculin Test. C. F. von Pirquet, Baltimore.
55 *The Stools of the New-Born Infant and Their Significance. T. S. Southworth, New York.
56 Pneumothorax: Clinical and Radiographic Study. F. Huber and I. S. Hirsch, New York.
57 Regulation of Fat Percentages in Infant Feeding. A. S. Bleyer, St. Louis.
58 Scarlet Fever Prophylaxis. R. M. Smith, Boston.

55. Abstracted in The Journal, July 10, 1909, p. 140.

## Washington Medical Annals

*March*

59 Treatment of Postoperative Adhesions. A. L. Stavely, Washington, D. C.
60 Chronic Headache—Neurologic Advances Regarding its Diagnosis and Treatment. T. A. Williams, Washington, D. C.
61 *Gall-Stone Diabetes: Case and Specimen. W. P. Carr, Washington, D. C.
62 A Review in Therapeutics. N. P. Barnes, Washington, D. C.
63 Ulcer of the Duodenum: Case and Specimen. E. A. Balloch, Washington, D. C.
64 Sarcoma of Kidney in a Child Sixteen Months Old. J. R. Wellington, Washington, D. C.
65 Adenocarcinoma of the Transverse Colon: Obstruction: Resection to Cecum and Colon; Enteroanastomosis. E. A. Balloch, Washington, D. C.
66 *A Convenient Instrument for Ready Clinical Investigation of the Sensibility to Coolness and Warmth. T. A. Williams, Washington, D. C.
67 *Measles and Mice: Does the Microbe Come from the Mouse? A. F. A. King, Washington, D. C.
68 Cases of Gall-Stones. A. L. Stavely, Washington, D. C.
69 Case of Fatal Mastoiditis. W. K. Butler, Washington, D. C.
70 The General Practitioner and the Surgeon. W. A. Jack, Washington, D. C.

61. **Gall-Stone Diabetes.**—Carr urges that the occurrence of sugar in the urine should lead one to examine very carefully into the condition of the bile ducts and pancreas. In his case the diabetes was unquestionably due to a pancreatitis caused by pressure of a large gall-stone. The symptoms of gall-stone disease were typical, but antedated the operation only three months. At the operation the adhesions about the gall-bladder seemed to be at least a year or two old. There were many old and firm adhesions around the gall-bladder, especially between it and the greater omentum. The gall-bladder was distended with about 8 ounces of rather pale, ropy bile, and a single large gall-stone about the size and shape of an English walnut was found in the common duct. The head of the pancreas was slightly enlarged and somewhat harder than the body of the organ. Careful search was made for other causes of obstruction, but none were found. Bile did not flow into the glall-bladder for some time, but did flow pretty freely before the wound was closed. The stone was evidently formed by the amalgamation of a number of smaller stones, and must have required a long time to form and to work down into the common duct.

66. **Investigation of Sensibility to Temperature.**—For estimating degrees of sensibility, Williams employs an apparatus consisting of a cube of cast copper, 3 x 3 x 3 centimeters, tunneled out in the center to within 2 millimeters of the opposite surface. Into the tunnel is inserted the bulb of a thermometer of the kind used in storage warehouses. It registers from 10 to 140° F. The whole is mounted on a wooden holder along a groove in which the thermometer is embedded for protection. The scale is easy to read, as it lies in the furrow. For convenience of manufacture, the copper block is made in two equal parts, furrowed in such a way that the approximation of the grooves forms a circular tunnel for the thermometer. The two halves are clamped together with four copper screws; and the whole is in turn screwed to a strip of brass ⅛-inch thick and 3 centimeters wide. The brass fits along a beveled-cut surface of the block, which extends to within 2 millimeters of the foot. The brass strip is screwed also to the wooden handle which carries the thermometer scale, thus making the whole solid and giving a uniform surface of copper to place against the skin of the patient being examined. To use the instrument, it is plunged into a large jug of water at a temperature approximating to that desired, say 25 C. when testing for appreciation of coolness, or 40 C., when testing the appreciation of warmth. It is very easy, by adding cold water or hot water, to obtain any temperature desired in the large vessel; and this will remain practically constant long enough to enable a series of observations to be taken sufficiently complete for current clinical use.

67. **Measles and Mice.**—Numerous instances are on record in which measles seem to have originated from contact with straw. In recently investigating a supposed *de novo* case of measles in Washington it was found that the patient, a girl, got measles after playing in the loft of the White House stables (a mile or more from her home), where she had gone to play with the children (who had got the disease at the same time) of the stableman. The loft contained straw and hay, in which there was "any quantity of mice," so the stableman stated. King recalls that his brother and himself, when respectively 10 and 11 years of age, were attacked with measles after spending several hours helping kill mice on a wheat rick that was being taken into the barn and which was swarming with these rodents. There were no other measles cases among the neighbors and schoolmates. Some years ago, a box of china packed in straw was received in his own house. While unpacking it he could not get rid of the idea that there was measles in the straw. It was probably a subconscious olfactory impression, but so pronounced that, fearing his own children (who were then very young) might get the disease, he had the box and packing burned up without delay. His children escaped, but some days later it was learned that the relatives in whose house the china had been packed was in bed with measles. Many other similar incidents are cited which point to a possible etiologic relationship between mice and measles.

While the evidence thus presented in support of the etiologic relation between measles and mice is, for the most part only probable or presumptive, how, asks King, shall positive evidence be obtained by experiment? Hitherto the experimental production of measles artificially has been done by inoculation—by inoculating non-immunes with blood, mucus, tears, etc., taken form measles patients. But this is not the method by which the disease is naturally acquired. Measles is not produced by inoculating wounds, neither by the bites of insects nor by traumatism of any kind. The initial symptoms—cough, sneezing, coryza, sore throat, lacrimation, etc., all indicate infection by a spore-laden (probably in *de novo* cases, by a dust-laden) atmosphere. Thus, if we admit the mouse excreta to be the original source of measles it is easy to conceive that these excreta, when dried by the warmth of our houses, crushed by passing feet on the floor and dispersed by housemaids' brooms into the air, can in this way come in contact with the respiratory and other mucous surfaces.

King suggests that a sufficient quantity of intestinal concretions from the mouse should be reduced to fine powder, and then diffused through the air, to be inspired by non-immune children of a suitable age (not younger than 8 years). In a supposed *de novo* case recently investigated King found that the child got measles, without having been exposed to contagion by inhaling dust made by the mother sweeping out a very dusty cellar in a house she had just begun to occupy. At least this is the only available explanation of the case. It seems to be similar in origin to the cases produced by inhaling dust from mouse-infected wheat-ricks and stable straw mentioned in this paper.

### Alabama Medical Journal, Birmingham

*March*

71 *The Physician—His Attitude Toward, and his Obligation to, his Patients, His Confrères, and to Himself. J. F. Alexander, Blocton.
72 Hookworm Disease. C. P. Martin, Woodstock.
73 Clinical Types of Pellagra. C. M. Rudolph, Birmingham.
74 One Hundred Obstetric Cases: Their More Important Complications, including a Successful Cesarean Section. W. A. Weed, Republic.
75 Supernumerary Uterus in a Girl Eighteen Years Old: Removal: Recovery. E. M. Robinson, Birmingham.

71. **The Doctor.**—The physician's attitude toward and his obligations to his patients, his confrères and to himself, are, in Alexander's opinion, somewhat as follows: To his patients.—The physician must hold himself in constant readiness to respond, fully equipped for emergencies, to calls to attend the injured or ill. He cannot be equipped with only pencil and a prescription pad. He must carry with him the instruments and medicines which may be urgently demanded. He must keep always before him the greatness of his mission and with a sense of the responsibilities he incurs when he proclaims himself a safe guide and counsellor. Visits should be made frequently enough to remain completely the master of the situation, as regards diagnosis, treatment and prognosis, but no visit should be made unnecessarily. The physician owes it to his patient to suggest improvements in his method of life and morals, and he can do this under the guise of professional advice so that the patient will never imagine that the advice is anything but medical. Physicians are frequently witnesses of injury to health and destruction of life by the nostrums and quack medicines so freely advertised and sold. It is their duty to warn their patients against the use of such "dope" and to explain to them why such preparations cannot be of universal service. The false and extravagant claims made for them should be denied and the reasons why they cannot perform the miraculous cures set forth in the "testimonials" should be made plain. The physician should inform himself, so far as possible, on the constituents of such nostrums, so that he may be able to combat intelligently the prejudices of his patients, who have been hypnotized by the startling language of the advertisement and the false records of cures.

To his confrères.—The medical profession, because of the circumstances surrounding the practice of medicine, has developed a special set of rules for the government of their fellowship, and this has been called the Principles of Medical Ethics. If all complied with the simple precepts there outlined, there would be no injustice, no malice, no jealousy, no envy, no hatred, no heart aches; for all men would be truly brothers, who would perish before they would work or think a wrong toward others. This code is merely the golden rule, amplified and adapted to the vicissitudes and perplexing situations so common in the practice of medicine.

The physician's attitude toward, and his obligations to himself.—Too many of us live and work as if our minds and bodies had no rights which we were bound to respect. Disciples of Æsculapius and votaries of Hygeia, we preach their precepts to the laity, but disdain and violate fundamental rules in our daily conduct and every-day life. We have no regular hours for meals, rest, recreation or sleep; we continue our exertions many times when mentally and physically exhausted; we endure all the exposure the country farmer or laboring man undergoes, and generally without adequate clothing; we are careless in collecting the fees we have earned through such privations. We owe a duty to ourselves in the matter of observance of the rules of health. The privations and hardships of the most arduous and exacting practice can be mollified, if we but appreciate this egoistic duty and plan to fulfil it. The physician cannot afford to be ill.

### Maryland Medical Journal, Baltimore

*April*

76 *Diagnosis and Treatment of Tuberculous Peritonitis. R. Winslow, Baltimore.
77 John Hunter (1728-1821). H. M. Cohen, Baltimore.
78 Malpighi and His Writings. W. R. Stokes, Baltimore.
79 *State Boards and High Entrance Requirements. H. Harlan, Baltimore.

76. **Tuberculous Peritonitis.**—While some patients with tuberculous peritonitis undoubtedly recover without surgical intervention, Winslow believes that there is always the doubt as to the correctness of the diagnosis. Not all cases are appropriate for surgical operation, but great benefit and permanent cure follows laparotomy in at least 50 per cent. of suitable cases. The cases in which there is free fluid in the peritoneal sac, with little or no evidence of disease elsewhere, are best treated by surgical methods; the adhesive forms sometimes are cured by laparotomy, but in a much smaller proportion of cases. After the patient has been subjected to surgical treatment, all other measures of a hygienic, climatic and medicinal character that have been found useful in pulmonary tuberculosis should be employed.

79. Abstracted in THE JOURNAL April 16, 1910, p. 1332.

### American Medicine, New York

*March*

80 Why we are What we are—The Proper Function of the Medical Society. R. W. Wilcox, New York.
81 The Eloquence of Infancy. L. Kerr, Brooklyn.
82 Points of Importance in the Performance of Vaginal Fixation. S. W. Bandler.
83 Acute Infective Osteomyelitis. D. C. Hilton, Lincoln, Neb.
84 Successful Cases of Puerperal Eclampsia. R. E. Coughlin, Brooklyn.

### American Journal of Urology, New York

*March*

85 Stricture of the Male Urethra: Dilatation as a Means of Treatment. V. C. Pedersen, New York.
86 Etiology and Symptomatology of Chronic Prostatitis: Report of 521 Cases and a Statistical Analysis of 1,788 Cases. H. A. Moore, Indianapolis.
87 Persistence of Urinary Fistula in two Cases in which it was Thought that the Whole Kidney had been Removed by Nephrectomy. F. S. Watson, Boston.

### Atlanta Journal-Record of Medicine

*March*

88 The Physician's Duty to the Public. J. G.Palmer, Opelika, Ala.
89 Postoperative Ileus and its Treatment. W. L. Cooke, Columbus.
90 Use and Abuse of Specific Treatment in Tuberculosis. L. C. Rouglin, Atlanta.
91 Tonsillectomy. H. M. Lokey, Atlanta.
92 The Pathology and Surgical Treatment of Cholelithiasis. H. S. Brnce, Opelika.

### Pennsylvania Medical Journal, Athens

*March*

93 *Modern Operations for the Cure of Inguinal and Femoral Hernia. J. H. Gibbon, Philadelphia.
94 Umbilical and Postoperative Hernias. J. J. Buchanan, Pittsburg.
95 *Conservative Surgery in Ocular Injuries. L. W. Fox, Philadelphia.
96 *The Futility of Administering Antirheumatic Remedies in Patients Suffering from Painful Joints. H. R. M. Landis and C. Mnschlitz, Philadelphia.
97 *Joint Diseases versus Rheumatism. DeF. Willard, Philadelphia.
98 Presenile Syphilitic Cataract. E. Stieren, Pittsburg.
99 Patent Thyrolingual Duct and its Diseases: Use of *X*-Rays. J. H. Comroe, York.

93. **Modern Operations for Inguinal and Femoral Hernia.**—Gibbon is of the opinion that the Bassini operation is now the most universally employed operation for hernia. Among the recent improvements should be mentioned the overlapping of the facial layers, as suggested by E. Wyllys Andrews. In old people, in whom the muscles are attenuated and the hernial opening large, this overlapping is necessary. The Ferguson method has the advantage of being of simpler performance, and requiring less time than the Bassini operation. It is particularly useful in cases of strangulated hernia and in cases complicated by an undescended testis. Important in any operation for hernia is the complete removal of the sac; failure to do this is responsible for many recurrences. The separation of the sac from the cord is best accomplished by first opening the sac. Iodized or chromicized catgut, Gibbons believes, is the best suture material. In operating for inguinal hernia on the right side the appendix can, as a rule, be removed easily and in children especially, he states, is a good practice. Direct hernia is much more difficult to cure than the oblique variety. The Bloodgood method of transplanting the sheath of the rectus gives the best results. The secret of success for femoral hernia lies in the complete removal of the sac rather than the method of closing the femoral canal. Infiltration anesthesia he considers particularly useful in cases in which a general anesthetic is contraindicated, and in cases of strangulated hernia. No truss should be worn after an operation for the cure of hernia, unless there is evidence of recurrence.

95. Abstracted in The Journal, Nov. 6, 1909, p. 1590.

96. Published in the *Therapeutic Gazette*, March, 1900.

97. Abstracted in The Journal, Nov. 13, 1909, p. 1672.

### Medical Herald, St. Joseph, Mo.

*March*

100 *The Bacteriologic Diagnosis of Epidemic Cerebrospinal Meningitis. S. R. Hopkins, Omaha.
101 *Scientific Feeding. M. A McLintock, Atchison, Kan.
102 The Neglected Anus. D. T. Quigley, North Platte, Neb.
103 *Does the Present Conservatism in Pelvic Surgery Serve the Best Interest of the Patient? B. A. McDermott, Omaha.
104 The Objects of Mechanical and Surgical Treatment of Infantile Paralysis. H. W. Orr, Lincoln, Neb.
105 Borderland Mental Cases. C. R. Woodson, St. Joseph.
106 Treatment of Chronic Nephritis with Sodium Carbonate and Uremic Convulsions with Calcium. C. F. d'J. A. Francis, Brooklyn.

100, 101, 103. Abstracted in The Journal, Oct. 2, 1909, pp. 1127, 1128.

### Cleveland Medical Journal

*April*

107 Traumatic Neuroses from a Medical Point of View. A. Church, Chicago.
108 The Pharmacopeia and its Revision. J. P. Remington, Philadelphia
109 The Coming Revision of the U. S. Pharmacopeia. T. Sollmann, Cleveland.
110 Care of Children after an Operation on the Tonsils and Adenoid Tissue. J. M. Ingersoll, Cleveland.
111 *Normal Saline Solution as a Dressing in Casualty Surgery. G. E. Follansbee, Cleveland.
112 Transfusions. H. G. Sloan, Cleveland.

111. **Saline Solution in Surgery.**—Follansbee compares the results in 1,000 consecutive cases of cuts, lacerations and crushing injuries treated antiseptically by means of 1 to 2,000 bichlorid solution, and 1,000 consecutive cases of the same nature treated physiologically by normal saline solution. The instances of prolonged disability, of deformity and death due to infection in the series treated antiseptically were much in excess of those in the series treated physiologically. The number of secondary operations such as amputations and opening infectious became noticeably less, although Follansbee has successfully attempted to save crushed fingers and toes that under the usual antiseptic treatment would have been lost. The number of cases which healed by primary union even in laceratious and crushes was markedly increased, although Follansbee's records are not sufficiently minute for him to venture on percentages. He finds it a most satisfactory dressing whenever it is desirable to promote healing in open wounds such as burns, ulcers, abscesses after wide incision, skingrafts, etc.

The manner of using is to keep the dressing saturated, preferably by dipping the injured part into a bowl of the solution. As the water evaporates from the dressing the salt is left, and if it is continually dipped and dried there is a great excess of salt which is liable to cause a dermatitis and to interrupt healing. To avoid this, it is only necessary to direct the patient to use pure water alternately with the solution. In the 1,000 cases of the bichlorid series there were 21 cases in which, on account of infection which developed, the period of disability suffered by the men was materially increased over what it should have been had no infection taken place, and in several cases deformity in the way of contractures or of loss of members resulted. There were also two cases of death following infection.

### Ophthalmic Record, Chicago

*March*

113 Glioma Retinæ. E. Stieren, Pittsburg.
114 Osseous Tumor of the Orbit. H. F. Hansell, Philadelphia.
115 Toxic Amblyopia of Diabetic Origin Occurring in a Young Woman—A Rare Symptom of the Toxemia of Diabetes. W. Reber, Philadelphia.
116 Transplantation of Fat into Tenon's Capsule after Enucleation. A. N. Alling, New Haven, Conn.
117 A New Device for Suspending the Giant Magnet. S. J. Torney, Bellingham, Wash.
118 Orbital Fibroma: Unusual Clinical Manifestations. G. O. Ring, Philadelphia.
119 The Use of a Mass of Fatty Tissue as a Stump in Ocular Prothesis. A. E. Hershoff, Cleveland.
120 Psychoses Associated with Ocular Affections. S. D. Risley, Philadelphia.
121 Unusual Forms of Congenital Cataracts. W. C. Posey, Philadelphia.

### Woman's Medical Journal, Cincinnati

*March*

122 Pregnancy as a Causal Factor in Enteroptosis. R. Moore, Rochester.
123 The Conservation of Manhood and Womanhood. E. W. Young, Boston.
124 Preventive Dentistry. A. S. Worthen, Boston.
125 The Importance of Vertigo in Symptomatology. M. L. Hnrrell, Rochester.
126 Hygiene of Pregnancy. G. L. Broadhead, New York.
127 Postgraduate Medical Work for Women in Europe. M. S. Macy, New York.

### American Journal of Physiology, Boston

*April*

128 Control Tests of a Respiration Calorimeter. F. G. Benedict, J. A. Riche and L. E. Emmes, Boston.
129 Comparison of the Direct and Indirect Determination of Oxygen Consumed by Man. F. G. Benedict.
130 The Mechanism of the Depressor Action of Dog's Urine: The Antagonistic Action of Adrenalin. R. M. Pearce and A. B. Eisenbrey, New York.
131 *The Internal Secretion of the Thyroid. A. J. Carlson and A. Woelfel, Chicago.
132 Physiology of Lymph—Methods of Inducing the Appearance of Polymorphonuclear Leucocytes in the Lymph. J. R. Green, Chicago.
133 Effect of Thyroidectomy on the Development of Active Immunity in Rabbits. C. A. Fjeldstad, Chicago.
134 Metabolism of Some Pyrimidin Derivatives. L. B. Mendel and V. C. Myers, New Haven, Conn.
135 *Physiology of Cell Division—Action of Isotonic Solutions of Neutral Salts on Unfertilized Eggs of Asterias and Arbacia. R. S. Lillie, Woods Hole, Mass.

136 *Metabolism of Development—Energy Metabolism in the Pregnant Dog. J. R. Murlin, New York.
137 Influence of Increase of Alveolar Tension of Oxygen on the Respiratory Rate and the Volume of Air Respired while Breathing a Confined Volume of Air. T. Hough, Charlottesville, Va.
138 Relation of Ptyalin Concentration to the Diet and to the Rate of Secretion of the Saliva. A. J. Carlson and A. L. Crittenden, Chicago.
139 Action of Extracts of the Anterior Lobe of the Pituitary Gland on the Blood-Pressure. W. W. Hambridge, Chicago.

131. **Internal Secretion of the Thyroid.**—Carlson and Woelfel investigated the nature of the thyroid lymph which they found did not differ materially from the neck or thoracic lymph. It did not contain iodin in appreciable quantities. Intravenous injection of thyroid lymph had no specific effects on the circulation. Complete elimination of thyroid and parathyroid lymph for from 36 to 48 hours in normal foxes does not induce the symptoms of thyroid-parathyroidectomy. While the feeding of thyroid preparations to mice poisoned with acetonitrile after the method of Hunt confirmed the results of Hunt that the poison was neutralized by the thyroid preparation, the thoracic lymph produced no such effect. Investigations of goitrous dogs showed that the iodin content of the thyroids is extremely variable. Iodin may not be present in detectable quantities in the thyroids of dogs which to all appearance are normal animals. Dogs with active thyroid hyperplasia according to histologic criteria, so far as found in the lake region, appear to be normal except the goiter, and exhibit none of the symptoms of exophthalmic goiter. Evidence is cited, showing: (1) that the thyroid may assume parathyroid structure and function and *vice versa*, and (2) that there is in all probability both a qualitative and quantitative difference in function of the thyroid and parathyroid under normal conditions. Evidence is also produced showing that both thyroid and parathyroid perform their functions with or without colloid or iodin in the glands; and that the present hypotheses concerning the relation of the colloid to the specific thyroid and parathyroid activities have little or no basis in fact. The colloid is peculiar in that it is an intercellular deposit. After remaining in the gland for a time it appears to be taken up by the same cells that secreted it and returned to the blood, but not to pass into the lymphatics. The authors favor the detoxication hypothesis of Cyon as explaining the fixation of iodin in the thyroid, that organ acting as a special filter to retain iodin which would otherwise be toxic to the organism. The iodin may be deposited in connection with or without colloid. The iodin absorbing power appears to be a function of the thyroid in a special degree and is not exhibited by the colloid of other organs.

135. **Physiology of Cell Division.**—Cell division as the first step in development is initiated by a number of agents such as sodium salts with various acids which Lillie finds are agents capable of increasing the permeability of the plasma membrane so that osmotic interchange occurs with a loss of some of the essential constituents of the cell. If this influence is carried too far there is an irreparable loss of material and death of the cell ensues. If the disintegrating influence be stopped at the right point the metabolic changes result in the initiation of the developmental process which may proceed as far as the blastula stage in the case of unfertilized *Arbacia* eggs. The permeability of the plasma membrane was shown by the escape of pigment. The salts of the same metal differ in their rate of action in the following order for sodium salts: sodium chlorid, sodium bromid, sodium nitrate, sodium sulphocyanate, sodium iodid. Potassium salts have a more gradual effect of the same kind and show the same general order of relative activity. The effect in initiating cell division is in the same order which is also the order of relative toxicity. A contrast is seen between the irreversible character of the death process which depends on increase of permeability and the reversibility of anesthesia in which activity ceases because normal permeability is decreased and in which the material of the cell is preserved and metabolic activity is resumed when the permeability becomes normal.

136. **Metabolism in Pregnancy.**—Murlin sums up the evidence to date regarding metabolism of the fetus as follows: 1. The energy metabolism of the embryo is greater per unit of weight than that of the mother. 2. This energy is derived in oviparous animals almost entirely from fat and in viviparous animals almost exclusively from carbohydrates.

From his own experiments on pregnant dogs he concludes as follows:

1. In a dog pregnant with only one embryo the increase in the total energy production due to pregnancy was not evident until the sixth week of gestation. Between the sixth and the eighth weeks an increase of 9 per cent. was observed.

2. The total energy production due to pregnancy, measured by the indirect method 3 days before parturition (in 2 different pregnancies in the same dog), proved to be proportional to the weight of the offspring at birth.

3. The extra energy production near the end of pregnancy is very nearly equal to the energy requirement of the new-born, when calculated according to Rubner's law of skin area.

4. The extra energy production of mother and offspring the first day after parturition is from 2 (5 puppies) to 3 (1 puppy) times the extra energy production of pregnancy 3 days before parturition

### Journal of Advanced Therapeutics, New York

*March*

140 The Rôle of Physical Therapeutics in the Treatment of Infection. W. B. Snow, New York.
141 Roentgenology for the General Practitioner: Its Limitations: Notes on Technic. D. R. Bowen, Rome, N. Y.
142 Controlling the Spark Gap of a Static Machine. G. S. White, Yonkers, N. Y.

### Journal of Ophthalmology and Oto-Laryngology, Chicago

*March*

143 The Effect of the Electric Headlight on the Vision of Engineers. A. H. Andrews, Chicago.
144 The Sensory System of the Facial Nerve and its Symptomatology. J. R. Hunt, New York.

### American Journal of Public Hygiene, Boston

*February*

145 An Epidemic of Probable Paratyphoid Fever. A. W. Freeman and H. T. Marshall, Charlottesville, Va.
146 Control of Typhoid in the City and Country: Description of a Modified Hesse's Medium for the Detection of Typhoid Bacillus in Excreta and Fluid Foods. W. R. Stokes and F. W. Hachtel, Baltimore.
147 *Management of Milk-Borne Outbreaks of Typhoid. C. V. Chapin, Providence, R. I.
148 Relation of Typhoid to the Water Supplies of Illinois. E. Bartow, Chicago.
149 Utility of the Domiciliary Visit in the Campaign against Yellow Fever. C. M. Garcia, Vera Cruz, Mexico.
150 *The Campaign against Yellow Fever on the Isthmus of Tehuantepec. F. Valenzuela, Mexico City.
151 *Yellow Fever in the Mexican Republic (Aug. 16, 1908, to date). E. Liceaga, Mexico City.
152 Limited Outbreak of Typhoid Due to a Double Water Supply. A. J. Douglas, Winnipeg, Canada.
153 Methods of Control of Communicable Disease by Boards of Health in Small Communities. F. G. Curtis, Newton, Mass.
154 Prevention of the Spread of Contagious Diseases, Particularly Among Children. A. S. Fell, Trenton, N. J.
155 The Tuberculin Test as Applied to a City's Milk Supply. G. W. Goler, Rochester, N. Y.
156 The Clean Milk Campaign in Hamilton, Ont. G. Steinmetz, Hamilton, Ont., Canada.
157 The Importance of Population Vital Statistics and their Treatment Actuarially. M. M. Dawson, Washington, D. C.
158 American Birth Registration. F. C. Gram, Buffalo.
159 The Budapest System of Death Classification. F. L. Hoffman, Newark, N. J.
160 Trade Mortality Statistics. F. L. Hoffman, Newark, N. J.
161 Smallpox in the United States. J. W. Trask, U. S. P. H. and M.-H. S.
162 Insanity in Immigrants. P. H. Bryce, Ottawa, Canada.
163 An Improved Bubbling Drinking Fountain. S. C. Keith, Boston.
164 Importance of Registration and Control of Cases of Laryngeal and Pulmonary Tuberculosis. D. D. Brough, Boston.
165 Ophthalmia Neonatorum: Facts Concerning the Disease and its Prevention as Affecting Massachusetts. M. W. Richardson, Boston.
166 Personal Hygiene. P. Stiles, Boston.
167 Veterinary Hygiene. W. L. Beebe, St. Paul.
168 Municipal Sanitation. C. V. Chapin, Providence, R. I.

147, 150. Abstracted in The Journal, Nov. 20, 1909, p. 1762.

151. Abstracted in The Journal, Nov. 27, 1909, p. 1844.

## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### Lancet, London

*April 2*

1 *The Localization of Cerebral Function, based on the Clinicopathologic Study of Mental Disease. J. S. Bolton.
2 Failure of Nerve Anastomosis in Infantile Paralysis. W. B. Warrington and R. W. Murray.
3 *An Anatomic Inquiry into the Pathway of Tuberculous Infection. F. W. Jones.
4 Rupture of the Tunica Vaginalis in Hydroceles. S. Hastings.
5 The Wassermann Reaction from a Practical Point of View. J. E. R. McDonagh.
6 *Tetanus Treated with Subcutaneous Injections of Magnesium Sulphate: Recovery. P. Paterson.

7 Hemorrhage Following Gastroenterostomy with Clamps. R. Ollerenshaw.
8 The Circulatory System (continued). H. Campbell.

1. **Localization of Cerebral Function.**—This is the first of the Goulstonian lectures. Bolton discusses the normal mode of evolution of the lamination of the cortex. He says that he purposes demonstrating that the essential physical basis of mental disease consists, on the one hand, in an imperfect development of the cell cortex, which is of the nature of a true sub-evolution or dissolution, since such decrease in depth takes place in the converse order to that in which the cell laminæ are developed during the process of normal growth.

3. **Pathway of Tuberculous Infection.**—Jones believes that his investigations point to the fact that with increasing age the abdominal lymphatics become more constricted, and the lymph circulation becomes more centered on the thoracic ducts. If some such process takes place, it would offer a ready explanation for the different sites of tuberculous infection in childhood and in adult life. If the mesenteric lymphatics most readily carry China ink (and tubercle bacilli) in children, the advent of tuberculous peritonitis is not difficult of explanation; and if the lymphatics of the diaphragm readily carry infection to the thorax in children, then basal phthisis is easily explained. Evidence of some such change would appear to be seen in the waning of lymphoid structures when the processes of growth have been carried out; for in the adult an atrophy of lymphoid tissues, and probably of the lymph channels, take place. At the period of life when bodily growth is complete it is not impossible that, with the atrophy of lymphatic structures the lymph stream becomes more dependent on the thoracic ducts, and this is the time of life when apical phthisis is most prone to occur. If the route of the thoracic duct should chance to be that by which the tubercle bacilli reach the lung in phthisis, and the spine in Pott's disease, it becomes a matter of importance to see if there is any symptom that might seem to point to an involvement of the duct. Of primary disease of the duct nothing seems to be known.

6. **Tetanus Treated with Magnesium Sulphate.**—Three weeks after he had received a small wound on the scalp from a kick, Paterson's patient developed tetanus. When brought under observation the whole body was rigid, with the exception of the forearms and hands. Opisthotonos was well marked; the legs could not be moved, and the incisor teeth could be separated for about an eighth of an inch only. All the affected muscles were very hard. He complained of severe and continuous pain across the upper part of the abdomen and down both legs. Superadded to the tonic contractions of the muscles there were almost continuous cramp-like spasms. Every two or three hours these became very severe, and implicated not only the muscles of the trunk and limbs, but also those of respiration, so that breathing was suspended, the face became cyanosed, the pupils dilated, the pulse thready, and occasionally consciousness was lost.

The following day the man received a subcutaneous injection of 10 c.c. of a 10 per cent. sterilized solution of magnesium sulphate, 5 c.c. being introduced into each thigh. Soon after this injection he obtained an hour's sleep, the first he had had for 48 hours. These injections were repeated every four hours, night and day, for 2 days. The comparatively slight and more frequent spasms had disappeared almost entirely, the pain had become much less acute and the severe spasms had become less frequent. As these were still so severe as to threaten life, however, the dose of the magnesium sulphate solution was rapidly increased till 20 c.c. were administered at one time, 10 c.c. being injected into 2 separate parts of the body at one time. This increased dose was repeated every 4 hours and continued for 4 days. The effect of this treatment seemed to be a prolongation of the interval between the spasms, there now being only one, or at most two, in the 24 hours. The rigidity of the jaws, abdomen and back was still present, but that of the legs was passing off, as he was able to draw them up in bed, though with difficulty. The injections were then stopped. The patient left the hospital 5 weeks after admission.

### British Medical Journal, London

*April 2*

9 Four Cases in Which Stones were Removed from the Ureter. C. A. Morton.
10 Some Idiopathic Diseases of the Skin which may Simulate Syphilis. P. S. Abraham.
11 Rupture of the Bladder Followed by Gangrene of the Bladder Walls. P. C. Fenwick.
12 *Double Loop Hernia. J. A. C. Macewen.
13 *Gluteal Aneurism. W. B. Secretan.
14 Amputation for Diabetic Gangrene. A. E. Johnson.
15 Epilepsy. W. A. Turner.

12. **Double Loop Hernia.**—The case cited by Macewen was one of left femoral hernia and only one loop was strangulated. The probable period of strangulation in this case was a long one—not less than 5 days—from which, together with the condition of the bowel as found at the operation, it may be inferred that the strangulation was not complete, but was more of the nature of an obstruction of the lumen of the bowel than of marked interference with the blood supply of the affected loop. It is a question whether the loop became strangulated immediately on entering the sac or whether it had been present for some time previous, as the history of the sac, increasing markedly in size, seemed to suggest. As the loop was perfectly free in the sac, and there was not even a constricting band at the neck, Macewen is inclined to think that the loop had become strangulated immediately on its entrance into the sac 5 days previously.

13. **Gluteal Aneurisms.**—In Secretan's case a tense pulsating tumor was present in the right gluteal region. The pulsations were expansile, and a marked thrill could be detected at one point. Auscultation revealed a loud bruit. The center of the swelling was situated above and a little to the outer side of the point of junction of the middle and lower thirds of a line drawn from the posterior superior iliac spine to the ischium. The tumor extended down to the gluteal fold, which was almost obliterated, and, apparently, deeply into the pelvis. Owing to the severe pain and the possibility of rupture of the aneurism, Secretan tied the internal iliac artery. Four weeks later the aneurism could still be felt to pulsate, but not markedly. It was smaller than before the operation and felt rather hard.

### Medical Press and Circular, London

*March 23*

16 Idiocy and Allied Conditions in Children. T. R. Whipham.
17 Acute Prostatic Abscess. V. Wall.
18 Flatulence and its Treatment. L. Boas.
19 Traumatic Neurosis Illustrating Successful Psychotherapy. T. A. Williams.

*March 30*

20 Idiocy and Allied Conditions in Children (continued). T. R. Whipham.
21 *The Physicotherapy of Sciatica. M. Orb.
22 *Administration of Ether by the Purely Open Method. R. H. Hodgson.
23 The Assimilation of Carbohydrates in Health and Disease. S. A. Arany.

21. **Physicotherapy of Sciatica.**—Orb favors the application of dry cupping glasses which the patients themselves can use, so that the application may be frequently repeated. He has seen good results in acute cases from wet packs on the hip and leg made with linen or silk bandages, wrung out in water of 60 to 70 degrees and covered with a double layer of flannel. Orb does not employ massage in the acute cases as the hard pressure often employed by masseurs may considerably increase the pains. But very light friction carefully applied by the physician himself, avoiding the most painful spots, is sometimes very useful.

Electrotherapy he does not apply very often; when he uses it he gives the galvanic current in acute and chronic cases, using 2 equal-sized electrodes, 10 square inches in area, the negative on the abdomen, the positive on the posterior iliac spine or the sciatic notch, moving both evenly along the leg without interruption of the current.

While the application of physical methods of treatment is limited in the acutest cases of sciatica, it has ample scope, he says, in the sub-acute and chronic cases. In these cases, massage is used most frequently. It is necessary to employ very light massage at the beginning of a course of treatment in order to avoid unnecessary and undesirable pains.

As improvement takes place, massage may be more energetic. Then *tapôtement*, intermittent pressure, and vibrations over the sciatic notch and the other painful spots are useful. Vibratory massage will very often be found successful. It is not advisable to give massage for longer than 15 minutes daily in sciatic cases. Once the pain is lessening, Orb recommends gymnastics, and exercises which induce a nonsurgical stretching of the sciatic nerve. Hydrotherapy is no less useful than other methods—the steam douche, the hot water spray, and the Scotch douche. Hot sitz baths are contraindicated, as the overflexing of the thigh during such a bath increases the pain.

22. **Administration of Ether by the Open Method.**—Hodgson depicts a new apparatus but unfortunately does not give a description of it. He claims that all the air breathed must first pass through drugs; no second breathing of the same air can take place. The quantity of ether necessary for a long operation is small—2 or 3 ounces. The patient feels but little sensation of suffocation. There is practically no struggling going under or coming to, and no fear of hemorrhage. The lungs and bronchial tubes are not choked by viscid mucus. The after-complications of ether administration do not arise. There are no sponges or other media liable to become foul or to accelerate freezing.

### Journal of Tropical Medicine and Hygiene, London

*March 15*

24 Ascites with Enlargement of the Liver, Occurring in Nyasaland. R. Howard.
25 Symptoms and Treatment of Localized Bilharziosis of the Large Intestine. F. C. Madden.
26 Operative Treatment of Bilharziosis of the Large Intestine. O. Richards.
27 Campaign against Bubonic Plague in Ground Squirrels (*Citellus Beechey*) in California. W. C. Rucker.

### Annals of Tropical Medicine and Parasitology, Liverpool

*March*

28 *Life History of *Trypanosoma Lewisi* in the Rat Louse (*Hæmatopinus Spinulosus*). A. Breinl and E. Hindle.
29 *Variation of the Hemolytic Complement in Experimental Trypanosomiasis. W. Yorke.
30 *Acute Craw-Craw. R. H. Kennan.
31 Prevalence of Mosquitoes in Cairo and its Environs. F. C. Willcocks.
32 Effect of Mosquito Larvæ on Drinking Water. R. Boyce and F. C. Lewis.

28. **Life History of Trypanosoma Lewisi.**—Breinl and Hindle have succeeded in transmitting *Trypanosoma lewisi* by means of *Hæmatopinus spinulosus*, and, with the aid of wet fixation methods, in modifying conclusions which have previously been drawn concerning the cytologic characters of this parasite in specimens stained by Romanowsky. In three of their experiments they have been able to transmit *Trypanosoma lewisi* by means of the rat louse. They usually collected well-fed lice from a heavily infected rat, and transferred them, after an interval of 20 hours, to a normal rat. In one experiment 24, and in the other 2 experiments, 40 lice were used. In the first 2 cases parasites appeared in the peripheral blood after an incubation period of 8 days, and in the third after 10 days. In each case the animal developed a typical infection. In two further experiments 10 lice were used after having been kept for two days in test tubes, but in neither did an infection result, although the animals were kept under observation for a considerable period.

29. **Variation of Hemolytic Complement in Experimental Trypanosomiasis.**—Results obtained by Yorke confirm those of Hartoch and Yakimoff, that in most cases of experimental trypanosomiasis, a marked diminution or total disappearance of the hemolytic complement can be observed for a few hours before the animal's death. This decrease of the hemolytic complement is limited to the last stages of the diseases, and is not met with in the earlier stages even when the blood is swarming with trypanosomes. The serum of an animal in the last stages of the disease at a time when it contains no hemolytic complement, has no inhibitory effect on the activating power of the complement of normal serum. The presence of numerous trypanosomes in the blood causes of itself no diminution of the hemolytic complement, and secondly it is not possible to absorb, *in vitro*, the complement from normal serum by the addition of numerous trypanosomes.

30. **Acute Craw-Craw.**—The term "craw-craw" is applied extensively in West Africa to describe pathologic conditions of the skin which are mainly characterized by the presence of a papulo-vesicular eruption, accompanied by more or less itching. Generally, this rash is most marked about the buttocks, perineum, genitals, and groins, and is most commonly seen in a condition which seems to indicate chronicity, *viz.*, scale formation, and hypertrophy. The rash is vesicular in the very early stage. The vesicles have very little, if any, papular foundation. Pricking the vesicle in the early stage allows exit of a sticky, pellucid fluid, and the vesicle can be entirely emptied by slight pressure without further rupture of its walls, leaving the latter collapsed. A day or so after the first outbreak of vesicles, fresh vesicles are formed between the older ones, and fresh spots continue to appear for a week or so. A few of the spots suppurate slightly, but definite adherent scabs are rare. A vesicle may show umbilication when a fine hair emerges from its center. The temperature is raised early and before any suppuration has appeared, and there is no "secondary" fever. Constitutional symptoms are definite but slight, and no more than would be expected to accompany the moderate degree of fever usually present (100 to 102 F.), and which lasts for a few days only. Itching is not generally a marked symptom, and is usually not present till the later stage; it is rarely intense, and it usually ceases before the rash has entirely disappeared.

Disappearance of the rash with desquamation of the epidermis of the affected parts is slow and protracted, and even with frequent bathing and friction the skin may still show signs of the rash for a month or six weeks, or even longer. No pitting or discoloration is found afterward. The mucous membranes are not usually affected. The progress of vaccination is not influenced by the disease.

### Australian Medical Journal, Melbourne

*February*

33 Work of the Ballarat Division of the British Medical Association. R. Scott.
34 Treatment of Gastroenteritis. H. D. Stephens.
35 Muscular Function. W. Mackenzie.
36 Anuria Lasting Nine Days—Nephrotomy. H. G. Loughran.
37 Impressions of Surgical Work in Great Britain and America. D. M. Morton.

### Annales de l'Institut Pasteur, Paris

*February, XXIV, No. 2, pp. 81-160*

38 Further Research on Infection from the *Trypanosoma congolense*. A. Laveran.
39 Serotherapy of Meningitis. (La sérotherapie antiméningococcique.) C. Dopter.
40 Experimental Diphtheria in the Chimpanzee. E. Burnet.
41 Spontaneous and Experimental Mouse Cancer. (Quelques recherches sur le cancer spontané et le cancer expérimental des souris.) L. Nègre.
42 Intracorpuscular Phases of Trypanosomes. (Stades endoglobulaires des trypanosomes.) A. Carini.
43 Parasites Resembling Bacilli Found in the Red Corpuscles of Brazilian Frog. (Sur quelques parasites semblables à des bacilles rencontrés dans les hématies du *Leptodactylus occllatus*. A. Carini.
44 A Fungus Causing Spontaneous Tuberculoid Lesions in Brazilian Frog. (Sur une moisissure qui cause une maladie spontanée du *Leptodactylus pentadactylus*. A. Carini.

### Annales des Mal. des Org. Génito-urinaires, Paris

*March, XXVIII, No. 5, pp. 385-480*

45 Paravaginal Pachyvaginalitis Following Trauma of Scrotum. G. Chavannaz and L. P. Nadal.

### Annales de Médecine et Chirurgie Infantiles, Paris

*March 15, XIV, No. 6, pp. 181-216*

46 *The Daily Ration in Infant Feeding. (Quelques indications pratiques concernant la ration alimentaire du nourrisson.) Périer and Gaujoux.
47 Defective Development without Rachitis in Case of Tuberculosis. (Hypotrophie sans rachitisme dans un cas de tuberculose.) L. Tixier.
48 *Chronic Appendicitis. A. Schwartz.
49 Importance of Examination of Cerebrospinal Fluid in Diagnosis and Treatment of Meningitis. L. Bousquet and W. Mestrezat.

46. **The Daily Ration in Infant Feeding.**—Périer and Gaujoux give several tables for practical determination of the amount of milk best adapted for the individual child at each feeding and during the twenty-four hours; the child is weighed before and after each feeding and the average computed for the twenty-four hours. During the first 7 days the amount taken should increase on an average by 10 gm. (about one-third of an ounce) a day; during the first 5 months by an

average of 10 gm. a month, after which the increase is more gradual. Terrien's rule is to estimate the proper amount of milk by multiplying by 2 the first two figures of the child's weight in kilograms. Apert's rule is that the daily ration in grams should be exactly one-tenth of its weight in kilograms, plus 200 grams (A). The amount of each feeding should be one-fiftieth of its weight (B), and the number of feedings should be computed by dividing the first, A, by the second, B. Variot's rule is to compute the daily ration by multiplying by 15 the height of the child in centimeters (1 cm. equals 3/8 inch; 1 kilogram, 2 1/5 pounds).

48. **Chronic Appendicitis.**—Schwartz describes some of the forms that unsuspected chronic appendicitis may assume. In one case a boy of 12 had no appetite and for years had to be coaxed to eat even one or two rolls during the day. There were no symptoms and the mother applied to the physician merely on account of this chronic lack of appetite. Examination revealed some tenderness in the right iliac fossa and on the diagnosis of chronic appendicitis the appendix was removed. The boy developed appetite at once and conditions have since been normal. In another case a young man had recurring attacks of vomiting for several hours every two or three months but with no other symptoms, the digestion being apparently good. Nothing abnormal was found except that the large intestine was distended and thickened but nowhere tender. At last one of the attacks of vomiting was accompanied by signs of acute appendicitis and a small abscess was found in the appendix. Since its removal there has been no return of the attacks.

### Bulletin de l'Académie de Médecine, Paris

*March 1, LXXIV, No. 8, pp. 213-244*

50 *Ectopia of the Heart. (Volumineuse hernie sus-ombilicale avec ectopie cardiaque.) M. Kirmisson.
51 Pathogenesis of Senile Cataract. H. Frenkel and A. Weiss.
52 *Proper Diet in Kidney Disease. G. Linossier and G. H. Lemoine.

*March 22, No. 11, pp. 293-322*

53 Graft of Muscle Tissue to Fill Cavity Left after Operative Treatment of Osteomyelitis in Clavicle or Tibia. Nélaton and E. Kirmisson.
54 Special Features of Arthritic Diathesis. Sir Dyce Duckworth and Chauffard.

50. **Displacement of the Heart Outside of the Thorax.**—Kirmisson reports a case in which a child was born with a large tumor just above the umbilicus, formed by a hernia, and another tumor also on the median line above which proved to be the displaced apex of the heart. The findings in this case are identical with those in a case reported by Vaquez and Foy in which the patient, a farmer, lived to be 37 years old. In both cases the sternum was split into two parts and the apex of the heart presented in the cleft. Kirmisson was able to find only 2 other cases like these in the literature, but Lannelongue has a patient in good health to date on whom he operated 22 years ago, 14 days after birth. The apex of the heart in this case protruded through the cleft in the upper part of the sternum and through a gap in the skin. The ring of skin around the heart began to constrict that organ and consequently Lannelongue pushed the heart back into the thorax and covered the defect with large autoflaps from the vicinity. The child developed into a healthy woman and has borne three children, two of whom are alive and healthy. Auscultation does not reveal anything abnormal in the heart action, although the apex beat is in the space left by the fissure in the sternum. The absence of a pericardium does not seem to have hampered the heart in this case, no adhesions having developed to interfere with its functioning.

52. Abstracted in The Journal, April 9, page 1241.

### Lyon Médical, Lyons

*March 13, XL, No. 11, pp. 549-610*

55 Acute Syphilitic Meningitis. L. M. Bonnet and N. Goujat.

*March 20, No. 12, pp. 621-674*

56 Intradermal and Cutaneous Syphilin Reaction in Syphilitics. J. Nicolas, M. Favre, C. Gautier and L. Charlet.
57 *Tuberculin Reaction in Syphilitics. J. Nicolas, M. Favre and L. Charlet.

57. **Reaction to Tuberculin in Syphilitics.**—Nicolas and Favre report a positive response to the tuberculin test in a number of syphilitics free from any suspicion of tuberculosis. They say that the history of various lesions in the skin and viscera will have to be revised as the assumption of a tuberculous origin based solely on the tuberculin reaction is thus shown to be unreliable and that the findings related explain the occasional cures sometimes reported of supposed tuberculous lesions under mercurial treatment.

### Presse Médicale, Paris

*March 19, XVIII, No. 23, pp. 193-200*

58 Malta Fever. Gouget.

*March 23, No. 24, pp. 201-208*

59 The Rôle of General Pathology in Medical Instruction. C. Achard.

### Revue de Médecine, Paris

*March, XXX, No. 3, pp. 153-232*

60 Myxedematous Infantilism with Mitral Stenosis and Sclerosis of the Thyroid in a Girl of 16. (Le nanisme mitral myxedemateux.) F. Klippel and E. Chabrol.
61 Epidemic Poliomyelitis. (La poliomyélite aigue.) E. Job and J. Froment.
62 Psychiatry in the Army. A. Haury.
63 *Analysis of Cerebral Fluid in Meningococcus Meningitis. (Analyse du liquide céphalorachidien dans la méningite cérébrospinale à méningocoques. Composition et formule chimique.) W. Mestrezat.
64 *Paradoxical Urinary Syndrome in Epidemic Cerebrospinal Meningitis. Galebert and C. Thubert.
65 *Two Cases of Cerebellar Syndrome from Hypertension of Cerebral Fluid. M. Lafforgue.

63. **The Cerebrospinal Fluid in Meningococcus Meningitis.**—From study of three cases Mestrezat has deduced a formula for the cerebrospinal fluid which applied constantly to his three patients and which seems able to differentiate this form of meningitis from the tuberculous. The proportions rose and fell parallel to the clinical course. The formula may be summarized as follows: 3 per thousand or over of albumin; 0.12 or 0.25 per thousand of sugar; between 6 and 7 per thousand chlorids; freezing point normal or below, and a permeability for nitrates ranging from 45 to 55 per thousand of sodium nitrate.

64. **Paradoxical Urinary Syndrome in Epidemic Meningitis.**—Galebert and Thubert state that contrary to conditions observed in other infections, the urine is clear and abundant with an exaggeration of the elimination of nitrogen and phosphates at the height of the disease. Serotherapy does not modify the formula except that the proportions are not so high. The subsidence of the temperature under the influence of the serum does not always mean that the disease is conquered; the proportion of nitrogen in the urine may remain high, showing that the disease still has the upper hand and that it is necessary to keep up the serum until the amount of urea in the urine begins to decline. Persistence of the azoturia indicates, the authors state, that the lower temperature under serotherapy is merely a deceptive lull in the storm, which is liable to break forth again with renewed fury. As soon as enough serum has been given, the azoturia subsides.

65. **Cerebellar Syndrome from Hypertension of Cerebrospinal Fluid.**—Lafforgue was able to cure permanently by repeated lumbar puncture the two patients presenting the cerebellar syndrome described. There was nothing to explain the evident hypertension of the cerebrospinal fluid except possibly alcoholism and recent mumps in one of the patients. There was no meningitis and no lasting derangement. The relief that followed lumbar puncture was striking in each case. In the first about 25 c.c. of apparently normal fluid was withdrawn at each of the 6 punctures at 3 or 4 day intervals. A few more punctures were made in the other case, some daily. Both patients were young soldiers. Scherb has related a somewhat similar case in which a cerebellar syndrome from uremic poisoning was cured by lumbar puncture.

### Revue de Gynécologie, Paris

*January, XIV, No. 1, pp. 1-96*

66 Utilization of the Vagina for a Drain after Total Hysterectomy. (Drainage vaginal sans tube.) M. Chaput.
67 Myoma on the Rectum. F. Descoeudres.

*February, No. 2, pp. 97-208*

68 *Microcystic Degeneration of the Ovary. (L'ovaire à petits kystes.) E. Forgue and G. Massabuau.
69 *Ileocecal and Appendicular Tuberculosis. P. Alglave. Commenced in No. 1.

68. **Microcystic Ovary.**—Forgue and Massabuau report 23 cases with illustrations of the findings in the ovaries and dis-

ss the nature and pathogenesis of the fundamental lesions d their importance in the pathology of the pelvis.

69. **Tuberculous Lesions in the Ileocecal Region and Appen- x.**—Alglave studies the six forms that tuberculous lesions in is part of the intestine generally assume, with their history the literature, and also autopsy findings in 52 cases from own experience, with illustrations.

### Semaine Médicale, Paris

*March 30, XXX, No. 13, pp. 145-156*

0 Autopsy Findings in Familial Hypertrophic Neuritis of the Pierre Marie Type. P. Boveri.

### Berliner klinische Wochenschrift

*March 14, XLVII, No. 11, pp. 469-516*

1 *Tuberculous Articular Rheumatism. (Ueber tuberkulösen Gelenkrheumatismus.) E. Melchior.
2 Good Ultimate Outcome of Treatment of Congenital Talipes Equinovarus by the Pascale Method. (Postoperative Resultate bei Behandlung des angeborenen Pes equino varus nach dem Pascaleverfahren.) G. d'Agata.
3 *Diagnosis of Carcinoma of the Rectum. L. Kuttner.
4 Pathology and Treatment of Nervous Diarrhea. A. Bickel.
5 *Determination of Diastase in Urine and Stool as Test of Pancreas Functioning. O. J. Wynhausen.
6 Nature of Process of Production of Antitrypsin in the Organism. (Wesen der Antitrypsinsbildung im Organismus.) A. Braunstein.
7 Roentgen-Ray Examination in Anterior Mediastinitis. O. v. Dehn.
8 *Tuberculin in Diagnosis and Treatment of Pulmonary Tuberculosis. (Anwendung des Tuberkulins bei Lungentuberkulose.) E. Aufrecht. Commenced in No. 10.
9 Moving Pictures of Ultramicroscopic Findings. (Mikrokinematographische Aufnahmen bei Dunkelfeldbeleuchtung und Makrokinematographie.) K. Reicher.
0 The Privileged Communication. (Vom Rechte des Arztes zur Verweigerung des Zeugnisses und des Gutachten.) H. Lieske.

71. **Tuberculous Articular Rheumatism.**—Melchior reports a se of articular rheumatism in which the discovery of tubercle cilli in the blood confirms, he asserts, Poncet's assumption the tuberculous nature of many cases of rheumatism. hen tuberculous pleurisy follows acute articular rheumatism, e tuberculosis may be secondary to the rheumatism, but ere are a number of cases on record in which a pulmonary berculous process developed after an operation on rheumatic ints, or acute articular rheumatism followed an operation a tuberculous joint or gland. These facts sustain the sumption that tuberculous articular rheumatism is merely form of miliary tuberculosis restricted to certain regions, e joints. In his case a girl of 19 with a tuberculous glandu- r lesion in the neck in childhood and later in the jaw devel- ed multiple acute articular lesions after an operation on the w. There was nothing to indicate gonorrhea or syphilis, d the joint lesions were more torpid than in ordinary acute eumatism; the fever and pains were less intense. There as nothing to indicate pyemia; the discovery of tubercle cilli in the blood cleared up the diagnosis.

73. **Early Diagnosis of Rectal Cancer.**—Kuttner reports a se in which a man of 51 complained of nausea and oppres- on, slight irregularity in bowel functioning, and rapid loss 12 pounds in weight. Nothing abnormal was discovered in e abdomen or digestive functioning but traces of blood were und in the stool and examination with the finger revealed minute linear projection in the rectum a few inches above e sphincter. The rectoscope disclosed a tendency to ulcera- on in the lesion and a scrap was excised for microscopic ex- nination; signs of adenocarcinoma were found. The tumor as easily removed without interfering with the sphincter; was only a little over half an inch in diameter, and the sur- on said it was the smallest rectal cancer he had ever countered.

75. **Functional Testing of Pancreas.**—Wynhausen reports ur additional cases to confirm his previous statements in gard to the reduction of the amount of diastase in the stool d the increase in the urine when the pancreas is not func- oning properly. The average in health is about 500 diastase its, but with pancreas disease it drops to 10 or 30 units; the urine the units are normally between 50 and 150, but ith pancreatic disease they increase to 200 or 300.

78. **Tuberculin Treatment.**—Aufrecht reports satisfactory periences with tuberculin treatment in minute dosage. He mmences with 0.000025 gm. and increases by a fourth of this dose, never surpassing 0.0001 gm. supplementing it with all the usual other measures. A sanatorium course is advantageous for two or three months, he says, to insure hygienic conditions, but when the mode of life conforms to these already, the course of tuberculin can be carried out at home; after leaving the sanatorium it should be continued for months, the patient receiving an injection of 0.0001 gm. every week or two. He found the compound tincture of cinchona (of the German pharmacopeia), 2 teaspoonfuls in a little water before dinner and supper, extremely useful to keep the appetite good. If the cough disturbs sleep he gives 0.3 gm. Dover's powder at bedtime. If the cough is limited to daytime he prefers warm hot milk with seltzer water or an ipecac syrup mixture every two hours. When the cough is very obstinate, he keeps the patients in bed. Atropin is given to combat the night sweats, 0.0001 gm. in a pill at bedtime. Potassium bromid he found most effectual in treatment of insomnia. Drugs are not needed long as all these symptoms disappear, he asserts, under the tuberculin treatment; only iron is administered systematically with the tuberculin; it seems to aid in the local reaction induced by the tuberculin.

### Deutsche medizinische Wochenschrift, Berlin

*March 25, XXXVI, No. 12, pp. 545-592*

81 *Postpartum Hemorrhage. (Wesen und Behandlung der Nachgeburtsblutungen.) W. Zangemeister.
82 Etiology of Epidemic Poliomyelitis. (Zur Aetiologie der Heine-Medinschen Krankheit.) H. Bonhoff.
83 Azure-Eosin Staining of Sections. (Färbung von Schnitten mittels Azur-Eosin.) G. Giemsa.
84 *Experimental Chronic Nephritis Entailing Higher Blood Pressure and Arteriosclerosis. (Erzeugung chronischer Nierenerkrankungen mit folgender Blutdrucksteigerung und Arteriosklerose.) E. Kautenberg.
85 Differential Diagnosis of Gastric Ulcer and Cancer by Hemolytic Test of Stomach Content. (Zur klinischen Differentialdiagnose des Carcinoma und Ulcus ventriculi mittels des Nachweises hämolytisch wirkender Substanzen im Mageninhalte nach Grafe und Röhmer.) E. Fabian.
86 *Relapsing Influenza. (Die Rückfallsgrippe.) W. Hellpach. Commenced in No. 11.
87 Cultivation of Cholera Germs on Blood Alkali Media. (Zum bakteriologischen Choleranachweise mittels der Blutalkali-Nährboden.) P. Esch.
88 *Abnormal Temperature Perception. (Ueber abnorme Temperaturempfindungen. Ein neues klinisches Symptom.) M. Sugar.
89 Direct Endoscopy of the Nasopharynx without a Mirror. (Epipharyngoscopia, Salpingoscopia et Rhinoscopia posterior directa.) A. v. Gyergyai.
90 Local Treatment of Iritis. E. H. Oppenheimer.
91 *Spasmophilic Tendency in Children over 12. (Ueber das Chvosteksche Symptom und den spasmophilen tetanoiden Zustand älterer Kinder.) O. Herbst.

81. **Treatment of Postpartum Hemorrhage.**—Zangemeister remarks that as the amount of blood is materially increased over normal during pregnancy, hemorrhage during delivery is of no moment unless considerably over a pint is lost. The average in 2,930 births in his service in two years was 170 c.c.; in 19 per cent. it was over 200 c.c., in 5.3 per cent. over 500. He insists that hemorrhage from supposed atony of the uterus is in nearly every instance traceable to retained clots. Even when there is a tendency to atony, the contractions still may be vigorous enough to induce complete retraction of the uterus if the uterus can be emptied of blood and kept empty for a few minutes. This can be accomplished by a single forcible expression of the uterus during contraction, which aids in expelling the retained clots, and then, by holding the uterus firm and pressing it down deep into the pelvis, the vessels are unable to bleed further and this gives the organ its chance to retract. He grasps the uterus firmly and by this means he has been able to arrest the hemorrhage in nearly every case. Ergot, he says, is of use only as it increases the force of the uterine contractions. When the hemorrhage is from a tear in the cervix fresh blood follows the child as it emerges, and the flow is independent of the contractions of the uterus, while bleeding from the site of the placenta does not manifest itself for several minutes after delivery and then some of the blood is dark red, with clots, and the gush coincides with the uterine contractions. By crossing the patient's extended legs and pressing them together, while the uterus is grasped, it is sometimes possible to arrest the hemorrhage from a tear. If the bleeding continues, there is probably some serious laceration of the cervix or of some branch of the uterine artery beyond the wall of the uterus, and suturing may be difficult or impossible. Momburg's belt constriction serves to gain time or may arrest the hemorrhage permanently.

The patient is removed to a table; the bed is too inconvenient. A wide speculum is inserted and under a good light the tubing around the waist is loosened and the site of the hemorrhage determined. If accessible, the bleeding vessels are clamped and the clamps left in place till next day. If the blood issues from a tear in the cervix, he expresses once more the contents of the uterus and while it is held firm from without he packs the tear, the uterus and the vagina with 5 inch strips of gauze, and if the hemorrhage is very profuse he sutures the vulva together over the whole for a few hours, introducing a permanent catheter into the bladder. These measures alone are not sufficient, as the bleeding may continue behind the tampon, but this is effectually prevented by applying a horseshoe dressing, made of cotton rolled into a hard roll in a towel, bent into the shape of a horseshoe and applied to the abdomen so that it encircles the uterus from above. This horseshoe is then bound down tight to the abdomen by broad abdominal bandages or towels, and the whole left undisturbed for twenty-four hours. He has applied these horseshoe bolsters for many years in all cases of severe hemorrhage from a tear in the cervix, and they have failed him in only one case in which he had neglected to suture the vulva. Of late he has been using an inflatable rubber bag for the horseshoe bolster, applying it uninflated and then inflating it after the abdomen has been bandaged tight, thus ensuring more effectual compression of the bleeding vessels.

84. **Experimental Chronic Nephritis with Consecutive Arteriosclerosis.**—Rautenberg reports that three weeks of retention of urine by ligation of the ureter in rabbits was invariably followed by development of chronic nephritis. After removal of the sound kidney, the animals survived for from 12 to 18 months with persisting albuminuria. Autopsy then invariably revealed extensive sclerosis and aneurism in the aorta, evidently the result of the inevitable increase in the blood pressure induced by the kidney changes. Even before the blood pressure rose, substances were discovered in the blood capable of dilating the pupil.

86. **Relapsing Influenza.**—Hellpach applies this term to the form of influenza in which the infection assumes a chronic, afebrile, relapsing character, the nervous system being predominantly affected. He describes a number of typical examples and discusses treatment and prophylaxis. The depression is generally out of all proportion to the severity of the symptoms, the patient finds mental work difficult and there is frequently a tendency to stumble over certain syllables—a difficulty in finding the right word. A tendency to dizziness is often observed, as also intolerance of alcohol, disturbances in the sexual sphere, motor weakness, sensory disturbances, muscular twitchings, and secretory, trophic and vasomotor phenomena, in addition to the typical neuralgiform pains in the feet and hands and elsewhere. Some of his patients suffered from a form of frontal neuralgia, which seemed to be a blending of supraorbital neuralgia and frontal sinusitis. The paroxysms of pain sometimes occur at regular hours of the day, but the pain is not quite so severe as in true neuralgia, and it may jump from side to side or elsewhere. Neuralgiform pains in the internal organs are also characteristic of relapsing influenza, especially a boring pain or ache in the heart after exertion, or with distention of the stomach or flatus. These symptoms may be observed singly or combined. A protracted prodromal condition persists for weeks before the patient has a typical catarrhal influenza. During this his other symptoms subside, but soon they return in kaleidoscopic sequence and combinations, and after a few weeks the individual has another catarrhal attack. This recurring cycle returns repeatedly, Hellpach asserts, for months, until finally the attacks gradually die out or an acute influenza may prove the last manifestation of the disease. Hellpach is convinced that many patients have been classed and treated as neurasthenics, rheumatics and chronic catarrh sufferers when in reality the whole trouble was this relapsing influenza. The obstinate objectivity of the phenomena seems to exclude pure neurasthenia, he says. It is significant that bacteriologic examination recently has revealed pyogenic germs in association with the specific influenza germ in many cases. This relapsing influenza includes certain phenomena which suggest septic trouble.

88. **Abnormal Temperature Sensation in Sclerosis.**—The touch of a test-tube filled with hot water and another filled with ice water were both perceived as heat in 25 cases of polyinsular sclerosis as the two test-tubes were applied simultaneously side by side to the skin. This abnormal temperature perception was not observed in a number of hysterical patients and healthy persons examined, nor in patients with myelitis. The von Strümpell test of temperature perception does not apply to the phenomenon described here.

91. **Chvostek's Sign in Older Children.**—Herbst examined 113 pairs of brothers and sisters and found the Chvostek sign most frequent among the older children. He also elicited the sign in 35 per cent. of 500 children, finding it most frequent at the age of 14.

### Fortschritte der Medizin, Leipsic

*February 24, XXVIII, No. 8, pp. 225-256*

92 *Treatment of Disease in New-Born Infants. (Therapie der Erkrankungen der Neugeborenen. II.) P. Sittler. Concluded in No. 9.
93 *Abdominal Massage in Treatment of Whooping Cough and Catarrhal Processes in the Upper Air Passages. (Behandlung des Keuchhustens und anderer Luftröhrenkatarrhe durch die Bauchmassage.) E. Hönck. Commenced in No. 7.

*March 3, No. 9, pp. 257-288*

94 Changes in Walls of Arteries During or Preceding the Menopause, a Consequence of Disturbances in Internal Secretions. Schuster.

*March 10, No. 10, pp. 289-320*

95 Advantages of Having Tuberculous Mothers, Free from Open Lesions, Nurse their Babies. (Sollen tuberkulöse Mütter stillen?) Abramowski.
96 Staining Technic for Spirochetes. (Ueber Spirochätenfärbung.) Hennig.

*March 17, No. 11, pp. 321-352*

97 *Treatment of Inflammation in the Orbit by the General Practitioner. (Behandlung der Entzündungen der Augenhöhle.) A. Birch-Hirschfeld.
98 The Fundamental Errors of the Total Abstinence Zealots. (Grundirrtümer der Abstinenz.) W. Sternberg.
99 Treatment of Placenta Prævia. F. Fromme. Commenced in No. 10.

92. **Treatment of Disease in New-Born Infants.**—Sittler discusses melena, sepsis, jaundice, etc. Subcutaneous injection of gelatin in case of true melena should be supplemented, he says, by breast milk given cold by the teaspoonful, and stimulants for the heart and, in case of collapse, saline infusion with measures for warmth. In case of septic jaundice the treatment for sepsis should be applied, aiming first to keep the temperature normal and to ward off hypothermia. Special care should be taken to prevent regurgitation and aspiration of milk into the air passages with resulting bronchopneumonia. In case of idiopathic hemorrhage from the umbilicus it may be necessary to fill the depression with plaster mixed with alum. Peritoneal effusion is sometimes observed in new-born infants and great benefit may be derived from early tapping. Energetic surgical evacuation of the focus is sometimes required in osteomyelitis and may give good results. In case of tetanus he injects antitoxin subcutaneously or even into the nerve trunk in the infected wound, generally the umbilicus, or the injection may be subdural or intravenous with chloral and regular frequent feeding. Antistreptococcus serum may be useful in erysipelas, supplemented by local warm mild antiseptic applications. Prophylaxis of disease in the new-born, he declares, must not only be care for asepsis and suitable nourishment but must include oversight of the parents.

93. **Abdominal Massage for Whooping Cough and Other Respiratory Disturbances.**—Hönck's advocacy of abdominal massage was abstracted in The Journal, April 9, page 1242. He here describes the technic; it must never, he says, cause discomfort. He massages for about 10 minutes every day or second day, but he warns that as the benefits are great when skilfully done so the harm may be serious when done wrong. In his work in this line during several years, he has had only one mishap; in this the massage evidently caused the flaring up of a latent appendicitis. For this reason he now always takes the temperature to exclude latent abdominal disease before massaging. He does not restrict the massage to the nerve tracts.

97. **Treatment of Inflammation in the Orbit.**—Birch-Hirschfeld discusses this subject from the standpoint of the general practitioner, especially when ophthalmologic treatment is im-

ssible. If there is no subsidence of the orbital symptoms ter a few weeks of general treatment—potassium iodid. ercury. tuberculin or arsenic, according to the presumed iology—operative treatment should no longer be deferred. a large proportion of cases the inflammation in the orbit secondary to a sinusitis. Chronic mild sinusitis without tual suppuration may involve the orbit and induce scotoma exophthalmos. By endonasal treatment of the sinus, the bital process may heal with it. The general practitioner ay be forced to operate for an acute phlegmon in the orbit ch as may develop after trauma or secondary to a sinusitis. improvement is not evident after a few days the danger brain complications may require the evacuation of the tire contents of the orbit. If the trouble is merely a sub- riosteal abscess in the orbit it may heal if the focus is posed and emptied. sparing the tissues in the orbit. The derlying sinusitis can then be given proper treatment by a cialist. Treatment of the sinusitis alone may cure the bital trouble with retrogression of the protrusion and dislo- tion of the eyeball, chemosis, and tenderness without neces- ty for direct measures on the orbit. He advises, therefore, recting attention first to the treatment of the sinusitis less the symptoms are too threatening. He adds that not s than 409 of the 684 cases of orbital inflammation he has und in the literature were traceable to sinusitis. Thus, in .8 per cent. of the cases the trouble originates in the sinus; not less than 118 cases vision was lost and in 99 the case rminated fatally. Much harm can be averted by the general actitioner's appreciation of the complications to be feared. e measures to be advised must be based on thorough ex- ination of the nose and general condition. At present it o often happens that he contents himself with compresses d a purgative, and does not consult with the ophthalmolo- st. the rhinologist or the surgeon until serious complications velop and the moment for successful relief is past.

### Medizinische Klinik, Berlin

*March 20, VI, No. 12, pp. 452-492*

0 *Principles of Dietetics in Digestive Disturbances. (Grundlagen der Diätetik bei Verdauungskrankheiten.) A. Bickel.
1 *Pathology and Treatment of Acute Pancreatitis. D. Pupovac
2 Connection between Inhalation of Smoke and Croupous Pneumonia. (Zusammenhang von Raucheinatmung und kruppöser Pneumonie.) H. Grau.
3 Tincture of Iodin in Surgical Sterilization. (Wert der Joddesinfektion, geprüft an einem grossen Hernienmaterial.) E. W. Baum.
4 Epidural Injections plus Cocainization of the Nasal Mucosa to Relieve Labor Pains. (Ueber sakrale Anästhesie in Verbindung mit Kokainisierung der Nase zur Linderung der Geburtsschmerzen.) K. Mayer.
5 *Fate of Existing Pregnancy after Bilateral Oöphorectomy. (Schicksal der Schwangerschaft nach Entfernung beider Eierstocke während der Schwangerschaft.) L. Löwenstein. Commenced in No. 11.
6 Gout and the Kissingen Waters. (Ueber die Gicht und die Kissinger Trinkkur.) E. v. Sohlern.
7 Filterable Virus and Nature of Epidemic Poliomyelitis. (Ueber filtrierbares Virus und über das Wesen der Poliomyelitis acuta.) R. Kraus.

100. **Dietetics in Treatment of Digestive Disturbances.**—kel discusses what is meant by a light digestible diet. es this mean foods easily attacked by the ferments, or ily passed along out of the stomach, or not inducing much retion of digestive juices, or does it mean easily absorbed? e individual conditions in each case require that the diet uld conform to the special manifestation of incompetency, l much more research is needed in this line. The effect on motor and secretory functioning depends on the physical ucture and chemical composition of the food. The more ly divided the food the less the demands on the motor ctioning, and also the less the stimulus for secretion. Low peratures seem to stimulate motor functioning; the more centrated the solution the greater the stimulus to secre- n. The chemical composition of the food is also important m this point of view; human milk leaves the stomach cker than cow's milk, even in the same dilution. He lists articles that have little, if any, effect in stimulating gastric retion: water, alkaline mineral waters, tea, cocoa, cream, albumin, other pure native albuminoids in aqueous solu- ns; also 0.9 per cent. salt solution. Of solid foods he men- ns boiled meat, fats of all kinds, boiled vegetables, starch l sugar; the vegetables should be taken in the form of a ée, that is, mashed soft. The list includes further white meat and fish as finely divided as possible. On the other hand, secretion is stimulated by all the alcoholic and carbonated drinks; by coffee, skimmed milk, meat broths and extracts, egg yolks, condiments and salt, except the 0.9 per cent. solution, and all raw, roasted or briefly boiled meat, salted and smoked meats, bread and all albumin and starch articles of food made in the bread form, and all vegetables not long boiled. This classification, he says, has rendered him inestimable service for many years in treatment of gastric trouble with secretory disturbances. Many of the foods make parallel demands on the motor and secretory functioning, or spare both alike.

101. **Treatment of Acute Pancreatitis.**—Pupovac describes the clinical picture of acute pancreatitis and the necessity for early diagnosis and operation, with every effort to protect the vicinity from the action of the pancreatic juice by appropriate tamponing. He regards the Bunge technic as preferable, done under primary or local anesthesia, with or without cecostomy.

105. **Fate of Existing Pregnancy After Oöphorectomy.**—Löwenstein concludes from his experience and the cases on record that the gravid uterus can tolerate bilateral ovariotomy without interference with the pregnancy. In his own case the operation was done on the forty-fourth day of the pregnancy and the patient was able to nurse her child for sixteen months after normal delivery. One ovary was removed during one pregnancy and the other during a later pregnancy, a dermoid cyst being removed at the first operation and the enlarged left ovary in cystic degeneration at the other. Essen-Möller removed the ovaries soon after conception without interference with the pregnancy, thus showing, he asserts, that the corpus luteum has not the importance for the pregnancy which Fraenkel maintains.

### Mitteilungen aus den Grenzgebieten der Med. und Chir., Jena

*XXI, No. 3, pp. 377-555. Last indcæed March 19, p. 1015*

108 Viscosity of Human Blood with Special Reference to Surgical Lesions. (Viskosität des menschlichen Blutes mit fes. Berücksichtigung ihres Verhaltens bei chirurgischen Krankheiten.) W. Müller.
109 Importance of Certain Anaërobes in Pathology, especially Puerperal Disease. H. Schottmüller.
110 *Mobilization versus Immobilization of the Lung in Treatment of Tuberculosis. P. Harrass.
111 Ossifying Myositis and Allied Ossifying Processes, especially with Organic Nervous Disease. (Myopathologische Beiträge.) H. Steinert.
112 Origin of Brachydactylia. E. Ebstein.
113 Mechanism of Invagination of the Intestine. (Mechanismus der Darminvagination.) C. Propping.

110. **Therapeutic Mobilization Versus Immobilization of the Lung.**—Harrass refers to the method of immobilizing the lung by means of artificially induced pneumothorax or a thoracoplastic operation according to Brauer's or Friedrich's technic, and to Freund's method of releasing the lung by severing the rigid first costal cartilage, or chondrotomy, as he calls it. Both of these methods have been evolved by empiric observation of Nature's processes. The former has a promising outlook in cases of severe advanced tuberculous lesions in one lung, while the chondrotomy is only for a small group of well-defined afebrile, incipient cases. Both, he says, seem to promise well; chondrotomy has given good results to date in the seven cases in which it has been applied, and the nitrogen injections have been followed by development of connective tissue in the compressed lung.

### Monatsschrift für Kinderheilkunde, Leipsic

*February, VIII, No. 11, pp. 657-728*

114 Intestinal Bacteria and the Food. (Darmbakterien und Ernährung.) Otaki and H. Vogt.
115 Importance of Weighing Young Infants every Four Hours to Judge of their Condition. (Wert vierstündlicher Wägungen für die Beurteilung des Zustandes junger Säuglinge.) E. Schloss.

### Münchener medizinische Wochenschrift

*March 15, LVII, No. 11, pp. 561-616*

116 Inhibition of Wassermann Reaction by Mercuric Chlorid. (Ueber die Hemmung der Wassermannschen Reaktion durch Sublimat und über die Möglichkeit dieselbe aufzuheben.) G. Satta and A. Donati.
117 Effectual Serotherapy of Epidemic Poliomyelitis. (Spezifisch wirksames Serum gegen das Virus der epidemischen Kinderlähmung.) P. H. Römer and K. Joseph.
118 Bacteriologic and Histologic Research in Congenital Syphilis. J. Trinchese.

119 Progress in Intubation Treatment of Diphtheritic Stenosis of the Larynx. K. Kaspar.
120 Endoscopy of the Nasopharynx and Larynx. (Zur endoskopischen Untersuchung des Nasenrachenraumes und des Kehlkopfes.) K. Schmuckert.
121 Aseptic Catheterization. (Der aseptische Katheterismus und Selbstkatheterismus.) Grosse.
122 New Drugs and Therapeutic Efforts. H. Hildebrandt.
123 Danger of Excessive Action of Ergot. (Unerwünschte Ergotinwirkung.) L. Klapp.
124 Case of Typhoid plus Paratyphoid Infection after Eating Oysters. F. Popp.
125 Two Cases of Cervical Cesarean Section. E. Rosenfeld.
126 Formula for Calculating Amounts in Infant Feeding. (Einfache Formel zur Berechnung der Nahrungsmenge für Säuglinge.) G. Heimann.
127 The Medical Papyrus in the Berlin Museum. G. A. Watzold.

### Therapeutische Monatshefte, Berlin

*March, XXIV, No. 3, pp. 113-168*

128 *Injurious Action of Coffee and Tea in Tendency to Gout. (Zur Frage der harnsäurevermehrenden Wirkung von Kaffee und Tee und ihrer Bedeutung in der Gichttherapie.) A. Schittenhelm.
129 *The Purin Content of Food. (Zur Diätetik bei harnsaurer Diathese und Gicht: der Puringehalt der Nahrungsmittel.) G. Bessan and J. Schmid.
130 Action of Strophanthin on Artificially Lowered Blood Pressure. (Versuche über die Wirkung medizinaler Strophanthingaben auf künstlich erniedrigten Blutdruck.) H. Straub.
131 Treatment of Acute Catarrhal Otitis Media. (Die akute Mittelohrkatarrh und seine Behandlung.) H. Klau.
132 *Technic for Operations without Necessity for Personal Assistance. (Zur Technic chirurgischer Operationen unter absoluter Emanzipation von persönlicher Assistenz.) L. Meyer.

128. **Coffee and Tea as Producers of Uric Acid.**—Schittenhelm's research on dogs seems to confirm, he says, the experiences recently related by Besser and by Axisa, who found that ingestion of tea and coffee in man had a pronounced effect in increasing the tendency to uricacidemia.

129. **Purin Content of Various Articles of Food.**—Bessau and Schmid have conducted research to determine the proportion of purin bodies in various articles of food, striving to make out a table with more rigorous determination of proportions and with uniform technic, in comparison to the tables of Walker Hall, Burian and others generally cited in the text-books. The proportions thus determined are listed in detail. They vary somewhat from those hitherto accepted in that an unexpectedly large proportion of purin nitrogen was found in the smaller fish, in sardines, in spinach, in green peas and dried peas and in beans. Mushrooms, pigeons, thymus, liver and kidneys also show a large proportion, but the difference is less than expected between the various kinds of meat.

132. **Operations Without Assistance.**—Meyer gives an illustrated description of various devices that enable the services of an assistant during operations to be dispensed with, even in the home. He warns against attempting outside of a hospital any operation in which a joint has to be opened, a plastic operation or removal of very large tumors. The surgeon should be equipped and able, he says, to do other operations in the home without assistance. The necessity for emergency operations is daily increasing. The tincture of iodin method of preparing the field of operation he considers a great advantage if experience confirms what is claimed for it. The main point in the assistantless operation, he remarks, is to plan it all out beforehand and be prepared for every phase as it arrives, the instruments arranged in turn on tables and chairs so that the operator can pick them up without glancing away from the field of operation. For operations on the vagina or rectum the sloping "desk" devised by Albarran for operations on the prostate is very convenient. Another useful device is the Anvard speculum, an aluminium tube with a row of small holes in one side. The vaginal portion of the uterus is seized with a curving forceps, a small hook in the side of the forceps hooking into one of the holes in the side of the speculum and thus enabling the cervix to be drawn down and held automatically at the point desired.

### Wiener klinische Wochenschrift, Vienna

*March 24, XXIII, No. 12, pp. 425-458*

133 Research on Anaphylaxis with Carcinoma in Man. (Anaphylaktische Untersuchungen beim Karzinom des Menschen.) G. E. Kelling.
134 *Arrest of Production of Effusions, etc., by Administration of Calcium Salts. (Hemmung von Transsudat- und Exsudatbildung durch Kalziumsalze.) R. Chiari and H. Januschke.
135 Posthemiplegic Chorea. (Zur Kasuistik und zur Erklärung der posthemiplegischen Chorea.) K. v. Economo.
136 Partial Suprapubic Prostatectomy. A. Noguelra.
137 Control of City Milk Supply. (Die gesetzliche und freiwillige Kindermilchkontrolle.) S. Weiss.
138 Radiosusceptibility. (Zur genaueren Kenntnis der Radiosensibilität.) R. Kienböck and G. Schwarz.

134. **Effect of Calcium Salts in Preventing Production of Effusions.**—Chiari and Januschke report experimental research which showed that the subcutaneous injection of calcium salts was able to prevent the formation of pleural effusion in poisoning with sodium iodid, thiosinamin and diphtheria toxin in dogs and guinea-pigs. It also prevented the development of inflammatory edema in the rabbit conjunctiva after instillation of oil of mustard. It seems evident that the calcium not only renders the blood less fluid but seems to make the vessel walls less permeable. Wright has also reported similar results in urticaria after serotherapy. It may be possible by this means, they believe, to influence the development of effusions in the clinic.

### Zeitschrift für klinische Medizin, Berlin

*LXX. Nos. 1-2, pp. 1-183. Last indexed March 5, p. 828*

139 Consequences of Severing the Tawara Leg of the Stimulus-Conducting System in the Heart. (Folgen der Durchschneidung der Tawaraschen Schenkel des Reizleitungssystems.) Eppinger and J. Rothberger.
140 *Resorption Fever and Early Recurrence in Infectious Diseases. (Resorptionsfieber und Frührezidiv bei Infektionskrankheiten.) A. Menzer.
141 Palpation of the Appendix. (Zur Untersuchung des Wurmfortsatzes.) W. Orlowski.
142 Influence of Respiration on Blood Pressure and Size of Heart. (Beobachtungen über den Einfluss der Respiration auf Blutdruck und Herzgrösse.) F. M. Groedel.
143 Progress in Percussion of the Lung Apex. (Ueber die Goldscheidersche Lungenspitzen-Perkussion.) H. Cornet.
144 The Coronary Vessels and their Influence on the Dilatation of the Heart Cavities. (Die Koronargefässe und ihr Einfluss auf die Dilatation der Herzhöhlen in Diastole.) G. van Eysselsteyn.
145 Antiformin Technic for Bacteriologic Examination of Tuberculous Sputum. (Nachweis der Tuberkelbazillen im Sputum mittels der Antiforminmethode.) H. Goerres.
146 Experimental Research on Influence of Body Temperature on the Diastase. (Einfluss der Körpertemperatur auf die Diastase.) H. Schirokauer.
147 *Pathology and Treatment of Fibrinous Pneumonia. H. v. Wyss.

140. **Fever from Absorption and Early Relapse in Infectious Disease.**—Menzer analyzes 11 cases of typhoid, tonsillitis or other acute infectious diseases presenting a flaring up of the fever after apparently complete defervescence. His study of the cases shows that the fever is the result of absorption of toxic products from the infectious foci and that this is also the cause of the return of symptoms. He has observed this absorption fever most frequently in the course of tonsillitis and influenza, and is in the habit of warning his patients of the liability of a recurrence. He is careful to give no antipyretics as the convalescence without them seems to be much more rapid than when the fever has been prematurely reduced by their influence. The fever curve in measles shows two phases; the after-fever frequently is higher than in the first stage. This assumption of an "absorption fever" seems to explain, he says, the peculiar course of many infectious processes.

147. **Salt in Treatment of Fibrinous Pneumonia.**—Wyss gives a detailed report of the clinical course in 50 cases of this disease at the medical clinic at Zürich in charge of Eichhorst. The aim in treatment should be: (1) to prevent any demands from outside on the heart; (2) to prevent any increase in the resistance in the interior of the organism; and (3) to sustain the action of the heart by appropriate drugs. Rest is therefore the main thing, not only keeping the patients in bed but combating the delirium and the resulting motor restlessness. No time should be wasted with weak narcotics, he declares, but morphin should be given at once to insure quiet and rest. The second indication he meets by measures to promote the circulation, especially to restore fluids to the body and render the blood less concentrated. His experience has shown that the fluids can be kept in the proper proportions by intake of salt. He found that 10 gm. (150 grains) of salt was sufficient to restore the proper balance of the fluids in the body. He gave the salt in thin broths into which an egg was stirred, or in milk. He reiterates that a regular and copious rinsing through of the body with water is beneficial, and that nothing accomplishes it so satisfactorily as this intake of salt in small regular amounts given by the mouth. Given by the

ectum there is liable to be irritation and in saline infusion he sudden flushing of the body with water may be directly angerous. The heart does not become insufficient when the ody has sufficient fluids. He does not compel the patients o drink, but after the salt is taken they are thirsty and all frequently for water. The diet is restricted to fluid food iven every hour during the fever, the patient being awakened hen necessary. The individual does not lose weight so rap- lly and recovers more quickly when this is done sys- ematically. The blood count is a faithful picture of the lood-making capacity of the bone marrow, and thus permits nportant conclusions as to the prognosis. A small number f leucocytes is only relatively significant. The retention f chlorids is not the expression of a specific feature of the isease but is dependent on the water metabolism. The elirium in fibrinous pneumonia may be due, Wyss says, to ntoxication or to the influence of alcohol, or it may be a ign of collapse; in each it has a different significance and equires different treatment.

### Zentralblatt für Chirurgie, Leipsic

*March 26, XXXVII, No. 13, pp. 465-496*

48 *Traumatic Rupture of the Appendix. (Ueber traumatische Appendicitis.) Pohl.

148. **Traumatic Appendicitis.**—Pohl reports a case which onfirms the possibility of appendicitis of traumatic origin, ot only directly following the trauma but even long after ight trauma. His patient was a man who had been hit by he crank of a gas motor which he was repairing. Severe ymptoms at once developed suggesting appendicitis, and rompt operation showed that the blow had evidently forced he contents of the appendix or cecum into the tip of the ppendix with such force that the mucosa had become eroded ith secondary inflammation. Inflammation might develop i the same way even after a slight trauma affecting the gion.

### Zentralblatt für Gynäkologie, Leipsic

*March 26, XXXIV, No. 13, pp. 433-464*

49 Sacral Anesthesia in Obstetric Cases by Epidural Injections. (Weitere Versuche über die sakrale Anästhesie.) A. Rieländer.
50 *Treatment of Placenta Prævia. J. Olow.

150. **Treatment of Placenta Prævia.**—Olow reviews the xperiences at Lund with 41 cases of placenta prævia in the st ten years. The preference was given to version over e hystereurynter as offering better chances for the mother n account of the danger of infection with the inflatable bag. he maternal mortality was 2.42 per cent., that of the ildren 40.9 per cent.

### Zentralblatt für innere Medizin, Leipsic

*March 26, XXXI, No. 13, pp. 322-344*

51 Catarrhal Enteritis in Etiology of Transient Glycosuria. (Zur Aetiologie transitorischer Glykosurien.) H. L. Richartz.

### Gazzetta degli Ospedali e delle Cliniche, Milan

*March 13, XXXI, No. 31, pp. 321-336*

2 Aphasia. F. Schupfer.
3 Necessity for Operative Treatment of Traumatic Dislocation of the Elbow with Fracture of the Inner Condyle of the Humerus. (Intervento operativo per lussazione traumatica del gomito con frattura dell' epitroclea.) L. Vercelli.

*March 15, No. 32, pp. 337-344*

4 *Typhoid Cortical Reaction in Children. (Considerazioni cliniche sulle infezioni generali nei bambini.) C. Amistani.

*March 17, No. 33, pp. 345-352*

5 *Differentiation by Millon's Reagent of Tuberculous from other Pus and Effusions. (Intorno alla reazione Millon per gli essudati e gli essudati purulenti.) A. Golinelli.

*March 22, No. 35, pp. 369-376*

6 *Treatment of Pleurisy by Artificially Induced Oxygen Pneumothorax. (Sulla cura delle pleuriti.) C. Molon.

154. **Typhoid Cortical Syndrome in Young Children.**—Amisni noticed a peculiar meningeal syndrome during the third eek of typhoid in young children during a recent epidemic his district. The diagnosis wavered between uremia, true eningitis, and a tuberculous meningitic process, but by clusion he explains it as a toxic action of the typhoid fection on the brain cortex. The cerebrospinal fluid was upid. On this assumption treatment was directed to sooth- g the nervous system by giving bromids or chloral and avoiding nerve stimulants such as alcohol or strychnin and the meningeal symptoms soon subsided. The children also displayed an unusual tendency to hemorrhage, not only cutaneous but in the internal organs.

155. **Differentiation of Tuberculous from Other Pus and Sputum.**—Golinelli has been testing on an extensive scale the method of differentiation of tuberculous pus devised by Müller and described in The Journal, June 15, 1907, page 2081. Golinelli's findings do not confirm absolutely the specific nature of the test; a positive response was sometimes obtained with pus of other origin, but a negative response seems to exclude tuberculosis beyond question. The test does not seem to have any value in respect to differentiation of tuberculous sputum, as a negative response was occasionally obtained with sputum containing tubercle bacilli.

156. **Artificially Induced Oxygen Pneumothorax in Treatment of Pleurisy.**—Molon has been applying this measure systematically in cases of pleurisy with effusion, injecting the oxygen or air as the effusion was removed by tapping. Benefit was prompt and permanent, the pain and dyspnea subsiding at once. He found that filtering the gas through cotton did not keep out all germs, and he improved on this method by passing the gas through a Chamberland candle, with a contrivance to regulate the pressure and measure the amount used. He generally injected about the same amount as of the fluid withdrawn, allowing the gas to enter very slowly through an opening above the one made for the escape of the fluid, the patient sitting upright. By this means even large effusions can be drained away without causing any disturbances from the change in the pressure inside the chest. He suggests that this method of immobilizing the lung might prove useful in aborting pleurisy by giving the pleura a chance to rest while putting an end to the pain from traction on the pleura. He has thus treated six patients with secondary pleurisy without effusion, as a prophylactic measure; all symptoms disappeared after the injection of about 400 c.c. of oxygen. The symptoms returned in one patient but yielded again to another injection. He does not venture to decide whether the effect is merely mechanical or whether the oxygen may not have a direct healing influence on the process.

### Policlinico, Rome

*March, Medical Section, No. 3, pp. 97-144*

157 Retention of Nitrogen—Azotemia. P. Rondoni.
158 Modification in the Structure of the Arteries in Chronic Nephritis. F. Fulci.
159 Successful Relief of Parathyreopriva Tetany by Subcutaneous Injection of Magnesium Salts. (Contributo al trattamento della tetania paratireopriva mediante ipodermoclisi con sali di magnesio.) C. Canestro.
160 Mixed Infection with Experimental Malta Fever. (Infezioni miste con il bacillo melitense.) A. Cantani.

*March, Surgical Section, No. 3, pp. 97-144*

161 Cancer in Accessory Thyroid . (Contributo alla conoscenza dei tumori maligni delle glandole tiroidee accessorie.) V. Barnabo.
162 Ligature of the Hepatic Artery. (La legatura dell'arteria epatica e dei suoi rami.) V. Nicolleti.
163 Sarcoma of the Pylorus with Tuberculous Adenitis. (Sarcoma del piloro con adenite tubercolare.) G. Picri.

### Riforma Medica, Naples

*March 14, XXVI, No. 11, pp. 281-308*

164 *Experimental Research on Effect of Quinin on the Properties of the Serum. (Di una pretesa possibile proprieta immunizzante della chinina.) L. Ferrannini.
165 *General Anesthesia with Part of the Circulation Shut Off. (Note ed osservazioni sulla narcosi con circolazione artificialmente ridotta.) M. Donati.
166 Splenomegaly with Cirrhosis of the Liver. A. Germani.

164. **Effect of Quinin on Properties of Serum.**—Ferrannini was unable to discover anything in his research on dogs which suggested that the blood serum acquired any bactericidal, agglutinating or immunizing properties under continued administration of quinin. Neither the phagocytic power nor the opsonic index of the blood serum seemed to be modified.

165. **General Anesthesia with Part of Circulation Shut Off.**—Donati in 71 cases applied Klapp's method of artificially shutting off the circulation in the limbs as an aid in general chloroform anesthesia. Thrombophlebitis developed in 3 cases while he witnessed nothing of the kind in his cases under ordinary technic. This experience, he says, confirms

that recently reported by Gräfenberg in which thrombosis developed in 6 out of 75 cases under this technic, but only once in a series of 75 cases with ordinary technic. In no instance was there a pre-existing tendency to varices on the legs which might have explained the thrombosis. With part of the circulation shut off the tendency to vomiting seemed to be materially reduced, but this advantage was counterbalanced by the sense of weight and tingling in the legs in the first few days after the operation. In the 3 cases in which thrombophlebitis developed the constriction had been applied for from 60 to 72 minutes; the operations were for hernia or ankylosis of the knee. On the whole he feels constrained to warn against the Klapp technic.

### Ugeskrift for Læger, Copenhagen

*March 3, LXXII, No. 9, pp. 235-268*

167 *Lubricating Catheters by Boiling the Vaselin in the Water with the Catheter. (Et ny Metode til steril Inungering af Kathetre og Bougier.) C. Engelbreth.

*March 10, No. 10, pp. 269-304*

168 *Treatment of Pulmonary Tuberculosis by Artificially Induced Pneumothorax. (Pneumothoraxbehandling og almindelig Praxis.) C. Saugman.

*March 17, No. 11, pp. 305-340*

169 *History of Sporotrichosis. C. E. Jensen and A Kiørboe.

*March 24, No. 12, pp. 341-368*

170 Technic of Tonsillectomy. N. R. Blegvad.

167. **Sterile Lubrication of Catheters.**—Engelbreth boils the vaselin with the catheter in the water. This not only ensures that the lubricant is sterile, but as the catheter is lifted out of the water it takes on automatically a thin, even coating of the vaselin or oil floating on the surface.

168. Abstracted in The Journal, April 23, page 1414.

169. **Sporotrichosis.**—Jensen mentions that the sporothrix was found in certain human lesions by American investigators several years before de Beurmann's publications on the subject, but he adds that the cultural characteristics speak against the identity of the sporothrix found in France and in America.

## Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

Modern Medicine. Its Theory and Practice in Original Contributions by American and Foreign Authors. Edited by William Osler, M.D., Regius Professor of Medicine in Oxford University, assisted by Thomas McCrae, M. D., Associate Professor of Medicine and Clinical Therapeutics in the Johns Hopkins University, Baltimore. Vol. VII, Diseases of the Nervous System. Cloth. Price, $6 net. Pp. 969, with illustrations. Philadelphia: Lea & Febiger, 1910.

Organization of the Public School Hygiene Service in the Federal District of Mexico. Paper presented to the American Public Health Association (37th Annual Meeting, Richmond, Va.). By Alfonso Pruneda, M.D. [Primera Alamo 16, City of Mexico.] Paper. Pp. 22, with illustrations. 1909.

Die experimentelle Pharmakologie als Grundlage der Arzneibehandlung. Ein Lehrbuch für Studierende und Aerzte. Von Dr. Hans H. Meyer und Dr. R. Gottlieb, Professoren der Pharmakologie. Paper. Price, 12 marks. Pp. 483, with 62 illustrations. Berlin: Urban & Schwarzenberg, 1910.

The Influence of Strong, Prevalent, Rain-Bearing Winds on the Prevalence of Phthisis. By William Gordon, M.D., Physician to the Royal Devon and Exeter Hospital. Cloth. Price, 7 shillings 6 pence net. Pp. 108, with illustrations. London: H. K. Lewis, 136 Gower St., W. C., 1910.

Drunkenness in Massachusetts, Conditions and Remedies. Special Report of the Board of Trustees of the Foxborough State Hospital. Submitted in Accordance with Resolve Approved May 26, 1909. Paper. Pp. 70. The Commonwealth of Massachusetts, 1910.

The Medical Register. Printed and Published under the Direction of the General Council of Medical Education and Registration of the United Kingdom. Cloth. Price, 10 shillings 6 pence. Pp. 1762. London: Spottiswoode & Co., New Street Square, 1910.

The Dentists' Register. Printed and Published under the Direction of the General Council of Medical Education and Registration of the United Kingdom. Cloth. Price 3 shillings 4 pence. Pp. 235. London: Spottiswoode & Co., New Street Square, 1910.

Teachers' Course, Department of Correspondence-Study, Bancroft Training School, Haddonfield, N. J. Course I, Physiology. B. E. A. Farrington, M.D. Section A, Elementary Anatomy and Physiology of the Nervous System. Paper. 1910.

The Science of Living, or the Art of Keeping Well. By William S. Sadler, M.D., Professor of Physiologic Therapeutics, the Post-Graduate Medical School of Chicago. Cloth. Price, $1.50 net. Pp. 420. Chicago: A. C. McClurg & Co., 1910.

Handbuch der Serumtherapie und experimentellen Therapie. Ein Handbuch fur Klinik und Praxis. Herausgegeben von O. Wolff Eisner, Berlin. Paper. Price, 12 marks. Pp. 408, with illustrations. Munich: J. F. Lehmanns Verlag, 1910.

Sixth Annual Report of the Education Department, State of New York. For the School Year ending July 31, 1909. Transmitted to the Legislature Jan 24, 1910. Cloth. Pp. 782. Albany: New York State Education Department, 1910.

Catalogue of Loan Exhibits and Lantern Slides to Illustrate Popular Lectures. Prevention of Blindness, No. 6. Paper. Pp. 14, with illustrations. New York Association for the Blind, 289 Fourth Ave., 1910.

Entéro-Côlite: Estomac et Système Nerveux. Par le docteur L. Pron, Membre adhérent de la Société de médecine de Paris. Paper. Price, 2 francs. Pp. 132. Paris: Jules Rousset, 1, Rue Casimir-Delavigne, 1910.

The Conquest of Disease Through Animal Experimentation. By James P. Warbasse, M.D., Surgeon to the German Hospital, Brooklyn. Cloth. Price, $1 net. Pp. 175. New York: D. Appleton & Co., 1910.

Précis d'Auto-Suggestion Volontaire. Par le docteur Géraud Bonnet, d'Oran, Officier de l'Instruction Publique. Paper. Price, 3 francs. Pp. 300. Paris: Jules Rousset, 1, Rue Casimir-Delavigne, 1910.

Letters of a Physician to His Daughters on the Great Black Plague. By F. A. Rupp, M.D. Boards. Price, 50 cents net. Pp. 96. Philadelphia: The Vir Publishing Co., (1910).

First Annual Report of the Committee on Prevention of Blindness of the New York Association for the Blind. Prevention of Blindness, No. 5. Nov. 1, 1909.

Thirtieth Annual Report of Creighton Memorial St. Joseph's Hospital, Omaha, Neb. Fourth Year Ending Dec. 31, 1909. Paper. Pp. 35, with illustrations.

Fifteenth Report of the Board of Health of the Town of Montclair, N. J. From Jan. 1, 1909, to Dec. 31, 1909. Paper. Pp. 69.

## New Patents

Recent patents of interest to physicians:

943728. Ophthalmoscope. F. Baum, Paris, France.
943918. Electrical medical appliance. B. R. Davenport, Philadelphia.
943827. Post-mortem table. T. B. Hennessy, Chicago.
943676. Thermometer case and instruments. M. P. Hermann, Philadelphia.
944136. Vaginal syringe. W. Herschlay, Chicago.
943679. Embalming table. G. F. Honold, Sheboygan, Wis.
943685. Truss. A. A. Klug, Merrill, Wis.
944203. Screw-cap for collapsible tubes. F. McIntyre, New York.
944204. Bed and bedstead for the use of invalids. J. McKay, Bendigo, Victoria, Australia.
943703. Ankle support. W. J. McLinden, Owen Sound, Ontario, Canada.
943843. Truss-pad. I. M. Pease, Cincinnati.
943894. Device for treating cutaneous diseases. F. Rightmire, Paterson, N. J.
944001. Chemical closet. W. O. Sheafor, Winuipeg, Manitoba, Canada.
944473. Apparatus for making oxygen. G. von Ach, Newark, N. J.
944252. Massage apparatus. E. M. Bassler, Chicago.
944765. Stoppering for bottles intended to contain volatile liquids. J. Bengue, Paris, France.
944717. Agitating device for mixing carbonic-acid gas and water. L. Caul, Cleveland, Ohio.
944420. Antifouling composition. C. Ellis, Larchmont, N. Y.
944737. Vacuum massage machine. N. Lombard, Akron, Ohio.
944738. Medicament for diseases of the mucous membrane. W. Loose, Bremen, Germany.
944624. Invalid's mattress. J. T. Lunn, Southhampton, England.
944455. Injector. J., J. C. and R. D. Metcalfe, Fallowfield, England.
944830. Gastroscope. M. Sussmann, Berlin, Germany.
945359. Body brace. Joel U. Adams, Cincinnati, Ohio.
945118. Hypodermic syringe case. Sheldon S. S. Campbell, Collinsville, Conn.
945380. Atomizer. Frank C. Dorment, Detroit, Michigan.
945449. Invalid bed. Robert L. Edgecombe, Waterville, Quebec, Canada.
945530. Infant-weighing device. Kate B. Haydeu, Columbus, Ohio.
945389. Sphygmomanometer. Max Herz, Vienna, Austria-Hungary.
945332. Obtaining ammonia from gas. Heinrich Koppers, Essen-on-the-Ruhr, Germany.
945282. Invalid bed or cot. George McElveen, Detroit.
945404. Machine for pasteurizing liquids. Wm. J. McKee, Detroit.
945139. Shoulder brace. Agnes Roland, Dorchester, Mass.
945292. Surgical forceps. Alvin F. Sether, Glendale, Ore.
945638. Glandular compound and producing the same. Jokichi Takamine, New York.
945657. Disinfecting apparatus. Louis Wieden, New York.
945255. Apparatus for distributing disinfectants. John W. Wilkie and R. Wilson, Birkenhead, England.
945307. Tank for administering oxygen. George vou Ach, Newark, N. J.
946427. Manufacturing ammonia. Frederick W. Frerichs, St. Lonis.
946256. Syringe. Thomas R. McMerthney, Tacoma, Wash.
945858. Shoulder brace. Eda Nesbitt, Swan Hill, Victoria, Australia.
946264. Dynamometer. Samuel T. Park and J. E. Phillips, Danville, Ill.
946397. Pasteurizing apparatus. Anders A. Pindstofte, Frederiksberg, near Copenhagen, Denmark.
945867. Automatic spray valve. Harry J. Richter, Chicago.
946467. Druggist's cabinet. Maurice P. Schwartz, Indianapolis.
945872. Vibrator. Alfred J. Stecker, Detroit.
40429. Design, Alta sick-call outfit. Joseph T. Homan, Cincinnati.

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## *Original Articles*

# ANATOMIC, PATHOLOGIC AND CLINICAL STUDIES OF LESIONS INVOLVING THE APPENDIX AND RIGHT URETER

## WITH SPECIAL REFERENCE TO DIAGNOSIS AND OPERATIVE TREATMENT

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ST. LOUIS

In two decades the brilliant work of American surgery has developed the disease of appendicitis from a practically unknown to a well-established clinical entity. In fact, this disease has become so popular that it is now credited with almost every symptom referable to the right lower quadrant of the abdomen. For this reason many a normal appendix has been unnecessarily removed, and many other lesions in this region simulating appendicitis have been overlooked. During the past two years a clinical analysis made on cases before operation compared with the lesions found during operation has demonstrated to us the many difficulties which present themselves in the diagnosis of some of the lesions of this quadrant. This applies particularly to those cases of combined lesions of the appendix and right ureter; appendicitis simulating genitourinary disease; urinary calculi simulating appendicitis, and lesions of other organs in this region usually mistaken for appendiceal or ureteral disease.

In order to attempt to determine definitely the cause of confusing clinical findings (such as hematuria, and skiagraphic shadows occurring with lesions of the appendix) and to simplify the diagnosis and treatment of these atypical cases, anatomic and skiagraphic studies of the relations of the appendix and ureter were made.

### ANATOMY AND PATHOLOGY

The many varied relations of the appendix to the right ureter are best illustrated by anatomic and stereoscopic skiagraphs made on bodies, the appendix injected with mercury and stylets in the ureters, as is shown in the series of accompanying illustrations. The most important relation of these two organs is that which is found at the brim of the pelvis, just anterior to the right sacroiliac synchondrosis. With the cecum in the normal position this point corresponds to the base of the appendix and the location at which the ureter crosses the iliopectineal line (Fig. 1). This point of the appendix is more or less fixed and consequently is separated from the ureter by the peritoneum only. When the appendix lies retrocecal or hangs down into the pelvis, more or less of the whole appendix has this relationship to the ureter, as shown in Figure 2. The relation of the distal portion of the appendix and even that of the base to the ureter will necessarily depend on the position of the appendix, as shown in Figure 3. This illustrates the maximum distance of the appendix from the ureter, and will probably account for the absence of urinary findings referable to the ureter in the majority of cases of appendicitis. In making the above anatomic investigations of the course of the ureters through the pelvis, we found that in the pelvis of three male subjects it did not correspond to that given in most texts on anatomy. Instead of describing a semicircle with the convexity posterior extending from the brim of the pelvis to the symphysis, it was found that in these bodies the course of the ureters lay practically in the same plane from a point just anterior to the base of the sacroiliac synchondrosis to another located at the superior portion of the prostate gland. This is shown in Figure 4 by a line drawn between these two points. It is also demonstrated by stereoscopic skiagraphs with the sound placed in this plane in the median line of the pelvis, as shown in Figures 1 and 3. In this plane the ureters traverse the lateral wall of the pelvis, describing a slight curve with its convexity outward. Reference is made to these anatomic points at this place on account of the bearing which they will have on the location of skiagraphic shadows in the pelvis, discussed in the section on diagnosis.

It is easy to conceive how a lesion at the base of the appendix or one of a retrocecal or pelvic appendix which has extended to the peritoneum can involve the ureter by contiguity. If this is true, it justifies the conclusion that the erythrocytes, leucocytes, and albumin found in the urine accompanying appendicitis are produced by contiguous inflammation of the ureter. This local ureteritis, however, will not account for casts in the urine. Consequently it is probable that their production is dependent on a toxemia usually present in the acute and more fulminating types of appendicitis. The practical diagnostic deductions from the above is that a lesion of the appendix in proximity to the ureter could account for a simple hematuria, pyuria, albuminuria, or the combined findings of any of these elements in the urine. On the contrary, casts with these elements in the urine would indicate probably not this continguous ureteritis but a more marked lesion of an appendix producing considerable absorption of toxins. These latter cases usually present no difficulties in diagnosis on account of having pregnant objective signs of peritoneal irritation referred to the anterior abdominal wall, whereas the former loc tion of lesions of the appendix having a mild subacute nature present only indefinite subjective symptoms, such as deep-seated tenderness.

This relationship in these positions of the appendix (retrocecal and pelvic) will also help to explain the cause of the peculiar type of pain transmitted down the ureter and the retraction of the testicle present in some cases of appendicitis. It will also show how concretions in the appendix may have the same locations in skiagraphs as ureteral calculi and *vice versa*.

### CLINICAL CASES DEMONSTRATING THE PATHOLOGIC RELATIONSHIP OF THE APPENDIX AND URETER

Those lesions of the ureter, especially ureteral calculi located high above the brim of the pelvis, are rarely confused with appendicitis. These conditions are rare and it is only calculi of large size which usually present positive skiagraphic findings that occur in this part of the ureter. It is only those cases of retrocecal appendicitis in which the appendix curls back beneath the cecum along the course of the ureter which could produce misleading signs, such as hematuria or obstruction of the ureter from strictures or periureteral contractures. The following are brief summaries of illustrative atypical clinical cases exhibiting either symptoms or signs of both lesions of the appendix and ureter.

Case 1—Mr. B., aged 28, traveling salesman, had had four attacks of severe pain in right lower quadrant of the abdomen. The onset was sudden, and attacks lasted from one to six days, accompanied by vomiting. After acute symptoms subsided, there remained more or less pain in region of the appendix. The patient was seen on the fifth day of a very severe attack, which had been diagnosed by both his father and brother, who were physicians, as appendicitis. The urine showed erythrocytes and leucocytes. A skiagraph by Dr. Carman showed a shadow in pelvic portion of the right ureter. Diagnosis, right ureteral calculus. Combined operation. Appendix extended well over pelvic brim, adherent to parietal peritoneum over right ureter. The skiagraphic diagnosis of stone in right ureter was confirmed. The stone was located well down in the pelvic portion of ureter and was pushed into the bladder. The stone was passed forty-eight hours after operation.

Case 2.—Miss B., aged 26, had suffered for two years with a recurrent pain in right side. The attacks at times were severe, and she was never free from pain. Examination revealed mild muscular rigidity over region of the appendix. Urine analysis showed erythrocytes and leucocytes. Skiagraphic examination was negative. A diagnosis of chronic appendicitis was made. The abdomen was opened through gridiron incision. The appendix was found well over the pelvic brim adherent to the parietal peritoneum over the right ureter.

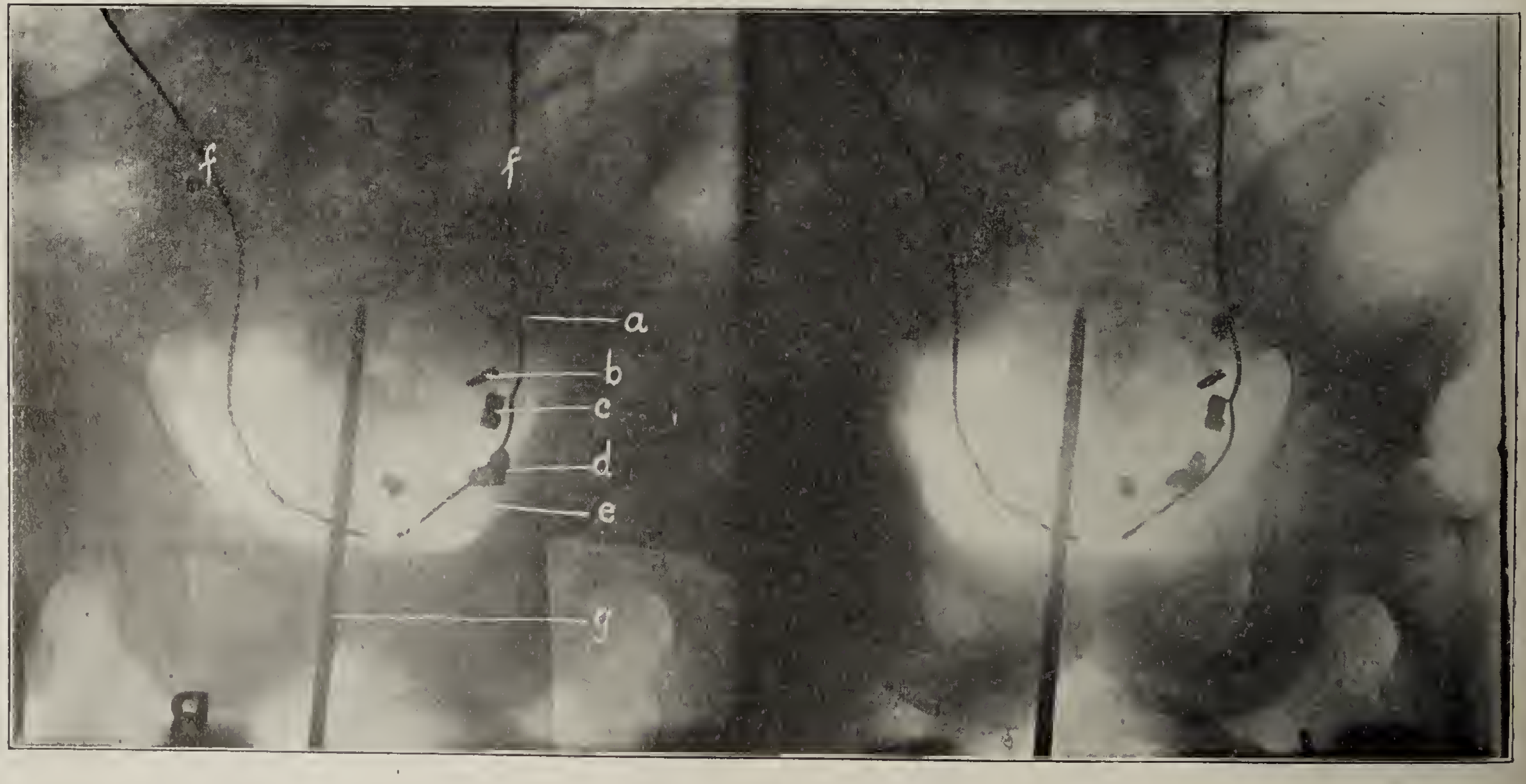
Case 3.—Mr. H., aged 48, broker, had had trouble for three years. The attacks came on suddenly with great violence, accompanied by vomiting and severe pain in region of the appendix, pain radiating downward along the cord to testicle. Twelve years prior to last operation he had been operated on by a New York surgeon for a stone in the bladder, the crushing operation having been done. The urine examination was negative. Skiagraphs (Figs. 5 and 6) showed a shadow in the region of the right ureter. Three skiagraphs presented a shadow in a different location at each examination. The mobility of this shadow with normal urine was the basis for a diagnosis of chronic appendicitis with concretion in the appendix. At operation an appendix 8 inches in length with a concretion and constriction at the lower third was found. This case was especially interesting as calculus in the ureter was excluded by the changing position of the skiagraphic shadow. The symptoms were undoubtedly due to appendiceal colic, the appendix being long and unable to empty its contents properly.

Case 4.—Mr. McC., aged 46, blacksmith, entered the hospital with the history of having been treated through several attacks of what had been diagnosed appendicitis. He was just getting over a rather severe attack similar in nature to those from which he had previously suffered. He complained of considerable pain in both right and left lower quadrant. There was some muscular rigidity on the right side and pain on deep palpation. Examination of urine showed erythrocytes and leucocytes. Skiagraphs showed a shadow in the pelvic portion of both right and left ureteral regions. Cystoscopic examination and ureteral catheterization showed right ureter free; obstruction about two inches above entrance of left ureter into the bladder. Combined operation was done; appendix was over brim, non-adherent, but constricted and diseased. A stone was removed from left ureter.

Case 5.—Dr. E., aged 32, had had several attacks of appendicitis. A skiagraph showed shadow in region of right ureter. There were erythrocytes and leucocytes in the urine.

Fig. 1.—Relation of appendix to ureter; (a), base of appendix injected with mercury; (b), lead wire in distal end of appendix; (c), lead ball attached to and in the same plane with ureter; (d), lead balls about two inches anterior to ureter; (e), lead ball about two inches posterior to ureter; (f), lead wire in ureter; (g), sound in rectum (showing slight displacement of the sound to the left, throwing it slightly posterior to the ureters at their lower portion).

The skiagraphs are placed at the bottoms of the pages for convenience in examination with parlor stereoscope.



t operation the appendix was found adherent to the ureter n the right side and well over the pelvic brim.

CASE 6.—Mr. N., aged 39, wholesale lumberman, was eferred from Arkansas by his family physician who had bserved him through a number of attacks of supposed ppendicitis. The attacks were classical with regard to the rdinary symptoms and signs. The only positive finding on amination was tenderness over McBurney's point. The skigraph by Dr. Carman showed a characteristic shadow low own in the right ureteral region. A diagnosis of ureteral calli was made. This patient later had the calculi removed by r. William Mayo.

CASE 7.—Mr. P., aged 33, farmer, was sent to St. John's ospital from Illinois with the diagnosis of intestinal obstrucon. Two days previous to his entrance in the hospital he was ken with a violent attack of pain in the lower part of the odomen more marked on the left than right side. It was soon llowed by abdominal distention and vomiting, which had freiently increased. Doses of cathartics which were given failed produce the desired evacuation. On examination the patient as found in this condition of marked abdominal distention, equent vomiting, and more or less delirious, so that it was npossible to depend on his statements. Urine analysis showed arked hematuria. The skiagraph located a shadow low down the left ureteral region. Catheterization of the ureters, hich was attempted with this examination, was unsuccessful. t operation a calculus was found in this location and removed. ombined operation was done; the appendix was found normal.

CASE 8.—Dr. E., aged 32, had had five attacks of abdominal in followed by tenderness located in the right lower quadrant the abdomen. The first three attacks were of short duraon, not accompanied by fever, leucocytosis, or peritoneal irrition (duration two to six hours). Following the second tack, erythrocytes appeared in the urine with each subseient one. A skiagraph showed a shadow located down in the gion of the right ureter, after which the patient himself conuded that he had ureteral calculi. The fifth attack was of nger duration and accompanied by two chills, fever, and ight leucocytosis. Erythrocytes and leucocytes continued to present in the urine. After this attack another skiagraph is taken with stylets in the ureter, which demonstrated that e skiagraphic shadow was a considerable distance from the eter. Diagnosis was then made of combined lesions of the pendix and ureter. At operation, the appendix was found flamed at its base and retrocecal. Since the operation of pendectomy seven months ago, there has been no return of mptoms or abnormal findings in the urine.

### DIAGNOSIS

The diagnosis of those lesions which give symptoms referable to this quadrant of the abdomen makes it necessary, first, to exclude those diseases which have no relation to the appendix or ureter, and, second, by special examination to differentiate between ureteral and appendiceal diseases. Among the general conditions which should always be considered as a possible source of error are tabes and the psychoneuroses. The intestinal crises of tabes can usually be recognized by numerous other signs of tabes. The peculiar paroxysms of pain in neurotic individuals associated with the menses are excluded by the stigmata of neuroses with negative local signs. Neurotic conditions, however, should not be held accountable for local symptoms when definite local

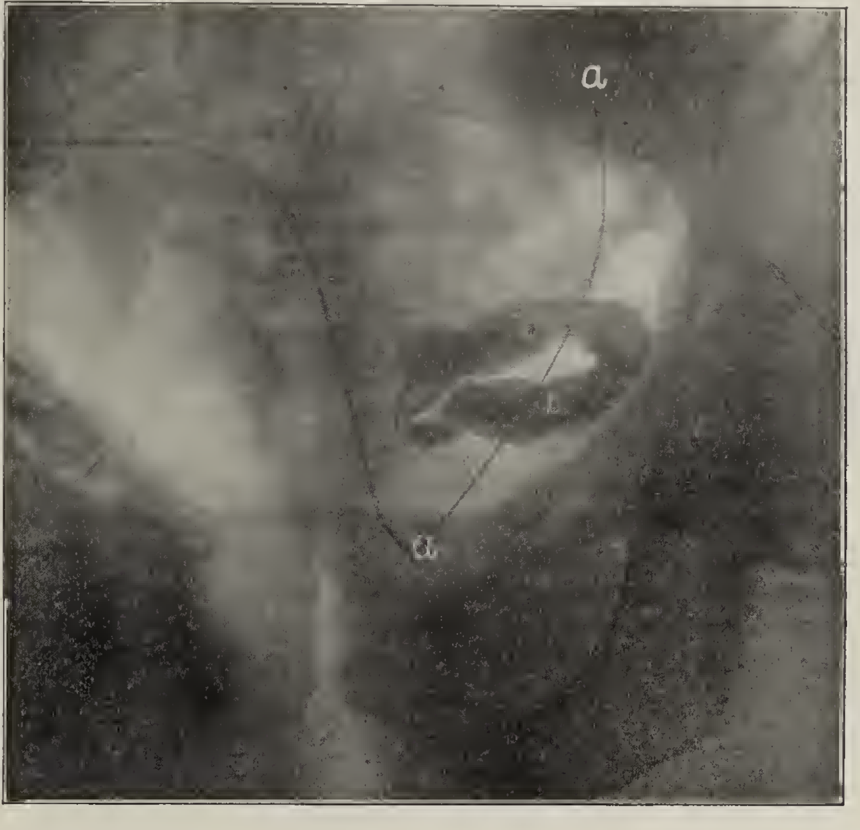
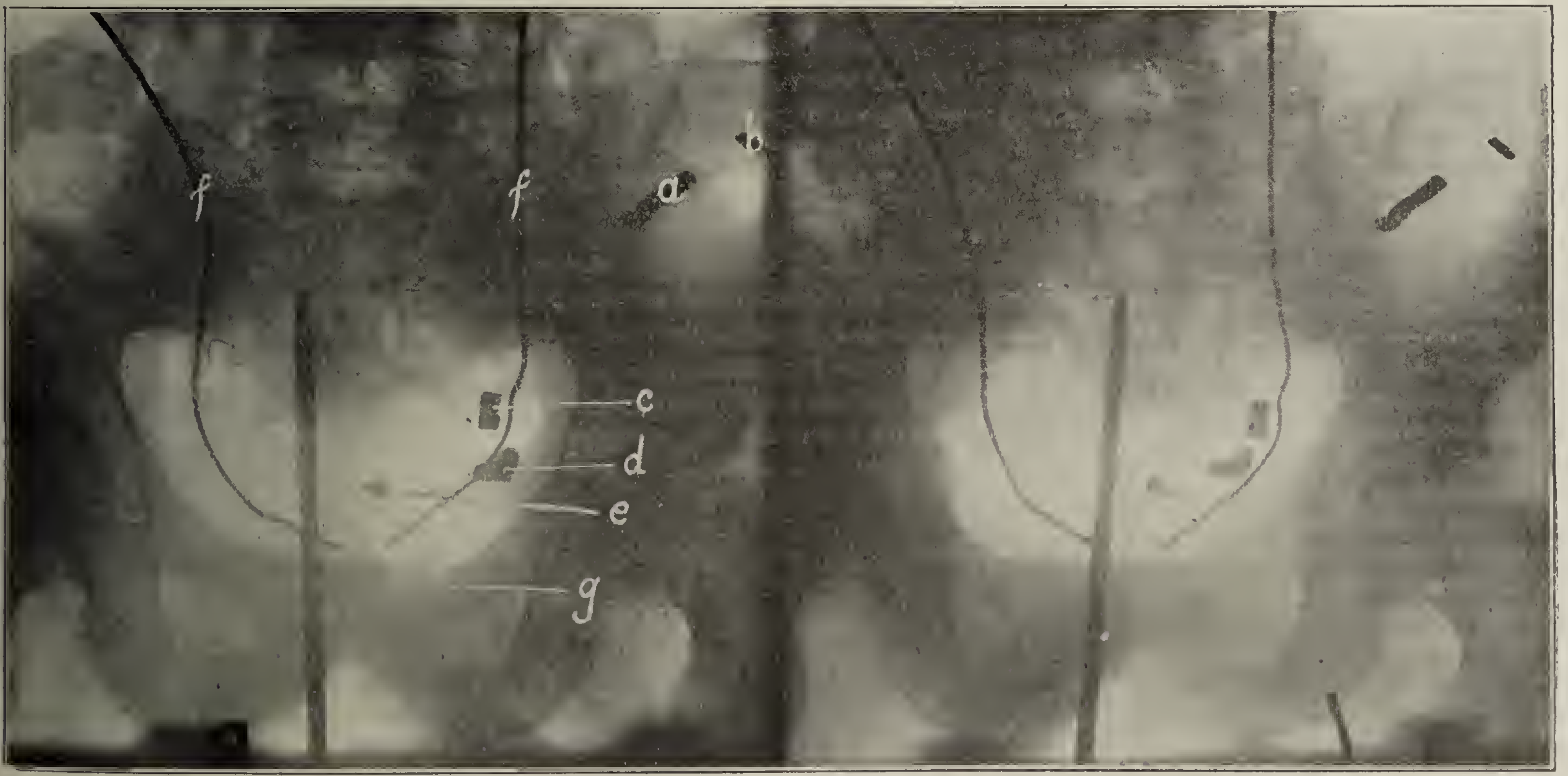


Fig. 2.—Relation of appendix to ureters; (a), stylet in ureter, (b), appendix injected with bismuth paste.

Fig. 3.—Relation of appendix to ureters; (a), base with the appendix injected with mercury; (b), lead wire in distal end of appendix; (c), lead ball attached to and in the same plane with ureter; (d), lead balls about two inches anterior to ureter; (e), lead ball about two inches posterior to ureter; (f), lead wire in ureter; (g), sound in rectum (showing slight displacement of the sound to the left, throwing it slightly posterior to the ureters at their lower portion). (For examination with parlor stereoscope.)



lesions can be demonstrated, as they in themselves may be the cause of the general neurosis.

Among local conditions independent of the appendix and ureter those diseases, in the female, of the uterus and adnexa (salpingitis, tubal pregnancy, ovarian cyst, subserous fibroid, etc.) can usually be differentiated by bimanual examination, as definite tumefaction in the pelvis. It is unusual for appendiceal or ureteral diseases to produce tumefaction that can be palpated by this method. Localized tenderness along the ureter can sometimes be elicited by rectal examination in calculi low down in the ureter. It is questionable, however, whether it is ever possible to palpate small calculi even when within reach of the palpating finger in the rectum. It was not possible in the clinical cases observed by us; and in the cadaver it was impossible to feel the stylet or small shot in the ureter, although the skiagraph (Figs. 7 and 8) demonstrates them within reach of the finger in the rectum. Tenderness and occasional bulging in the right fornix or pelvis are also present in lesions of a long pelvic appendix or pelvic abscess from this organ, but it is very exceptional that the appendix itself can be palpated. Figure 7 shows that the finger is barely able to reach to the top of an appendix of an average size through the rectum. Pyelitis in pregnancy gives a clinical picture which simulates appendicitis. It occurs more frequently in primiparæ, usually about the third month. Pyuria or local findings, which soon occur about the kidney, will clear up the diagnosis. As this disease is non-operable it should receive the first consideration in the suspected appendicitis in early pregnancy. Gall-bladder disease, especially in cases of ptosis of the liver or dependent gall-bladder, are usually differentiated by the physical findings. Ulcers and other lesions of the cecum with an extension to the peritoneum, resulting in a localized peritonitis, should be suspected when the history of their causal disease is present elsewhere in the body, or the local findings have been preceded by large intestine symptoms. Mucous colitis, which has been a very common cause for unnecessary operation on the accessory organs of the intestinal tract, should always be considered as a possibility. The characteristic evacuation catheterization of large amounts of mucus followed by paroxysms of abdominal pain is sufficient on which to base a diagnosis. Tuberculous peritonitis causing localized peritonitis should especially be suspected in children. A history of exposure and tuberculous lesions elsewhere in the body, diazo reaction in the urine, etc., are usually sufficient to form the basis of a positive diagnosis. Chronic seminal vesiculitis and calculi in the seminal vesicle may mimic both ureteral and appendiceal diseases. Periodic occurrence of pyuria which can be demonstrated by ureteral characterization and cytoscopy as not due to the kidneys or the bladder itself, combined with pus massaged from the seminal vesicles and skiagraphic findings, will support such a diagnosis.

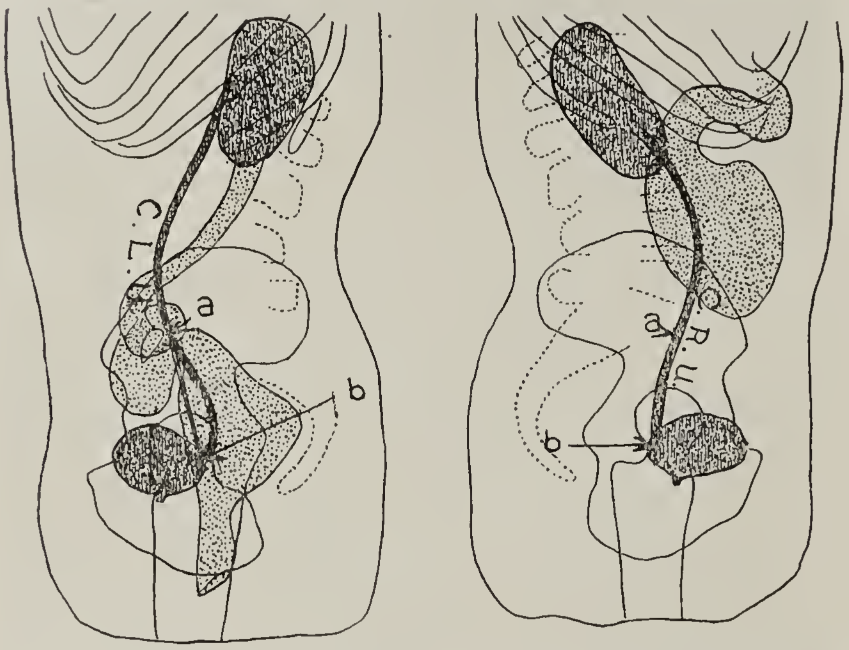


Fig. 4.—Diagrams showing, left (C. L. U.), course of left ureter; right (C. R. U.), course of right ureter; (a), synchondrosis; (b), prostate line from a to b represents plane in which sound lies when introduced into the rectum in position described.

After these conditions have been given due consideration and positively excluded, in many of these cases there are symptoms and signs common to both ureteral and appendiceal lesions. It has been demonstrated by the illustrative cases given above that evidence derived from the subjective, physical and urinary findings are not sufficient in some of those cases on which to base a positive diagnosis. It is therefore, necessary to add to this evidence that procured by skiagraphy, cystoscopy and ureteral catheterization. The mere demonstration of a shadow along the course of the ureter with the positive findings in the urine and other clinical evidences is usually not sufficient for a positive diagnosis. A skiagraph taken with stylets in the ureter used as negative evidence is also not without some degree of error. For example, the fact that stylets in the ureter do not meet obstruction or come in contact with a skiagraphic shadow is not absolutely sufficient to exclude a stone in the ureters. There are three conditions in which a stone might be present in the ureter, and the findings of a styleted skiagraph misleading. One is a calculus in a ureteral pocket allowing the stylet to pass up the ureter and not producing a skiagraphic shadow in contact with the stylet. Another is the anomaly of a double ureter as shown in Figure 9. A calculus might be present in one ureter and yet a stylet passed up the other one would not be in contact with the shadow. Ricketts has collected many reports of cases of double ureter. The third is a shadow appearing in contact with a stylet in the ureter in a single skiagraph which can be demonstrated to be either anterior or posterior to the stylet by stereoscopic skiagraph.

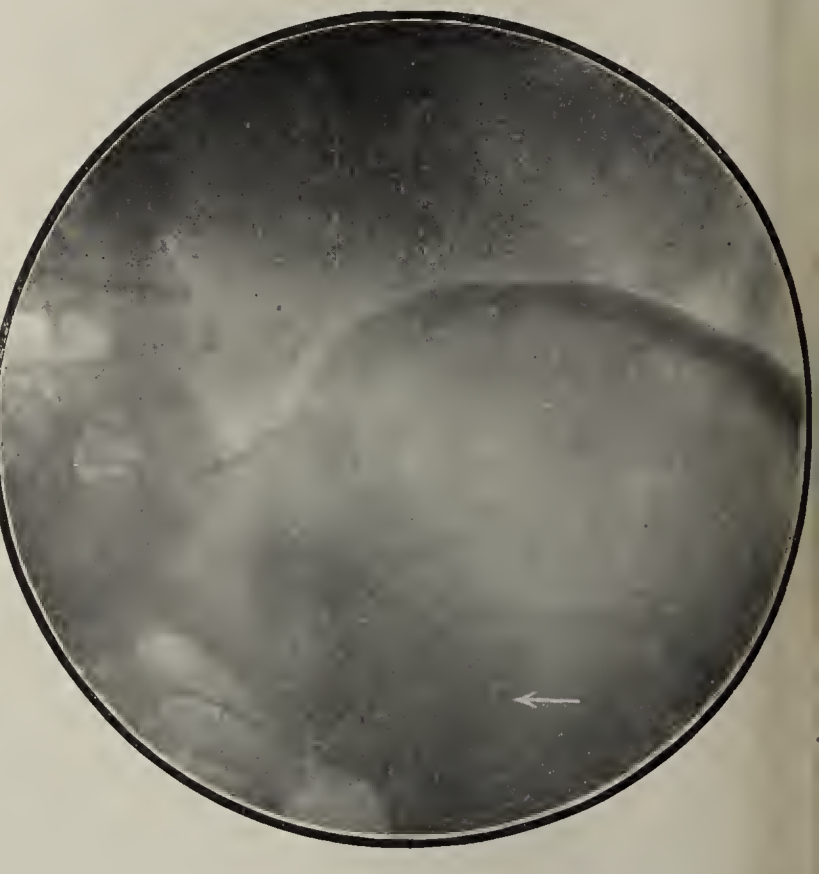


Fig. 5.—The arrow indicates shadow of concretion in appendix, external to the sacro-iliac synchondrosis over ilium.

### ORIGINAL METHOD AS AN AID TO THE LOCATION OF SKIAGRAPHIC SHADOWS IN THE PELVIS

It has been our misfortune to have so many reactions from cystoscopy and catheterization of the ureters either from trauma or infection that we have attempted other methods of localization of the skiagraphic shadows in the pelvis which occur in a considerable number of these cases. While we do not wish to discredit the value of the skiagraph of the styleted ureters as probably the most satisfactory and positive way of localizing these shadows, we have become convinced that if a more simple and practical method could be found which would avoid these reactions it would be of greater advantage, for the reason that it would be more frequently attempted. From personal experience we have found that the majority of skiagraphic shadows found in the pelvis are not in the ureters, as has also been shown by Parks and others. They are usually phleboliths in the papiniform, vaginal and hemorrhoidal plexus of veins. The other common condition producing these shadows in the pelvis are calcified glands and enteroliths. Many of these shadows of extra-ureteral opacities are not on the same transverse plane with the ureter.

The male pelvis seems to be especially adapted to other methods of localization of ureteral calculi found within its bounds. This lies in the fact that the rectum running from the anus backward to the coccyx, and then upward to the first sacral vertebra will allow the introduction of a sound along the median line of the pelvis which will be on the same transverse plane of the ureters. As has been shown above under the anatomic description, the ureters traverse the pelvis in a transverse plane extending from the base of the sacro-iliac synchondrosis to the posterior portion of the prostate gland. In taking advantage of these anatomic relations we have endeavored to demonstrate that when a sound in the rectum is brought forward beneath the crotch of the symphysis and then passed directly upward for a distance of 6 inches, its tip will strike the first sacral vertebra just below the promontory of the sacrum on the level and in the same plane with the ureters, as they leave and pass forward from the posterior pelvic wall. The base of the sound in this position is against the prostate gland and, therefore, on the same level with the ureters as they enter the bladder. The sound in this position then traverses the median line of the pelvis in practically the same transverse plane with the ureters as shown in Figures 1 and 2, provided their course is as constant as we have found it on three subjects. Having thus determined the normal plane of the ureters by taking stereoscopic skiagraphs with the sound in the rectum in this plane, it can be determined whether a given skiagraphic shadow is in the same plane with the sound. If the course of the ureters is constant, then one would be justified in concluding that a skiagraphic shadow which was any considerable distance from this plane (anterior or posterior to the sound) would probably not be in the ureters. At the present time no definite claim can be made for this method, because it depends on the constancy of the course of the ureters; i. e., on whether they traverse practically the same plane in different individuals. This must be determined by extended anatomic and clinical investigations, which should be stimulated by this preliminary report. It is true that the lateral course of the ureter has already been demonstrated to vary considerably by skiagraphs taken on clinical cases. This seems to be more pronounced in the female than in the male, probably owing to the other conditions which are present, causing the dislocation of the other organs. In the three bodies studied and the clinical cases observed by this method, so far the course of the ureters in the male seem to be remarkably constant in this plane. Therefore, the liberty was taken of inserting the method into this article, as one that would be worthy of consideration in the diagnosis of these conditions. Provided it is of value, its simplicity and freedom from danger and reaction highly commend its trial.

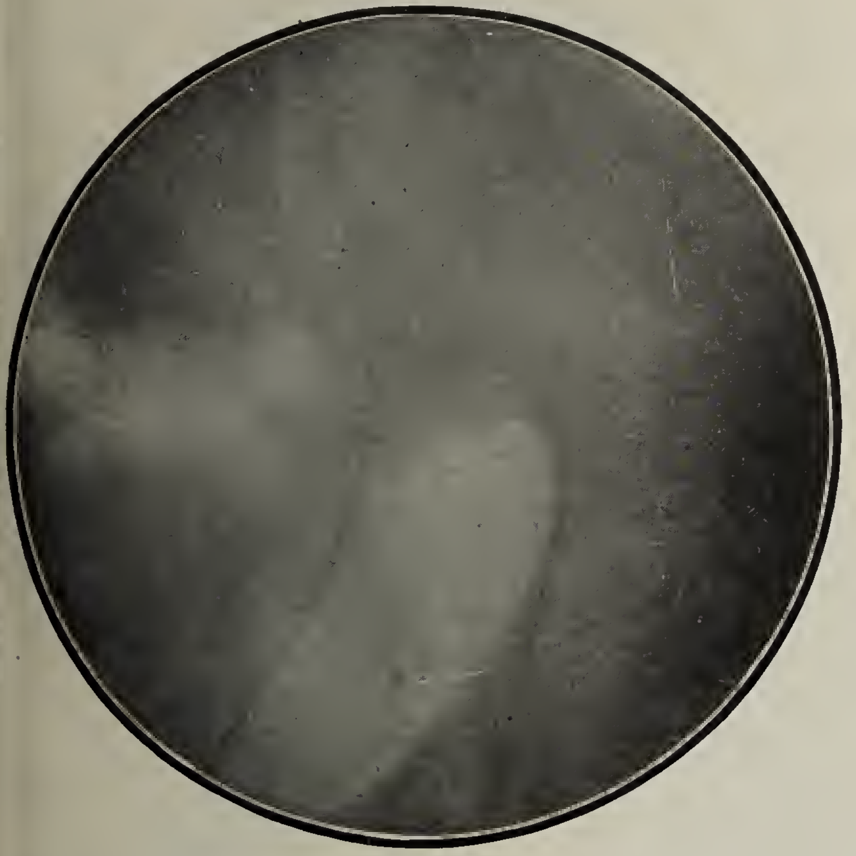


Fig. 6.—Skiagraph taken with stylets in the ureters. The shadow indicated by the arrow) not in contact with the stylet in the right internal to synchondrosis ureter.

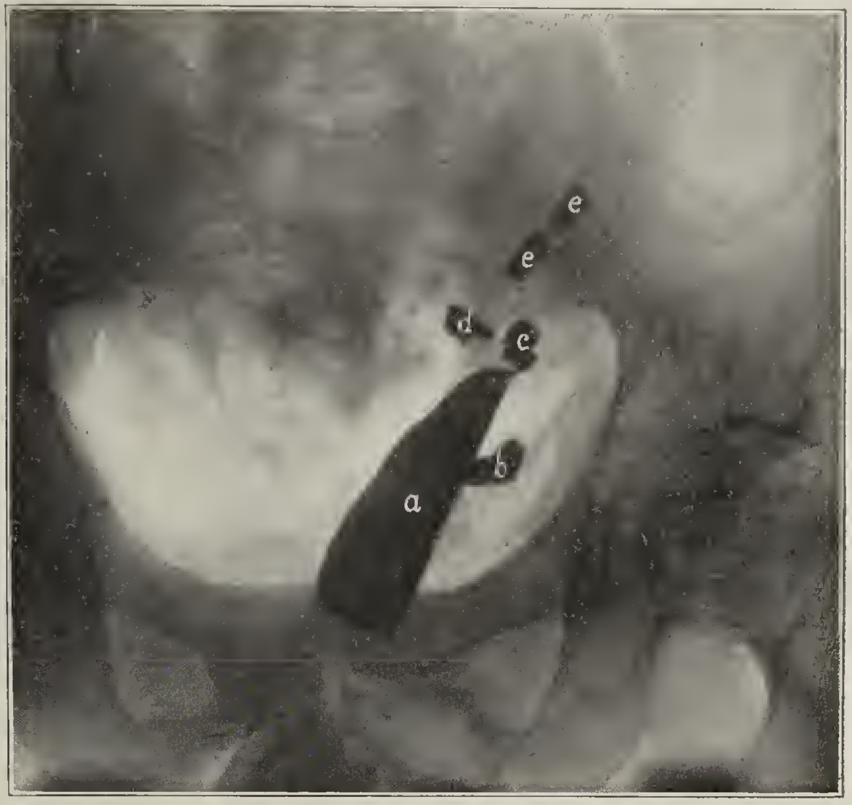


Fig. 7.—Skiagraph showing (a), finger in rectum; (b), three lead balls about two inches anterior to ureter; (c), two lead balls attached to and on the same plane with the ureter; (d), lead wire in the tip of appendix; (e) mercury in the proximal portion of the appendix.

*Technic.*—No preliminary catharsis is necessary. (If suspicious shadows are found a second skiagraph should be made within two or three days to exclude enteroliths.) An ordinary straight No. 26 French ureteral sound, graduated in inches, is introduced for the distance of six inches into the rectum with the patient in the dorsal position. It is pulled up anteriorly until it impinges on the subpubic ligament, directly in the median line. If the introduction of the sound is painful to the patient, which is due to meeting obstruction in the folds of the rectum, the rectum can be inflated, which usually overcomes this difficulty. With the sound in this position, stereoscopic skiagraphs are taken in the usual manner.

## TREATMENT

The treatment of these lesions necessarily depends on an accurate diagnosis, which will not only place positive indications for treatment, but will also indicate the absolute methods of the procedure to be undertaken, such as the location of the incision and the route of the operation. The treatment of definite lesions of the appendix is well established. The treatment of ureteral calculi is not entirely established and will depend to a considerable extent on the findings in the individual cases. If the calculus is small enough to pass through the ureter, and there is no evidence of complications, such as pyelitis, hydronephrosis, etc., and repeated skiagraphic examination demonstrates the progression of the calculus toward the bladder, there is no imperative indications for surgical interference. On the other hand, if the calculus is complicated by secondary conditions of the kidney or does not progress satisfactorily after a number of attacks of ureteral colic, indications are definitely fixed for radical removal.

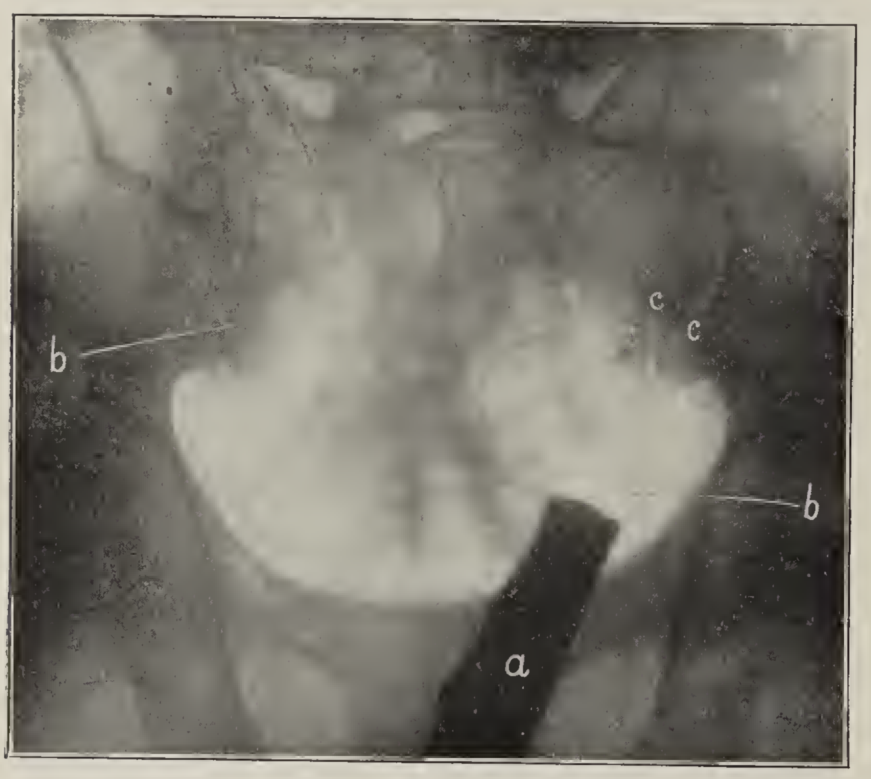


Fig. 8.—Skiagraph showing (a), finger in rectum; (b), stylet in ureter; (c), appendix injected with bismuth paste.

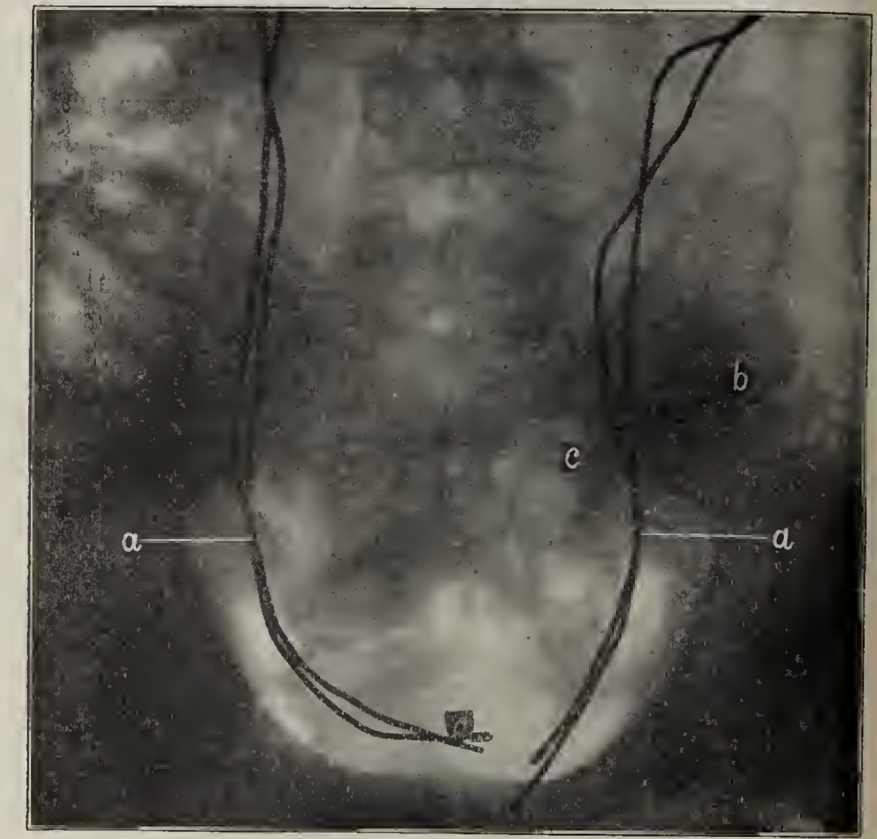
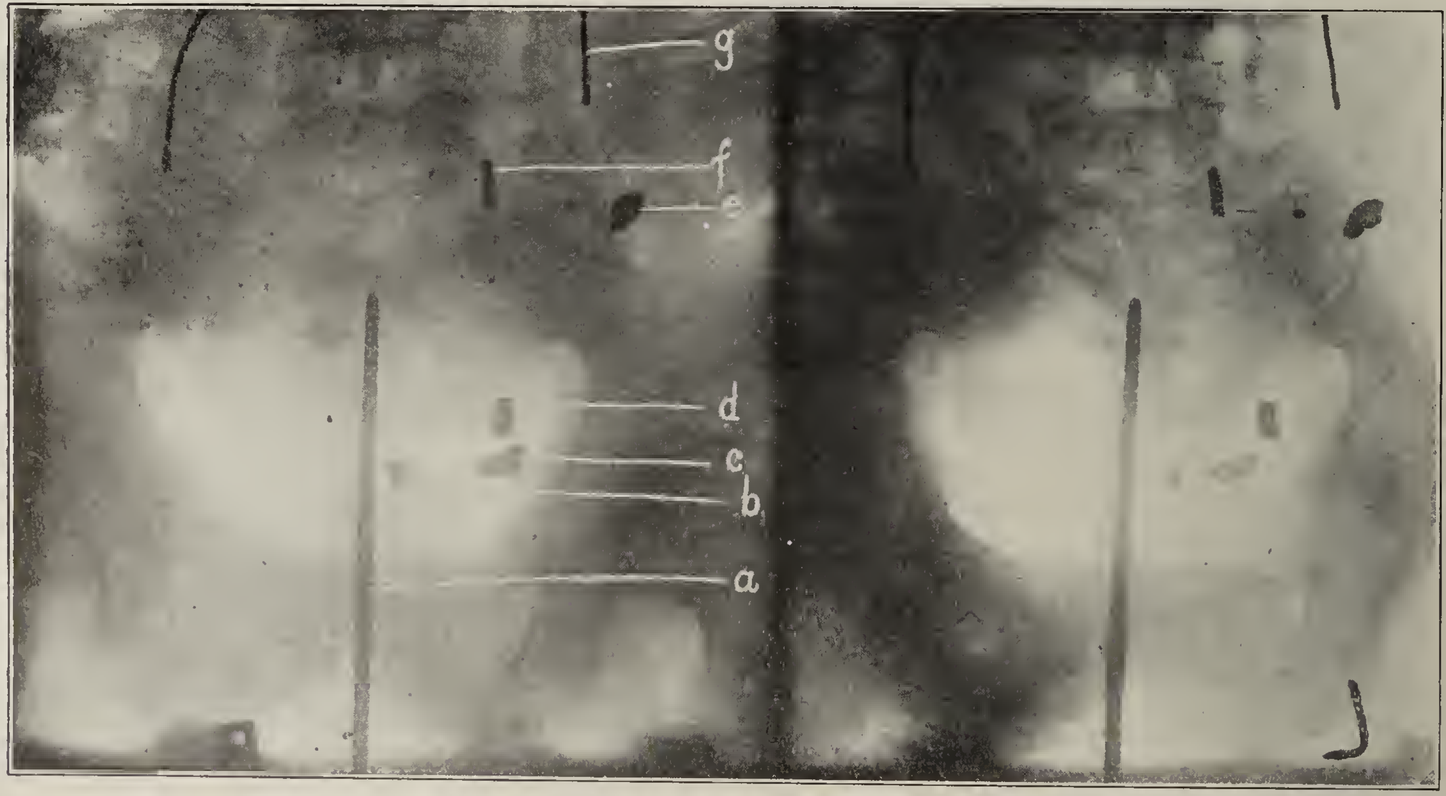


Fig. 9.—Skiagraph of double ureters; (a), stylets in bilateral double ureters; (b), mercury in the base of the appendix; (c), lead wire in the tip of the appendix; (d), lead ball posterior to the ureter.

The operations adapted for the removal of ureteral calculi are, first, the extraperitoneal operation; second, the intraperitoneal operation; and, third, the combined

Fig. 10.—Skiagraph showing (a), sound in the rectum in the proper position in the same transverse plane with the ureters; (b), lead ball about two inches posterior to sound in ureter; (c), three lead balls about two inches anterior to the sound and ureter; (d), two lead balls attached to ureter and in the same transverse plane with the sound; (e), base of the appendix injected with mercury; (f), lead wire in the tip of the appendix; (g), lead wire in the ureters withdrawn from the pelvic ureter. (For examination with parlor stereoscope.)



extraperitoneal and intraperitoneal operation. In unquestionable cases of ureteral calculi a simple extraperitoneal operation should be attempted. Incision is made according to the location of the calculus, along the external border of the rectus to the peritoneum. The peritoneum is separated (in pelvic calculi) down to the posterior surface of the bladder and prostate gland. The ureter is palpated with the bare fingers, beginning at the bladder and going upward. If the stone is felt, a longitudinal nick is made in the ureter between the two fingers grasping the stone, through which the calculus is squeezed and removed. A cigarette drain is placed down to the opening in the ureter and the wound closed in the usual manner. If the calculus is not discovered by this extraperitoneal method, an opening should be made in the peritoneum at the site of the incision and bidigital palpation of the ureter should be made with the finger in the abdominal cavity and the thumb along the course of the ureter extraperitoneally. If the stone is found, it is removed in the same way as extraperitoneal operation. If no calculus is found, the appendix and complete exploration of the abdomen should be made. It is necessary to remember that these operations should be done as soon as possible after definite location is made of the calculi in order to be positive that they have not changed their position. It is not infrequent that after a catheterization of the ureters, ureteral colic, which is stimulated by the instrumentation, causes the stone to pass into the bladder. Many cases in which calculi have not been found during operation, which have been previously definitely located with a skiagraph of the styleted ureters, can be accounted for on the ground of change of position. In other cases the stone has been milked into the bladder without the knowledge of the operator.

612 Metropolitan Building—308 Humboldt Building—4318 Olive Street.

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# THE ABUSE OF HYPODERMIC STIMULATION DURING AND AFTER SURGICAL OPERATIONS

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Hypodermic stimulation during and after surgical operations is ordinarily governed by the habit of the anesthetist or surgeon more than by his deliberate judgment. It is also true that the anesthetists and surgeons who have had the largest experience and the best results use such stimulation rarely. The apparent necessity for stimulation will depend on the skill and dexterity of both the surgeon and the anesthetist. It will also depend on the anesthetic chosen, the environment in which the operation is performed, the previous condition of the patient and the care with which he may have been prepared for the operation.

Given a patient in fair physical condition, prepared for operation with due care, skilfully anesthetized and operated on without undue loss of time or loss of blood, by a fairly skilful surgeon, and hypodermic stimulation will, with a few rare exceptions, be quite unnecessary. More than this, if unnecessary it is definitely injurious. So far as my observation and experience go, the great majority of the patients who are operated on in our hospitals need no hypodermic stimulation whatever during or after the operation, and furthermore they are injured if such stimulation is given to them.

The anesthetic, if given with judgment and skill, is for a time a stimulant of itself. This is particularly true of ether, for the first thirty to fifty minutes. If, after this time has elapsed and the amount of anesthetic is diminished, as should usually be done, the depressing effect is not great, provided severe hemorrhage does not occur. If it does occur, hypodermic stimulation to increase the blood-pressure is, of course, definitely contraindicated while it lasts.

After the patient is returned to his bed and as he recovers from the anesthetic, with the nausea, vomiting and pallor incident to its administration, his pulse softens and, not uncommonly, becomes very thin and small, and even intermittent. It is under these circumstances that the inexperienced nurse and the unthinking doctor rush for the "strych and the spart," and "shoot it into him." In reality, all that is needed is postural treatment, the external application of heat, and possibly water or salt solutions by the rectum or by the stomach, depending on the nature of the operation which may have been performed. His condition is no more serious than that of the small boy who has had his first large dose of alcohol or of tobacco.

More than once have I known of instances in which I have believed that the balance has been turned against a desperately ill patient by such a course of injudicious and irrational hypodermic stimulation. I have seen a patient die in the characteristic clonic convulsions of strychnin poisoning, and on making a calculation of the amount administered as recorded on the chart it has been apparent that all conception of the enormous aggregate dose of the poison had been lost in the excitement of the effort to "pull the patient through."

On the other hand I cannot recall a single instance in which I believe that a patient has ultimately recovered as a result of the use of such hypodermic stimulation. In some instances temporary improvement may have occurred but the subsequent reaction or collapse has been all the more profound, and those so treated who recover do so in spite of the treatment and not because of it. Better results could have been procured without it or by the employment of milder and more rational measures.

The best results and the lowest mortality of the busiest surgeons of to-day are attained by the simplest methods.

Careful diagnosis and accurate estimates of the ability of the patient to undergo the operation are made. He is prepared with great care, the anesthetic is wisely chosen and skilfully given, he is operated on without avoidable exposure, delays, or hemorrhage, he is returned to a warm bed, placed in a favorable position, watched by a competent nurse AND LET ALONE. If he is very restless and really suffering from shock or severe pain as he emerges from the anesthetic he may be given a moderate dose of morphin and atropin but, notwithstanding its stimulating and soothing effect, he is ordinarily better off if it can be omitted.

No strychnin, no spartein, no digitalin, no nitroglycerin—no whip and spur for a tired and jaded and played out or overworked heart, if such he has—no piling up of new poisons to impose additional burdens on the organs of elimination. Let him alone. Keep him warm and very quiet. Give him all the water he can absorb by the avenue of choice; mouth, rectum, under the skin, or within the peritoneal cavity, and as few drugs as possible. "His apparently feeble heart's action is often occasioned by the retention of a large volume of blood in the enormous veins of his thoracic and abdominal organs and, as little blood is delivered to the right heart to be acted on, little effort is required to pass it on to the left heart and so on to the half-filled arteries against a greatly reduced arterial blood-pressure. I have long regarded this process as essentially conservative in its effect and disapproved of what I have deemed unwise and irrational drugging in the treatment of such physiologic phenomena."[1]

"By some means supply to the depleted vessels an increased volume of fluid at a high temperature for the heart and blood-vessels to contract on, so that the circulation and blood-pressure may be speedily re-established. In abdominal operations this may be done by leaving a large volume of hot salt solution in the cavity; or . . . the abdomen may afterward be opened and the fluid introduced, thus securing at once the application of heat to the great abdominal nerve-centers, the mechanical pressure and support of a large volume of fluid as an object on which the abdominal walls may contract, thereby restoring to a degree the intra-abdominal pressure, as well as supplying water for absorption into the circulation. The sustained Trendelenburg position is, for obvious reasons, an important accessory."[2]

In the treatment of shock Crile's therapy is founded on this hypothesis of vasomotor exhaustion. The drugs commonly used are not only inactive but are positively harmful in most instances.

"Digitalis: The heart is not depressed or weakened in any way and a cardiac stimulant is not indicated.

"Nitroglycerin, alcohol: These drugs, by dilating the peripheral vessels, further lower the blood-pressure and hasten death.

"Strychnin: This drug apparently acts in customary doses only on the sensory neurons of the cord and thereby heightens reflex irritability. This action is not stimulation. Under normal conditions strychnin may raise the pressure by facilitating the access of normal afferent impulses from the periphery. This action, in the presence of suitable factors, *obviously conduces to shock;* it is precisely antagonistic to the blocking action of cocain, and, indeed, Crile found that of deeply shocked animals those receiving strychnin died more rapidly than the untreated controls, or, if they survived, convalescence was much more prolonged.

"Atropin, given before the experiments, was found slightly to lessen the tendency to shock."[3]

By such methods as these, based on such reasoning and experimental proof, the greatest surgeons of the century are securing the best results and the lowest mortality ever recorded in surgical literature. "The more they know the less they do."

If compelled to choose, be guilty of a sin of omission rather than a sin of commission. Give up acting for the sake of action in emergencies. Keeping a cool, calculating, thoughtful poise, order only those remedies and measures which reason and wisdom teach us may benefit and not injure the patient. Add nothing to his burden by doubtful dosing with deadly drugs.

Give him a chance.
Let him alone.

505 California Building.

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[1] Wetherill: The Conservative Agency of Shock, West. Med. Rev., March, 1898.

[2] Wetherill: The Effect of High Altitudes in Aggravating Surgical Shock, Ann. Surg., April, 1897.

[3] Smith, H. W.: Surgical Shock; A Review of Recent Literature, U. S. Naval Med. Bull, October, 1909.

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# A NEW AND QUICK METHOD FOR STAINING SPIROCHETES (TREPONEMATA) IN SMEAR PREPARATIONS *

ALBERT A. W. GHOREYEB, M.D.
BOSTON

In this method the following solutions are used:

1. One per cent. aqueous solution of osmic acid.
2. Liquor plumbi subacetatis, diluted 100 times with distilled water. This diluted solution should be freshly prepared.
3. Ten per cent. aqueous solution of sodium sulphid.

A thin smear is preferable. No heat fixation is necessary. The smear is stained as follows:

1. Cover with osmic acid solution for thirty seconds.
2. Wash in water.
3. Cover with lead subacetate ten seconds.
4. Wash in water.
5. Cover with sodium sulphid solution ten seconds.
6. Wash in water.

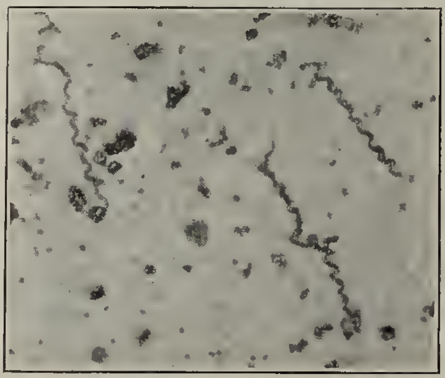

Fig. 1.—Spirochete of syphilis (*Treponema pallidum*). Smear preparation from primary syphilitic sore on penis. The black masses are fragments of cells. × 1500.

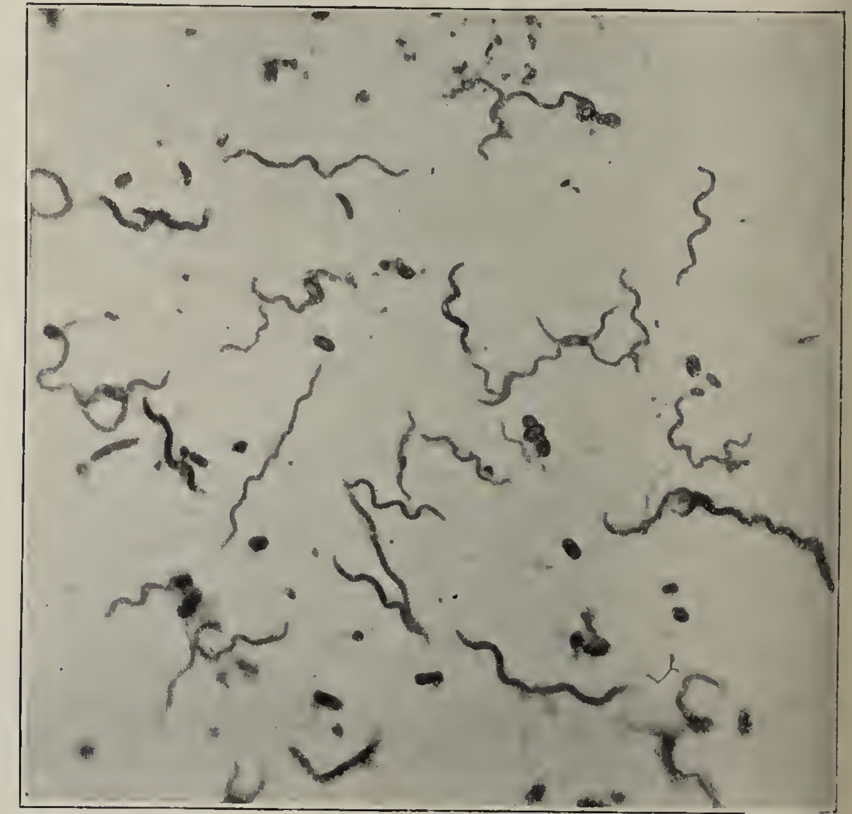

Fig. 2.—Various forms of spirochetes from which the spirochete of syphilis is to be differentiated. Smear preparation of material taken from between the teeth and gum of a patient who had ulcers on his gums and lips. A few bacteria are also seen. × 1500.

This process is gone through with three times. Following this the osmic acid solution is applied for thirty seconds and the specimen is then washed in water, dried and mounted in balsam. A thorough washing in running water is essential after the application of each solution to prevent the formation of excessive precipitates.

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* From the Pathological Laboratory, Massachusetts General Hospital.

The osmic acid, the first time applied, acts as a fixative and a mordant. The lead unites with the albumin to form lead albuminate, a compound insoluble in water. The sodium sulphid transforms the lead albuminate into lead sulphid and causes the preparation to become stained brown. The osmic acid turns the brown color to black.

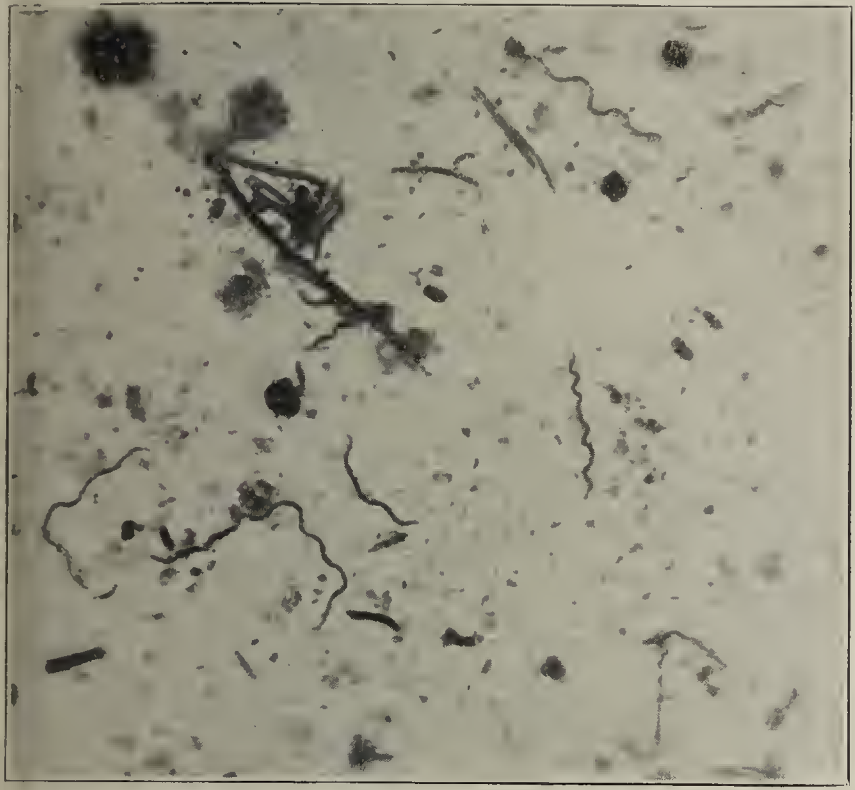

Fig. 3.—Smear taken from the teeth and gums of a normal individual, showing various forms of spirochetes and bacteria. × 1500.

The spirochetes, bacteria and cellular detritus are stained black.

Thanks are due Dr. James Homer Wright for his valuable criticisms and Dr. William H. Boos for his suggestions.

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# A NEW ABDOMINAL DRAIN

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That an entirely satisfactory drain to lift fluids from the cul de sac over the pubis has not heretofore been devised is evidenced by the fact that every stage in the evolution of the drain—the glass tube, the unprotected gauze, the cigarette, the split rubber, the gutta-percha strips, and the fenestrated rubber tube—each still has its adherents.

A recent experience with a large fenestrated rubber abdominal drain, in which it was necessary to administer a general anesthetic, split the tube down to one of the lower eyelets and with the finger push a plug of intestine out of the lumen of the tube before it could be removed, led me to devise the drain shown in the accompanying illustration. In the few cases in which I have used it it has met all the indications of an ideal drain, since it combines all the advantages of all the other materials used for this purpose and none of their disadvantages.

It is inexpensive, easy of construction and can be sterilized by boiling.

It drains, not only by the pumping action of the diaphragm, but also by capillary action.

It drains all the levels of the abdomen and not alone from the lowest point.

It remains active and unclogged until its function is finished.

It does not adhere to surrounding structures, and therefore it comes away without pain, trauma or hemorrhage.

It is unlike the glass tube, in that its use is not attended with the danger of pressure necrosis.

It is unlike the gutta-percha strips, in that there is no danger of its breaking and leaving a part of it behind among the intestines.

To make this drain, ordinary rubber dam and soft rubber tubing of any desired size are used. Cut a piece of the dam as long as the tube that is to be used, and fold it back and forth from four to six times, the folds being a little less in width than double the diameter of the tube. Clamp the center of each end of the folds with hemostats as in Figure 1, A. Split out about one-eighth of the circumference of the tube as in Figure 1, B, making a trough or gutter of it. Pull on the hemostats and throw the rubber into folds, place it in the gutter and clamp it at each end until it is sewed down the middle from end to end directly opposite the slit, as in Figure 1, C. A few long stitches through rubber and tube will suffice, and it can then be cut any desired length, the rubber holding the thread securely. Now clip small holes in the inner folds at several levels and the drain is ready to be boiled for use.

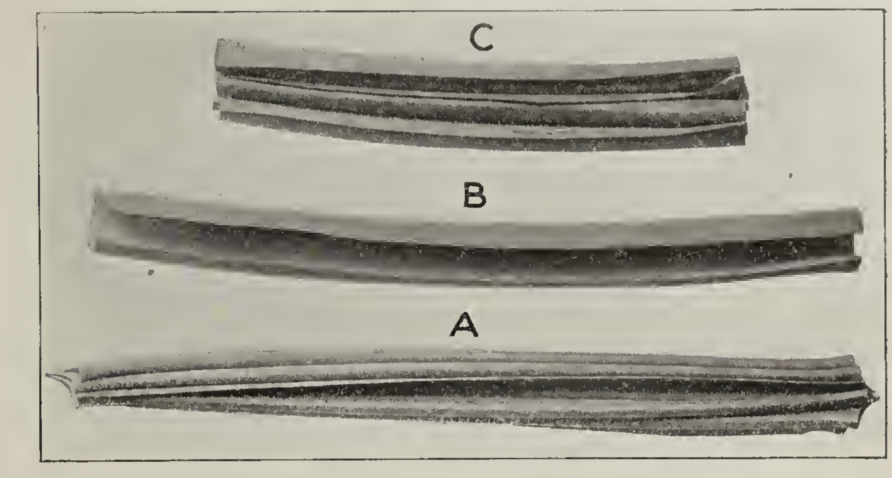

Fig. 1.—Abdominal drain. A, Rubber dam folded; B, tubing cut into a gutter; C, tubing with folded rubber dam sewed into it.

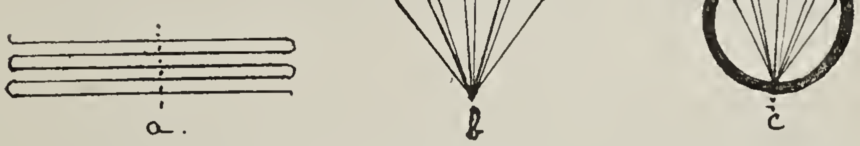

Fig. 2.—Cross-sections of abdominal dam. A, Rubber dam folded; B, thrown into folds; C, sewed into tube.

A glance at the cross-section of this drain (Fig. 2) shows how the fluids can gain access to the interior at any level. They pass out either through one or more of the small tubes, or along the gutters that lie between adjacent folds, or between the rubber dam and the enclosing tube.

1000 West Grace Street.

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**The Professional Anesthetist.**—The professional anesthetist will usually administer less of the anesthetic than the unskilled. He will induce the anesthesia so gradually that the change is a transitional one, during which time the patient's mind, brain, heart, lungs and circulatory apparatus quietly assume the new state of anesthesia.—E. Metzenbaum, in *Ohio State Medical Journal.*

# A NEW SUTURE.—THE DOUBLE FIGURE-OF-EIGHT

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Surgeons everywhere are familiar with the ordinary figure-of-eight suture, and those who have employed it must have recognized its value as an economizer both of time and of suture material. It possesses still other merits, chief among which are first its simplicity; second, its very wide field of application; and third, the fact that it combines some of the advantages of both the continuous and the interrupted suture. All these factors have participated, of course, in popularizing this suture, especially among abdominal surgeons and gynecologists.

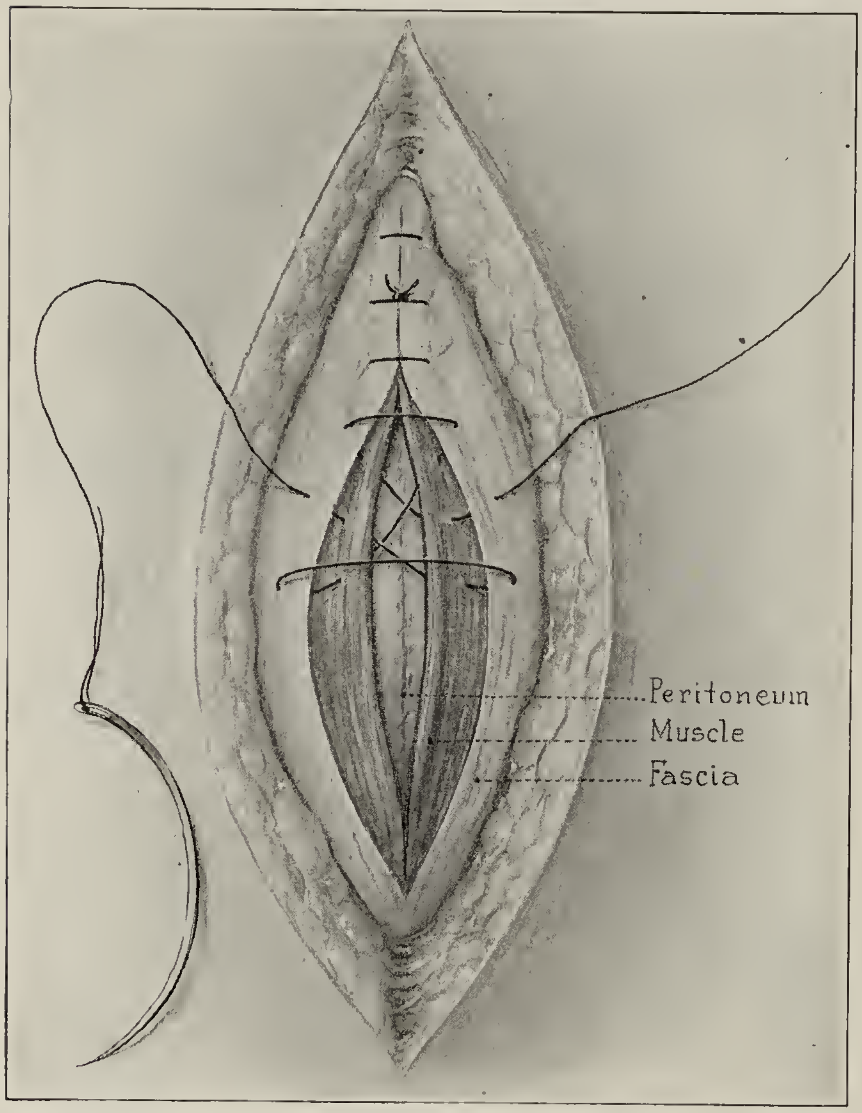

Fig. 1.—Closure of midline incision below the umbilicus. The peritoneum has been closed by a continuous suture. At the upper angle of the incision a double figure-of-eight suture has been introduced and tied, doing the work of three interrupted sutures. A second suture has been introduced, but has not been drawn taut. It shows clearly that traction on one end is transmitted directly to the upper loop, approximating the tissues included in the upper half of the suture, whereas the same result is accomplished over the lower half by traction on the opposite end. Thus, when the ends are tied there is a uniform strain on the suture, and no puckering. Two or three of these sutures suffice to close the average incision.

A few months ago it occurred to me to add another loop to this already useful suture, thereby making a double figure-of-eight, and thus, in a limited field of application, at least, greatly increasing its value.

After subjecting this innovation to a practical test at the operating table in a large number of cases, I am convinced that it renders the suture a distinct improvement over the single figure-of-eight, in that it represents a gain of exactly 33.33 per cent. in every point of advantage that the latter possesses.

I have used this form of suture chiefly in the closure of abdominal and lumbar incisions, where the closure was done in layers, and also after myomectomy, finding it especially useful in obliterating dead space, effecting neat approximation, and in controlling hemorrhage.

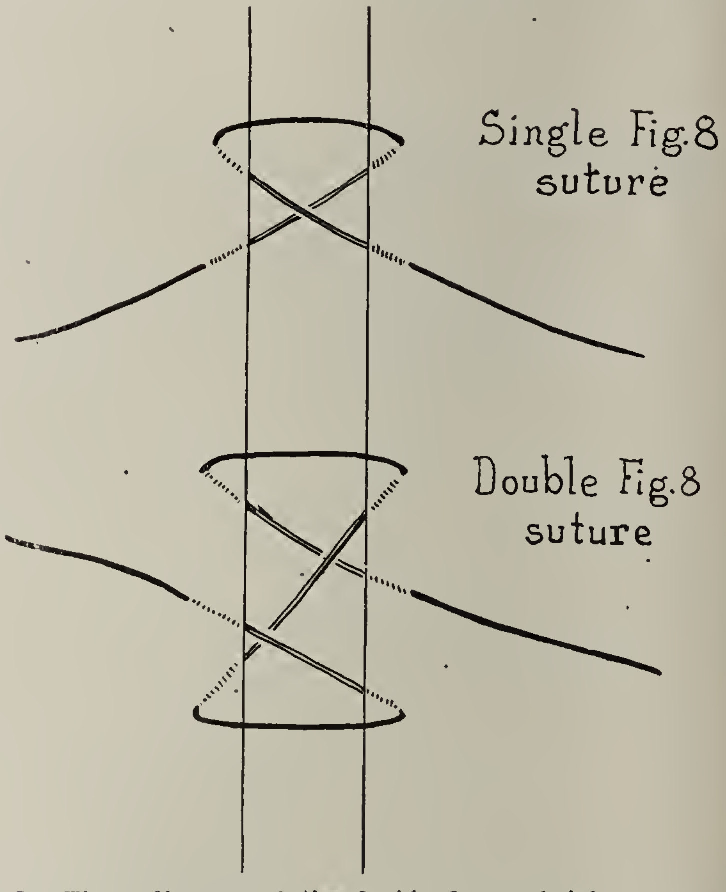

Fig. 2.—The ordinary and the double figure-of-eight suture schematically shown.

The technic of the suture is simple, and is clearly shown in the accompanying illustrations.

Johns Hopkins Hospital.

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# THE UNITED STATES PHARMACOPEIA FOR 1910

## HOW MAY IT BE CONSTRUCTED?

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1. Let the new Pharmacopeia contain only such drugs as are of positive therapeutic value.

If we are in the age of scientific beliefs and research, I cannot see how this preamble can be objected to by anyone. Certainly no one individual practitioner wishes to perpetuate a drug he considers valueless, or would use for a specific purpose one that he deemed valueless. In the abstract, then, no one could object to this resolution. Now as to what drugs are valueless: Here comes the crux of the whole discussion and perhaps the Waterloo of the recommendation; and nothing will save it but to carry by storm Recommendation 2, viz.:

2. Let it be officially declared that when a drug or preparation of a drug that is not official in the Pharmacopeia of 1910 is prescribed, that the standard of purity and the method of preparation is that ordered in the last Pharmacopeia in which the preparation was recognized.

There is absolutely no satisfactory outcome to be expected from any circulation of requests for approval or disapproval of the various drugs contained in the present Pharmacopeia. The differences of opinion would be legion, and the slim majority obtained for deletion of little practical value. Such decision for deletion must be left to the judgment of three to five clinical men selected by the U. S. P. Revision Committee. Practitioners all over the United States who are disappointed by these omissions from the U. S. P. of 1910 may regret and pity the lack of wisdom of this deletion committee, but must be therapeutically and pharmacally content with the U. S. P. 1900 standard for their pet drugs.

If a deleted drug is valueless, how can a certification to that fact be better made than by omitting it from the 1910 Pharmacopeia? If a deleted drug is of value, it will survive in spite of such deletion, and may be incorporated into the 1920 Pharmacopeia as any new drug found valuable.

3. Let it contain such new drugs as have been proved of therapeutic value.

All honest practitioners of medicine must approve of this recommendation. A drug (not some fool-befogged formula to cloud the active ingredient) that is of value in overcoming disease, or a disturbed condition, whatever the source from which it was derived, or by whom discovered, should be made official. And here again a committee of five clinicians appointed by the U. S. P. Revision Committee must decide what drugs are eligible, and then what drugs are of sufficient therapeutic use to be officialized. Again, many practitioners will not be satisfied with the committee's selection, but a drug found valuable and not recognized by the committee will be in no worse position than it was before, viz., an unofficial drug. Such a drug will clamor for recognition, and may be recognized through the means proposed in Recommendation 4. On the other hand, if a drug is raised to importance and prominence unadvisedly by this committee, or if another similar acting and better drug has been discovered and supercedes it, it may be dropped from the U. S. P. of 1920, and then each Pharmacopeia will represent scientific advance and not as now be a book of historic reference.

Recommendation No. 4 which follows, needs no discussion, except as a question of advisability and policy:

4. Let there be issued a supplement to the Pharmacopeia, in 1915, which shall make official such new drugs as have been proved to be of therapeutic value during the years of 1910-1915.

5. Let the 1910 Pharmacopeia give the most simple titles possible to all new drugs, especially to the synthetic drugs. If it is considered impossible or inadvisable to make an official title of a drug simple, an official abbreviation should follow the name of the drug.

Every writer of a prescription, and most assuredly every teacher of materia medica and prescription writing, will approve of this. The terrible heart-rending and brain-splitting attempt to prevent all possible advertisement of a proprietary drug has been followed by continuous condemning all over this country, and has forced the ordering of the drug by a proprietary name, much to the profit of the drug promoter.

6. Let the 1910 Pharmacopeia give official approval only to the best of the preparations of the Galenic drugs, and let it not officialize the little-used and useless preparations of these drugs.

In the abstract everyone must approve of this as read. Now, again, who shall determine which are the most efficient preparations? Why not a committee of ten, five clinicians and five pharmacists, appointed by the Revision Committee? Whatever this committee decides, it will be criticized anyway. But it is certainly supposable that one or two preparations of a Galenic drug are better than the others, and certainly the best is none too good. Again, if a prescriber desires a deleted preparation, he can revert to the 1900 Pharmacopeia. But a smaller, useful teaching book we must have for medical school purposes.

7. Let the 1910 Pharmacopeia not give official approval of all of the known salts (of iron and mercury, for instance), but officialize only the best.

This is similar to Recommendation 6, and should be decided by the same committee; their decision will be subjected to the same berating. It might even be well for this committee to be protected by special insurance policies against suits for malfeasance in office.

All joking aside, it is perfectly supposable that a certain small number of salts are better than many other salts, and again the advisability of reducing the unnecessary number of official preparations to what can be readily taught as the best to medical students.

8. Let the average adult dose appear after each drug and each preparation of it, not the range of dose, i. e., minimum to maximum, as there is no exact minimum or maximum limit of dose. The dose is enough to accomplish the object aimed at by the prescriber, and all he cares to know is the average dose.

This recommendation is self-explanatory. It certainly cannot be dictated how small a dose a prescriber may order. Nor should he be officially limited to a given dose when, in his judgment, with this particular preparation, in this particular condition, in this particular patient, a larger dose is required. Chemical assayists and pharmacologists attest the varying strength of drugs and preparations, and this will perhaps be always true of Galenic drugs. Consequently, it is absurd to prescribe the limit of a dose dogmatically, or to give such a wide range of dose as to make the drug and its strength appear ridiculous.

Let there be no translation of metric to Troy doses. Let each dose (and both should be given) be smooth for each system.

9. As the U. S. P. gives the official titles of drugs in Latin, it also should give the genitive after each title. This would be of special value in teaching the correct writing of prescriptions. It is not always easy to determine the declension to which a Latin noun belongs, or whether it may not be indeclinable.

This cannot well be objected to by anyone, and will be a real help to teachers of medical Latin and to medical students.

10. Let the official preparations of a drug be enumerated under the title of that drug.

This was an omission from the last Pharmacopeia that has been considered a mistake, and I doubt not that the next Revision Committee will be glad to rectify it.

In closing, I wish to hope that a vote by this society on each recommendation, could be transmitted to the new Revision Committee. A positive vote will help the committee, and a negative vote will show that a body of clinicians cannot back up the recommendation.

252 York Street.

**Cataract Extraction in the Insane.**—Cataract operation can be done in the insane, says Dr. F. M. Fernandez, in the *Medical Record*. It may be a little more dangerous than in sane people, but not much more. Extreme vigilance has to be exercised, and one should try to avoid any possible cause of excitation during the operation, and especially during the postoperative treatment.

# A CASE OF TUBERCULAR LEPROSY

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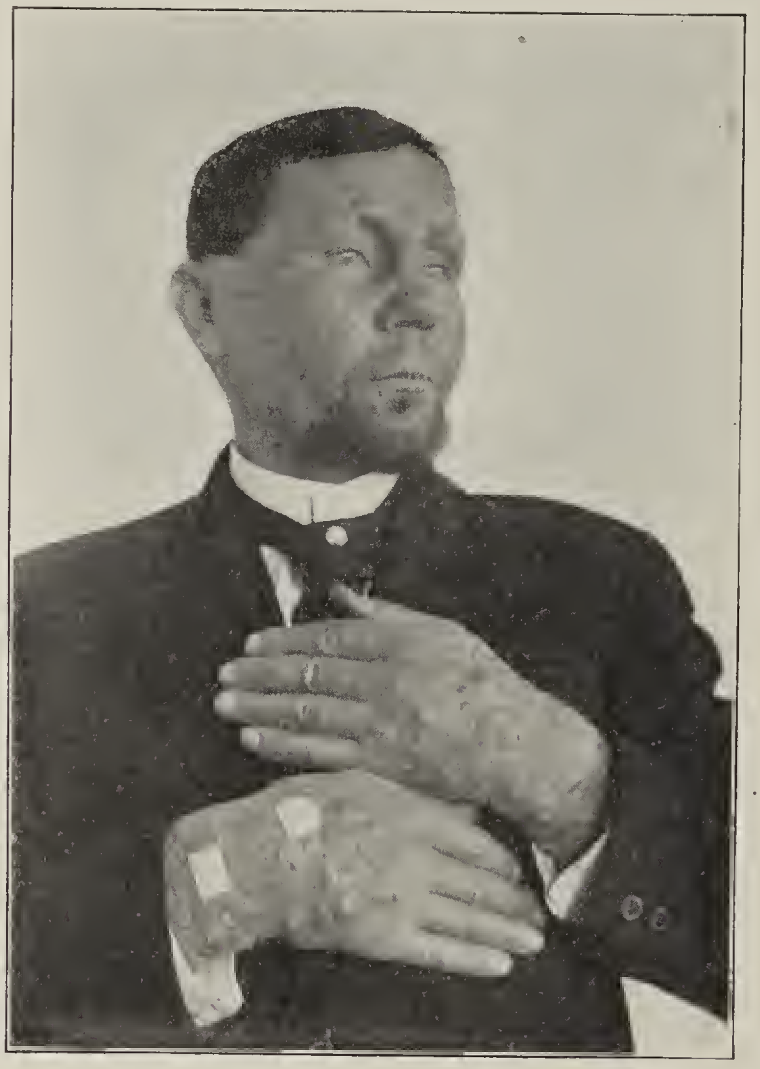
CALUMET, MICH.

On Aug. 5, 1909, I was called to examine for life insurance a patient who gave the following history:

Mr. M. M. J. E., married, aged 37, Norwegian by birth, has lived in America nine years, two of which were spent in Alaska herding reindeer (1905 and 1906). He is now a carpenter, his former occupation was fisherman. His father and mother were said to be living and well, but I found later that his mother is now confined in a leper hospital in Norway. Two brothers are living and well; one brother died from an injury. The patient is the father of four healthy children, and his wife is in good health.

*Beginning of Leprosy.*—The applicant had always been well until 1905, when the present trouble began. He first noticed a peculiar sensation about the hands and face which he describes as though grains of sand had been driven into the skin. Small elevations soon appeared at these places. Soon after his return to Calumet in the Fall of 1906 he began to have trouble with his nose and consulted a physician. The turbinates were removed to free him from the chronic colds or coryza that he was having and he has not been troubled with his nostrils since.



Showing tubercles on face and hands.

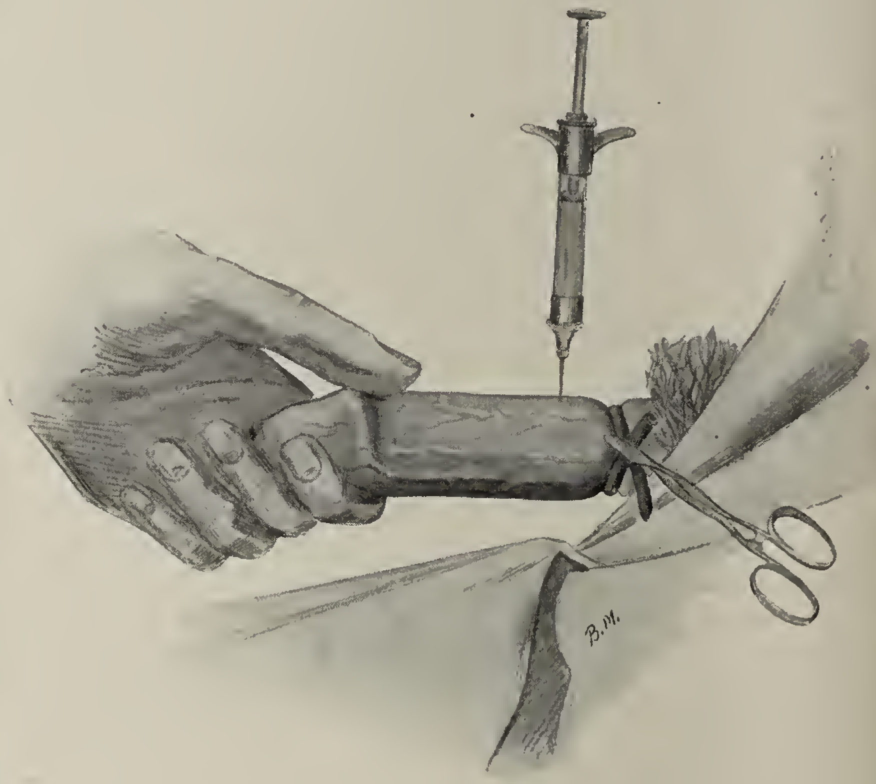
*Course of the Disease.*—The tubercles have gradually increased in number until his face and hands and forearms are well covered; there are some lesions on the body and feet. The nails of both great toes are gone. The eyebrows have almost disappeared and the beard is scanty. The tubercles are more numerous about the nose, lips, chin and forehead with some thickening of the ears. The lesions on the hands are larger and farther advanced, several have suppurated and healed showing broad white scars in contrast to the distinct bronzing about the tubercles. There is slight anesthesia about the tubercles.

I took advantage of Dr. A. S. Warthin's visit to Calumet to have him see the patient. Dr. Warthin agreed with my diagnosis but said to be positive he wanted to examine some of the tissue. Accordingly I sent him one of the tubercles which he examined and pronounced leprosy.

# THE OBERST METHOD OF COCAIN INFILTRATION

J. W. MILLER, M.D.
Instructor in Dermatology in the Medical Department of the University of Cincinnati
CINCINNATI

In operative procedures, especially on the penis, it has long been the custom to use cocain solutions subcutaneously. This method has never proved entirely satisfactory for several reasons. Chief of these is edema that was caused in the area operated on with consequent slowness in healing. Another objection that might be mentioned is opportunity for local infection, due to numerous needle punctures. Results were often unreliable, anesthesia not occurring in certain areas because the solution had been placed too deep in the tissues, or for no assignable cause. Even with proper technic pain was frequently complained of, and often a general anesthetic had to be substituted. Although the amount of cocain and morphin injected was small, when solutions as suggested by Schleich were used, the anesthetic was sometimes used in excessive amounts to get desired results, and in order to anesthetize all structures, superficial and deep.



The Oberst method of cocain infiltration.

The technic of the method to be described is extremely simple and results uniformly satisfactory. The injection is not made at the area to be operated on, and edema is thereby avoided. A definite quantity of a weak cocain solution (no morphin) answers in the majority of cases. Pain is never complained of, and overstimulation or depression from the drug does not occur, except possibly in a few cases patients having an idiosyncrasy.

The method indicated is for circumcisions either with scissors (clean cases) or with the galvanocautery knife, which is to be preferred in the case of a chancroidal ulcer, since infection of cut surfaces is thereby prevented and all sutures are done away with. In hard chancres, the organism of syphilis having been found, it is advised to excise the ulcer early, in order to remove source of infection. Patients with a painful paraphimoses, after the usual means to reduce it have been tried, can be painlessly relieved after use of cocain solution injected into the corpora cavernosa. The edematous collar in these cases is cut down on by the blade of the cautery knife, or a grooved director is worked under the constriction and this is nicked with the point of a bistoury. Dissecting out scar tissue and closing a fistulous opening and even amputation of the penis call for this method. For a meatotomy, slitting up urethral lacunæ or Tyson's glands a simple application of a solution is usually all that is required, but one may occasionally have to resort to deep infiltration. The profession is indebted to Professor Oberst of Halle for first suggesting cocain solutions to be used in this way. The manner of introduction is shown in the illustration. A small rubber tube or catheter is placed around the organ at the penoscrotal junction, drawn moderately tight and held in place by artery forceps. The penis is washed with a solution of bichlorid and placed on a clean towel, or preferably a square of white glazed paper. The needle to be used, having been placed in boiling water for two minutes, is attached to a clean syringe, into which is drawn a fresh solution of cocain hydrochlorate 1 per cent. The needle is thrust into the tissue of the corpora cavernosa, and about one-fourth of an ordinary hypodermic syringeful of the solution is deposited (about five minums). It is then withdrawn and about five minims more are placed deep on one side, then on the other side of the penis. Lastly, what remains in the syringe is injected into the under side of the penis. The urethra and the dorsal vein should be avoided if possible. It makes little difference, however, even if these parts are punctured. The most important point to bear in mind is to wait fifteen minutes after making the injection before beginning to operate. It is well to remember that patients will often detect a pin-prick, after acute sensation is lost, but they do not feel the cut of the scizzors or the burn of the cautery if one is careful to postpone work for the above-mentioned period. I have never heard of a case of cavernitis resulting from this method.

In operations on the fingers, in cases of felon, etc., and on the toes as in ingrown nail, this way of producing analgesia is to be preferred to infiltration subcutaneously. It is less painful, for one keeps away from the inflamed parts. Recently I have been using one half syringeful of a 2 per cent solution in some cases, which also acts satisfactorily.

7 East Eighth Street.

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# PERNICIOUS VOMITING OF PREGNANCY*

ADAM H. WRIGHT, B.A., M.D., M.R.C.S. (ENG.)
President of the Canadian Medical Association; Professor of Obstetrics, University of Toronto
TORONTO, CANADA

We are much indebted to Dr. Whitridge Williams of Baltimore, and his assistants, who have demonstrated, to some extent at least, the nature of the disturbances of metabolism which cause a peculiar toxemia, and pernicious vomiting during pregnancy. Chemical examination of the urine in such cases shows a decrease in the amount of nitrogen excreted as urea, and an increase in the amount excreted as ammonia. Without referring to other changes we may accept the fact that this excess of ammonia excreted, or, as it is called, the ammonia coefficient, furnishes a fair indication of the severity of the poisoning. In normal pregnancy it is 4 or 5 per cent., and in cases of toxemia may rise to 10, 20, 40 per cent., or even higher. Dr. Williams has expressed the opinion that if this ammonia coefficient exceeds 10 per cent., the patient's life is endangered, and the pregnancy should be immediately terminated.

The following history is interesting in certain respects:

*Patient.*—Mrs. A., aged 27, secundipara, became pregnant early in August, 1908. Nausea and vomiting commenced early in September. Treatment, including the administration of cathartics, sedatives, and enemas of salt solutions, failed to relieve the symptoms. She steadily grew worse until September 30, when the ammonia coefficient was 14 per cent. The most distressing symptom was almost constant nausea which prevented her from eating, drinking or sleeping. The clinical signs, and the results of chemical examination, appeared to indicate the advisability or necessity for the induction of abortion. The maternal instincts, however, were very strong in the patient. She preferred to take great risks so far as her own life was concerned in the interests of her unborn babe.

*Treatment and Clinical Course.*—It was found that a hypodermic injection of one-quarter of a grain of morphin had no effect, and it was thought that a large dose might quiet those nerve centers, which, like so many specks of dynamite, were causing a vicious circle of explosions within the digestive tract, and especially in the stomach. Consequently one-half grain of morphin was administered hypodermically; and, shortly afterward, calomel was given, one grain every hour for four doses. This treatment produced satisfactory results. The patient had some sleep during the night, and felt fairly well the next morning—better than she had felt for a month before. The nausea returned, however, during the forenoon, and she had a very bad afternoon. It was then decided to give larger doses of morphin. Accordingly one-half grain was administered hypodermically at 9 p. m., one grain of calomel was given by mouth half an hour after, and as the morphin had not produced sleep another quarter grain was administered between 10 and 11 p. m. The patient had a comfortable night, slept well, and felt comfortable and happy the next morning. As the nausea returned each afternoon this treatment was continued for five more nights with such excellent results that on the seventh day from the commencement of this treatment the patient had no nausea or vomiting. During this week she had five grains of morphin administered hypodermically, and eleven grains of calomel by the mouth. Although at this time (October 7) the general condition was vastly improved the ammonia coefficient was still fairly high—8.2 per cent. After this less morphin was administered at bedtime for five days, after which it was stopped entirely. Calomel was given occasionally during the remainder of the pregnancy. After November 1 the patient enjoyed excellent health until she reached full term, May 8. In accordance with my custom, during the last five years of inducing labor at term or within two or three days after, labor was induced May 10, when a healthy child was born. At the time of writing (nearly nine months later) mother and child are both well.

The doses of morphin may seem large to some, but it was hoped that large doses would prove efficient when average doses produced no good effect. It is believed by some (perhaps many now) that half a grain often does good when one-eighth or quarter of a grain does harm. The dose of calomel may also seem large to some. Four grains for a woman with such a stomach, and with such low vitality, might seem a somewhat heroic dose; but in many forms of both toxemia and septicemia, large doses are frequently, if not generally, well borne by those having exceedingly disordered stomachs, and often if not generally do a world of good. If the patient vomits at once after taking one calomel pill, another is given half an hour afterward, and such administration is repeated until eight pills are swallowed in some cases. It would appear that this old-fashioned medicine is the best antidote to certain poisons known to-day.

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* Read before the Toronto Academy of Medicine, March 8, 1910.

It will be noticed that in this case the ammonia coefficient rose to 14 per cent. According to Dr. Williams' rule this pregnancy should have been terminated on or before September 30, i. e., when pregnancy was about two months advanced. Considering that this patient is now a strong and happy mother, with a beautiful healthy babe, such a procedure seems too awful to contemplate. We are learning much through modern physiologic chemistry about the various types of toxemia: but we should be careful to avoid reaching mathematically precise conclusions regarding exceedingly serious questions on insufficient data. We had hoped that the investigation of careful, conscientious workers outside of Baltimore had proved the incorrectness of this 10 per cent. rule. We find, however, that so high an authority as Sir John Byers, of Belfast, tells us[1] that he agrees with Whitridge Williams that "if this ammonia coefficient rose to 10 per cent., one might conclude the case was toxic, and one should empty the uterus as soon as possible."

It should be understood in this connection that emptying the uterus in a case of pernicious vomiting of pregnancy is one of the most dangerous operations in obstetrical surgery. There have been a number of heartrending tragedies in Toronto from this cause during recent years. Certain healthy, happy brides, after short illnesses from pernicious vomiting of pregnancy, died so suddenly after the induction of abortion under chloroform anesthesia that the grief-stricken relatives had not time to say farewell. In connection with these serious cases two things should be kept in mind: (1) that the administration of chloroform is exceedingly dangerous: and (2) that forcible dilatation of the cervix is perhaps still more dangerous. Therefore, the modern operation of emptying the uterus "at one sitting" should not be performed. The common statements by experts that this "operation is practically free from danger provided perfect asepsis is observed" is woefully incorrect in such cases. The safest method is Dührssen's vagino-uterine tamponade or some modification of it. It is unfortunate that it happens in a certain proportion of cases that the emptying of the uterus, even if done before it is "too late," so far as our present knowledge can indicate, and in the most careful way by a skilled expert, is followed by no improvement. The patient simply continues to grow steadily worse until death ensues from exhaustion. Notwithstanding such dangers we probably all agree that in certain cases the induction of abortion is absolutely indicated. The practioner in charge, when in doubt, should have a consultation as soon as possible, and should act promptly if such an operation is decided on.

Dr. Williams has adopted the following classification: reflex, neurotic, and toxemic vomiting of pregnancy. As it is generally conceded now that in the nausea and vomiting there is always some disturbance of metabolism it seems rational to drop the terms "reflex" and "neurotic," and consider that in every instance toxemia is the cause of the condition produced. This would tend to prevent carelessness on the part of those practioners who consider that in the great majority of cases the nausea and vomiting are simply "neurotic" or "sympathetic," and that treatment can accomplish no good. So far as our present knowledge goes it seems well to consider that there are various types of toxemia of pregnancy, of which the principal are: (1) acute yellow atrophy of the liver; (2) pernicious vomiting; and (3) that form of autointoxication that produces eclampsia. One of the advantages of grouping these three varieties in such a way is that it simplifies matters much for general practitioners. This is true especially from a therapeutic standpoint because the eliminative and sedative treatment is suitable for most of the symptoms that appear in all varieties. It is somewhat interesting to note that the treatment carried out in the case here reported is very much like that of British obstetricians fifty years ago.

30 Gerrard Street, East.

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[1] 1. Byers: Brit. Med. Jour., Feb. 19, 1910.

# CEREBRAL SYPHILIS

## A CLINICAL REPORT OF SIX CASES WITH SUGGESTIONS AS TO TREATMENT

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The object of this short paper is to call attention to the course and prognosis of syphilis in certain patients who may present many of the physical and mental characteristics of general paresis, and yet, unlike sufferers from paresis, are to a certain extent amenable to antisyphilitic treatment.

These cases are more common now than they were a decade ago. This is probably due to the ever-changing character of the two factors which cause their development—"syphilization and civilization." Secondly, this increased frequency is also doubtless due to our ever-increasing skill in diagnosis. There can be but little doubt that the specific case of to-day differs from the one of twenty years ago.

The following case is a typical one.

Case 1.—*History.*—J. A. G., came into my office with the story that for the previous six months his business associates and the employees in his office had noticed a change in his general conduct. He tried to accomplish more work than formerly. He often made mistakes in language. Next, his memory began to be slightly affected, and he was unable to remember events of recent occurrence. He was not irritable, but was confused. He showed considerable difficulty in going about, so that his friends in the town where he lived spoke about his lameness and his inability to use his legs.

*Examination.*—Finally, he was brought to my office, and when he came in his pupils reacted sluggishly and were almost Argyll-Robertson; the knee-jerks were much exaggerated; he was ataxic in both arms and legs. His speech was considerably ataxic. He had no tremors. His mental condition was one of great confusion, depression and inability to comprehend his surroundings. His clothes were soiled, his person was unclean, and as he stood up talking to me in the office he passed water right on the floor, and yet did not seem to be cognizant of the fact and in no way apologized for what he had done or seemed to realize that his clothes were in any way soiled. During the whole examination he manifested practically no interest in the preceedings and asked no questions; in fact, did not seem to care what symptoms he showed or what opinion was given. His wife and brother were present at the examination but he paid no attention to them. His handwriting was practically normal; there was no evidence of tremor and his ability to add was adequate.

*Diagnosis and Treatment.*—I made a diagnosis of general paresis and advised his family to make arrangements to take him away from business and have him treated. His family physician and I thought, as a matter of precaution, and more as a general routine than anything else, that it would be wise to put him on antisyphilitic treatment. We gave him mercury in the form of inunctions every night, and iodid in moderate doses, steadily increasing. For the next week the patient was not so well. At the end of ten days his wife began to notice iat he was able to walk a little better, and, as she said, the iit was more of a shuffle now, and not nearly so ataxic. The ext thing his family physician noticed was that the pupils ecame very much smaller in size and gradually at the end of month began to respond to light. He still presented the omberg symptom. The left knee-jerk was decidedly less tive than it had been three days before. He was able to nswer questions as to the location of certain cities and rivers the country.

*Subsequent Course.*—I then lost sight of the patient but ard that the improvement continued steadily but slowly. he pupils came down to normal in size and reaction, knee-rks became practically normal, the Romberg disappeared, the iit became normal, and two years afterward the patient was ack at his business, attending to it regularly, and considered imself in good condition both physically and mentally. He omplains a little of difficulty in walking, and that his memory not quite as good as it used to be, but his business associates ink he carries on his business well, and every one associated ith him seems to consider that his condition is as good now as ever was. During all this time he has taken large doses of oth mercury and iodid.

Case 2.—*History.*—S. H. M., referred to me by Dr. S., is a wyer and has worked fairly hard. He gradually became a ttle confused, and one night was found wandering about his ouse in an aimless manner, not knowing where he was going what he was doing. He was taken to his family physician ho advised that he be sent to a specialist.

*Examination.*—When he came to me he had unequal pupils, marked facial tremor, a considerable lack of expression; nee-jerks were very much diminished; no Romberg. The tient took little interest in his surroundings and did not pay uch attention to what was being done; did not seem to care uch as to his future disposition, although he was several undred miles away from home, and did not manifest any esire either to remain where he was at the time or to return ome.

*Treatment and Course.*—The patient was given inunctions of ercury and put on iodid, starting at 35 drops and gradually icreasing it up to 300 drops a day. He was under my observaon for two years, and during that entire time steadily imroved. The improvement was slow in his case; I gave him ery little mercury; for a whole year at a time he got no merury at all, but continued on large doses of iodid. At the end f two years he felt that he was very much better and asked go back to work. He was depressed and restless on account f doing nothing. He began to notice that his clothes did not ok as nicely as they ought, called attention to the fact that is finances were running low and that he must get back to ork. He was able to carry on his business well. I then icreased the amount of mercury that he was getting and his nprovement became much more rapid. Three years afterward e was actively engaged in his law business. The ophthalmoscopic examination was negative.

Case 3.—*History.*—I. S., referred to me by Dr. H., was a ingle man, aged 30, who had complained of inability to conntrate, loss of memory, failure to use his mind as formerly, leeplessness and considerable depression. He denied both lcohol and syphilis.

*Examination.*—The physical examination showed unequal upils, a slight facial tremor, a marked Romberg and knee-rks unequal. From the story which the patient told, both is family physician and myself agreed that there were strong easons for thinking he had a specific history.

*Treatment and Course.*—He was put on large doses of iodid nd injections of mercury. The improvement was rapid and onsiderable. In two months the pupils became equal, the remor and Romberg symptoms disappeared and the knee-jerks uieted down. The mental symptoms cleared up to a very considerable degree, although there still remained some of the ack of confidence and depression. The ophthalmoscope showed othing abnormal.

The special symptoms to which I wish to call attenion in these three cases are, facial tremor, mental conusion and the absence of a typical Argyll-Robertson upil.

All three patients improved very considerably; two to so great extent that they were enabled to return to their work; the third is steadily getting better. The symptom which showed the greatest improvement in these patients was the mental condition—the return to normal from the period of confusion and depression. It is noteworthy that in none was there any feeling of well-being, and in this respect they differed from the classic types of general paresis.

Case 4.—*History.*—T. H. B., aged 35, was in bed when I was called in consultation. His walking had become difficult; it was practically impossible for him to get about. He had no tremor; the pupils reacted; he was very ataxic; could not pass his urine and complained of paresthesia over one entire side. The knee-jerks were slightly overactive; the mental symptoms were marked; he was suspicious, unclean, careless and his judgment was defective.

*Treatment and Course.*—He was given large doses of iodid and hypodermic injections of mercury. At once he began to improve. He now is able to walk about, of course, somewhat imperfectly. His urinary function has improved considerably. His hypochondriasis has diminished and he now gets down to his office. His judgment, I must say, although by no means good, is yet very much better. The ophthalmoscope showed nothing.

Case 5.—*History.*—The patient, aged 35, admitted both specific and alcoholic history. He had never done any work and never assumed any responsibilities other than those incumbent on a student. At the time at which he consulted me he was suffering from headaches, and shortly afterward he developed a condition of somnolence and almost stupor. The pupils were unequal and slow to the light reflex; the knee-jerks were exaggerated. There was neither Romberg nor facial tremor. Mental symptoms were present and were somewhat like the others—a lack of confidence, and a weakness of the higher faculties. The ophthalmoscopic examination was negative.

*Course and Treatment.*—This latter case was, of course, complicated by the alcoholic habit. This might, therefore, have accounted for the unequal pupils and the tremor. The point here to be noticed, however, is that this patient improved, not under abstinence from alcohol, but in spite of its use, with the aid of mercury and the iodid. He took inunctions of mercury for some weeks and very large doses of potassium iodid. This patient has improved more than any of the others; he has gained a great deal in weight, and in appearance; his judgment has improved. This improvement has persisted now for five years. He still takes both of the antisyphilitic remedies.

Case 6.—*History.*—W. B., aged 32, a business man, admits specific history but has been moderate in the use of alcohol. This patient complained of being unable to concentrate as well as formerly. He was nervous and irritable. At home the children annoyed him. His sleep was restless; he had phobias. He felt that he was not doing as well as he ought to and that his judgment in business affairs was not as good as formerly. He had in the last few weeks noticed pains in his legs.

*Examination.*—The physical examination showed pupils that were pin point and unequal; the reaction to light was normal in the left pupil; in the right, sluggish. There was a decided facial tremor; no Romberg; the knee-jerks were normal; the memory was bad; there was an inability to pronounce certain words. The handwriting showed nothing and he was able to figure correctly. The ophthalmoscopic examination was negative.

*Treatment and Course.*—This patient was placed on large and steadily increasing doses of potassium iodid. He took as high as 375 grains a day. Its use was continued almost without intermission for over five months. At the end of that time the physical signs had completely changed. The mental signs had improved, the appearance of the patient was better, he spoke clearly, his judgment was good, and he felt better.

This last was in many ways typical. The complication of alcohol was too slight to be taken into consideration. The only other feature to be noted was that this patient improved without mercury. He subsequently took mercury and the improvement continued.

It will be noticed that all of these cases developed in the third decade of life. This is in exact accordance with the statistics collected by Gowers. It seems, as Berkeley says, to disprove the commonly accepted belief that cerebral syphilis is one of the late manifestations of the infection. It may be delayed for more than forty years after the initial lesion, and, on the other hand, according to Gilles de la Tourette, it has been known to begin within one month after the date of the infection.

### SUMMARY

The group of symptoms which these cases present is twofold in character, physical and mental. These occur in men about 35 years of age, who have contracted the disease probably fifteen years before.

The physical signs consist of changes in the reflexes, both of eyes and knees, the Romberg symptom, and the tremor of the facial muscles. The mental symptoms consist of a lack of confidence, a loss of judgment, a sense of depression, and inability to perform regular work; a certain amount of mental deterioration, degradation and confusion. These patients do not care for their personal appearance; their clothes are not neat; their shoes are never cleaned; they do nothing, they are hypochondriacal.

Every one of us will, I think, find that he has met cases of this character. My contention is that we are not sufficiently on the alert for them and that when we do meet them we dismiss them as cases of general paresis. Now these cases may be instances of general paresis and by this very abatement prove that they are paretics. But if they do abate over a period of several years, and if they are well enough to return to their business, they certainly differ in degree from the typical paretic. To the layman, and also to a great extent to the medical man, the word "paresis" is a synonym for incurableness and hopelessness. Therefore, I am contending for a change of nomenclature. The word "paresis" ought to be reserved for the well-marked and well-advanced stage of the disease. These so-called incipient paretics ought to be assigned to a different class—a class in which not only name but also treatment and prognosis hold out some definite and more marked rays of hope.

From a review of these cases it will be seen that the best results have come from large and systematic dosage of the iodid and mercury. The mercury can be given either by inunction or by hypodermic injection. The latter is the preferable plan from the point of view both of the patient and of the physician. The dosage can be made more exact, and it enables the physician to keep a constant supervision over the patient. The iodid should be begun in doses of from 25 to 35 drops a day and steadily and rapidly increased to 300 or even 400 drops. Another important factor in the improvement of these patients is the environment. They ought to be surrounded in every way with what is agreeable and congenial. Exercise and diet should be carefully regulated. Such patients also require a great deal of rest and do better with long hours in bed.

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**Persistent Foramen Ovale.**—Symptoms of a defective foramen ovale can exist for many years without causing cyanosis, thus refuting the theory of the admixture of arterial and venous blood causing cyanosis. There has been reported a case of complete absence of the intra-auricular wall. This patient lived to the age of 39 years. Physical signs are frequently absent in these cases of defect cordi.—L. T. Rawles, in *Journal of the Indiana State Medical Association.*

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# ANIMAL EXPERIMENTATION IN RELATION TO OUR KNOWLEDGE OF SECRETIONS, ESPECIALLY INTERNAL SECRETIONS*

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NEW YORK

(*Concluded from page 1437*)

### FACTS ESTABLISHED

Looking over the mass of facts which we have recorded in the foregoing pages, we find in the first place that the investigations of recent years have established definitely that the thyroids, the suprarenal capsules and the hypophysis are vital organs of immense importance. Furthermore, for the thyroid it was found that its extract can nearly compensate the absence of the organ. For the adrenals it was found that they furnish a very effective therapeutically extremely important extract; this extract however, cannot supplant the organ. The hypophysis furnishes a moderately effective extract, and this by a part which seems to be not indispensable for the life of the animal. All three glands seem to consist anatomically of two parts, of the mutual functional relations of which we know nothing definite. We know nothing of the significance and importance of the cortex of the suprarenal capsules and we know little about the posterior part of the hypophysis. We know a great deal of the importance of the newly discovered mate of the thyroids, the parathyroids, but as to the mutual relations of these neighbors we have for the present only theories, and as many as the subject permits; they are synergists, they are antagonists, and they are indifferent to one another. As to the mode by which these glands affect the life of the organism, there can be no doubt that it is accomplished by means of an internal secretion; that is, something of importance is prepared within the gland which comes in contact with the blood without the intervention of a special duct. As to the way this takes place we have again a variety of theories: each of the glands sends to the blood a specific substance which the body needs for its existence; the glands send to the blood an ingredient which neutralizes poisonous specific substances accumulated there; and, finally, specific poisonous substances are attracted to the various glands where they become detoxicated. These theoretical disagreements were and are important factors in the development of the details of our knowledge of these subjects, inasmuch as in the efforts to prove the correctness of one theory or the other a great many important facts were and are being brought to light by the supporters of the various theories.

### THE INTERNAL SECRETION OF OTHER GLANDS AND ORGANS

The inspiring experimental activities in the studies of the internal secretion of the ductless glands stimulated similar investigations in other organs and brought to light the important fact that organs which have a definite function or even a definite external secretion may at the same time affect the body in a well-defined manner also by an internal secretion.

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* This paper is one of the series prepared for and reprinted by the Council on Defense of Medical Research of the American Medical Association for circulation among the public. Thirteen of these pamphlets are now ready, taking up the relations of animal experimentation to ethics, diagnosis, cancer, vaccination, the live stock industry, tuberculosis, typhoid, dysentery, rabies, surgery, internal secretions, protozoan tropical diseases, etc.

### INTERNAL SECRETION OF THE PANCREAS

This became manifest especially in the discovery of he relation of the pancreas to diabetes. Here, again, linical medicine led the way. On the basis of his own bservations and those of former medical writers Lanceeaux,[52] in 1877, assumed that the so-called meager iabetes is connected with a diseased condition of the ancreas. The same view was taken subsequently by ome other clinical writers. In 1889 von Mering and inkowski[53] published their discovery that the complete emoval of the pancreas in dogs leads to a most striking evelopment of diabetes. The facts were soon worked ut at great length by Minkowski[54] and were confirmed y numerous writers. The main facts are as follows: omplete removal of the pancreas leads to a fatal glycouria in all animals except fowls, in which it leads only o a hyperglycemia.[55] Ligation of the pancreatic duct oes not produce diabetes. The diabetes is completely revented when one-fifth of the pancreas is left behind, o matter where this remnant is placed, provided it preerves its vascular connections with the body. Extracts f pancreas are of no avail when the pancreas is comletely removed. There is no doubt that the control of he carbohydrate metabolism in the body by the pancreas s accomplished not by its external secretion, but by an nternal secretion which is confined to the pancreatic land and is thus specific. Whether this latter secretion s produced by the same cells which provide the external ecretion or by a different set of pancreatic cells, for nstance, the groups of cells which are known as the slands of Langerhans, is a problem which is still within he stage of theories. It was a great discovery—a suden flash of light in that dark labyrinth of physiology nd pathology of carbohydrate metabolism. It led to umerous investigations and to the unravelling of a reat amount of important detail, which, of course, we hall not attempt to discuss here. I wish only to add he remark that this great work was carried out and is eing carried on essentially by modern clinicians well ersed in experimental methods.

### NTERNAL SECRETION IN THE ORGANS OF GENERATION

The well-known interdependence of the various organs f generation, which in the past was generally ascribed to he regulation by a nervous mechanism, is now recogized as being essentially a chemical coordination manged by the internal secretions of these organs. Instances f such chemical coordination are: the dependence of the econdary sexual characters on internal secretion of the esticles[56] and ovaries;[57] the dependence of the growth of he uterine mucous membrane in pregnancy on the interal secretion of the ovary and the corpus luteum;[58] the evelopment of the mammary glands in pregnancy under onditions in which the activity of the nervous system is xcluded; for instance, when the ovary is transplanted n the peritoneum or at the base of the ear,[59] or after the emoval of the spinal cord.[60] Starling and Lane-Clayon[61] succeeded in producing the development of mamary tissue in virgin rabbits by injections of extracts made of fetal tissue. The fetus while in the uterus transmits to the maternal body a substance which accomplishes two purposes: it stimulates the growth of the mammary glands and prevents the cells of these glands from resuming their specific secretion. With the removal of the fetus from the body at a period when the glands reached a certain definite stage, the glandular cells begin to secrete milk. This means that the mission of the internal secretion might sometimes consist in the inhibition of a certain function.

### SECRETIN

By the discovery of secretin[62] a new type of internal secretion came to light. Through the work of Pawlow[63] it became known that the presence of hydrochloric acid in the duodenum causes a greater flow of pancreatic secretion. It was presumed that the acid produced this effect by stimulation of peripheral nerves in the duodenum and the increased pancreatic secretion was simply a nervous reflex. Bayliss and Starling, however, discovered that an extract made of the duodenal mucosa under addition of hydrochloric acid causes an increase in the flow of pancreatic juice. This extract the authors named secretin. Boiling the extract does not destroy its effectiveness. Bayliss and Starling assume that under normal conditions after the entrance of the hydrochloric acid into the duodenum a similar extract is prepared within the epithelial cells. This extract is normally given up to the circulation which carries it to the pancreas and causes the external secretion of that gland. These authors believe that secretin is the only inducing cause of pancreatic secretion. Other physiologists, however, believe that the secretion of the pancreas is also under the control of the nervous system.

It seems to me that there are well-established clinical facts which speak definitely against the sole control of the pancreatic secretion by secretin. In cases of achylia gastrica no acid is secreted within the stomach and none, therefore, reaches the duodenum; consequently no secretin can be formed. Nevertheless the digestion of various foodstuffs occurs in these patients in a practically normal way within the intestines, which, of course, would be impossible if pancreatic secretion depends exclusively on stimulation by secretin.

While secretin is thus a useful factor in the animal mechanism, its presence is not indispensable for the life and health of the animal. It may be mentioned that secretin has, in common with the extracts of the thyroids, adrenals and hypophysis, the property of not being destroyed by digestion or by heating (when not prolonged).

It is stated by Edkins[64] that also the cells of the mucosa of the pyloric part of the stomach manufacture a secretin (gastrin) which stands in close relation to the secretion of the gastric juice.

Besides the above mentioned results there are many interesting investigations which deal with the mutual relations of these various internal secretions, for instance, the relation of the hypophysis to that of the thyroids or to that of the sexual functions, or the mutual relations of the internal secretions of the pancreas, adrenals and thyroids, and many more problems. All these investigations which we cannot discuss here open up new fields and are full of promise of scientific and practical results.

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52. Lancereaux: Bull. de l'Acad. de méd., Paris, 1877.
53. Von Mering und Minkowski: Arch. f. exper. Path. and Ther., xvii.
54. Minkowski: Arch. f. exper. Path. and Ther., xxxi.
55. Kausch: Arch. f. exper. Path. and Ther., xxxvii.
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58. Fraenckel: Arch. f. Gyn., 1903, lxviii.
59. Ribbert: Arch. f. Entwcklngsmechn., 1898.
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61. Lane-Claypon and Starling: Proc. Roy. Soc., London, 1905, xxvii.
62. Bayliss and Starling: Jour. Physiol., 1902, xxviii.
63. Pawlow: Die Arbeit der Verdauungsdrüsen, 1898.
64. Edkins: Jour. Physiol, xxxiv.

### DISTINCTION BETWEEN INTERNAL SECRETION AND WASTE PRODUCTS

The internal secretions with which we have dealt so far have in common a few important characteristics which ought not to be lost sight of. In the first place, all these secretions are traced to organs which are provided with definite secretory elements. In the second place, there are good reasons for assuming that in each of these organs the respective secretions are the main products of the specific affinity of the secretory elements and not by-products (waste) secondary to another, chief activity of these elements. Furthermore, each secretion is specific for each organ. For instance, antitetanic activity is exercised only or essentially by the parathyroids, and glycolysis only or essentially by the pancreas.

However, the term internal secretions, as it was introduced by Brown-Séquard in 1891[65] and as it is now frequently used, is meant to cover also a variety of products which have in common with the before mentioned secretions only the fact that they are carried away from the place of their production through the blood or lymph capillaries and not by special ducts. It is true that the waste products of the testicles, of the kidneys, of muscles, and of other organs and tissues, which are thus included under the term of internal secretion, have, of course, to get first into the circulation before they can be eliminated from the body. And it is further true that, since they have to linger a little while within the organism before they can be completely eliminated, the fluids and tissues of the animal body become somewhat adapted to them and often form definite reactions to protect the body against their deleterious influence. But while by the presence of such reactive mechanisms the impression is created that these waste substances are integral parts of the living organism, the fact should not be lost sight of that they are poisons, harmful to the body, and that the mechanism of the body with regard to them is arranged to defend it against them, to neutralize their poisonous effects and to hasten their removal from the body. What logical and practical advantage can there be in the attempt to class these waste products together with the internal secretions with which we have dealt before? It is probable that the very aim of some of these secretions is to protect the body against some of these waste products.

Let us take $CO_2$, a waste product of the importance of which recently a great deal has been said and written. When muscles are contracting $CO_2$ is formed. This gas, however, is not secreted by the muscle cell and its production is not the functional object of the muscle fiber; it is here only a secondary, a waste product. This gas is produced also by the activity of any other cells, for instance, in the secretory activities of the glands. It is not secreted by them, either, and its production is not the function of the gland cell; it is here also merely a waste product. Its production is, therefore, not confined to any specific cell, tissue or organ. In the assumption of Bohr that $CO_2$ is secreted by the epithelial cells of the pulmonary alveoli, the term secreted is simply misapplied; it is meant that there is a vital action in the removal of the gas. A cell secretes only what is new; the epithelia of the alveoli do not create $CO_2$; they only hasten its removal by some vital action. That these epithelia, as well as the endothelia of the capillaries, are provided with such vital power demonstrates that the organism is provided with special mechanisms for the speedy, infallible removal of that gas, the most deleterious waste product. Now a great deal of stress has been laid on the theory or fact that the respiratory center is greatly stimulated by $CO_2$. What does this specific irritability of the respiratory center signify? Again, nothing else but that the body protects itself by making the respiratory center so sensitive and so reactive against this dangerous waste product that any surplus of it automatically sets going a well-working mechanism for its rapid elimination. That the animal organism is provided with sensitive mechanisms for the effective removal of a substance can surely not be taken as an evidence of the necessity and importance of this substance to the life and economy of that organism. We know now that the animal organism is provided with numerous effective defenses when invaded by bacteria or other foreign injurious substances. Will any one claim that the existence of these well-organized means of defense within the body is a proof that these bacteria or deleterious substances belong to the economy of the animal body? The animal possesses, on one hand, a variety of organs to provide it with certain specific products (secretions) to maintain its life, and, on the other, it possesses various other mechanisms for the purpose of maintaining life by the effective removal of other products? Can the contrast between the two kinds of products be greater? I cannot see that any progress can come from a generalization which tries to unite such heterogeneous products under one head. It is only capable of obscuring the issue. At any rate I would strongly advocate confining the term internal secretion to specific secretions of organs which are provided with definite secretory elements.

### SUMMARY

Let us now summarize the main facts of importance we have learned in the recent experimental studies connected with the problem of internal secretion.

1. It became established that the thyroids, suprarenal capsules and hypophysis are vital organs, the removal of which means ruin to the animal organism. Only three decades ago they were considered as useless remains.

2. Little bits of definite tissue, the parathyroids, were recognized as vital organs, the removal of which is fatal to the animal. Their very existence was completely unknown thirty years ago.

3. New diseases were recognized in connection with the impairment of these organs: myxedema, acromegaly, etc.

4. The real nature of cretinism was recognized.

5. Great theoretical and practical lessons were learned with regard to extracts prepared from these ductless glands; the results are of considerable theoretical and practical importance. We need only refer to the striking effect of the thyroid extract in the treatment of natural and artificial (surgical) myxedema and cretinism, and to the great usefulness of adrenalin in hemostasis, or in sthenic conditions. Valuable practical therapeutic results were recently obtained also from the extract of the hypophysis.[66] There is no doubt that even from a purely therapeutic point of view the lessons learned in this short period of three decades by the methods of experimental medicine compare favorably with all the lessons learned in therapeutics by the empirical method for many past centuries.

6. It was discovered that organs with a definite external secretion may exert also another function by means of internal secretion. Especially important was the discovery that the removal of the pancreas leads to diabetes. In the innumerable observations dealing with the exas-

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[65] Brown-Séquard: Arch. de physiol. norm. et path., 1891.

[66] Bell, W. Blair: Brit. Med. Jour., 1909, ii.

erating problem of diabetes this discovery is an mmense step forward, although the goal is not yet in ight.

7. A new type of correlation by means of internal ecretion was learned, namely, that organs participating n a common complex function are capable of controlling heir coordination by means of an internal secretion: he interrelations of the organs of generation and the elations of the duodenum to the secretion of the panreas (secretin).

8. An important lesson was learned, that the organs hich exert an influence on the mechanism of the body y means of an internal secretion are provided with an bundance of factors of safety; that is, they possess of he specific vital tissues a good deal more than the animal needs for its immediate maintenance.

9. Surgery learned many valuable lessons. In the first lace it learned that radical operations on these organs re invariably ruinous to patients. It learned further, owever, that a favorable result can nevertheless be btained by leaving in the body a comparatively small ascularized fragment of the organ. Surgeons have earned the difficult task in removing goiters of avoiding nterference with the parathyroids and their vascular upply; they are learning how to reach and remove umors of the hidden hypophysis, and they are learning o mend the evils of an unavoidable radical removal of ne of these organs by grafting such an organ or a fragment of it in various safe places in the body.

These results surely mark an immense scientific and ractical progress. Remembering that it was made ithin a brief period of less than three decades, and emembering further the dense ignorance which reigned n this field for centuries, even the most superficial bserver must admit that the progress is truly marvelus. Furthermore, the observer must readily admit that he acquired results are not luxurious contributions to bstract science, but consist of elementary indispensable nowledge in the domain of medicine.

### THE LESSONS TAUGHT

There are many valuable lessons that we may and ught to learn from the history of this chapter of modrn medicine.

In the first place nearly every fact of importance in his chapter, as was pointed out before, was learned by he purely biologic method of research, and experimentaion on animals had the lion's share in it. It is selfvident that none of the fundamental facts could have een discovered by any other method.

Furthermore, the results were achieved largely through he harmonious cooperation of medicine, surgery and xperimental medicine. Experimentalists and physiolosts should remember that it was the observation of the linician Addison which set Brown-Séquard to work xperimentally on the suprarenal capsules; that it was he clinical observations of Oliver which led to the disovery of adrenin by Schaefer and himself; that it was he observations of the clinicians Gull and Ord, on one and, and of the surgeons Kocher and Reverdin, on the ther, which contributed greatly to the establishment of he vital importance of the thyroids; that the clinical bservations of Marie led to the recognition of the hypohysis as a vital organ; that the clinical statements of ancereaux and others were the forerunners of the xperimental discovery of the internal secretion of the ancreas. The physiologists should also remember that t was Schiff and Brown-Séquard who were instrumental n the establishment of the vital importance of the ductless glands, experimenters who did not enjoy the full approval of the official physiologists of their time, and that most of the experimental work on internal secretion was at least first carried on essentially by experimental clinicians and surgeons, and that such eminent physiologists as Munk and Pflüger were and still are fighting the teachings of internal secretions, which can be explained only by the deep-rooted distrust of physiologists of the mechanical school of any results obtained by purely biologic methods.

It deserves to be pointed out that some of the results owe their origin to mere hypothesis. It was the hypothesis of Felix Semon of the similarity of the phenomena in the clinical observations of Ord and the surgical results of Kocher which led to the formation of the committee of the London Clinical Society, and it was the report of this committee which definitely established the importance of the thyroid to life. The hypothesis of Gley of the relations of the parathyroids to the thyroids, though probably incorrect in its original conception, led to the establishment of the fact of the antitetanic function of the parathyroid.

On the other hand, it ought to be evident that neither hypothesis alone, nor even clinical or surgical observation, is capable of uncovering the whole truth. Mere observations and ingenious hypotheses give the stimulus and create the problem; its solution can be hoped for only by animal experimentation. Sometimes surgery initiates also a solution of the problem; but we must keep in mind that when surgery teaches a lesson it has already made an experiment, and often a futile one, on a human being! The history of the radical operation for goiter should be a lesson to all surgeons that progress in surgery must be preceded by animal experimentation; otherwise it may sometimes mean ruin to human life.

The experimental history of the ductless glands teaches us the impressive lesson not to rely on a few experiments, or on experiments made only on one species of animals, or carried out by only one experimenter. The experiments made by Phillipeaux and by Harley on white rats postponed the discovery of the vital importance of the suprarenal capsule for thirty years. Contradictions between experimenters should not discourage further investigation; on the contrary, it often indicates the presence of an important fact not even looked for. Neither should an apparently satisfactory solution prevent us from reinvestigating the problem. When the chapter on the thyroid seemed to come to a beautiful close by the discovery of the curative effect of its extract, it surely appeared to many that the problem was satisfactorily solved. Nevertheless further experimentation disclosed soon the surprising fact that in all the foregoing experiments and observations two organs instead of one was dealt with. Re-examination of seemingly well-established facts is one of the best means to further scientific progress.

For hundreds of years the functions of the ductless glands were shrouded in deep mystery. In less than three decades a flood of light was shed on these and allied functions by animal experiments in harmonious cooperation with medical and surgical observations. Can any person with a sane judgment be in doubt as to the usefulness of modern experimental medicine?

Rockefeller Institute for Medical Research.

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**Polyuria.**—Polyuria should make one suspicious of diabetes, remarks C. W. Bonney, in the *Therapeutic Gazette*, and the urine of those who complain of it should always be examined for sugar.

# SOME MODERN IDEAS OF CANCER *

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There is no doubt that cancer, in various forms, was prevalent even in the day of Hippocrates (470-361 B. C.); and his famous maxim, "What drugs fail to cure, that the iron (or knife) cures; what iron cures not, that the fire cures; but what the fire fails to cure, this must be called incurable," might well be considered as having been applied to certain superficial forms of this disease. Later, Claudius Galen (131-204 A. D.) showed by his writings that he regarded this disease as a result of the accumulation of one or other of the various humors, while Guy de Chauliae (1300 A. D.) declared that cancer was closely allied to leprosy and advocated the use of the thermocautery in the superficial forms.

Such observations, made centuries ago, beginning even with the earliest knowledge of medical problems, must prove to us of the present day that our medical forefathers were keen observers and fully deserving of the respect that their memory inspires. Especially is this true when we stop to consider that our present conceptions of pathology are not based so much on the gross changes observable in the patient as on a knowledge of the changes which occur in the separate tissue cells; observations of such a nature as have been rendered possible only through the discovery and perfection of the microscope. This instrument, essential to our understanding of disease processes, is said to have been discovered by Jansen about the year 1620, but its development for practical use took place no farther back than the beginning of the nineteenth century. Thus we can see that, while the clinical observance of tumors and their malignant characteristics covers a period of possibly two thousand years, yet our conception of their true etiology must be limited to the comparatively short duration of microscopic knowledge. Before this era, it must have been an absolute impossibility for a practicing physician, no matter how skilful, to differentiate absolutely between cancer and some forms of infectious granulomata, such as syphilis and tuberculosis. Even with the present advanced means at our disposal, the question frequently arises, "Is this section one of sarcoma or of a chronic infection?"

Hunter (1728-1793) is credited with being the first man to study the minute structure of tumors. He recognized the similarity between tumors and normal tissues and stated that tumors are the result of a modification of the formative process. However, but little attention was given to his work, for early in the nineteenth century the theory that all tumors were simply forms of chronic inflammation was proposed by Broussais and met with general acceptance.

Early in the eighteenth century Boerhave ascribed the origin of tumors to the lymphatic system, then newly discovered. Cancer, in his opinion, was the result of a degeneration of the lymph.

The perfection of the microscope to a sufficient degree for use in histologic work was not attained until after 1830, and the first important work on cancer from a histologic standpoint was published by Müller in 1838. All modern ideas concerning the etiology of cancer must date from this period, and then, as now, the profession was divided, one portion favoring the microbic theory, the other that of cellular derivation. Of the latter Müller himself was a firm advocate. Müller, however, believed that all tumor cells were derived from a formative fluid that escaped from the blood, an idea probably retained from the Boerhave school, and it was not until 1858 that Virchow applied his famous aphorism, "*Omnis cellula e cellula*," to the etiologic view of tumors.

Every theory, and there have been many, which maintains a truly autogenous basis for the development of new growths, depends on Virchow's maxim as a foundation. From this sprang the doctrine of Cohnheim, which well explains many tumor formations, such as dermoid cysts and enchrondromata of the testicle. Cohnheim believed that during the earlier stages of embryonic growth more cells were produced than needed. In consequence, some cells were left which possessed the power of reproduction to a marked degree. These "rests," as they were termed, might lie dormant for many years, only to spring into active growth when favorable conditions presented, thus forming a strictly embryonic new-growth even in late adult life.

Previous to this Virchow, who was a keen clinician as well as a laboratory observer, had brought forth his mechanical irritation theory. Attention was called to the frequent occurrence of cancer of the lip in pipe smokers, cancer of the scrotum in chimney sweeps, and the association of carcinoma of the gall-bladder with gall-stones, while recently much has been written concerning the relationship between gastric ulcer and cancer of the stomach. Bashford, in the latest report of the Imperial Cancer Research Institute, has further demonstrated the relation of chronic irritation to the production of epithelioma. He calls attention to the fact that in Kashmir, where the natives wear next to the skin of the abdomen an oven containing burning charcoal, carcinoma of the skin at the point of contact is frequent; and that in Ceylon and India many women suffer from carcinoma of the inside of the mouth, which fact he attributes to the chewing of betel nut and the practice of sleeping with the plug in the mouth. There are also frequent examples of the occurrence of cancer following the repeated exposure of the same portion of the body to the influence of the *x*-ray.

It is of interest to note that one form of occupation cancer is at present markedly on the decrease since the occupation itself has almost disappeared, that is the scrotal cancer of chimney-sweeps, which was so common in the seventeenth century. At present scrotal cancer is a rather rare occurrence.

Ribbert, following Cohnheim's lead, proposed a rather original theory as to the etiology of cancer. He had observed that reproduction of epithelial cells always proceeded from those that occupied a basal position, and also that when an epithelioma occurred the sharp boundary between epithelial cells and the underlying connective tissue cells was lost, the epithelial cells infiltrating through the underlying stroma. He stated that the connective tissue loses its normal resisting power, or "tissue tension," as he termed it, thus allowing the epithelial cells to multiply abnormally. This theory, founded on observation, depended chiefly on a mechanical basis and, while ingenious, it is highly improbable and does not conform with the facts of the disease.

Still another attempt to explain the cause of cancer from an autogenous source places the blame on the trophic nerve system. By the followers of this doctrine the idea is set forth that a chronic irritation causes a destruction of the trophic nerve endings at the point of irritation. This, in turn, allows the cells to grow without any governing power, their over proliferation being the result. In every disease condition the cause of which is obscure, the nervous system has ever been accused by some of being the factor responsible. In all conditions, so far, experience teaches that this ever-ready desire to attribute the blame to nerve elements is simply another way of stating that we do not know, and further researches have always shown that the over-zealous nerve theorists were wrong.

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* Read before the Detroit Academy of Medicine, Feb. 8, 1910.

Leaving, for the time being, the theories which attempt to explain the autogenous development of cancer, I will take up the various attempts that have been made to prove that this disease is of parasitic nature. Many of the foremost laborers in the field of cancer have adopted this belief which was prevalent in the premicroscopic age owing to the close resemblance of local cancer lesions to those of certain of the infectious granulomata. As early as 1886 bacteria were detected in cancer by Scheurlin. Since that time almost as many parasites have been reported as there have been investigators along that line. The yeast organisms of San Felice, the protozoa of Thoma and other observers, notably Plimmer, J. Jackson, E. von Leyden and Gaylord, and the Doyen micrococci, have all been thoroughly studied by many capable observers—and found wanting.

Space does not permit of taking up the reasons for and against the parasitic theory in detail, so I will simply summarize the chief arguments that have been advanced in its favor. First, certain cellular degenerations in sheep-pox and smallpox, known infectious diseases, bear a resemblance to similar changes noticed in cancer cells. Next is urged the so-called house infection of cancer, comparable to the cage infection in animal experiments. Again, cancer of the breast in elderly female mice is most generally seen in animals that have been used for breeding purposes. It has also been observed that the continued transplantation of mouse tumors increases the virulence of the tumor. More recently Bashford has shown that the virulence of the tumor depends chiefly on the age of the host. A transplantation will be successful in young mice, but not in old. This also explains to some extent the previously claimed immunity of some mice to cancer inoculation, which fact was urged as favoring the parasitic theory. The transformation from one variety of tumor to another in animal experiments has also been advanced in favor of this idea. However, the transformation noted is invariably from a carcinoma to a sarcoma, a fact that always leaves a suspicion as to whether the second tumor is really of malignant character.

Other facts have been urged in favor of the infectiousness of the process, notably the observations of Perthes that treatment of warts by the $x$-ray removes the stimulus to excessive epithelial proliferation, resulting in normal epithelium; but none of these observations is in reality conclusive. Certainly all the arguments so far mentioned could be explained equally as well, if not better, by means of the autogenous belief. A similarity between the rapidly proliferating and partially degenerated epithelial cells of cancer and those of known infectious lesions signifies no connection between the causative factors of the changes. It would be impossible to state whether the vacuole in a single vacuolated cell was caused by the application of heat, a bacterial invasion, or a simple lessening of fluid content due to too rapid division. As to contact tumors and direct infection, one could readily conceive such to be possible, even if the cell itself is the active parasite. However, surgeons have been removing cancers since the time of Hippocrates, and as yet no case of infection from such a source has ever been observed.

Observations of pathologic changes caused by parasitical invasions teach us that the first change is always one of local tissue destruction. As a result of this, other cells must multiply in order to compensate for the loss sustained. This process of repair calls into action not only the cells at the point of infection, but certain elements of the vascular system as well, chiefly the leucocytes and to a lesser degree the red blood corpuscles. The percentage of vascular cells brought into action depends both on the nature and virulence of the invading organism, and blood examinations have taught us that the total number of such cells may be greatly increased in many instances. Shall we lay the cause of this increase to a mere mechanical or nerve theory, or shall we adopt the more plausible theories that have been evolved since the epoch-making work of Ehrlich and state that it is due to a definite chemical activity? But to return to the original subject: The local changes following any infection or injury, whether chemical or physical, are always primarily destructive in nature.

Is such the case in the early stages of cancer? I believe that every one will agree that the first positive sign of epithelioma, which we will take as an example, is a loss of the distinct limiting border between the epithelial cells and the connective tissue beneath. In other words, when the pathologist tells us, "This may or may not be cancer, it is suspicious," the section that he has examined shows in no area cellular destruction of any degree. On the contrary, it shows simply an active increase in the number of cells in that locality, some of which are in the stages of reproduction and piled up thickly on each other, with a probable loss of definition of the limiting membrane. In other words, infiltration is beginning. In none of these early pictures is there the slightest evidence of vascular invasion or cellular destruction.

Again, I believe that it is absolutely inconceivable to the majority of pathologists that any outside infection is capable of causing an epithelial cell to reproduce itself within the liver, lung or brain, or even in a lymph gland. Lately several cases have been reported of malignant uterine leiomyomata. How could a parasite cause a muscle cell to invade a lymph gland and reproduce itself therein until the entire structure of the gland is replaced by muscle cells alone? The advocates of the parasitical theory would have us believe that this is just what happens. The invading infection causes the cell invaded to multiply, regardless of outside conditions. As stated above, however, such a procedure would be contrary to all pathologic observations, since the active process in parasitic infection is always one of primary cellular destruction.

In order to explain satisfactorily the causation of cancer, I believe that we must first solve the riddle of life. What is it that causes any cell to divide and multiply? In the instance of the simple amœba we know that this cell may reproduce itself simply by the chemical reaction which occurs between the cell and the surrounding media. Outside influences, either chemical or mechanical, may hasten or retard such division—but the capability of division is inherent to the cell itself. In the case cited, such a division must be the result of chemical changes within the cell—no other method of explanation would be satisfactory. With regard to the cells of the human body, we can also conceive that each cell has within itself the power of reproduction. This power is called into action continually because of the changes normally occurring within the human body. Thus the epithelial cells of the skin are continually being cast off and again replaced by those of the deeper layers beneath. The same thing is true of the cells that compose every tissue of the body. Some have highly specialized functions and their chemical content is found to differ widely, but in all the power of reproduction is present to a greater or less degree. A comparative study teaches that this power of the cell is inherent in the cell and is not dependent on any special nervous influence.

When we attempt to compare the relative frequency of various forms of neoplastic growth we come readily to the conclusion that practically all forms of malignant disease are dependent on cells that possess this reproductive power in the greatest degree. This is true not only of the tumor formations which arise from the extremely productive embryonic cells, but also of those which occur in late life and arise from apparently normal tissue. Thus, the cells which compose the rapidly growing sarcoma in the child of tender years and those which form the lip cancer in the man of sixty have this property in common—active reproduction. Outside influences may stimulate this property to a marked degree, especially if the irritation be so slight as to cause stimulation and not destruction of the cell, but the power of reproduction belongs to the cell itself.

If we consider that every cell has within itself the power of multiplication, we next ask, Why do not these cells keep dividing and multiplying continually? Why is it that reproduction and destruction continue in just such a proportion that the balance is always correct? This under normal conditions must be a property inherent to the tissues also, and it is hardly conceivable to my mind that such depends to any great extent on nerve influence alone. Each cell cannot be governed by a nerve ending which controls this special function of that cell. Such cannot be the case in the lowest forms of life where there is no nervous system to control. There it must be some property inherent to the cell itself. In the case of the highly differentiated liver cell, it is due to the chemical nature of the cell that it is able to make its specialized product, bile. The amount produced may be controlled, to some extent, by nerve stimuli, but the ability to produce is possessed by the cell itself and is not dependent on any outside influence. Constant exercise of the specialized function of the liver cell results in the death of the cell; consequently there must be periods of lessened function on the part of many cells, during which time like cellular elements are undergoing the process of reproduction in order to compensate for the loss of elements destroyed. This process of actual reproduction, as stated before, varies with the need, and is certainly dependent to some extent on outside influence. In the lower forms of life, however, it is a property inherent in the cell; hence it would not be totally wrong to assume that each cell possesses a definite chemical ferment which controls its power of division and reproduction. As this power of cellular elements is not active at all times, it might not be amiss to proceed a step farther and state that the reproductive substance is normally stored within the cell as a zymogen, which in turn is changed to an active ferment when more cells are demanded. This demand might depend on chemical or mechanical irritation from outside sources to a certain extent. In the case of cancer, clinical observation has shown that the probability is that mechanical irritation is the *a priori* factor in bringing around the activity of this ferment—especially a low grade of irritation which does not produce cellular death, but instead keeps the specific reproductive ferment constantly in an active state. In other words, we might imagine that when one cell forms two daughter cells, under normal conditions, the ferment is present in the new elements as a zymogen; but in the case of malignant disease there is no inactive stage. Instead of pre-enzyme there is always the active ferment so that this predominates, and the total function of the cell is now one of rapid reproduction only. Thus the cell has acquired as its principal constituent the ferment of active reproduction, its whole nature is changed both physically and chemically, and it is a true autogenous parasite.

While it must be admitted that the above statements are mostly theoretical, yet clinical observation and modern research have demonstrated that chemical ratios are different in cancer individuals. First we have the work of Crile, which has been corroborated, in part at least, by many others, that shows the blood of cancer patients to be capable of causing hemolysis of normal red blood cells. This surely must be the result of an added chemical ferment to the blood of individuals suffering from malignant disease.

The recent works of V. C. Vaughan concerning the chemistry of the bacterial cell tend to prove that in bacterial infections, especially of the lytic type, a ferment is formed which is capable of destroying the bacterial cell through the injection of the specific "residue" of that bacterial cell within the human body. With this in mind, I have attempted likewise to induce the formation of a ferment within the human body which is capable of destroying the cancer cell through injections of its non-toxic residue into the body from which the cancer was obtained. Examples of the formation of such a substance within the host through normal circumstances might explain the few cases of apparent self-cure of cancer which have been observed; some of which cannot be denied. Whether the malignant process arises from one single cell *per se* or from several cells in the same locality has been a matter of some discussion. In my opinion, one single cell is in all probability the first to obtain this new property and all others are direct derivatives of this one cell.

The plea for a trial of this method does not diminish to any degree the necessity for radical operation. It is undoubtedly true that early and radical operation saves the lives of many sufferers from cancer, and prolongs the lives of many others; but I firmly believe that, even with the most radical measures, the total percentage of absolute recoveries will never greatly exceed the 30 to 50 per cent. that some surgeons report now. The few cells that have penetrated beyond all reach of the surgeon's knife will continue to multiply and grow. I have seen secondary melanotic sarcoma of the liver, after total enucleation of the eye twenty years previous, as well as secondary axillary involvement by a breast cancer before the mammary cancer itself could be palpated. The last instance could well be considered as inoperable with glands the size of walnuts in the axilla and attached to the vessels. My attempt, therefore, has been to establish the ferment which destroys the cancer cell in subjects who can well be considered beyond surgical relief. The injection of non-toxic residue can do no harm, and no other known method is of any avail.

The preparation of the residue has been repeatedly described by V. C. Vaughan in his many articles concerning the chemistry of the bacterial cell. The Shattuck Lecture of 1906 describes the preparation in detail, and, as the method of preparing "cancer residue" is the same, I will state the essentials briefly: The cancer material is dissected as freely as possible from all surrounding tissues, after which it is ground in a meat grinder. The material is next washed with water, dilute salt solution, alcohol, and, lastly, ether. This process removes salts, fats, wax, several proteid bodies, and traces of carbohydrates. The remaining substance is then heated in a flask with a reflux condenser with from 15 to 20 times its weight of a 2 per cent. solution of sodium hydroxid in absolute alcohol, and by this means it is split into a toxic and a non-toxic group. The toxic portion is soluble in the alcohol, the non-toxic is insoluble, and it is with this portion we have to deal.

The first work with preparations of this nature was done in September, 1907, so that the period of trial is of too short duration to make a report of any value, except in the case of death of the patient or treatment of a patient for recurrence after operation. Consequently, in the following brief case reports I will use only cases belonging to these groups. Other patients, after radical operation, have been given injections of the residue, either autogenous or from a like growth, with the hope that its early use might cause the few carcinoma cells left in the body to be destroyed. However, a period of at least five years should elapse in every case of such nature before any conclusions can be drawn, and I will omit those cases from this report.

Case I.—Mrs. S. (patient of Dr. Boise of Grand Rapids) was first operated on in March, 1897. At this time both breasts were amputated, one of which proved to be cancerous. In January, 1901, the glands of the axilla were removed. Other operations were performed in December, 1901, and December, 1902, the exact nature of which I have been unable to ascertain. After the last operation the *x*-ray was used for one year, since which time its use has been intermittent. In January, 1908, Dr. V. C. Vaughan of Ann Arbor, was called in consultation. The patient at that time showed active recurrence. Several large glands were palpable in the axilla. The arm was swollen and edematous and there was local recurrence in the wound. Cancer residue from an adenocarcinoma of the breast, already prepared, was sent to Dr. Boise with instructions that injections should be given every ten days. The dosage was 1 c.c. of a 0.5 per cent. solution. Injections were given for 8 months. A letter from Dr. Boise, dated Sept. 2, 1908, states that the patient is much better and no nodules can be felt. Another letter, dated Dec. 18, 1908, states: "Mrs. S. is feeling well, looking well and doing well. The small nodules in the skin have disappeared. The arm is no more swollen, but the ulcer in the center of the scar remains about the same; it certainly is no larger and I think that it is a little smaller. This is probably an *x*-ray burn aggravated by the tension on the scar. Mrs. S. has not used the *x*-ray since July 1." In answer to a request for information concerning the patient that Dr. V. C. Vaughan made of Dr. Boise recently, he wrote, Feb. 7, 1910: "At present Mrs. S. is much as you saw her—intense capillary injection due to *x*-rays—cicatricial tension impairing usefulness of arm—two ulcers (due to *x*-ray?), not (apparently) malignant—a valvular lesion of the heart—great difficulty of breathing on exertion, but no edema or other signs of cardiac failure, and no signs of active malignancy."

Case 2.—Mr. M. (patient of Dr. Ballin) was operated on Feb. 20, 1909. Exploration revealed a large mass the size of a child's head which involved the liver, gall-bladder and hepatic flexure of the colon. The lymph glands were everywhere enlarged and pearly white. No microscopic examination was made. The clinical diagnosis was carcinoma and the abdomen was closed. The patient received weekly injections of cancer residue prepared from a previous breast cancer. The dosage was 1 c.c. of a 0.5 per cent. solution. The mass became slightly smaller, but no other changes were observed. The patient died on April 30, 1909, from starvation. The most noticeable fact during the course of his illness was that he complained of no pain after the beginning of the injection treatment.

Case 3.—I operated on Mr. H. P. (referred by Dr. Gleason) for cancer of the lower lip, June 23, 1909. The tumor was excised and both submaxillary fossæ were stripped of their lymphatic and submaxillary glands. Microscopic examination showed epithelioma of the lip. Epithelial cells were also found in both the lymphatics and submaxillary glands. This patient failed to return to the office until forced to do so through a glandular recurrence in September. He then entered Harper Hospital, where a neck dissection was again attempted. The cancerous tissue was found to have infiltrated into the muscular structures, encroaching on the larynx and tongue, and also involving the mandibular periosteum. The primary tumor was then split up, together with the submaxillary glands. The amount obtained was so small that it was deemed best to prepare a 0.25 per cent. solution. This was injected near the tumor site in doses of 1 c.c. Injections were at first made every week, later twice a week, and toward the last every other day. The patient died November 28, 1909, from starvation, owing to the fact that he was unable to take nourishment of any kind by mouth during the last month of his illness. Postmortem examination of the neck showed that the entire right side of the tongue and surrounding tissues were composed of infiltrated cancer cells. A fairly large abscess was found between the base of the tongue and the epiglottis. This had drained imperfectly and was, I believe, the chief cause of his inability to swallow. It is of interest to note that when recurrence occurred his pain was severe. *X*-ray treatment was given with the hope of relieving this symptom, but was ineffectual. After the first injection of residue, from his own tumor, pain subsided and was always controlled by this means thereafter.

Case 4.—Mrs. B. (patient of Dr. Ballin) was operated on Oct. 7, 1909, because of cancer of the right breast. The operation was radical; several large glands were removed from the axillary veins and nerves. A residue was prepared from the patient's own tumor. The attending surgeon had advised *x*-ray treatment and these were given until January, 1910. At this time recurrent supraclavicular glands were easily palpable and the patient complained of severe pain. The autogenous residue was then tried, and after the first injection the pain ceased, since then the injections have been repeated twice a week with apparently favorable results.

Case 5.—Mrs. K. (patient of Dr. Ballin) was operated on Feb. 10, 1909, for adenoma of both breasts. The operations consisted of simple removal of the tumors. Appendectomy was performed at the same time. Microscopic examination showed a suspicious piling up of the cells in the tumor from the right breast and the subsequent occurrence of enlarged lymphatics in the same axilla confirmed the diagnosis clinically. Radical removal was performed Oct. 30, 1909, and sections of the glands showed adenocarcinoma. Since Dec. 30, 1909, this patient has received weekly injections of the residue prepared from the tumor in Case 4. The wound is entirely healed, the patient has gained in weight and feels perfectly well.

Case 6.—Mrs. B. (patient of Dr. Ballin) was operated on for cancer of the left breast, Dec. 18, 1909. The glandular involvement was very extensive, involving the axillary and supraclavicular glands. During her residence in the hospital she received 2 injections of 25 minims each of the cancer residue from Case 4. The wound healed well and she is apparently in good health.

Case 7.—Mr. C. (patient of Dr. Ballin) was operated on at Harper Hospital, Feb. 28, 1908, for cancer of the palate. The operation was radical, nevertheless recurrence was observed within six months. *X*-ray treatment was given without apparent effect. In November, 1909, 4 injections were given of residue from Case No. 3, without apparent effect. X-ray treatments were continued until December, 1909, at which time injections of residue from Case No. 8 were begun. These were given at first weekly, and then bi-weekly. Pain apparently is absolutely controlled by the frequency of the injections. The anterior portion of the tumor mass has healed over completely, leaving a healthy looking scar, and that portion of the cancer visible has almost entirely disappeared.

Case 8.—Miss B. (patient of Dr. Ballin) was operated on for epithelioma of the left elbow, March 11, 1908. The malignant growth was completely excised and a large skin flap taken from the abdomen to cover the defect. At the end of ten months recurrence was noticed under the elbow flap. Aug. 2, 1909, the flap was dissected upward and the tumor curetted. Oct. 29, 1909, it again was found necessary to clean out the cancer cells. From the material obtained at this time residue was prepared. The amount was so small that the solution was made 0.25 per cent. X-ray treatment was employed regularly but by December 20 the recurrence had become so painful that curetting was again resorted to. Immediately after this, injections of the split product were begun. Even with the few days intervening between operation and the begining of injections, two rather advanced foci of recurrence could be detected. Injections were made at first weekly, and then every other day. A single suspicious area occurred, followed by total disappearance within two days after injection into the area. This is the only form of treatment being used now, and since its beginning the patient has been entirely free from pain. An interesting specimen was obtained from this case just after commencing the injections. A suspicious area was clipped from the arm twenty-four hours after an injection had been given. The microscopic section showed a superficial layer of normal epithelial cells under which was observed normal connective tissue and fat cells, while under the latter area was a mass of deeply staining necrotic cells, which had lost all form and contour. This represented that portion of the epithelial infiltration which could be reached by the patient's blood supply and in it no definite cell could be found.

In conclusion, I would say that the results so far have been encouraging. The above patients all had definite signs of recurrence at the time of commencing the injections.

Immediately after the first injection of cancer residue the symptom of pain ceases.

While the growth of new tissue in all patients treated has not been entirely stopped, yet it may safely be stated that its rapidity has been lessened.

I have purposely chosen cases of superficial forms of cancer in which recurrence could be seen, so that results could be more accurately and quickly estimated.

Every tumor should be examined microscopically and the patient preferably treated with the residue from his own tumor cells. This method of procedure should be combined with radical surgical removal and instituted as soon thereafter as possible.

A few cases, whether favorable or not, signify but little, but if the majority of surgeons who control large cancer material would give this method a trial definite conclusions could soon be reached.

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# GASTRIC ANALYSIS IN INFANTS*

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Two years ago I commenced a study of the gastric analyses of infants to determine, if possible, secretory abnormalties which might be associated with the vomiting of infants, especially of those rejecting a sour-smelling material.

At that time there was nothing which I could find in the literature at my disposal that gave accurately the gastric analysis of the normal or abnormal infant. It was consequently first necessary to examine material from a so-called normal series, and then to collect sufficient cases of the abnormal or sour-vomiting series to make a report of any value.

Since then Dr. T. Wood Clarke at the Rockefeller Institute in New York, at the suggestion of Dr. L. Emmett Holt, has done some work in this line and worked out elaborately (as is possible in that institution) a series of gastric analyses of infants. His tests were more elaborate than would be possible for the average physician, requiring a well-equipped laboratory. Our tests are those which could easily be made in the laboratory of any physician, and considering their scope are equally accurate.

Dr. H. R. Lohnes, who is associated with me, has made for me one hundred and twenty analyses from sixty-two cases, of which number fourteen cases belong to the sour-vomiting class.

I am pleased that our figures correspond so closely with Dr. Clarke's, although his are expressed in a different way, for both present data which may help form the basis for an average gastric analysis of infants.

We hoped that we might be able to surmise, if nothing more, the secretion abnormalities of butyric acid fermentation, but in this we were disappointed. We have learned, we think, how important a factor hyperacidity is as a causal factor in vomiting.

In our sixty-two cases, in many of which two or more analyses were made, were the fourteen cases of sour-vomiting. Deducting these we present statistics from forty-eight cases, all institution babies, in a condition as nearly normal as institution babies usually are, varying in age up to twelve months. From these we deduce our averages of the gastric analyses and compare them with the averages of the gastric analyses of the fourteen sour-vomiting babies.

## TECHNIC

Our technic was to examine the gastric contents one-half hour after a meal of plain barley-water, and also one-half hour after a proprietary food containing starch, made up without milk.

In making these analyses the Topfer method was used, which, though not absolutely accurate, is sufficiently so for clinical purposes.

Free hydrochloric acid was estimated by using phloroglucin vanillin, and quantitatively by titration with decinormal sodium hydrate solution, using dimethylamido-azobenzol as an indicator.

Total acidity was estimated by using phenolphthalein as an indicator, and combined acidity by alizarin.

## BARLEY WATER IN NORMAL INFANTS

In forty-two of these analyses after barley water we found an average, expressed in degrees, of free hydrochloric acid, 3.61, total hydrochloric, 7.30, total acidity, 11.00. But this average was open to question because five infants nine months of age or over presented a very high degree, the average being free hydrochloric, 14.6, total hydrochloric, 25, total acidity, 26.4.

If these are deducted and only thirty-seven analyses which correspond more or less closely, used to make up the average, we obtain a fairer average, which is, free hydrochloric acid, 2.1, total hydrochloric acid, 5.6, total acidity, 9.

This we accept as the average for our normal series after barley water.

Of this series twenty-one analyses were very similar, eight were, as Clarke designates them, hyperacid, and eight hypoacid, which means somewhat above and below the average.

Of this same normal series two of the hyperacid subjects vomited and one of the hypoacid.

## PROPRIETARY FOOD IN NORMAL INFANTS

Turning to the starchy proprietary food made without milk, which contains more proteids than barley-water, some fat, with sugar and carbohydrates, we find the average of twenty-six analyses to be, free hydrochloric acid, .69, total hydrochloric acid, 11.3, and total acidity, 19.

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* Read before the Academy of Medicine of Buffalo, Feb. 8, 1910.

Like in the barley water series of normal cases, there were four cases with an average very much higher than the other twenty-two cases, the reading being, free hydrochloric acid, 4.25, total hydrochloric acid, 15, and total acidity, 28.25. Deducting these, the twenty-two analyses give the fairer average of, free hydrochloric acid, 0, total hydrochloric acid, 10.5, total acidity, 17.4.

This we accept as our average after food containing, as stated above, some proteids, fat, carbohydrates and sugar.

We learn from these few analyses, that after such a food the total hydrochloric acid and total acidity are twice as high as after barley-water, and that after this same food there is no free hydrochloric, while it is present after barley-water. This shows that in the infant, as in the adult, the stomach responds to the stronger food and secretes more freely.

### RESULTS IN ABNORMAL CASES

We give now for comparison with the so-called normal series the degrees of the sour-vomiting series. In eleven analyses after barley water they were, free hydrochloric acid, 4, total hydrochloric acid, 10.3, and total acidity, 15.8.

This shows that the free hydrochloric acid in the sour-vomiting series was higher than in the normal series after barley-water, in the proportion of four to two and one-tenth, and after the proprietary food one-half to 0.

The total hydrochloric acid in this vomiting series was higher than in the normal series after barley-water, in the proportion of 10.3 to 5.6, virtually 2 to 1. After the proprietary food the total hydrochloric acid corresponds closely in both the sour-vomiting and normal series.

The total acidity in the vomiting series after barley water was 15.8, and after the proprietary food, 18.2, as compared to the normal series of 9 after barley-water and 17.4 after the proprietary food. In other words, there was greater acidity after barley-water in the vomiting series than in the normal, and about the same in the vomiting and normal series after the proprietary food.

These figures point to an excessive acidity, especially of free hydrochloric acid and total hydrochloric acid, as a causal factor in the vomiting series, but do not explain the fatty or butyric acid fermentation.

In opposition, however, to this statement of hyperacidity as an influencing factor, there were three with normal acidity and three with hypoacidity at the time of the examination. It may be that on those days there was not the usual excess, and further analyses should have been made to clear up this point, for they might still belong to the hyperacid class, even though temporarily not hyperacid. Eight who vomited were hyperacid.

When we commenced making our analyses we interrupted the regular milk feedings with one barley-water feeding, but later found it necessary to use barley-water feedings twice consecutively in order that we might be sure that the stomach would be free from milk or milk curds. In those which did contain milk, twenty cases in all, the figures were high, ranging from an average of, free hydrochloric acid, 0, total hydrochloric acid, 15, acidity, 23, to free hydrochloric acid, 0, total hydrochloric acid, 34, total acidity, 44.

The fact that milk with a high acidity was found three and a half hours after the feeding goes to prove that the interval in feeding with milk should be a long one rather than a short one, in order that the stomach may secure rest and freedom from the late acid products of digestion.

In five of our cases the stomach was empty one-half hour after taking the barley-water, and in one after the proprietary food, showing a high state of motility in those five cases.

In deducing our normal average we eliminated five cases of high degree. These five were babies nine months or more of age who were gaining well, averaging eight ounces per week. These high readings did not occur before nine months of age, and seem to indicate an age in infant life when the stomach assumes much greater secretory activity.

With this thought in mind we endeavored to divide the observations into periods of three months each, and deduce the average for each period. In the three periods, up to three months, from three to six months, and six to nine months, in eighteen cases studied we found the average degrees in all about the same, i. e., approximating, free hydrochloric acid, 2.5, total hydrochloric acid, 6, and total acidity, 8.5.

But in the next period, nine to twelve months, the average degrees jumped much higher, showing an average of, free hydrochloric acid, 12.6, total hydrochloric acid, 16, and total acidity, 22.

It has always been thought that the stomach is empty before the administration of the next meal, and when empty it is supposed to be in an alkaline phase. If food is introduced the secretions, hydrochloric acid and rennet, are supposed to be gradually thrown out and the digestive processes to become more and more active. But if food is introduced before the stomach is empty, where we have, as the analyses show, a high acidity, there is quicker coagulation with larger and harder curds, and the period of digestion is continuous. The stomach becomes taxed and a vicious cycle is established. This leads to an irritation which may result in a catarrhal condition with or without vomiting, or at least to the clinical symptoms of distress, which we have so often seen relieved by an alkali and gastric rest.

I wish to express my appreciation of the large amount of excellent work done by Dr. H. R. Lohnes in providing the statistics of this paper, and to Dr. Thomas J. Walsh and Dr. A. J. Colton for their generosity in putting at my disposal the infant ward at St. Mary's Infant Asylum and Maternity Hospital, and to those in charge of that institution for their help.

### CONCLUSIONS

1. The normal infant gastric analysis, shown in degrees, after barley water, is, free hydrochloric acid, 2.1, total hydrochloric acid, 5.6, total acidity, 9.

2. It is the hyperacidity which is one of the common causal factors of the vomiting of infants.

3. Clinical experience corroborates our tests, that longer intervals of milk-feeding are less apt to be followed by sour vomiting.

4. Milk going into a hyperacid stomach forms curds more quickly, they are larger and harder, and hence may produce vomiting.

5. The analyses explain the good results following the exclusion from the dietary for a time of cow's milk, the reason for gastric rest, with or without lavage, and also the chemical antidotal effect of alkalies.

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# VINCENT'S ANGINA DURING QUARANTINE FOR DIPHTHERIA

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Although ulcero-membranous stomatitis, or pharyngitis, also known by the name of fetid ulcerous inflammation of the throat, has been recognized for many years, and although there is still controversy as to whether Vincent was the first to discover the fusiform bacilli and the long spirilla, which, occurring together, are characteristic of this affection, it is certainly due to his observations and writings in the years 1896-1898, that this rather uncommon form of pharyngitis has been brought to general attention, and the obscurity of its etiology and differentiation cleared up; so that at the present time this condition is less frequently confused with true diphtheria than was formerly the case.

Recently I had opportunity to observe a number of cases of the peculiar necrotic ulceration, known as Vincent's angina, in an institution which is constantly receiving children from the worst possible hygienic surroundings. At the time of the outbreak of the small epidemic referred to, no children had been admitted for a period of over a week, as the institution was under quarantine for diphtheria, which had been introduced by a child with chronic nasal discharge, with the result that three patients had been removed to the Municipal Hospital. All of the remaining fifty children were then immunized, and this fact aided in the recognition of the new disease.

The first patient gave a misleading history, and showed no membrane at the time of discovery, and the disease was not recognized as Vincent's angina until the next case with a typical pseudomembrane occurred, two days later, when the peculiarities of the former case, were explained. Smears were then made from Case 1, as well as the latter, but the organisms were not found in the former, probably on account of the vigorous treatment instituted.

A brief history of the nine cases observed is as follows:

On the fifth day following the removal of the last patient with dipththeria to the hospital the matron reported that in the course of the daily examination of the remaining children, J. B., aged 11, had an ulcer in the side of his cheek, which he said had come from biting it while eating. Examination revealed a small irregular-shaped and fairly deep ulcerated spot in the middle of the right cheek, just at the line where the teeth come together. There was no membrane, the base was clean, but there was considerable induration, and a zone of turbid, red swelling surrounded the ulcerated area, which was the size of a small bean.

Externally the cheek appeared somewhat swollen, and the induration could be readily felt. From the general appearance it seemed that the boy's explanation was correct, but there was noticed a very peculiar, sour, fetid odor to the breath, unlike the putrid odor of noma, but somewhat suggesting it. It was also noticed that the gums were rather spongy, and that manipulations in the mouth caused bleeding at the base of the teeth in numerous places. The temperature was normal, there was no sore throat, and the discovery was made by the attendant, as the boy evinced no discomfort and said it only hurt when he chewed.

He was promptly placed in isolation, with the idea of possible noma, and after a thorough cleansing with liquor antisepticus and hydrogen peroxid, the cheek, ulcer, and margins of the gums were swabbed with 50 per cent. argyrol solution every three hours. No extension occurred and apart from the slow healing of the ulcer there was nothing further of interest except the persistence of the musty odor and of the spongy gums for over a week

Four days later the matron reported that at the routin morning inspection two children were found to have sor throats with exudation, but with normal temperatures, and with no complaint of pain, chilliness, or, in fact, of any discomfort whatsoever. Examination revealed in each case a quite extensive involvement of both tonsils, with a whitish cheesy deposit; not the firm yellowish, grayish, or greenish-white, that is generally seen in faucial diphtheria, but a sort of crumbling, soft material of about the consistency of butte and having somewhat the appearance of cottage cheese. Ther was the same fetid odor present that had been noted in th first case, and also the same sponginess and tendency to bleeding of the gums on slight manipulations of the mouth.

The children, however, were bright and seemed entirely comfortable, and as the matron had reported, it was again foun that their temperatures were normal. The diagnosis of Vincent's angina was made tentatively, and the Board of Healt notified by telephone, with the request that an immediate visi by one of their inspectors be made, in view of the fact tha the institution was still under quarantine for the recent outbreak of diphtheria.

Smears were taken from the exudate in both cases, and als from the gums at the bases of the teeth, and the examinatio of the slides was made at the Ayer Clinical Laboratory of th Pennsylvania Hospital, where the typical fusiform bacilli an long spirochetes were found almost to the exclusion of all othe organisms.

The inspector had scarcely more than entered the isolatio room when he remarked, "You can almost make a diagnosis o Vincent's from the smell here," and after the examination o the children he concurred in the diagnosis, stating further tha he had recently been summoned to several cases of suppose diphtheria, which had proved to be Vincent's angina.

The disposition of the cases became the next problem, as a that time there was no provision for such at the Municipal Hospital for contagious diseases, where they could onl be placed in the diphtheria ward to the great detriment of a concerned. The Board of Health solved the problem by havin the patients admitted to the isolation wards of the Philade phia General Hospital, which are kept for emergencies, but a the present time there is ample provision for such conti gencies in the detention buildings of the new Municipal Ho pital for contagious diseases.

The next day another case developed, and two days later fifth, but as all the children affected were promptly remov and still cases occurred, smears were taken from the mout of all the remaining children who showed any sponginess the gums, enlarged tonsils, or any other suspicious portal f infection. Of these children there were six, and in four t results were positive, though there was no macroscopic ev dence of any of the characteristic features of the disease.

In two the organisms were found in smears, taken from t tonsils, and in the other two, from the spongy margins at t base of the teeth. None of these children had any symptom illness, and no fever was present in any of the nine patien seen. Their ages ranged from 3 to 15 years. After t removal of these last children, no further cases occurred.

In searching for the cause of the transmission of t disease after removal of the discovered cases, it appea probable that the infection was conveyed by a tur bler which was kept alongside of a water cooler, to whi the children would go as they felt thirsty and help the selves.

Further comment on this fact appears superflous, u less it would be pertinent to remark that it is quite ea to formulate rules but an altogether different matter have them properly enforced, as everyone connected wi institutions will agree.

Primary Vincent's angina is as a rule a mild disea but occasionally it assumes a virulent type and rare may even be fatal.

Secondary Vincent's following or complicating oth diseases such as scarlatina, diptheria, and especial measles, is, on the contrary, a very dangerous affectic and usually pursues a malignant course terminati fatally. Through the courtesy of Dr. S. S. Woody, chief resident physician of the Philadelphia Hospital for Contagious Diseases, where secondary Vincent's angina is seen in its worst form, the following interesting features of this type are briefly summarized:

> The disease in secondary cases is characterized by but little if any elevation of temperature, but with a rapid, feeble pulse; with profound prostration, with excited nervous system, irritability, wakefulness, tremors, and frequently, in the later stages, with the appearance of the Hippocratic facies, and death in a brief period from toxemia or exhaustion. The odor is characteristic, with salivation and moderate cervical entumefaction, and the spongy, friable, and readily bleeding gums are almost invariably present, in some cases even closely simulating the picture of scurvy. In severe cases, the necrosis proceeds with extraordinary rapidity and the tissues apparently melt away, destroying large areas in an incredibly short time.

The features of interest in this small epidemic were, its extreme mildness, the recent presence of diptheria in the institution, the probable spread of the infection by a mediate object and the fact that characteristic organisms were found in the mouths of some children, whose gums were spongy or bled easily, without the production of either exudation or ulceration.

1701 De Lancey Place.

## MUSCULAR SPASMS DUE TO HEAT IN COOKS ON PULLMAN DINERS

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In none of the articles[1] calling general attention to muscular spasms in individuals whose occupations expose them to intense heat has any mention been made of this condition in professional cooks and chefs. I have recently had my attention called to the fact that it does occur in this class of occupations by a patient whom I examined in the Dispensary of the University of Kansas.

*History.*—The patient was a negro, 64 years of age, who complained of some vague pains in the loins and back. He had noticed also that his urine was red and deposited a heavy sediment. He stated that he had been a professional cook for twelve years, that he had recently been head cook at the General Hospital in Kansas City and had previously worked for some years on Pullman diners in the southwest part of the United States. When questioned as to his past history he stated that he had never been ill in his life, except on some occasions when he got "over-het." Urged to amplify this somewhat, he told me that very often while in an overheated kitchen he had been seized with cramps in the muscles, especially the muscles of the calf and of the abdomen! These were described as hard, tonic contractions and intensely painful; when they occurred he was compelled to go out into a cooler atmosphere and lie down for an hour or two, after which he could resume work. He had found two or three glasses of lemonade the best adjunct to treatment. The condition was familiar to him and to all cooks, at least on Pullman diners, where in the hot weather the temperature in the kitchen sometimes rose to 150 F. He knew very well one man who had been seized with generalized tonic spasms on duty, and who had died in the hospital at the end of his run. The spasms tended to become worse and more frequent with time.

*Examination.*—Little was found on examination of this patient. His temperature was 98.3, his pulse 84. He had a coarse tremor in both hands which was increased on voluntary movement. His reflexes were normal, there was no Babinski, no fibrillary twitchings in any muscles, nor were there any tonic spasms. His pupils reacted to light and distance. His urine was red, clear and acid, with a specific gravity of 1025, contained no albumin nor sugar, but on standing deposited a heavy sediment of urates.

On inquiry I have found that while this condition is well known among Pullman chefs it is not familiar to those who work in the better ventilated kitchens of hotels, restaurants and cafés.

404 Bryant Building.

## EXTRAUTERINE PREGNANCY AT FULL TERM

HARRY GREENBERG, M.D.
MILWAUKEE, WIS.

The following two cases of extrauterine pregnancy at full term are reported because of the comparative infrequency of this condition and because of the erratic course of each case during the operation for its relief.

Case 1.—Mrs. A. S., aged 28, married three years, primipara. Previous history negative.

*History.*—She had had a stormy pregnancy with pains and hemorrhage at various intervals and with no suspicion of the pregnancy being extrauterine. Labor pains developed at the end of the ninth month, and her physician, after spending a whole night at her bedside, finally suspected her true condition and had her removed to a hospital where I was called on to operate.

*Operation.*—The abdomen was opened in the middle line. The uterus was found high up in the abdominal cavity and to the extreme left; it was about twice its normal size. The left uterine appendages were normal; the right appendages could not be distinguished as they were connected with, and formed a part of a large cystic tumor situated behind the uterus and filling the entire abdominal cavity. The tumor was laid open and a living child weighing seven pounds was removed. The placenta came away intact with the child. No hemorrhage of any consequence followed the removal of the placenta nor was it marked at any time during the operation. As several loops of bowel were adherent to the sac of the tumor no attempt was made to separate them and only the free part of the sac was removed. The two uterine and ovarian arteries were ligated to ward off any possibility of secondary hemorrhage and the abdomen was closed without drainage. The woman made an uneventful recovery, the wound healing by primary union.

Case 2.—Mrs. M. R., aged 33, had three children, the youngest two years old. Previous medical and menstrual history was negative. She became pregnant a year ago. Six weeks later, she had severe pain over the right ovarian region and attacks of fainting and vomiting which kept her in bed for fourteen days. These pains and fainting spells continued for three months, after which she felt better. She felt the fetal movements after the fifth month. Her health continued good until the ninth month of her pregnancy when she had severe labor pains, fainting spells and vomiting attacks. Her attending physician pronounced the pains spurious; and she got up; but continued to suffer from periodic attacks of pain. At the eleventh month she entered a local maternity hospital where a physician attempted to "open her womb," as she expressed it, but as no child was forthcoming she was sent home to return at a later date. She then came under my observation twelve months after she became pregnant.

*Operation.*—The abdomen was opened in the middle line. The uterus was found occupying a similar position as in Case 1, but it was not much above normal size. The appendages on the left side were normal. The right ovary was about four times its normal size, flattened, and adherent to the front of the cystic tumor that filled up the abdominal cavity. The right round ligament coursed in the front of the tumor. The right tube and right broad ligament could not be distinguished and they seemed to form a part of and to be connected with the tumor mass. The tumor was opened and a dead child beginning to macerate and weighing nearly ten pounds was removed. At an attempt to remove the placenta a profuse hemorrhage ensued which for a time threatened the life of the patient and was brought under control only after compression of the abdominal aorta and ligation of the uterine and ovarian arteries of both sides. A considerable amount of oozing continued even after that and further attempt at removing the placenta had to be abandoned. The placenta was stitched to the wound in the abdominal wall and a drain inserted. The patient made a good recovery; she was out of bed at the end of the third week and the placenta had entirely drained away by the end of the fifth week.

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[1] Edsall, D. L.: The Journal, li, 1969; Welsh, H. M.: The Journal, lii, 1173; Cameron, W. H.: The Journal, lii, 1483.

The difference found in these two cases during operation, refutes the commonly accepted dictum that the greater liability to hemorrhage under such condition exists with the presence of a living child in the abdomen, and that the degree of danger is lessened in proportion to the length of time that has elapsed after the child's death.

While it must be conceded as true that the placenta is more vascular during the life of the child and consequently is more apt to bleed profusely if its vessels are roughly handled and torn, the same cannot hold true if the placenta can be gently separated from its bed. A great deal more depends on the site of the attachment and the structures to which the placenta is adherent. If it is attached to any large vessel like the inferior mesenteric uterine or ovarian arteries or veins, forcible detachment may cause a tearing of the particular vessel and consequent profuse hemorrhage. This would be even more dangerous in a placenta after the death of the child. In fact the danger would be in exact ratio to the length of time elapsed since the death of the child; for the longer the dead child remains in the abdomen the greater and stronger the adhesions between the placenta and the adjacent structures and the greater force necessary to separate them.

Caswell Building.

# MENSTRUAL DISTURBANCE FOLLOWING ADMINISTRATION OF DIPHTHERIA ANTITOXIN

ELISABETH MacVEEN COLLIER, M.D.
DENVER

On entering my service as interne at the Steele Memorial Hospital for Contagious Diseases I was surprised to learn that the nurses refused to take the periodical immunizing dose of antitoxin. On inquiry I learned that over half of them, on the administration of even 500 units of antitoxin, were troubled with a profuse clotted menstrual flow which amounted in many cases to a hemorrhage.

Since I am unable to find any similar cases in medical literature or any reasonable explanation—three different brands of concentrated antitoxin being used—I am sending this report hoping to bring out the experience and ideas of other physicians.

Case 1.—Nurse, widow, aged 29, had no previous history of menstrual disturbance; flow always free. July 1, she was given 3,000 units antitoxin for the purpose of immunization as she was just entering the hospital. July 5, the menstrual flow began, two days ahead of time. The flow was very profuse and constant, a number of clots about 4 cm. in diameter being passed. The severe flow ceased under bed rest. The entire flow lasted six instead of the usual eight days and was unusually profuse throughout.

Case 2.—Nurse, widow, aged 36, had no previous history of menstrual disturbance. September, 1908, during a rather severe attack of diphtheria she was given 37,000 units of antitoxin. The following menstrual period began three days ahead of time and was very profuse and clotted. For the following eight months the menstrual periods appeared every two or three weeks and were very profuse. In June, 1909, she was given 5,000 units of antitoxin on account of a suspicious throat, before a negative culture report was received. She had ceased menstruating three days previous, six days later the flow appeared, lasting twelve days, being very profuse throughout.

Case 3.—Nurse, single, aged 27, had no previous history of menstrual disturbance; flow always free. She was given 5,000 units of antitoxin on account of a suspicious throat, before a negative culture report was received. The flow appeared the next day, the regular time, and lasted with varying severity for the next twenty-seven days. The following periods were normal. Six months later, she reentered the hospital and was given 500 units for immunization. The previous history was repeated.

Case 4.—Nurse; single, aged 26, during an attack of diphtheria was given 15,000 units of antitoxin. The following three periods appeared about four days early; the flow was profuse and the blood clotted.

Cases 5, 6 and 7 were similar to the above cases, one, however, being in a patient. Patients 1 and 2 were the only ones to have any form of serum reaction.

# A CASE OF PSEUDOPARALYSIS IN INFANTILE SCURVY

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ST. LOUIS

Infantile scurvy is a disease which is mainly the result of improper food, i. e., lack of fresh food and the use of boiled milk and prepared or patent infant foods. The symptoms are as a rule fairly definite, and usually lend themselves to an easy diagnosis. The important symptoms are slow and progressive cachexia, anemia, gastrointestinal disturbances of a subacute and chronic type, profuse sweating about the head and occasionally slight feverish attacks. The appetite is lessened. One of the earliest symptoms is sensitiveness of the bones. As the disease progresses the expression of the face is one of fear. Later, swellings of the legs appear; these are usually of the diaphysis, just above the epiphysis, and are pyriform and symmetrical in shape; the skin over the swelling is more or less tense, but there is no fluctuation. There is usually some tenderness on pressure, but as a rule no especial heat of the affected part. Signs of hemorrhage may appear in the skin. The gums about the teeth are of a livid color and bleed readily.

Frequently, as a result of subperiosteal hemorrhage and severe pains in and about the joint (epiphysea pain), the child is apt to keep the affected joint quiet and to resist any attempt at motion. In fact, as the bones of the limbs may become so sensitive that any pressure on them causes intense pain, a state of pseudoparalysis results. It is this which often first attracts the parents' attention and for which they bring the child to be treated. Occasionally there is a history of an injury which precedes the condition and which may tend further to complicate the diagnosis.

It is this class of infantile scurvy which is of interes to the orthopedic surgeon, on account of the joint condition and the fact that it may be ascribed to some othe cause. The case presented below is one of this class, and the interest is increased on account of the history of a couple of injuries directly preceding the onset of th attack, which at first glance appeared to have a direc influence on the condition. The history of tuberculosi in the mother and in her family might also add a possibility of error.

*History.*—R. C., male, aged 11 months, an only child, was referred to me in August on account of a paralysis in both legs. There was tuberculosis on the mother's side. The mother was thin and delicate; had signs of tuberculosis before the baby was born; had been well since. The baby nursed for three days after birth and was then put on one proprietary food after another until one was found which agreed with it. This has been its exclusive diet except for an occasional cracker.

*Present Illness.*—On May 1 the child hurt its hip while being put into a chair; "the hip was doubled up" (flexed). The child complained for a while of much pain, which gradually got better. Six weeks later the baby fell from a table and hit the right side of its head on a chair; there was a small black and blue spot on the temple. The child apparently improved but was nervous, especially when handled. After this the condition gradually grew worse. The child was pale and had lost weight; occasionally had slight fever, was constantly passing flatus and at the time of examination was very nervous. It was disturbed by the slightest noise or motion.

*Examination.*—The baby presented a sallow, cachectic appearance; was fairly well nourished but seemed apprehensive; had four teeth, cut six at eight months. The gums were of a livid color, spongy, and the mouth painful. The neck and back were normal. There was a suggestion of a rosary; the chest was otherwise normal. There was symmetrical enlargement of both radial epiphyses. The abdomen was tense and flat. There were ecchymotic areas on arms and legs. The hips were held at an angle of 45 degrees flexion and were not moved voluntarily. The hips could be completely extended; abduction was not limited. The motions and pressure along the femora caused pain. The lower tibial epiphyses were enlarged. The child was very sensitive to touch. The urine was very slightly acid, albumin slightest possible trace.

*Treatment and Course of Disease.*—A diagnosis of scurvy was made and the patient was put on a diet of lactone buttermilk, beef-juice, potato and orange-juice. The buttermilk was later changed to raw whole milk. This diet was well borne and the patient showed a steady improvement. Eleven days after the first visit it was noted that the child's condition was greatly improved, its gums practically normal, it moved feet and legs, and had very little pain. The patient was thereafter to be under the care of the family physician. The child was seen six months later. It is fat and rosy; has a good appetite; eats everything; weighs over 25 pounds. It has not been sick since; walks everywhere and is very active; does not complain of any pain. It has twelve normal teeth; the gums are in a healthy condition. The legs are normal.

Metropolitan Building.

# BLOTTING-PAPER MOLD FOR OBTAINING CRAYONS OF CARBONIC-ACID ICE *

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NEW YORK

Pure carbonic-acid gas which has been compressed into a liquid by enormous pressure evaporates so rapidly when liberated that a portion of the liquid freezes and takes the form of snow or ice according to the conditions under which it is collected. Frozen carbonic acid has a temperature of about 85 F. below zero and freezes any animal surface to which it is applied, a certain amount of pressure being required. The effect is one of superficial or deep destruction according to the length of application, thirty seconds usually being a full exposure. Frozen carbonic acid has been successfully used in treating port-wine stains, a type of nevus for which no other treatment is even partially satisfactory. Other lesions for which it is excellent are lupus, warts, condylomata, moles and epitheliomata.

## METHODS PREVIOUSLY IN USE

The originality and simplicity of the method which I am about to describe is best shown by first describing two of the best previous methods.

In Gottheil's method[1] a folded towel or a piece of chamois skin is applied to the vent in such a way as to be in sufficiently close contact with the orifice. He sometimes uses a cylindrical staff or short piece of broomstick to get a proper cavity in the towel, removing it after the first windings of the retaining bandage have been put on. With ordinary rollers this hollow towel or bandage is firmly bandaged to the vent and heavily reinforced. It is well to use plenty of bandage and to wind it tightly around the neck of the vent and top of the cylinder, for on this depends the amount of pressure that can be used without rupture or escape of gas and the hardening of the ice. With the key the gas is then turned on at the tap, slowly at first so as to permit the ice to freeze in the meshes of the container. Clouds of white vapor or fine snow escape; the cloth may rupture and the cylinder top is covered with hoar frost. The gas is then turned on again forcibly a number of times until a sufficiently large and firm mass of ice is obtained. When this is obtained the cloth is icy cold and perfectly hard; the gas is then shut off and the bandage cut away. The ice cylinder and the cloths are frozen together and the bandages are brittle and must be carefully distangled to avoid tearing.

Pusey's method[2] is to collect the snow in a cloth or preferably a chamois skin and subsequently to compress it into a solid mass with the hands protected by a cloth, and to pare into any desired shape with a knife or press it into a tubular mold.

## THE AUTHOR'S BLOTTING-PAPER MOLD

My device consists in a hollow cylinder made by rolling several layers of blotting-paper around a lead-pencil or a glass vial, which is then removed. The blotting-paper must be absorbent all the way through, not sized on one side like so many advertising blotters. One end of the tube thus formed is tightly stoppered. The other end is placed tightly against the nozzle of the liquid carbonic-acid tank and wrapped around with adhesive plaster to make an air-tight joint.

The carbonic acid cylinder employed is a small one, 18 inches long and 4 inches in diameter, and containing 5 pounds of the liquefied gas. It is laid on its side with the lateral nozzle turned downward. The liquid should be allowed to flow out into the porous paper tube. A portion immediately vaporizes and escapes, through the meshes of the paper, producing cold enough to freeze the remainder. The liquid is allowed to flow very slowly, taking perhaps a minute to fill the tube. Turning it on full force would blow the tube off and waste a great deal of the liquid. When the mold is full of ice the liquid will begin to spurt out around the adhesive plaster and the flow should then be turned off. The adhesive plaster being unwrapped, the porous paper cylinder will be found to contain a crayon of carbonic acid resembling very much the crayons used for writing on a blackboard. The blotting-paper may be unwrapped from one end of the crayon so as to expose the latter. Or after waiting a short time the crayon will be found to have lost some of its substance by direct evaporation and to lie loose in the blotting-paper tube. The crayon may be made to protrude as much as desired by holding the tube upside down with something underneath to prevent the crayon falling out altogether. The blotting-paper is flexible enough and a sufficient non-conductor of heat to serve as a handle for the crayon, which must not be touched by the naked hand.

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* Demonstrated at the Meeting of the Dermatological Section, New York Academy of Medicine, April 5, 1910, and at the meeting of the Medical Association of the Greater City of New York, New York Academy of Medicine, March 21, 1910.

[1] Intern. Jour. Surg., January, 1909.

[2] The Journal A. M. A., Aug. 7, 1909, p. 459.

It is not practicable to secure ice crayons with the carbonic-acid cylinder in an upright position, because then only the gas above the surface of the liquid could reach the nozzle and escape. None of the actual liquid would be let out of the tank in this way.

59 West Forty-sixth Street.

## CHILD BORN THROUGH PERINEUM

J. A. RAWLS, M.D.
KENT, WASH.

The case reported by Dr. Petrie in The Journal March 5 reminds me of a similar one I had, Sept. 12, 1882, never before reported.

The patient, a forty-year-old primipara, had been in labor two hours when I arrived. She was a small, spare built, anemic individual, one of the kind Dr. Bartholow described in his lectures in 1875 as "the gelatinous product of albuminous parents." The tissues lacked tonicity. On making an examination I found the perineum bulging, and attempted to support and guide the head under the pubic arch. I felt the perineum give way, and the head was born, the body immediately following. An examination revealed the fact that the child was literally born through the perineum. There was complete laceration of the sphincter ani and the right labium majus torn loose for the lower two-thirds. I was assisted in the repair and after attendance by my partner, Dr. H. E. W. Barnes, now of Santa Ana, Cal. The patient made a complete, though somewhat tedious recovery. The age of the patient, the rapidity of the labor, and the manner of birth were the unusual features of the case.

## *Therapeutics*

### ANGIONEUROSIS

The best therapeutic measures are those that are harmless, and this is especially true when a proper diagnosis precludes the necessity for operative procedure, and even prevents the necessity for a wrong and perhaps harmful régime and for the harmful use of drugs. No more difficult task occurs in medicine than to make a decision as to whether a condition is hysterical or organic, or that it is a vasoneurosis of the skin or perhaps an infection. Nothing will put one so much on his guard against making a wrong diagnosis as will a brief review of what can occur from simple vasomotor ataxia.

It is nearly twenty-five years since M. Allen Starr, of New York, contributed to the fifth volume of Pepper's System of Medicine an elaborate article on vasomotor and trophic neurosis. This was without doubt the most comprehensive discussion of this subject which had been published in the English language up to that time. It is now well-recognized that there is a by no means small group of more or less troublesome and unpleasant conditions which, at their outset at least, are not dependent on tangible pathologic changes, but are always associated with disturbances of the circulation in the part affected. In some of these cases there seems to be an excess of blood—a hyperemia—associated with a dilatation of the peripheral vessels. These are described as angioparalytic. In other cases there appears to be less blood than usual in a part, an anemia due to a narrowing of the peripheral vessels. This condition is termed angiospastic. In still other cases there seems to be at the same time, or at different times in the same individual, a mixture of hyperemia or congestion, and anemia or deficiency of blood, in which both angioparalysis and angiospasm are present. To include all three classes it has been proposed to use the term angioneurosis. The condition on which they depend has been designated vasomotor ataxia. This indicates a disorder of the vasomotor mechanism which regulates the circulation.

Included among, or closely related to, these disturbances of function, which have been called angioneuroses, are a great variety of affections. At one end of the list might perhaps be placed Graves' thyroid disease, commonly known in its classic form as exophthalmic goiter, and which is associated with a paralytic condition of the peripheral circulation, and at the other end Reynaud's disease with its condition of local asphyxia and local or symmetrical gangrene, which is associated with a spastic condition of the peripheral circulation. Urticaria and circumscribed edema seem to be associated with a paralytic condition, lesser degrees of which are indicated by such symptoms as unnatural flushing and sweating. Perhaps the best known example of affections of this kind is migraine, in which in some cases there is a congestion of the head with throbbing vessels and heat and redness of the surface which are believed to indicate a vasomotor paralysis or paresis attended with congestion or hyperemia, while in other cases there is no sensation of pulsation but paleness and coolness of the surface, which are believed to indicate vasomotor spasm, attended with anemia of the brain.

The better known and more easily recognized forms of angioneurosis affect the skin, but equally important and equally worthy of careful study are those affecting the viscera. Dr. S. Solis-Cohen, of Philadelphia, has recently published (*New York Medical Journal,* Feb. 19, 26, and Mar. 5, 1910) an extensive study of this subject based on the histories of 200 cases. Cohen's discussion of the subject is so able and timely that we quote him freely. Affecting the respiratory system, not to include hay fever, which is easily recognized as a respiratory neurosis associated with vasomotor disturbance, are edema of the larynx, certain forms of asthma which may be either angioparalytic or angiospastic, spitting of blood, and in some cases edema of the lungs.

In the digestive system are seen cases characterized by pains in various parts of the abdomen, sometimes even simulating appendicitis and suggesting operation, nausea which is often unaccompanied by vomiting; flatulence with eructations of large quantities of gas; vomiting of blood, not associated with ulcer; serious diarrhea, and sometimes bloody stools and hemorrhoids. Many of these gastrointestinal symptoms may be due to thyroid disturbance. There may be attacks of pain simulating hepatic colic so closely that sometimes the gall-bladder has been operated on, but without disclosing any lesion which rendered an operation necessary.

In the genitourinary system occur nephralgia, hematuria, metrorrhagia and menorrhagia, dysmenorrhea, and ovarian neuralgia, and all due to vasomotor disturbance.

In the vascular system occur abnormal pulsation of the vessels, palpitation of the heart, rapid action of that organ, tachycardia, pseudoangina, and purpuric or ecchymotic spots on the skin.

When the brain is affected there may be attacks of temporary aphasia and even temporary hemiplegia.

Although, at the beginning, these vasomotor disturbances are not associated with organic changes, it is within the range of possibility that such frequently repeated and protracted vascular disturbances might ultimately result in permanent organic change.

While these vasomotor disturbances usually occur independently of the organic lesions which their symptoms might simulate, nevertheless it must not be forgotten that organic changes may be present, which are not directly associated with the symptoms of disordered innervation of the blood vessels. These must not be overlooked or neglected, and treatment directed to the functional trouble alone.

The diagnosis of these so-called visceral angioneuroses is not easy, and it is often very difficult to differentiate these "pseudo conditions" from actual lesions of the organs which may cause the same symptoms.

Often considerable light is thrown on these cases by the family history. It will frequently be found that some members of the family have had disorders of metabolism such as diabetes, gout, rheumatism or arthritis deformans, and many have suffered from various nervous disorders, especially those classed as neuroses, such as migraine, epilepsy, hay fever, asthma, neuralgia and insanity.

The personal history also often presents many suggestive facts which point to the conclusion that the symptoms observed are of functional rather than organic origin. Colic, hives or urticaria, epistaxis and migraine are common in children who in later life become the victims of vasomotor neuroses. Later they may have paroxysmal diarrhea, not infectious or inflammatory in origin, polyuria, glycosuria, hay fever, asthma and hemoptysis.

Cohen says: "It should be remembered that two, three and four attacks of an eruptive fever probably represent angioneurosis storms mistaken for measles or scarlet fever. The scarlatiniform or rubelloid attacks are frequently accompanied with nausea, vomiting, abdominal pain, sometimes albuminuria, not rarely fever; and are probably of toxic excitation." The frequency of eruptions from various drugs, fish, strawberries, etc., and the specific susceptibility of some patients to such irritants is generally recognized, but when the well-known causes are not discovered, the diagnosis of an eruptive fever is often made, though the cause may be a simple intestinal irritant.

Among symptoms frequently observed at various times in these subjects of vasomotor disturbances, are congestions of the skin, which are especially frequent in cold weather; factitious urticaria, a name applied to unusual transient swellings, which may or may not become discolored, produced by slight injuries; the so-called dermography, in which, after drawing a probe over the skin a white or red line persists longer than in normal individuals; alterations in the perspiratory function; and changes in the appearance of the nails, especially zones of different colors and shades.

Cohen says that on examining the eyes of these patients the pupils are usually found dilated, the eyelids are often separated to an unnatural degree, the upper lid especially being elevated so that the sclera is seen above the cornea, on lightly closing the lids there is sometimes tremulousness of the lids.

The thyroid gland is sometimes enlarged, palpitation of the heart is frequent and muscular tremor or trembling, either local or general, is not uncommon.

The etiologic factors concerned in the production of these various conditions and symptoms may be briefly summarized as: hereditary influences, toxic conditions, fatigue, exhaustion, and emotional influences such as worry, shock, unusual sorrow or joy, and disappointment. . As Cohen intimates but does not declare, all these may be due to disturbed thyroid secretion.

The management of these cases, from their nature, must be considered not alone as regards the first or a single interview, but with reference to a continued course of treatment which will result in the restoration, if possible, of normal physiologic action of the entire neurovascular mechanism.

By preference, the treatment of those individuals who have an inherited tendency to angioneurotic disturbances, should commence in early life. and should consist in the enforcement of regular and not shortened hours of sleep; of regular meals of simple, easily digested and nutritious food; regular and abundant, but not too violent exercise out of doors; moderate and systematic study carried on under careful teachers in such a way that worry is eliminated and over-straining of the mind is avoided; self control must be cultivated; and over-stimulation of the emotions must be prevented by the avoidance of late parties and balls, excessive theater-going and the reading of sensuous literature. All, or most of which means, conserve or fend from over-excitation the thyroid gland, especially in girls from 10 to 20 years of age.

When a condition of toxemia is found to be present, the intestines should be cleaned out by a saline laxative, preceded, if preferred, by calomel, the action of the kidneys should be promoted by a saline diuretic, and skin action should be encouraged by a warm bath.

In some cases, especially when restlessness and insomnia are prominent accompanying symptoms, the bromids are useful, another quieter of the thyroid gland. For the same reason, tea and coffee should be prohibited. The glycerophosphates are also valuable sedatives in this condition.

In other cases, especially if numbness and depression of spirits are present, the aromatic spirit of ammonia is of benefit. Also small doses of iodid (0.05 to 0.10 gm., or 1 to 1½ grains) are valuable as stimulant to a sluggish thyroid.

In edema of the larynx and in those cases of asthma in which there is an angioparalytic condition, the application of adrenalin solution by means of an atomizer often affords astonishing relief.

The organic extracts are often useful in these conditions. Cohen says: "Trembling may be of emotional origin. It is in some instances controlled by the administration of thyroid substance; sometimes by calcium."

When there is a tendency to hemorrhages from angioneurotic congestion, the fluidextract of ergot should be prescribed, or one of the purified aseptic preparations should be administered hypodermatically.

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**Cancer.**—This most terrible of human diseases is of great antiquity. For centuries men of learning have devoted much thought to it; every few years a prophet has arisen with a new theory, a theory eagerly studied by all those desirous of solving the mystery, and again and again we are disappointed, and the origin and cure of cancer remain plunged in the darkness of ignorance. Almost every other branch of medicine has advanced, more especially in the last decade, at an astounding rate. Doubts and difficulties have been cleared up, light has illuminated the darkness, many of our most formidable enemies, tuberculosis, typhoid fever, diphtheria, and malaria, to mention only a few, have been so fully brought to light that they have been rendered comparatively harmless, and we begin to realize the possibility of completely routing them, but in spite of persistent, patient work and the endeavors of some of the greatest minds, cancer still continues undaunted, unconquered.—F. M. Sandwith, in *Medical Press and Circular.*

# THE ST. LOUIS SESSION

AMERICAN MEDICAL ASSOCIATION, SIXTY-FIRST ANNUAL SESSION, ST. LOUIS, JUNE 7-10, 1910

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## ST. LOUIS

### MEETING PLACE OF THE SIXTY-FIRST ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION

The 1910 session of the American Medical Association will mark its fourth pilgrimage to St. Louis since its organization. It will, however, be the first meeting of the Association in St. Louis since the reorganization; and instead of a meager few hundred persons who attended the last session here in 1886, the medical profession of St. Louis is preparing to entertain fifteen thousand visitors next June.

To the thousands who will attend the annual convention of this great organization St. Louis smiles a welcome. Lying on the banks of the great gray river, the city stretches her busy limits for a distance of over fifteen miles to the north and the south and from the river westward seven miles. Within this extent she offers many entertaining diversions to the casual visitor and numerous places of interest and instruction to those whose inclinations lead to places made famous in history.

The great Mississippi River has lost that picturesqueness which characterized it in the palmy days of river traffic "befo' de Wah," when Mark Twain piloted the great steamers, and the keen competition between rival boats often brought the people to the river bank to witness the racing monsters fighting for a landing. The center of business activity long ago shifted from the river front to other parts of the city, and the levee is no longer the scene of the busy activity it was aforetime. But the river to-day affords pleasure and diversion to thousands of people, who daily parade the decks of the great excursion steamers as they glide through the smooth waters of the mighty "Father of Waters."

For the information of those who will attend the coming session of the Association, a brief description of the arrangements that have been made for receiving our guests and of some of the places of interest in the city, is appended:

### BUREAU OF INFORMATION

Trains from all directions arrive and depart at the Union station, the largest and handsomest Union station in the country, where the twenty-four great arteries of commerce entering St. Louis converge. The great train shed covers thirty-two tracks and three hundred and twenty trains arrive and depart daily. At the Union Station will be located a Bureau of Information, under the charge of members of the St. Louis Medical Society. Upon arrival at the station guests will be greeted by members of the Bureau of Information and of the Reception Committee, who will guide those unfamiliar with the city to their respective hotels, to the meeting places and to any other points that visitors may desire to reach. A small folder will be handed to every physician on his arrival which will contain simple and definite instructions for making one's way about the city. It is the desire of the committee that members of the Association make themselves known to the physicians at the Bureau of Information, all of whom will wear appropriate badges so that they may be readily approached for any information desired. In addition to this attention by the members of the St. Louis Medical Society, all guards, train-callers and employees at the Union Station will be instructed to give special attention to our guests. Other members of the Reception Committee will be stationed at the hotels and lend their assistance in arranging for the prompt and comfortable housing of the members.

### MEETING PLACES

The Registration Bureau, Post Office, Commercial and Scientific Exhibits will be located at the Coliseum, at the corner of Washington and Jefferson avenues. It is easily accessible from all parts of the city.

The sections will be grouped in suitable halls located on and near Grand avenue, from Pine street to Finney avenue, a distance of about one-half mile.

The President's reception will be held in the First Regiment Armory Building, at the corner of Grand and Manchester avenues.

### THE GUIDE BOOK

The Committee of Arrangements is preparing a Guide Book of St. Louis for free distribution to the members. In this volume, which will contain about 160 pages, will be given an interesting description of the city as a commercial, educational and medical center. It will be a most interesting book for the physician to retain as a souvenir of the meeting. In view of the fact that this Guide Book will contain full information concerning the city and its attractions, this article will be very brief and only suggestive of a few of the entertaining and instructive features that a visit to St. Louis affords at this time.

### ST. LOUIS AS A MEDICAL CENTER

With the exceedingly rapid settlement of the southwestern part of the country, of which this city is the natural commercial metropolis, St. Louis became a center of medical instruction early in its history, and a number of medical colleges sprang into existence and flourished for many years. As the demand for higher educational qualifications of the medical graduate increased a number of the colleges were merged, the course of instruction lengthened, the corps of teachers increased and the scope of the curriculum broadened. This tendency towards higher ideals in medical teaching resulted in the consolidation, in 1899, of the Missouri Medical College and the St. Louis Medical College, the two oldest medical institutions in the West. The St. Louis Medical College had enjoyed university connection since 1891, being the medical department of Washington University, and the merger materially strengthened the medical department of the university. Again, in 1901, the Marion-Sims College of Medicine and the Beaumont Hospital Medical College were consolidated, and two years later university connection was acquired by affiliation with the St. Louis University, thus becoming the medical department of that institution.

The medical department of Washington University is located at 1806 Locust street. It can be reached by the Olive street cars, the Eighteenth street line and any car line on Washington avenue.

The medical department of St. Louis University is at Grand avenue and Caroline street. It is reached by the Grand avenue line and the Compton Heights car.

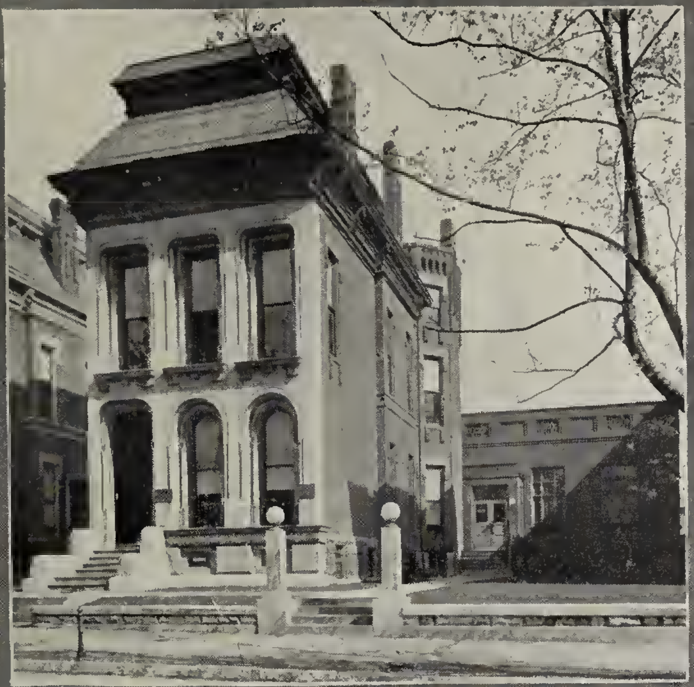
### HOSPITALS

In April of this year, the Municipal Assembly passed an ordinance providing for an entirely new system of managing the eleemosynary institutions of the city, and in future the city charity hospitals will be under the control of a hospital board, the members of which will be appointed by the Mayor. The hospital board will appoint a hospital commissioner who will have charge of the business affairs of all the institutions, under the direction of the hospital board. A visiting staff of physicians, also appointed by the hospital board, will control the medical affairs of the hospitals and all inmates will be under the direct charge of the visiting staff.

### CITY HOSPITAL

The City Hospital is composed of a group of buildings, eight in number at the present time, with three additional buildings now in course of construction. All the buildings are connected by closed corridors except the building for contagious diseases. The medical and surgical buildings are three stories high with an attic floor for observation and detention cases. The operating rooms are in a separate building, and another building houses the bacteriologic and pathologic laboratories. Of the three new buildings now being erected, one will be the administration building and the other two will be used for medical and surgical cases. The administration building will be five stories high and the ward buildings four stories, with operating rooms on the top floor. All buildings are fireproof and built according to the most approved principles of modern hospital construction. The present capacity of the hospital is 505; this will be increased to 900 when the new buildings are complete. During the year ending March 31, 1910, 10,961 patients were admitted.

Fig. 1.—The buildings of the St. Louis Medical Library Association and the St. Louis Medical Society (in the rear). Meeting place of the House of Delegates, 3525 Pine Street.



ST. LOUIS SKIN AND CANCER HOSPITAL

The St. Louis Skin and Cancer Hospital was established in 1906 with funds contributed by a few public-spirited citizens who realized the need of an institution of this character. Its usefulness was quickly appreciated as the large number of patients who applied for treatment fully demonstrated, and the permanency of the institution was then assured through the munificence of Mr. Geo. D. Barnard.

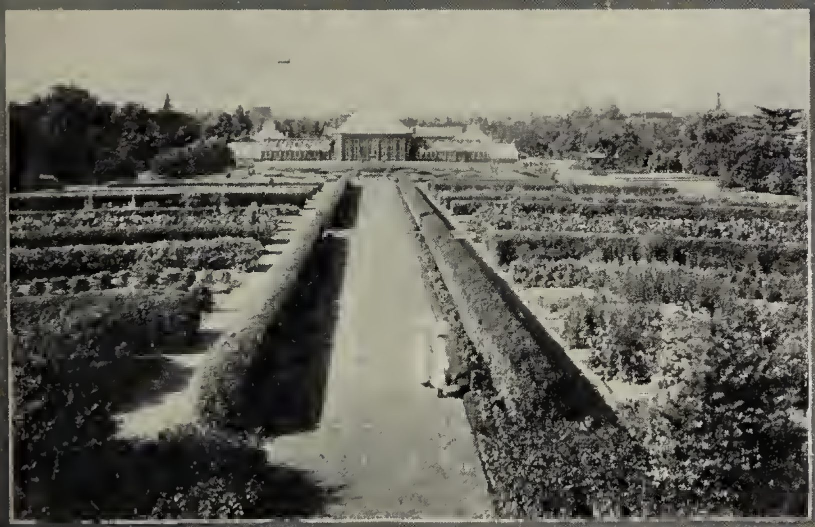


Fig. 2.—A view of Shaw's Garden, Tower Grove Avenue, one of the two most celebrated botanical gardens in the United States. At the time of the meeting the garden will be in full array. Here is to be held one of the special entertainments provided for the ladies, an afternoon lawn fête, with refreshments.

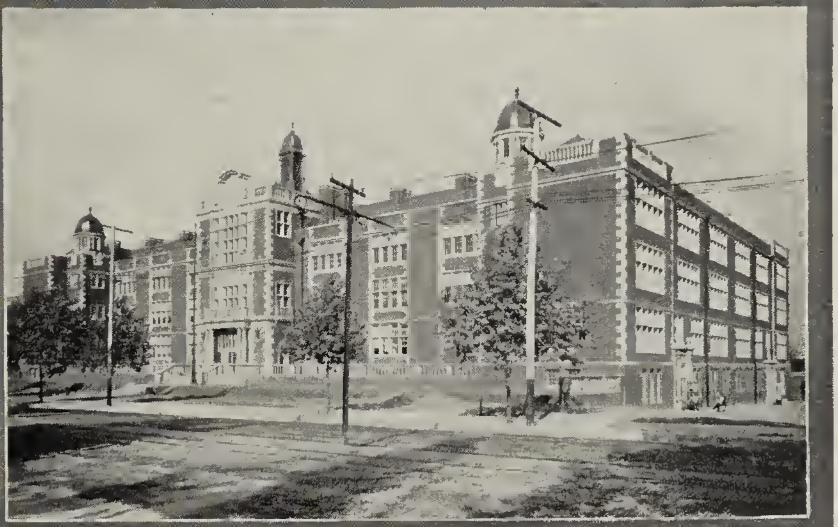


Fig. 3.—Soldan High School (public), one of the largest school buildings in this country, having accommodations for 2,250 pupils.

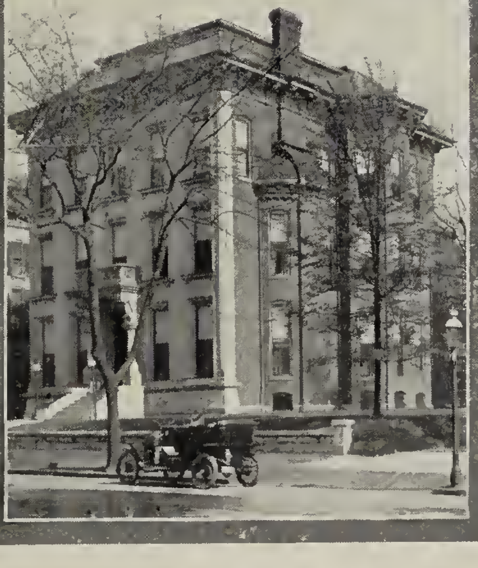


Fig. 4.—The Woman's Club, 3621 Washington Avenue, west of Grand. A reception for the ladies will be held here Tuesday afternoon.

It is wholly charitable, no pay patients being admitted to the hospital or treated in the out-clinic department. In thus limiting the class of diseases to be treated greater opportunities are afforded the medical staff to study the conditions, with the special object of devising more successful methods of treatment than have yet been discovered, particularly as regards the alleviation and cure of cancer. With this special object in view a research department has lately been added to the equipment and an endowment fund is now being raised to perpetuate the usefulness of this department. Dr. Leo Loeb of Philadelphia has accepted the position of director of the research laboratory and will take charge early in the fall. The new four-story building, at Theresa Avenue and Washington Avenue is now under roof; here the facilities for prosecuting the work will be materially increased and a larger number of patients can be cared for. At present the hospital is located at Jefferson and Washington Avenues, opposite the Coliseum.

## AS AN EDUCATIONAL CENTER

### SCHOOL OF MECHANICAL TRADES

St. Louis has always ranked high as an educational center. The first manual training school in America was established here under the direction of Prof. C. M. Woodward of Washington University. Recently the School of Mechanical Trades was founded by Mr. David Ranken, Jr., which he has endowed with over two million dollars.

### ST. LOUIS UNIVERSITY

The St. Louis University is the oldest institution of learning west of the Mississippi River. It was founded in 1818 by the Right Reverend Louis William Dubourg, Bishop of St. Louis, as the St. Louis Academy. Under his direction it grew into the St. Louis College, and, in 1827, the institution was turned over to the Jesuits, who continued the work under the name of the St. Louis University. It has an unbroken record of yearly sessions since its inception, and has been a potent factor in the growth and development of the city. The faculties of the various departments have a teaching corps of 200 professors and assistants. The principal building is located at Grand Avenue and Pine Street. It is reached by the Grand Avenue cars and the Laclede and Olive Street lines.

### WASHINGTON UNIVERSITY

Washington University was founded by the Reverend William G. Eliot in 1853, to whom a charter was issued for conducting the Eliot Seminary. The original charter was issued on Washington's birthday and the first meeting of the corporation occurred on the same anniversary a year later, at which time Dr. Eliot expressed a desire that the name of the institution be changed. Since the charter had been issued on Washington's birthday and the first meeting of the corporation had occurred on the same anniversary, it was decided to change the name to Washington Institute, and several years later this was changed to Washington University. From its earliest beginning, when the teaching was done at night in a building on Sixth street, the institution has grown to large proportions and is now one of the strongest educational institutions in the country. All the departments usually embraced in university work are represented, including the Mary Institute, a school for girls, and the Henry Shaw School of Botany. The main buildings are located in the western outskirts of the city, and can be reached by the Delmar car on Olive Street.

### PLACES OF INTEREST

The Missouri Botanical Garden (Shaw's Garden) is the gift of the late Mr. Henry Shaw, who also gave to the city one of its most beautiful parks—Tower Grove Park. Shaw's Garden is one of the most celebrated botanical gardens in the country. Here the student of plant life finds conditions ideal for study and experimentation in the investigation of vegetable physiology and pathology. The herbarium contains over 600,000 sheets of specimens and the collection of living plants exceeds 10,000 species or varieties. It is permanently endowed with funds supplied by Mr. Shaw. It is a most attractive spot at all seasons of the year because of the large collection of plants under glass; but it is especially enchanting in the growing season when the plants are in full bloom, as they will be during the meeting of the Association. The Garden will be the scene of an entertainment for the ladies on one afternoon during the session.

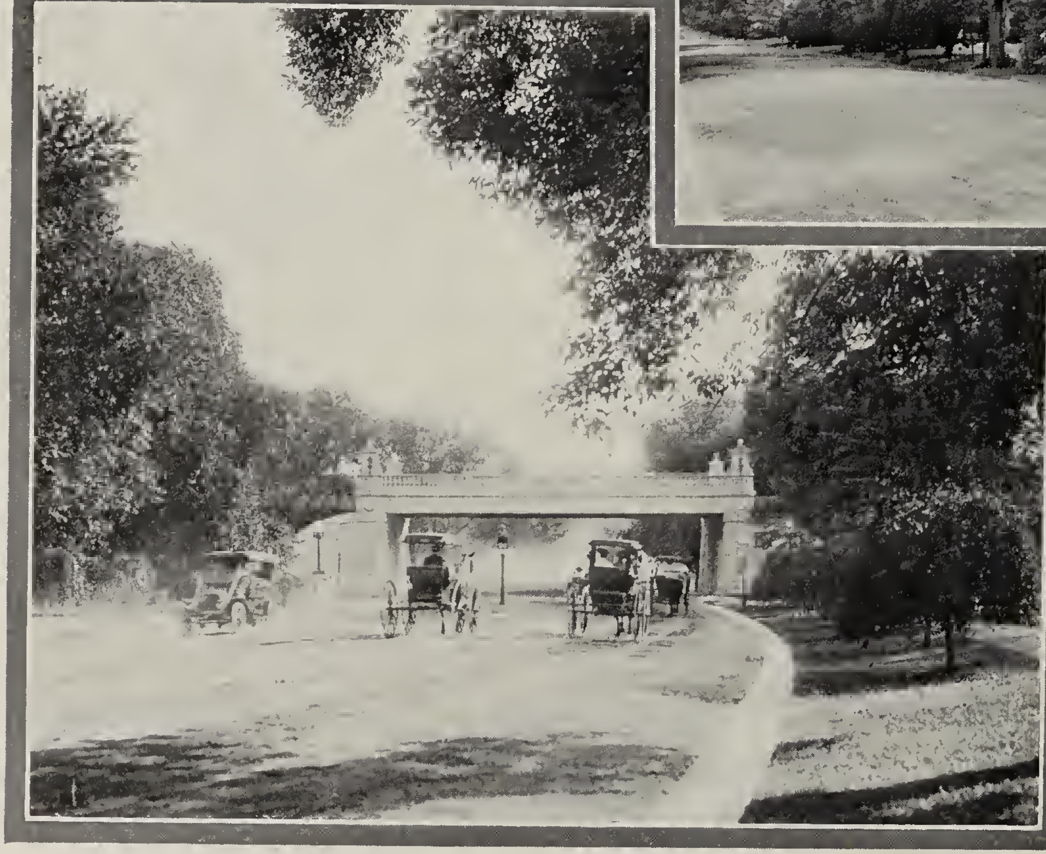


Fig. 5.—Lindell Boulevard entrance to Forest Park.

### ART MUSEUM

The Art Museum is located on Art Hill in Forest Park. In 1909 the city authorized a tax to support a municipal art museum and the St. Louis School of Fine Arts, a department of Washington University, placed its museum collection in the Art Museum, the management of the school and of the Art Museum then being made separate. In the sculpture galleries of the Museum there are examples of the work of different periods of art history from Egyptian art to the time of Michael Angelo, besides a large collection of later works, including a very comprehensive representation of American sculptors. The collection of paintings is large and comprehensive and includes examples of work done in all art centers of the world. The School of Fine Arts gives instructions in all branches of art work, aiming to fit the students not only for painting and sculpture, but as skilled artist-workmen.

### PARKS

St. Louis has many beautiful parks and play-grounds, the most noted of which perhaps is Forest Park, where the World's Fair was located in 1904. It is one of the largest parks in the country, containing over 1,300 acres. Lafayette Park, before the tornado in 1896 swept it almost bare, was considered to be one of the most picturesque parks in the country; it is being rapidly restored to its original beauty. Over 144 acres of ground were purchased recently for parks and play-grounds at a cost of more than $1,393,000.

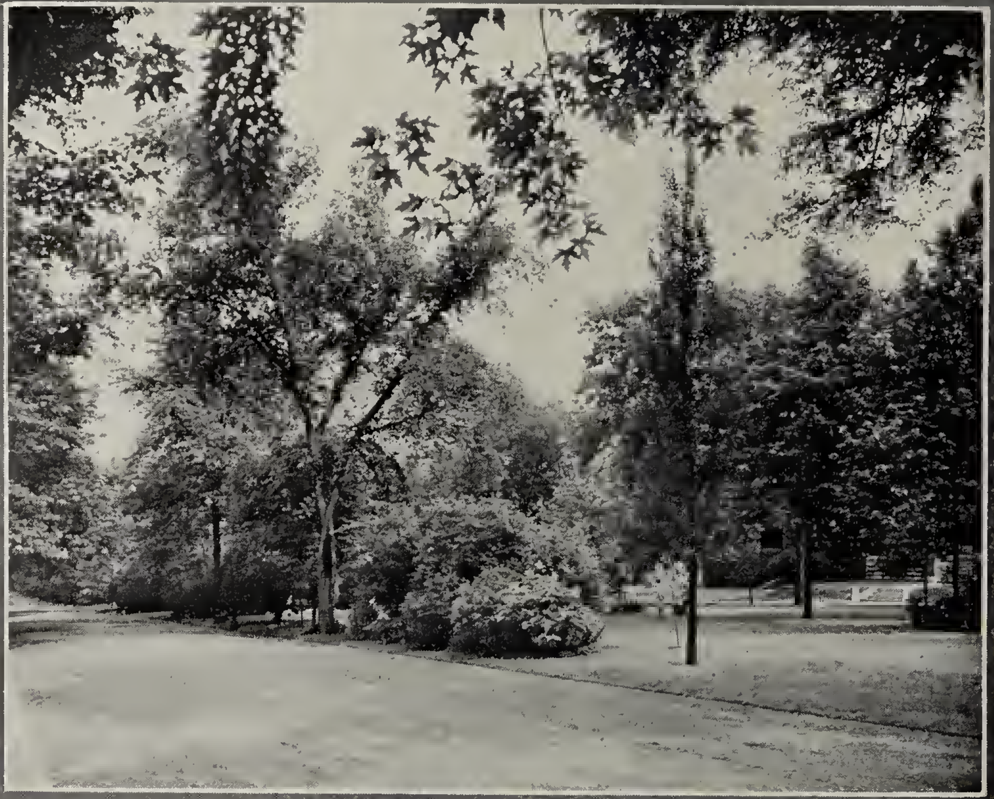


Fig. 6.—Vandeventer Place, one of the restricted residence districts. It has an entrance on Grand Avenue in the middle of the section meeting-place district.

The summer gardens attract thousands of people nightly. The principal ones are the Suburban Garden, Delmar Garden, and Forest Park Highlands. The Committee on Arrangements will lease Forest Park Highlands for one night during the meeting for the exclusive use and entertainment of the members of the Association.

E. J. Goodwin, Secretary
Local Committee on Arrangements.

## THE SCIENTIFIC PROCEEDINGS

### The Papers to Be Read at St. Louis—The Preliminary Program and the Official Program

The following is a partial list of titles of papers to be read before the various sections. The order here is not necessarily the order which will be followed in the Official Program. This Official Program will be a pamphlet similar to those issued in previous years, and will contain the final program of each section, with abstracts of the papers, lists of committees, programs of the General Meeting and of the meetings of the House of Delegates, lists of entertainments, map of St. Louis, etc. To prevent misunderstandings and to protect the interests of advertisers, etc., it is here announced that this Official

Program will contain no advertisements. It is copyrighted by the American Medical Association and will not be distributed before the session. A copy will be given to each member on registration.

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## SECTION ON PRACTICE OF MEDICINE

CHAIRMAN, GEORGE BLUMER, NEW HAVEN, CONN.; SECRETARY, WILDER TILESTON, NEW HAVEN, CONN.

Experiences with the Duodenal Contents in man (15 minutes). Max Einhorn, New York.

The Radical Cure of Malaria; Its Importance and How It May be Attained (15 minutes). Seale Harris, Mobile.

Urinary Hyperacidity and Its Relation to Neuritis, Neuralgia and Myalgia (15 minutes). Thomas R. Brown, Baltimore.

Oration on Medicine: A Study of Mistaken Diagnoses Based on the Autopsy Findings in One Thousand Cases. Richard C. Cabot, Boston.

Magnesium Poisoning; A Study of Ten Cases (15 minutes). William F. Boos, Boston.

Certain Popular but Erroneous Notions Concerning Angina Pectoris (15 minutes). James B. Herrick, Chicago.

Orthodiagraphy: A Presentation of a Series of Diagrams of the Heart and Aorta, with Explanatory Remarks (10 minutes). Thomas A. Claytor and Walter H. Merrill, Washington.

The Diagnostic Value of the Orthodiagram (10 minutes). James G. van Zwaluwenburg, Ann Arbor, Mich.

Persistent Patency of the Ductus Arteriosus, Stenosis of the Isthmus of the Aorta, with Degeneration of the Coronaries of the Cardiac Muscle and of the Sino-Auricular Bundle (10 minutes). Kate C. H. Mead, Middletown, Conn.

Regional Vasomotor Hypertonus, with a Report of a Case (15 minutes). C. F. Hoover, Cleveland.

The Electrocardiogram in Clinical Diagnosis (15 minutes). L. F. Barker and A. D. Hirschfelder, Baltimore.

Hookworms; Infection and Prevention (15 minutes). Claude A. Smith, Atlanta, Ga.

Pathologic Relationship of Ulcer and Carcinoma of the Alimentary Canal (20 minutes). Louis Wilson, Rochester, Minn.

The Importance of a Low Protein Diet in Chronic Nephritis (15 minutes). H. D. Arnold, Boston.

The Relation of Blood Platelets to Bleeding in Certain Cases of Purpura (15 minutes). W. W. Duke, Baltimore.

Fig. 7.—The Colonial Club, the large Jewish club of St. Louis.

A Case of Diffuse Purulent Ventriculoseptal Myocarditis with Adams-Stokes Syndrome (10 minutes). Harvey G. Beck and William Royal Stokes, Baltimore.

A Study of a Case of Heart-Block with Auricular Alternating Pulse (10 minutes). Isaac I. Lemann, New Orleans.

A Possible Differential Sign Between Cardiac Dilatation and Pericarditis with Effusion (15 minutes). W. J. Calvert, Dallas, Texas.

*Symposium on the Circulatory Disorders in Acute Infections. Joint Meeting with the Section on Pharmacology and Therapeutics*

Pathologic Physiology of the Circulatory Failure of Acute Infectious Disease (20 minutes). W. G. MacCallum, New York.

Treatment of the Circulatory Failure of Acute Infectious Diseases by Drugs Other than Alcohol (20 minutes). George Dock, New Orleans.

The Physiologic Action, Uses and Abuses of Alcohol in the Circulatory Disturbances of Acute Infections (20 minutes). Joseph L. Miller, Chicago.

The Action of Alcohol on the Mammalian Heart. A. N. Richards, Chicago.

Extra Pharmacal Measures in the Treatment of Circulatory Failure of Acute Infections (20 minutes). W. S. Thayer, Baltimore.

The Visceral Anesthesias of Tabes Dorsalis in Relation to the Diagnosis of Acute Inflammatory Conditions in the Abdomen, with an Illustrative Case (15 minutes). Lewis A. Conner, New York.

Fig. 8.—The St. Louis Club.

Clinical Results of Gastroenterostomy for Non-Malignant Diseases (10 minutes). John D. Dunham, Columbus, Ohio.

The Influence of Perigastric Lesions on Gastric Secretions, Based on Clinical and Experimental Study (15 minutes). M. J. Lichty, Cleveland.

The Roentgen Ray in the Diagnosis of Diseases of the Alimentary Tract (20 minutes). Judson Daland and George E. Pfahler, Philadelphia.

The Different Forms of Mediastinal Exudative Pleurisy, with Report of Three Cases (15 minutes). Anders Frick, Chicago.

The Diagnostic Significance of the Paravertebral Triangle of Percussion Dulness (Grocco's Sign) (5 minutes). Frank Smithies, Ann Arbor, Mich.

Autogenous Vaccine Therapy in Endocarditis (15 minutes). Edward C. Rosenow, Chicago.

The Treatment of Typhoid Carriers, with Report of a Case Treated by Inoculations of Typhoid Vaccine (15 minutes). Willard J. Stone, Toledo, Ohio.

Indicanuria (10 minutes). Gustav Baar, Portland, Ore.

## SECTION ON SURGERY

Chairman, Charles H. Mayo, Rochester, Minn.; Secretary, William D. Haggard, Nashville, Tenn.

Chairman's Address: Prophylaxis of Cancer. Charles H. Mayo, Rochester, Minn.

Fig. 9.—The Coliseum, Jefferson and Washington Avenues. Here are located the Registration Bureau, the branch Postoffice, the Scientific Exhibit, the Commercial Exhibit and the Bureau of Information.

Surgical Treatment of Compression Paraplegia. A. Primrose, Toronto.

Anastomosis of Facial and Spinal Accessory Nerves and the Distal End of Spinal Accessory with Descending Hypoglossal. W. W. Grant, Denver.

Injuries of Abdominal Viscera without External Signs of Violence. Henry H. Sherk, Pasadena, Cal.

Present Status of Vaccine Therapy. Ernest E. Irons, Chicago.

Appendicitis in Children, with Report of 500 Cases. H. C. Deaver, Philadelphia.

Tuberculosis of Adult Knee-Joint, with New Theory and Plan of Operation. Leonard W. Ely, New York.

Report of the Commission on Anesthesia.

Acute or Chronic Joint Infections. J. B. Murphy, Chicago.

Open Treatment of Fractures. A. F. Jonas, Omaha, Neb.

Congenital Atresia of the Ureter. J. T. Bottomley, Boston.

Extracapsular Fixation of the Kidney. Charles A. L. Reed, Cincinnati.

Traumatic Rupture of the Fixed Portion of the Male Urethra. Otto C. Gaub, Pittsburg, Pa.

Suppuration in One-Half of a Horseshoe Kidney. J. E. Thompson, Galveston, Texas.

Surgical Considerations in Treatment of Chronic Suppurative Nephritis. D. S. Fairchild, Clinton, Iowa.

Kidney and Ureteral Stones. Miles F. Porter, Fort Wayne, Ind.

Surgery of Congenital Cystic Kidney. T. C. Witherspoon, Butte, Mont.

Phrenitis Prostatica. J. F. Percy, Galesburg, Ill.

Partial Thyroidectomy in Dementia Præcox. Randolph Winslow, Baltimore.

Certain Surgical Aspects of Goiter. G. W. Crile, Cleveland.

Diagnosis and Treatment of Esophageal Lesions. H. S. Plummer, Rochester, Minn.

Surgical Management of Suppurative Peritonitis. A. D. Bevan, Chicago.

Conservative Surgery of the Pelvis and Lower Abdomen. F. W. McRae, Atlanta, Ga.

Some Further Experience with Drainage of Pelvic Abscess Through the Rectum. A. MacLaren, St. Paul, Minn.

Temporary and Permanent Occlusion of the Large Arteries with Removable Metallic Bands. Rudolph Matas and C. W. Allen, New Orleans.

Diagnosis of Mammary Cancer. William L. Rodman, Philadelphia.

Operative Treatment of Cancer of the Breast. Maurice Richardson, Boston.

Physiologic Implantation of Severed Ureter or Bile-Duct into the Intestine. R. C. Coffey, Portland, Ore.

A Further Consideration of Cholecystenterostomy in Certain Cases of Pancreatitis. Le Grand Guerry, Columbia, S. C.

Pathology of Gall-Bladder and Gall-Tract. J. P. Runyan, Little Rock, Ark.

Inguinal Hernia Following Appendectomy. A. M. Pond, Dubuque, Iowa.

Teaching the Principles of Surgery; The Ideal and the Practical. Martin B. Tinker, Ithaca, N. Y.

Gunshot Wounds in Modern Wars. Louis A. La Garde, Washington, D. C.

Post-Operative Gastric Hemorrhage. Donald Macrae, Jr., Coucil Bluffs, Iowa.

Surgical Constipation (Obstipation) and Its Treatment. S. G. Gant, New York.

A Simple Operation for Hemorrhoids without Hemorrhage. Louis J. Hirschman, Detroit.

Surgical Diseases of the Umbilicus. Thomas S. Cullen, Baltimore.

## SECTION ON LARYNGOLOGY AND OTOLOGY

Chairman, Chevalier Jackson, Pittsburg; Secretary, George E. Shambaugh, Chicago

Chairman's Address. Chevalier Jackson, Pittsburg, Pa.

Fig. 10.—The City Hall, Twelfth, Market and Clark Streets.

In Memoriam: Wilhelm Meyer. Holger Mygind, Copenhagen, Denmark.

Clinical Observations on Nasal Diphtheria. Dunbar Roy, Atlanta, Ga.

The Comparative Pathology of Hyperplastic and Suppurative Ethmoiditis. Ross Hall Skillern, Philadelphia.

Intraocular Complications from Pansinusitis; Results Following Intranasal Operations. Harmon Smith, New York.

The Bronchoscopic Treatment of Bronchial Asthma. Henry Horn, San Francisco.

Observations on the Vocal Cords in One Thousand Cases of Goiter. Justus Mathews, Rochester, Minn.

*Symposium on Faucial Tonsils*

The Tuberculous Tonsil. Robert Levy, Denver.

Conditions Demanding Enucleation of the Faucial Tonsils. Joseph C. Beck, Chicago.

Enucleation of the Faucial Tonsils and Contraindications for This Procedure. Burt R. Shurly, Detroit.

*Symposium on Otitic Meningitis*

Symptomatology and Diagnosis of Meningitis of Otitic Origin. Edward Bradford Dench, New York.

Fig. 11.—Planters' Hotel, Pine, Chestnut and Fourth Streets, headquarters of Sections on Practice of Medicine, Pathology and Physiology and Pharmacology and Therapeutics.

Fig. 12.—Maryland Hotel, Ninth and Pine Streets.

Fig. 13.—Southern Hotel, Broadway, Fourth and Walnut Streets, General Headquarters.

Indications for Surgical Interference for the Relief of Otitic Meningitis. S. MacCuen Smith, Philadelphia.

The Surgical Treatment of Otitic Meningitis. Holger Mygind, Copenhagen, Denmark.

The Results of the Operation of Submucous Resection of the Septum in Private Practice. Francis P. Emerson, Boston.

Submucous Resection of the Nasal Septum. Clyde E. Purcell, Paducah, Ky.

Exhibition of Patients and Instruments.

The Pathology of Mastoiditis as Revealed by the *X*-Ray. Sidney Lange, Cincinnati.

Neuralgias and Functional Disturbances Occurring in the Head and Neck Arising from Infections in and About the Tonsil. Frank C. Todd, Minneapolis.

The Development of the Human Temporal Bone. (Lantern-Slide Demonstration). George W. Boot, Evanston, Ill.

A Study of the Bacterial Flora of the Nasal Mucosa. Will Walter, Chicago.

*Symposium on Labyrinthine Suppuration*

The Pathology and Prognosis of Internal Ear Complications Resulting from Inflammatory Midle-Ear Diseases. (Lantern-Slide Demonstration). Jacques Holinger, Chicago.

The Symptoms and Diagnosis of Infections of the Labyrinth Resulting from Chronic Suppurative Otitis Media. J. R. Fletcher, Chicago.

The Present Status of Vertigo Considered from a Diagnostic Standpoint. George E. Davis, New York.

The Difficulties and Dangers Associated with Operations on the Labyrinth. J. D. Richards, New York.

Scientific Exhibit: Oral Eustachian Catheter. Ephraim Cutter, West Falmouth, Mass.

Histologic Specimen Showing Pathology of Labyrinth Infection. Jacques Holinger, Chicago.

Preparations showing (a) Cholesteatoma of Middle Ear with Defect in the Horizontal Semicircular Canal and Infection of the Labyrinth; (b) Cholesteatoma of Middle Ear with Defect in Horizontal Canal Without Infection of the Labyrinth. Henry Horn, San Francisco.

Normal Histologic Specimens Showing: (a) the Organ of Corti; (b) Attachment of Hairs of Hair Cells to Membrana Tectoria; (c) the End Organ in the Ampulla—the Crista Ampullaris; (d) the End Organ in the Utricle and the Saccule—the Macula Acustica. George E. Shambaugh, Chicago.

Anatomic Preparations Showing the Developing Temporal Bone. George W. Boot, Evanston, Ill.

Anatomic Preparations of the Nose and the Nasal Accessory Sinuses. H. W. Loeb, St. Louis.

Apparatus for Determining the Presence of Pus in the Accessory Cavities by Means of Negative Pressure. Henry Horn, San Francisco.

Sections of Infant Heads. Frederick Menge, Chicago.

## SECTION ON OBSTETRICS AND DISEASES OF WOMEN

Chairman, John G. Clark, Philadelphia; Secretary, C. Jeff Miller, New Orleans

Infections of the Endometrium. William S. Gardner, Baltimore.

The Plastic Surgery of the Pelvic Structures. Henry O. Marcy, Boston.

Arteriosclerosis of the Uterine Vessels. Sidney A. Chalfont, Pittsburg.

The Report of Three Cases of Pregnancy Following Double Salpingectomy. John Osborn Polak, Brooklyn.

An Ideal Operation for the Cure of Total Prolapse of the Uterus. Samuel Wyllis Bandler, New York.

Papillary Cystadenoma of the Kidney, Associated with Myoma of the Uterus and Spinal Caries. G. E. Shoemaker, Philadelphia.

Uselessness of Local Treatment in Puerperal Sepsis. J. H. Carstens, Detroit.

Fig. 14.—Statue of von Humboldt in Tower Grove Park.

Fig. 15.—Park View. This and Kingsbury Place, also shown on this page, are two of the restricted residence districts, of which there are many in St. Louis.

Fig. 16.—Lindell Boulevard, with the St. Regis Apartments on the right.

Fig. 17.—Kingsbury Place, a residence view.

*Symposium on Observations by Inventors of Operations for Retroflexion of the Uterus*

Plication of the Round and Anterior Fold of the Broad Ligament on the Anterior Surface of the Uterus for Retrodisplacement. R. C. Coffey, Portland.

Attachment of Ligaments Posterior to the Uterus. J. M. Baldy, Philadelphia.

Intraperitoneal Implantation of Round Ligaments. (Gilliam's Operation.) D. Tod Gilliam, Columbus, Ohio.

Intraperitoneal Shortening of Round Ligaments. (Simpson Operation). F. F. Simpson, Pittsburg.

Shortening of the Round Ligaments Via the Temporarily Dilated Inguinal Canals Combined with the Bassini Technic in Closure of the Wounds A. Goldspohn, Chicago.

Operations on the Uterosacral Ligaments for Displacements of the Uterus. J. Wesley Bovée, Washington, D. C.

Suspensio Uteri. Howard A. Kelly, Baltimore.

Chairman's Address: Embryologic and Anatomic Causes for Obstinate Constipation in Women: Operative Methods for Relief. John G. Clark, Philadelphia.

*Symposium on Enteroptosis*

Enteroptosis, with Special Reference to Its Etiology and Development, and Remarks on the Results of Examination of 400 Women, with Reference to This Condition. Richard R. Smith, Grand Rapids, Mich.

The *X*-Ray in the Diagnosis of Enteroptosis. E. H. Skinner, Kansas City, Mo.

Value of the Roentgen Ray in Enteroptosis. A. W. Crane, Kalamazoo, Mich.

The Physician's Viewpoint. J. H. Musser, Philadelphia.

The Surgical Viewpoint. A. J. Ochsner, Chicago.

Tuberculosis of the Female Organs of Generation and the Peritoneum. J. Riddle Goffe, New York.

*Symposium on Carcinoma of the Uterus*

Our Present Knowledge of the Etiology of Cancer. Harvey Gaylord, Buffalo, N. Y.

The Participation of the Glandular System and Tissues Adjacent to the Uterus in Carcinoma of the Uterus. John A. Sampson, Albany, N. Y.

The Results Obtained by the Radical Abdominal Operation for Carcinoma of the Uterus. J. H. Jacobson, Toledo, Ohio.

The Diagnosis of Operability of Carcinoma of Cervix Uteri. Emil Ries, Chicago.

Further Observations on the Use of the Cautery in the Treatment of Carcinoma of the Uterus. C. C. Frederick, Buffalo.

Treatment and Cure of Inoperable Cases of Carcinoma of the Uterus. Palmer Findley, Omaha.

The Ureter in Pelvic Surgery. Channing W. Barrett, Chicago.

*Symposium on Eclampsia*

The Etiology of Eclampsia. E. P. Davis and Collin Foulkrod, Philadelphia.

Medical Treatment, Diagnosis and Treatment of Eclampsia. C. S. Bacon, Chicago.

Treatment of Eclampsia, Including a Comparison of the Dangers of Chloroform and Ether in This Condition. Edwin B. Cragin and Edward T. Hull, New York.

The Surgical Treatment of Eclampsia. Joseph B. DeLee, Chicago.

Vaginal Cesarean Section in Eclampsia. Henry D. Fry, Washington, D. C.

Indications for and Technic of Rapid Emptying of the Uterus in the Toxemias of Pregnancy. Reuben Peterson, Ann Arbor, Mich.

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## SECTION ON NERVOUS AND MENTAL DISEASES

Chairman, Theodore Diller, Pittsburg; Secretary, William A. Jones, Minneapolis

Chairman's Address: The Institutional Treatment of Nervous and Mental Diseases. Theodore Diller, Pittsburg, Pa.

Pathology of Anterior Poliomyelitis. H. E. Robertson, Minneapolis.

Poliomyelitis and Its Treatment. Smith Ely Jelliffe, New York.

The Surgical Treatment of Anterior Poliomyelitis. David Silver, Pittsburg.

The Topographical Diagnosis of Subtentorial Tumors. Herman H Hoppe, Cincinnati.

Case of Tumor of the Pineal Gland Involving Cerebellum with Cerebellar Shocks. Charles L. Dana, New York.

Brain Tumor of the Psychomotor Area. Frank Warren Langdon and Simon P. Kramer, Cincinnati.

The Differential Diagnosis of Pelvic Tumors from Tumors of the Lumbosacral Cord and Cauda Equina. Charles K. Mills, Philadelphia.

Intradural Tumor of Lower Cervical Cord with Operation. Edward E. Mayer and Otto C. Gaub, Pittsburg, Pa.

Tumor of the Cerebello-Pontile Angle. Julius Grinker, Chicago.

Syphilitic Disease of Arteries of the Central Nervous System; with Detailed Report of a Case. E. M. Hummel, New Orleans.

Amyotonia Congenita. A. L. Skoog, Kansas City, Mo.

Fig. 18.—Jewish Hospital, Delmar Avenue, near Belt.

Fig. 19.—Present buildings of the City Hospital.

Fig. 20.—Missouri Baptist Sanitarium, North Taylor Street.

Fig. 21.—The new buildings of the City Hospital, Lafayette and Grattan Avenues, now under construction on grounds adjoining the present buildings shown in Figure 19.

Pathogenesis of the Toe Phenomenon. Alfred Gordon, Philadelphia.

Radicular Changes in Meningitis and Other Conditions. John H. W. Rhein, Philadelphia.

Address: The Eye and Its Relation to Neurology. Alfred Saenger, Hamburg, Germany.

The Functions of the Psychopathic Hospital. Albert M. Barrett, Ann Arbor, Mich.

Prevention of Insanity by the Treatment of Incipient Cases in General Hospitals. L. Vernon Briggs, Boston.

Nervous and Mental Disturbance at the Male Climacteric. Archibald Church, Chicago.

Manual Work in the Treatment of the Functional Nervous Diseases. Herbert J. Hall, Marblehead, Mass.

The Treatment of Nervous Diseases by Gymnastics and Massage. Haldor Sneve, St. Paul, Minn.

The State Care of the Inebriate. Irwin H. Neff, Foxborough, Mass.

Treatment of Stuttering. E. W. Scripture, New York.

The Relation of Stuttering to Amusia. E. Bosworth McCready of Pittsburg, Pa.

The Plea of Insanity as a Defense for Crime and Its Remedy. John Punton, Kansas City, Mo.

Hemiplegia Following Acute Infections. W. A. Jones and A. S. Hamilton, Minneapolis.

A Case of Crossed Hemidysergia. Tom A. Williams, Washington, D. C.

Treatment of Acute Ailments Occurring in Persons Addicted to Narcotic Drugs. George E. Pettey, Memphis, Tenn.

Twenty Years of Electrocution. George Edward Fell, Buffalo, N. Y.

Alcohol Injections in Trifacial Neuralgia. Hugh T. Patrick, Chicago.

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## SECTION ON STOMATOLOGY

Chairman, Thomas L. Gilmer, Chicago; Secretary, Eugene S. Talbot, Chicago

Chairman's Address: Composite Odontomata; Report of Four Cases. Thomas L. Gilmer, Chicago.

Growth and Regeneration of the Bones of the Face. Stewart L. McCurdy, Pittsburg.

Conservation of General Health of Children Through Overcoming the Inclination Toward Nasal Stenosis by Means of Widening the Maxillary Arch. Nelson M. Black, Milwaukee.
The Influence of Widening the Palatal Arch on the Nose. Lee Wallace Dean, Iowa City.
The Relation of the Teeth to the Development of the Face. Frederick Noyes, Chicago.
Symposium on the Education of the Stomatologist. Eugene S. Talbot, Chicago; James E. Power, Providence, R. I.; M. H. Cryer, Philadelphia; James G. Sharp, San Francisco.
The Teeth as a Factor in Pathogenesis. Herbert A. Potts, Chicago.
Septicemia of Dental Origin. Arthur R. Dray, Philadelphia.
The Mouth Lesions of Syphilis and the Dangers Arising from Them. Charles M. Whitney, Boston.
The Relation of Pathologic Conditions of the Mouth and Systemic Disease. Henry R. Harrower, Chicago.
The Value of Vaccines in Oral Surgery. James E. Power, Providence-Boston.
The Teeth and Alveolar Processes as Points of Entrance for the Tubercle Bacillus. Frederick Moorehead, Chicago.
The Close Relations Between the Dentist and the Physician. Bertha E. Bush, Chicago.
A Review of the References to Oral Conditions in a Number of Standard Text-Books on Surgery. Arthur D. Black, Chicago.
The Surgical Principles of Harelip Operations. George V. I. Brown, Milwaukee.
A Study of the Repair of Cementum. M. H. Fletcher, Cincinnati.
Systemic Conditions in Relation to Oral Symptoms; Pain, Factor and Sepsis. Vida A. Latham, Chicago.

Fig. 22.—St. Luke's Hospital, Delmar Avenue and Belt.

Fig. 23.—Hospital of the Missouri Pacific Railway, California and Eads Avenues.

## SECTION ON DISEASES OF CHILDREN

Chairman, William J. Butler, Chicago; Secretary, Godfrey R. Pisek, New York

Chairman's Address: Enteroptosis in Children. William J. Butler, Chicago.
Agar-Agar in Constipation in Childhood. John Lovett Morse, Boston.
Diagnosis and Treatment of Chronic Intestinal Indigestion in Children. Samuel M. Hamill, Philadelphia.
Further Report of Cases with Complicating Ileocolitis and Probably Due to Acidosis. Thomas D. Parke, Birmingham, Ala.
Atypical Scarlet Fever. C. Gilmore Kerley, New York.
Infectious Diseases in Negro Children. H. M. Folkes, Biloxi, Miss.
Rachitis. J. W. Van Derslice, Chicago.
The Significance of Tuberculides in the Diagnosis of Tuberculosis in Infants. I. Rosenstern, Berlin.
A Clinical Study of a Case of Pseudoleucemic Anemia of Infancy. Theodore J. Elterich, Pittsburg, Pa.
A Case of Amaurotic Family Idiocy with Autopsy and Histologic Report. Isaac A. Abt, Chicago.
Some Cases of Edema in Infants. D. J. Milton Miller, Atlantic City, N. J.
Blood-Letting in Children. Heinrich Stern, New York.
Disturbances of Lactation. A. C. Cotton, Chicago.
Complemental Feeding of the Infant as an Effective Aid in Maintaining Maternal Nursing. Thos. S. Southworth, New York.
Feeding of Fats to Infants and Difficulties Encountered. Charles Douglas, Detroit.
The Digestion of Fat in Infancy. F. B. Talbot, Boston.
The Influence of Colloidal Protection on Milk. Jesse G. M. Bullowa and Jerome Alexander, New York.
Creatinin and Creatin Metabolism in Children. J. P. Sedgwick, Minneapolis.
Intracranial Surgical Lesions in Children. C. C. Rogers, Chicago.
Retarded Mental Development Due to Other than Cerebral Causes. Ernest Laplace, Philadelphia.
Surgical Treatment of Empyema. Samuel Lloyd, New York.
The Surgical Treatment of Congenital Pyloric Stenosis. A. D. Bevan, Chicago.
Surgical Mistakes on Infants and Children. Samuel W. Kelley, Cleveland.
Circumcision and Uncircumcision. R. B. Gilbert, Louisville, Ky.
Treatment of Some Colonic, Sigmoidal, Rectal and Anal Affections Common to Infancy and Childhood. S. G. Gant, New York.
A Study of the Anatomic Index in Children. Eli Long, Buffalo, N. Y.
A Clinical and Roentgenographic Study of the Essential Differences Between the Physical Findings in Childhood and Adult Life. Louis A. Levison and Harry Dachtler, Toledo, Ohio.
The School Child. W. C. Hollopeter, Philadelphia.
The Child's Sleep. J. Ross Snyder, Birmingham, Ala.
Dietary Studies of Undernourished School Children in New York. E. Mather Sill, New York.
Deintoxication of Atropin. Paul Fleischmann, Berlin.
The Pediatrist in Preventive Medicine. E. H. Bartley, Brooklyn.
Foibles in Specialism. C. F. Wahrer, Fort Madison, Iowa.
A Brief History of the Nebraska Epidemic of Poliomyelitis. H. M. McClanahan, Omaha, Neb.
The Prevention of Infant Mortality from an Educational Point of View. L. T. Royster, Norfolk, Va.
Subnormal Temperature in Infancy. H. W. Cheney, Chicago.
Orthostatic Albuminuria in Children. Louis Fischer, New York.

## SECTION ON PREVENTIVE MEDICINE AND PUBLIC HEALTH

Chairman, J. N. Hurty, Indianapolis; Secretary, Marshall Langton Price, Baltimore

Chairman's Address: J. N. Hurty, Indianapolis.
The Rôle of Pathology and Physiology in Preventive Medicine. Walter P. Bierring, Iowa City.
The Rôle of Pharmacy in Preventive Medicine. Joseph P. Remington, Philadelphia.
Oration on State Medicine and Hygiene. Seneca Egbert, Philadelphia.
The Rôle of Internal Medicine in Disease Preventive Work. D. L. Edsall, Philadelphia.
The Rôle of Ophthalmology in Preventive Medicine. Hiram Woods, Baltimore.
The Rôle of Pediatrics in Preventive Medicine. Thomas S. Southworth, New York.

*Symposium on Hookworm, Pellagra and Typhoid Fever*

Pellagra. John D. Long, Washington, D. C.

Sanitary Phases of the Hookworm Problem. Charles W. Stiles, Washington.
Hookworm Disease: The Farm; the next Point of Attack in Sanitary Progress. Allen W. Freeman, Richmond, Va.
Present-Day Problems and Progress in Prevention of Typhoid Fever. W. Forrest Dutton, Carnegie, Pa.
The Currents at the Eastern End of Lake Erie and the Head of Niagara River: Their Influence on the Sanitation of the City of Buffalo, N. Y. George Edward Fell, Buffalo, N. Y.
The Campaign Against Diphtheria, Scarlet Fever and Typhoid in Chicago. I. D. Rawlings, Chicago.
What Health Departments Can Do to Control Scarlet Fever. C. Hampson Jones, Baltimore.
The Relation of Alcoholism and Drug Addictions to Preventive Medicine. T. D. Crothers, Hartford, Conn.
The Rôle of Genito-Urinary Surgery in Preventive Medicine. W. T. Belfield, Chicago.
The Rôle of Surgery in Preventive Medicine. Miles F. Porter, Fort Wayne, Ind.
The Rôle of Obstetrics in Preventive Medicine. Walter P. Manton, Detroit.
Acute Epidemic Anterior Poliomyelitis. Hibbert W. Hill, Minneapolis.
The Rôle of Rhinology and Otology in Preventive Medicine. J. J. Kyle, Indiana.
Relation of Recruiting to Preventive Medicine. W. H. Rennie, Washington, D. C.
The Rôle of Neurology in Preventive Medicine. Joseph Collins, New York.
Legal Aspects of Domestic Quarantine. Henry Hemenway, Evanston, Ill.
The permanent Elimination of Yellow Fever from the Earth. J. H. White, New Orleans.
House Quarantine. Hyman Cohen, Chicago.
The Work of Prevention in Nebraska. D. T. Quigley, North Platte, Neb.
The Ventilation of School Buildings. W. A. Evans, Chicago.
Examination of School Pupils for Physical Defects. Heman Spalding, Chicago.
The Prevention of Infant Mortality. Gottfried Koehler and C. St. Clair Drake, Chicago.
Tuberculosis in the Raw Milk-Supply of Chicago. T. O. Tonney, Chicago.

Fig. 24.—The main building of the St. Louis University, Grand Avenue and Pine Street.

## SECTION ON DERMATOLOGY

Chairman, Grover W. Wende, Buffalo; Secretary, H. R. Varney, Detroit

Chairman's Address: Dermatology in General Practice. Grover W. Wende, Buffalo.
Iodic Purpura. Report of Two Cases Caused by the Ingestion of Potassium Iodid. Frank Crozer Knowles, Philadelphia.
Pemphigus Foliaceus. Report of a Case. Alfred Schalek, Omaha.
Alopecia. Charles J. White, Boston.
The U. S. Pharmacopœia and the National Formulary in Dermatologic Practice. C. S. N. Hallberg, Chicago.
Anesthesia Dolorosa. Joseph Zeisler, Chicago.
Dermatitis Exfoliativa. William Frick, Kansas City, Mo.
Lichen Planus Atrophicus (Hallopeau.) Oliver S. Ormsby, Chicago.
A Report of Three Epidemics of Anomalous Scarlet Fever. William Thomas Corlett and Harold Newton Cole, Cleveland.

*Symposium on Cancer*

The Present Status of the Etiology of Malignant Growths of the Skin. Leo Loeb, Philadelphia.
Pathology of the Malignant Growths of Epithelial Tissue. J. A. Fordyce, New York.
Pathology of Malignant Diseases of Non-Epithelial Formation. F. B. Mallory, Boston.
Surgical Treatment of Cutaneous Malignant Growths. Joseph C. Bloodgood, Baltimore.
Treatment of Malignant Growths of the Skin from a Dermatologic Standpoint. William Allen Pusey, Chicago.
The Year's Progress in Our Knowledge of Syphilis. Howard Fox, New York.
Results of Experience with the Noguchi Modification of the Wassermann Serodiagnosis Test for Syphilis. James N. Hyde, Chicago.
Two Years' Experience with the Wassermann Reaction in Practice, Being a Preliminary Report on Fifty-seven Cases Treated from the Standpoint of the Wassermann Reaction. B. C. Corbus, Chicago.
Primula Dermatitis. O. H. Foerster, Milwaukee.
A Chronic Itching, Papular Eruption of the Axilla, Pubes and Breast. Marcus Haase, Memphis.
The Diagnosis of Leprosy. Isadore Dyer and Ralph Hopkins, New Orleans.
The Etiology of Verruca. Douglas W. Montgomery, San Francisco.
Hairy Tongue. M. L. Heidengsfeld, Cincinnati.
Granuloma Annulare. M. B. Hartzell, Philadelphia.
Lichen Nitidus. Richard L. Sutton, Kansas City, Mo.

## SECTION ON OPHTHALMOLOGY

Chairman, W. C. Posey, Philadelphia; Secretary, A. E. Bulson, Jr., Ft. Wayne, Ind.

Chairman's Address. W. C. Posey, Philadelphia.
Question of Enucleation in Purulent Panophthalmitis, Together with Brief Experimental Study of the Subject. R. L. Randolph, Baltimore.
A Study of Transillumination. P. H. Fridenberg, New York.
The Radical Treatment of Lachrymonasal Disease by Rapid Dilatation and Allied Measures. S. L. Ziegler, Philadelphia.
Intermittent Closing of Retinal Arteries. Arnold Knapp, New York.
Report of the Committe on Collective Investigation Concerning the Ocular Muscles. Lucien Howe, Buffalo.
Report of the Committee on Tuberculosis. William H. Wilder, Chicago.
Tests of Visual Acuity and Cards for Subjective Correction of Ametropia. Edward Jackson, Denver.
Prescribing of Lenses for Close Work. Mark D. Stevenson and E. M. Weaver, Akron, Ohio.
Prevention of Blindness. F. Park Lewis, Buffalo.
Report of Two Cases of Choked Disc Due to Disease of the Accessory Sinuses of the Nose. C. A. Thigpen, Montgomery.
Present Status of the Etiology of Squint. W. Zentmayer, Philadelphia.
Post-Operative Treatment of Strabismus. A. E. Davis, New York.
Advancement Operation in Squint. V. H. Hulen, Houston.
Surgical Treatment of Separation of the Retina. C. A. Wood, Chicago.
Status of Serum and Vaccine Therapy in Ophthalmology. J. E. Weeks, New York City.
The Noguchi Reaction for Syphilis as an Aid to Diagnosis in Eye Lesions. Albert E. Bulson, Jr., Ft. Wayne, Ind.
Exhibition of new instruments and appliances.
Danger of Sympathetic Ophthalmia from the Use of the Cautery in Treating Iris-Prolapse; with Discussion of Other Methods of Treatment. H. Gifford, Omaha.
Ophthalmia Nodosa or Caterpillar-hair Ophthalmia, with Report of a Case. W. R. Parker, Detroit.
Spontaneous Rupture of the Eyeball—a Phenomenon of Glaucoma. E. C. Ellett, Memphis, Tenn.
Autointoxication and Allied Intestinal Troubles as a Possible Cause of Certain Vascular and Functional Disturbances. Hiram Woods, Baltimore.

Increasing Frequency of Inherited Syphilis and the Grave Importance of Its Early Recognition in Infants and Young Children, from the Standpoint of the Ophthalmologist. C. S. Bull, New York City.

Concerning the Ocular Palsies Associated with the Introduction of Various Solutions into the Spinal Cord for the Induction of Surgical Anesthesia. Wendell Reber, Philadelphia.

The Effect of Bright Light on the Eyes. J. Herbert Parsons, London.

Cataract-in-Capsule Extraction by a New Means and a New Method. G. C. Savage, Nashville, Tenn.

My Experience in the Operation for Cataract. J. L. Thompson, Indianapolis.

Filtering Cicatrix for Chronic Glaucoma, with Report of Cases Operated on by Method of LaGrange. Allen Greenwood, Boston.

Plastic Surgery of the Eyelids, Using the Wolfe Graft. F. P. Calhoun, Atlanta, Ga.

## SECTION ON PHARMACOLOGY AND THERAPEUTICS

Chairman, David L. Edsall, Philadelphia; Secretary, Murray Galt Motter, Washington, D. C.

Chairman's Address: D. L. Edsall, Philadelphia.

Addresses of Delegates of the American Pharmaceutical Associates. Jos. P. Remington, Philadelphia, Chairman.

Reports of Standing Committees: Executive Committee. on Habit-Forming Drugs; H. C. Wood, Jr., Chairman. Committee on U. S. P.; Reid Hunt, Chairman. Committee on N. F.: R. A. Hatcher, Chairman.

*Symposium on the Circulatory Disorders in Acute Infectious Diseases*

Pathologic Physiology of the Circulatory Failure of Acute Infectious Disease. W. G. MacCallum, New York.

Treatment of the Circulatory Failure of Acute Infectious Diseases with Drugs Other Than Alcohol. George Dock, New Orleans.

The Physiologic Action, Uses and Abuses of Alcohol in the Circulatory Disturbance of Acute Infection. Joseph L. Miller, Chicago.

The Action of Alcohol on the Mammalian Heart. A. N. Richards, Chicago.

Extra-Pharmacal Methods in the Treatment of the Circulatory Failure of Acute Infections. W. S. Thayer, Baltimore.

Discussion to be opened by Joseph A. Capps, Chicago, and Arthur S. Loevenhart, Madison, Wis.

*Symposium on Recent Advances in the Knowledge of Diabetes and Its Treatment*

*Joint Meeting with the Section on Pathology and Physiology. For Program, See That Section*

*Symposium on Extra-Pharmacal Methods*

Limitations of the X-Ray. George C. Johnston, Pittsburg.

The Practical Uses of Electricity in Medicine. C. S. Potts, Philadelphia.

General Principles of Massage. Charles W. Barr, Philadelphia.

The Principles of Hydrotherapy. Thomas McCrea, Baltimore.

Reeducation of the Will in Neurasthenics. D. J. McCarthy, Philadelphia.

Vasomotor Drugs. Reid Hunt, Washington.

The Practical Value of the Physiologic Standardization of Digitalis. Worth Hale, Washington.

The Clinical Use of Strophanthus. Robert A. Hatcher and Harold C. Bailey, New York.

Use and Abuse of Drugs in Circulatory Disorders. Samuel W. Lambert, New York.

The Treatment of Experimental Trypanosomiases. Joel J. Abel and Leonard G. Rowntree, Baltimore.

The Standardization of Antiseptics. John F. Anderson and Thomas B. McClintic, Washington.

Blood-Pressure in Tuberculosis. Haven Emerson, New York.

Vaccines in Typhoid Fever. James M. Anders, Philadelphia.

The Effect of Treatment on the Wassermann Reaction. Homer F. Swift, New York.

Fig. 25.—The Union Station, Market and Eighteenth Streets, one of the largest and finest union stations in this country. Twenty-four different railroads enter here, and thirty-two tracks are housed under one shed. All trains arrive at and depart from this station. On arrival members will find of service a complete Bureau of Information conducted by members of the St. Louis Medical Society.

## SECTION ON PATHOLOGY AND PHYSIOLOGY

Chairman, H. Gideon Wells, Chicago; Secretary, Yandell Henderson, New Haven, Conn.

The Prognostic Significance of Pulse-Pressure Changes During Hemorrhage. Carl J. Wiggers, Ann Arbor, Mich.

The Functional Disturbances in Paroxysmal Tachycardia. Arthur D. Hirschfelder, Baltimore.

The Action of Adrenalin on the Mammalian Heart. Robert B. Gibson, Columbia, Mo.

The Crossed Action of Atropin and Chloroform on the Heart. William S. Carter, Galveston, Texas.

The Action of Alcohol on the Normal Intact Unanesthetized Animal. Clyde Brooks, Chicago.

Survival of Engrafted Blood-Vessels. C. C. Guthrie, Pittsburg, Pa.

The Inhibitory Effects of Magnesium Sulphate and the Nature of the Impulses in the Phrenic Nerves. Ida H. Hyde, Lawrence, Kan.

Gangrene Following Carbon Monoxid (Coal-Gas) Poisoning. Angus McLean, Detroit.

The Reaction of the Hemolymph nodes to Infection and Intoxication. A. S. Warthin, Ann Arbor, Mich.

Further Observations on the Hemolytic Test for Cancer and on the Behavor of Autodermic and Isodermic Skin Grafts in Operative Cases. George W. Crile, Cleveland, Ohio.

Diffuse Hypertrophy of the Mammary Glands of the Female. Henry Albert, Iowa City, Iowa.

The Pathogenesis of Cancer. Arthur E. Hertzler, Kansas City, Mo.

A Series of Spontaneous Tumors in Wild Rats. Paul G. Woolley and W. B. Wherry, Cincinnati.

The Use of Pure Lipoids and Alcoholic Extracts with Active and Inactive Serum in the Complement Fixation Tests for Syphilis. Thomas MacRae, A. B. Eisenbrey and Homer F. Swift, New York.

A Study of Streptococci with the Complement Fixation and Conglutination Reactions. Homer F. Swift and William C. Thro, New York.

Pathology and Bacteriology of Anterior Poliomyelitis. H. E. Robertson, M.D., and A. J. Chesley, M.D., Minneapolis.

Classification of Appendicitis and the Relation of Chronic Appendicitis to Obliteration and Carcinoma (A Study of 5,000 Specimens Removed at Operation). William Carpenter MacCarty, Rochester, Minn.

*Symposium on Recent Advances in Treatment of Diabetes*

Metabolism in Diabetes. Graham Lusk, New York.

Various Forms of Experimental Diabetes and Their Significance for Diabetes Mellitus. J. J. R. MacLeod, Cleveland.

The Relation of the Pancreas to Diabetes. J. H. Pratt, Boston.

Acidosis. Silas P. Beebe, New York.

Therapy and Dietetics of Diabetes. George B. Wallace, New York.

Recent Clinical Advances in Diabetes. Thomas B. Futcher, Baltimore.

Congenital Cystic Kidney. F. R. Zeit, Chicago.

Electric Anesthesia and Electric Resuscitation After Heart-Failure Under Chloroform or Electrocution. Louis G. Rabinovitch, New York.

Influence of Alcohol on the Kidneys. J. F. Hultgen, Chicago.

Effects of Compression of Its Vessels on the Parenchyma of the Kidney. D. N. Eisendrath and D. C. Straus, Chicago.

Lymph Production in Edema. A. J. Carlson, Chicago.

The Influence of Diet on the Chyle. W. S. Hall, Chicago.

Further Studies on the Influence of Copious Water-drinking with Meals. P. B. Hawk, Urbana, Ill.

One of the Functions of the Duodenum. S. A. Matthews, Chicago.

The Action of Glycol Aldehyd and Glycerin Aldehyd in Diabetes and the Nature of Antiketogenesis. R. T. Woodyatt, Chicago.

The Effects of Different Anesthetics on the Course of Some Infections. John T. Halsey, New Orleans.

Recent Progress and Present Status of Experimental Research in Cancer. Leo Loeb, Philadelphia.

The Statistical Method in the Study of the Etiology of Cancer. Isaac Levin, New York.

The Relation of Heredity to Cancer. E. E. Tyzzer, Boston.

Immunity in Cancer. Harvey R. Gaylord, Buffalo.

The Biochemical Investigation of Cancer and its Diagnostic Applications. Richard Weil, New York.

Recent Progress in the Microscopic Anatomy and Differentiation of Cancer. F. B. Mallory, Boston.

Recent Progress in Surgical Treatment of Malignant Growths. J. C. Bloodgood, Baltimore.

Fig. 26.—The music pavilion in Forest Park Highlands, where the members will be entertained Thursday night.

Fig. 27.—A view of a portion of Forest Park Highlands, one of the Metropolitan summer gardens. The Committee on Arrangements has arranged for the exclusive use of this resort for the members of the association and their guests on Thursday evening.

# OFFICIAL CALL

## The Sixty-First Annual Session of the American Medical Association, to be Held at St. Louis, June 7-10, 1910

The sixty-first annual session of the American Medical Association will be held on Tuesday, Wednesday, Thursday and Friday, June 7, 8, 9 and 10, 1910, at St. Louis, Missouri.

The House of Delegates will convene at 10 a. m., Monday, June 6. In the House, the representation of the various constituent associations for the years 1910 to 1912, is as follows:

| | |
|---|---|
| Alabama | 3 |
| Arizona | 1 |
| Arkansas | 2 |
| California | 3 |
| Colorado | 2 |
| Connecticut | 2 |
| Delaware | 1 |
| Dist. of Columbia | 1 |
| Florida | 1 |
| Georgia | 2 |
| Hawaii | 1 |
| Idaho | 1 |
| Illinois | 9 |
| Indiana | 4 |
| Iowa | 3 |
| Kansas | 2 |
| Kentucky | 4 |
| Louisiana | 2 |
| Maine | 1 |
| Maryland | 2 |
| Massachusetts | 6 |
| Michigan | 3 |
| Minnesota | 2 |
| Mississippi | 2 |
| Missouri | 5 |
| Montana | 1 |
| Nebraska | 2 |
| Nevada | 1 |
| New Hampshire | 1 |
| New Jersey | 3 |
| New Mexico | 1 |
| New York | 11 |
| North Carolina | 2 |
| North Dakota | 1 |
| Ohio | 7 |
| Oklahoma | 2 |
| Oregon | 1 |
| Pennsylvania | 9 |
| Philippine Islands | 1 |
| Rhode Island | 1 |
| South Carolina | 2 |
| South Dakota | 1 |
| Tennessee | 3 |
| Texas | 5 |
| Utah | 1 |
| Vermont | 1 |
| Virginia | 3 |
| Washington | 2 |
| West Virginia | 2 |
| Wisconsin | 3 |
| Wyoming | 1 |

The twelve scientific Sections of the American Medical Association, the Medical Department of the Army, the Medical Corps of the Navy, and the United States Public Health and Marine-Hospital Service are entitled to one delegate each.

### THE OPENING MEETING

The General Meeting, which constitutes the opening exercises of the scientific functions of the Association, will be held at 10:30 a. m., Tuesday, June 7.

### REGISTRATION

The Registration Department will be open from 8:30 a. m. until 5:30 p. m., on Monday, Tuesday, Wednesday and Thursday, June 6, 7, 8 and 9, and from 9 to 10 a. m. on Friday, June 10.

William C. Gorgas, President.

George H. Simmons, General Secretary.

## PERSONNEL OF HOUSE OF DELEGATES

### Membership of the Legislative Body of the Association

A complete list of the members of the House of Delegates for the St. Louis session is impossible to give in this issue as a number of state societies are yet to hold their meetings at which delegates will be elected. The following is a list of the holdover delegates and of the newly elected members who have been reported to The Journal up to the time of going to press:

### *STATE DELEGATES*

ALABAMA

Mack Rogers, Birmingham.
W. H. Sanders, Montgomery.

ARKANSAS

E. Carson Hay, Hot Springs.

CALIFORNIA

H. Bert Ellis, Los Angeles.
Granville MacGowan, Los Angeles.

COLORADO

Edward Jackson, Denver.
Hubert Work, Pueblo.

CONNECTICUT

D. Chester Brown, Danbury.

DELAWARE

James H. Wilson, Dover.

FLORIDA

J. Harris Pierpont, Pensacola.

ILLINOIS

Frank Billings, Chicago.
J. W. Pettit, Ottawa.
C. S. Bacon, Chicago.

INDIANA

W. N. Wishard, Indianapolis.
Edwin Walker, Evansville.
A. C. Kimberlin, Indianapolis.
C. H. McCully, Logansport.

IOWA

A. L. Wright, Carroll.

KANSAS

C. C. Goddard, Leavenworth.
L. L. Uhls, Osawatomie.

KENTUCKY

W. W. Richmond, Clinton.
A. T. McCormack, Bowling Green.
B. F. Van Meter, Lexington.

LOUISIANA

E. Denegre Martin, New Orleans.

MAINE

Alfred D. Sawyer, Fort Fairfield.

MARYLAND

L. F. Barker, Baltimore.

MASSACHUSETTS

J. L. Morse, Boston.
R. P. M. Ames, Springfield.
C. E. Durant, Haverhill.
Horace D. Arnold, Boston.
Homer Gage, Worcester.
O. G. Brown, North Adams.

MICHIGAN

F. W. Robbins, Detroit.
S. C. Graves, Grand Rapids.
E. T. Abrams, Dollar Bay.

MINNESOTA

Arthur Sweeney, St. Paul.
C. F. McComb, Duluth.

MISSISSIPPI

J. W. Gray, Clarksdale.
D. W. Jones, Brookhaven.

MISSOURI

E. J. Goodwin, St. Louis.
W. B. Dorsett, St. Louis.

NEVADA

B. F. Cunningham, Reno.

NEW JERSEY

Luther M. Halsey, Williamstown. town.
C. R. P. Fisher, Bound Brook.
Alexander Marcy, Riverton.

NEW MEXICO

G. K. Angle, Silver City.

NEW YORK

J. Riddle Goffe, New York City.
W. H. Thornton, Buffalo.
H. S. Houghton, New York City.
J. E. Weeks, New York City.
D. H. Murray, Syracuse.
A. T. Bristow, Brooklyn.
Charles Jewett, Brooklyn.
W. S. Ely, Rochester.
E. H. Bartley, Brooklyn.
H. L. Elsner, Syracuse.
J. E. Sadlier, Poughkeepsie.

NORTH CAROLINA

J. Howell Way, Waynesville.
A. J. Crowell, Charlotte.

NORTH DAKOTA

Victor H. Stickney, Dickinson.

OHIO

J. H. J. Upham, Columbus.
J. W. Clemmer, Columbus.
R. B. Hall, Cincinnati.

OKLAHOMA

L. A. Hahn, Guthrie.

OREGON

C. J. Smith, Pendleton.

PENNSYLVANIA

Thomas D. Davis, Pittsburg.
W. L. Estes, South Bethlehem.
F. W. Frankhauser, Reading.
Samuel Wolfe, Philadelphia.
Americus R. Allen, Carlisle.
Alexander R. Craig, Philadelphia.
G. W. Guthrie, Wilkesbarre.
John B. Lowman, Johnstown.
H. G. McCormick, Williamsport.

RHODE ISLAND

John Champlin, Westerly.

SOUTH DAKOTA

R. D. Alway, Aberdeen.

TENNESSEE

S. S. Crockett, Nashville.
L. A. Yarbrough, Covington.

TEXAS

E. H. Cary, Dallas.
William Brumby, Austin.
Frank Paschal, San Antonio.

UTAH

Augustus C. Beahle, Salt Lake City.

VIRGINIA

J. Shelton Horsley, Richmond.
T. C. Firebaugh, Harrisonburg.
W. E. Anderson, Farmville.

WASHINGTON

J. R. Yocum, Tacoma.
Wilson Johnston, Spokane.

WEST VIRGINIA

C. S. Hoffman, Keyser.
C. A. Wingerter, Wheeling.

WISCONSIN

Carl Doege, Marshfield.
C. A. Richards, Rhinelander.
L. F. Bennett, Beloit.

WYOMING

J. J. Monahan, Encampment.

### *SECTION DELEGATES*

PRACTICE OF MEDICINE

Joseph Capps, Chicago.

OBSTETRICS AND DISEASES OF WOMEN

H. G. Wetherill, Denver.

SURGERY

E. H. Ochsner, Chicago.

OPHTHALMOLOGY

T. A. Woodruff, Chicago.

LARYNGOLOGY AND OTOLOGY

D. B. Kyle, Philadelphia.

PREVENTIVE MEDICINE AND PUBLIC HEALTH

J. H. White, New Orleans.

NERVOUS AND MENTAL DISEASES

M. Allen Starr, New York.

STOMATOLOGY

George V. I. Brown, Milwaukee.

DISEASES OF CHILDREN

C. Douglas, Detroit.

DERMATOLOGY

W. A. Pusey, Chicago.

PHARMACOLOGY AND THERAPEUTICS

C. S. N. Hallberg, Chicago.

PATHOLOGY AND PHYSIOLOGY

W. B. Cannon, Boston.

U. S. ARMY

M. W. Ireland, Washington, D. C.

UNITED STATES PUBLIC HEALTH AND MARINE HOSPITAL SERVICE

G. B. Young, Chicago.

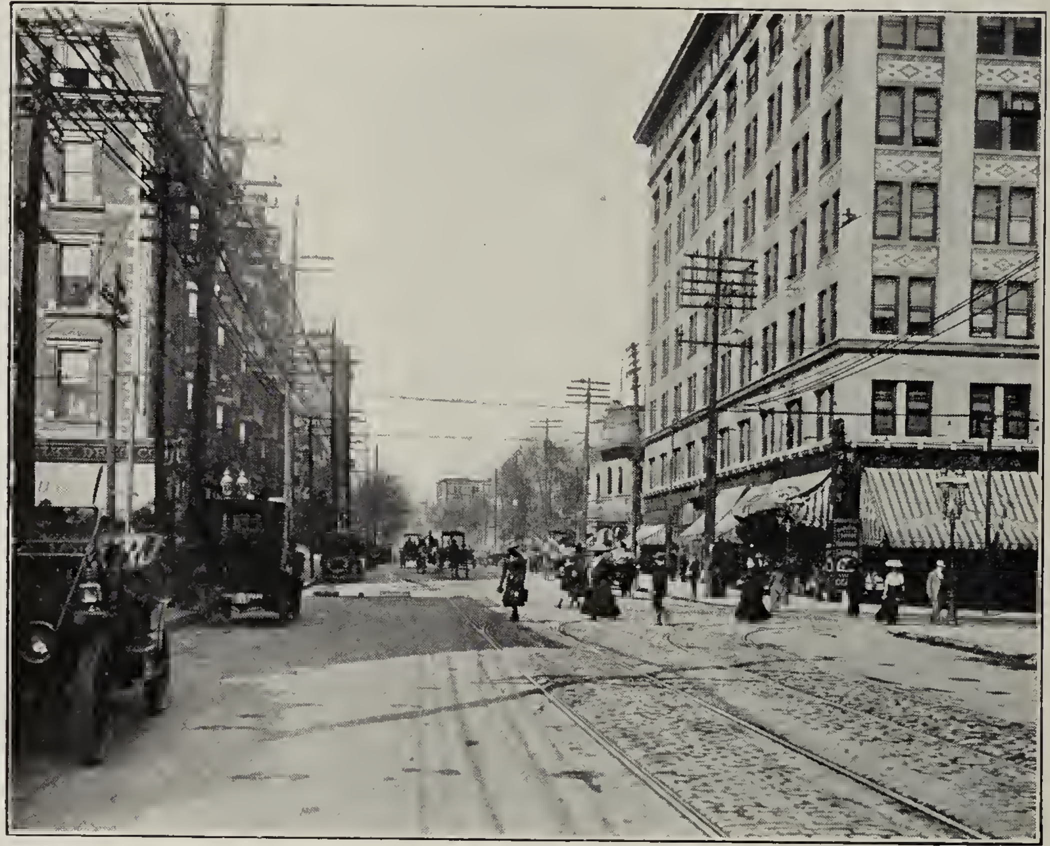

Fig. 28.—The corner of Grand and Olive looking north on Grand. This is one of the important corners during the session. On the right is the Metropolitan Building, headquarters of the Committee on Arrangements, where one hundred physicians have offices; in the distance, in the center, is the Young Men's Christian Association Building, where the Sections on Stomatology, Obstetrics and Diseases of Women and Pathology and Physiology meet. On the left is Beer's Hotel and the Humboldt Building, the latter occupied by physicians and dentists exclusively. The Third Baptist Church, where the Section on Practice of Medicine meets, is obscured by the trees on the right. The Presbyterian Church, where the Section on Diseases of Children meets, stands between Beer's Hotel and the Humboldt Building on the left. A block further north is the Congregational Church, where the Section on Pharmacology and Therapeutics meets.

## REGISTRATION

### Importance of Registering Early

The Registration Department will be in the Coliseum. It will be necessary for a member of the Association to register in order to obtain the official badge and program. No one will be admitted to any entertainment without a badge. Members are urged to register as soon as they can name their hotels.

The Registration Department will be open from 8:30 a. m. to 5:30 p. m., on Monday, Tuesday, Wednesday and Thursday, June 6, 7, 8 and 9, and from 9 to 10 a. m. on Friday, June 10.

Attention is called to the following directions:

1. Each physician desiring to register will first fill out a registration card. One should write very plainly, or print with letters, as the cards are given to the printer to use as "copy" for putting the names in the daily *Bulletin*.

2. *Each member who has paid his annual dues* in full will present his pocket card (which was sent him from the Chicago office) and his filled-out registration card at a window marked "Registration by Pocket Card."

3. *The registration of members* who have paid their dues, but *who have failed to bring their pocket cards*, will be delayed, while the records are consulted. Hence, be sure to bring your "pocket card."

4. *Members who have not paid* their dues will present registration card and make payment at a window marked "Cash."

5. *Each applicant for membership* will present his registration card at the window marked "New Members," with a certificate of membership in his state society. Prospective members, however, will save delay and annoyance by sending in their applications before the session. All such applications should be mailed to the American Medical Association, 535 Dearborn Avenue, Chicago, so as to arrive not later than May 25.

6. Each member on registration will receive a badge, a copy of the Official Program, containing the full details of the scientific proceedings, invitations to the social functions, and such other announcements as may be necessary.

## THE PROGRAM OF CLINICS

### Special Clinics for the Benefit of Physicians at St. Louis Session

During the week preceding and the week following the session of the American Medical Association, the medical departments of the St. Louis University and Washington University have arranged series of clinics at the various hospitals and medical schools for the benefit of physicians, who will thus have opportunity to take advantage of the instruction afforded by the clinics during their visit. The Committee on Arrangements will have full programs, with location of hospitals and clinics, and the way to reach them, ready for distribution at the time of the session. The clinics will begin May 30. The schedule of lectures and clinics of St. Louis University follows:

Fig. 29.—Another important street corner during the sesion, Grand and Finney Avenues looking south on Grand. The large building on the left is the Odeon Theater, in which will meet the Section on Surgery and the Section on Dermatology; here also will be held the general meeting Tuesday morning. In the center of the picture over the first street car is the Y. M. C. A. Building, where will meet the Section on Obstetrics and Diseases of Women, the Section on Stomatology and the Section on Pathology and Physiology. Beyond the Y. M. C. A. Building is the Third Baptist Church, where the Section on Practice of Medicine will meet. A comparison of this picture with that on the opposite page and with the map of St. Louis a few pages further on will show how near the meeting places of the various sections are to one another.

MONDAYS, MAY 30 AND JUNE 13

Children's Diseases and Infant Feeding, by Profs. J. R. Clemens and J. M. Brady, St. Ann's Foundling Asylum, from 9 to 12 a. m. Clinics at City Hospital, to be arranged from 2 to 5 p. m.

TUESDAYS, MAY 31 AND JUNE 14

Medical Clinic, by Prof. W. G. Moore and Assistant Prof. William Engelbach, at St. John's Hospital, from 9 a. m. to 12 m. Surgical Clinic, by Prof. John Young Brown and Dr. F. W. Bailey, at St. John's Hospital, from 9 a. m. to 12 m.

Ear, Nose and Throat Clinic, by Prof. H. W. Loeb, and X-Ray Clinic, by Assistant Prof. R. D. Carman, at St. John's Hospital, from 2 to 5 p. m.

WEDNESDAYS, JUNE 1 AND 15

Ophthalmology, by Prof. Carl Barck; Medicine, by Prof. G. C. Crandall and Assistant Prof. W. P. Elmer; Surgery, by Prof. C. M. Nicholson, Drs. H. Talbott and J. T. Axline; Pathologic Demonstrations, by Prof R. L. Thompson, at Rebekah Hospital, from 8 to 12 a. m.

Eye, Ear, Nose and Throat, by Prof. Max A. Goldstein; Skin, by Prof. F. M. Englan and Dr. W. H. Mook; Eye, by Prof. Adolph Alt; Genito-Urinary, by Prof. Bransford Lewis and Dr. E. E. Kurtzeborn, at College Dispensary, from 2 to 5 p. m.

THURSDAYS, JUNE 2 AND 16

Clinics same as Tuesdays.

FRIDAYS, JUNE 3 AND 17

Clinics same as Wednesdays.

SATURDAYS, JUNE 4 AND 18

Surgical Clinic, by Dr. John McHale Dean and Dr. Louis Rassieur, at St. Mary's Hospital, from 9 a. m. to 12 m.

Orthopedic Clinic, by Dr. Archer O'Reilly; Gynecological Clinic, by Prof. Walter B. Dorsett and Dr. W. C. Gayler, at Rebekah Hospital, from 9 a. m. to 12 m.

Nervous Diseases, by Prof. C. G. Chaddock, at the Sanitarium, from 9 a. m. to 12 m.

Neurology, by Assistant Prof. William W. Graves, at Alexian Brothers Hospital, from 2 to 5 p. m.

Syphilology, by Assistant Prof. J. W. Marchildon, at Alexian Brothers Hospital, from 2 to 5 p. m.

Further clinics will probably be arranged. Those interested in nervous diseases are invited to the Alexian Brothers Hospital daily from 2 to 5 p. m. during the meeting. The clinic will be in charge of Prof. W. W. Graves. A few physicians interested in gynecology may attend daily at the Jewish Hospital Dispensary from 11 a. m. to 1 p. m. The clinic will be in charge of Assistant Prof. Hugo Ehrenfest.

Washington University clinics are given on page 1539.

## PROGRAM OF ENTERTAINMENTS

(The official members' badge, or one of those provided for ladies and guests, will be required for admission.)

### For the Ladies

*Tuesday:* A trip has been arranged to University City, as the guests of Mr. E. J. Lewis, to visit his printing establishment and the other enterprises in which he is interested. Mr. Lewis says that he will arrange to transport the ladies to and from University City, and to entertain them with refreshments. A trip has also been planned to the Anheuser-Busch Brewery. A reception will be held at the Woman's Club and one at the English building at Washington University under the auspices of the university.

*Wednesday:* There will be a steamboat excursion to Jefferson Barracks at 3 in the afternoon, returning at 6 o'clock.

*Thursday:* There will be a general entertainment with music and refreshments at Shaw's Garden.

### For the Members and Guests

*Tuesday Night:* The various alumni banquets and reunions and the section dinners and smokers.

*Wednesday Night:* The President's reception.

*Thursday Night:* The large general entertainment for everybody at Forest Park Highlands.

At the last-named entertainment, the Association will have the exclusive use of this popular amusement park for that evening, and refreshments, cigars, entrance to the theater, etc., will be free. The concessions in the garden, however, will, of course, make their usual charges for entrance.

## THE ST. LOUIS HOTELS

### Rates, Locations and Capacities of Hotels—Important to Reserve Early

Members of the American Medical Association desiring to secure hotel accommodations should write to the chairman of the Hotels Committee, Dr. Louis H. Behrens, 609 Metropolitan Building, or direct to the hotels. Many reservations have already been made and prompt attention should be given to this matter in order to secure accommodations in advance.

### PARTICULARS SHOULD BE GIVEN

When writing, please give definite instructions as to the character of rooms desired, whether with or without bath, European or American plan, number of people in the party, and particularly the names of persons who are willing to share rooms.

As the section meeting places are located along Grand avenue, which is a thoroughfare about midway between the east and west ends of the city, the hotels are listed according to their location, and the time consumed in riding to the meeting-places is mentioned.

A glance at the accompanying map of St. Louis will make the relationships of these districts clear. There is excellent street-car service.

### DOWN-TOWN HOTELS

The first list comprises those hotels located in the down-town, or east, section of the city:

American Hotel, Seventh and Market Sts., 275 rooms, all with bath; can take 350; rate, one person, $1.50 and up; additional, $1 per person; 15 minutes from meeting place.

Edison Hotel, 107 N. Eighth St., 12 rooms: can take 24; rate, one person, $1; additional, $1 per person; 15 minutes from meeting place.

Hotel Garni, Jefferson and Olive St., 50 rooms: can take 50; rate, one person, $0.75 and up; additional, $0.50 per person; 8 minutes from meeting place; near Coliseum.

Jefferson Hotel, Twelfth and Locust Sts., 400 rooms; can take 300; rate, one person, $1.50 and up; with bath, $2.50 and up; additional, $1 per person; with bath, $1.50 per person; 8 minutes from meeting place.

Laclede Hotel, Sixth and Chestnut Sts., 170 rooms: can take 150; rate, one person, $1 and $1.50; with bath, $2 to $2.50; additional, $1 per person; 15 minutes from meeting place.

Madison Hotel, Broadway and Chestnut St., 112 rooms; can take 100; rate, one person, $1 and up; additional, $0.75 and up; 15 minutes from meeting place.

Marquette Hotel, Eighteenth and Washington Ave., 400 rooms; can take 250; rate, one person, $1.50 and up; with bath, $2 and up: additional, $1 per person: 8 minutes from meeting place.

Fig. 30.—The Merchants' Bridge, one of the two handsome bridges joining Missouri and Illinois.

Maryland Hotel, Ninth and Pine Sts., 240 rooms; can take 200; rate, one person, $1 to $2: with bath, $2 to $2.50; additional, $1 per person; 10 minutes from meeting place.

Moser Hotel, 809 Pine St., 100 rooms; can take 75; rate, one person, $0.75 and $1; additional, $0.75 per person; 10 minutes from meeting place.

Planters Hotel, Fourth and Pine Sts., 440 rooms; can take 300; rate, one person, $1.50 and up; with bath, $2.50 and up; additional, $1 per person; with bath, $1.50 per person; 15 minutes from meeting place.

Portland Hotel, 1817 Market St., 100 rooms; can take 100; rate, one person, $1; additional, $0.75 per person: 10 minutes from meeting place.

Rozier Hotel, Thirteenth and Olive Sts., 120 rooms; can take 180; rate, one person, $0.75 to $1.50; additional, $0.75 per person; 8 minutes from meeting place.

St. James Hotel, Broadway and Walnut, 150 rooms; can take 200: rate, one person, $1.50; with bath, $2; additional, $1 per person; with bath, $1.50 per person; 15 minutes from meeting place.

St. Nicholas Hotel, Broadway and Market, 40 rooms; can take 25; rate, one person, $0.75 to $1; additional $0.50 per person; 15 minutes from meeting place.

Southern Hotel (General Headquarters), Broadway and Walnut, 400 rooms; can take 200; rate, European plan, one person, $1.50 and up; with bath, $2.50 and up; American plan, one person, $3.50 and up; with bath, $4 and up; additional, European plan, $1.50 and up per person; American plan, $3.50 and up per person; 15 minutes from meeting place.

Stratford Hotel, Seventh and Pine Sts., 100 rooms; can take 150; rate, one person, $1; with bath, $1.50; additional, $0.50 per person; 15 minutes from meeting place.

Terminal Hotel, Union Station, 110 rooms; can take 150; rate one person, $1.25 and up; with bath, $2.50 and up; additional, $1.25 per person; 10 minutes from meeting place.

### SECTION DISTRICT HOTELS

The following hotels are located in the west end, or residence section, of the city:

Beers Hotel, Grand and Olive, can take 40; rate, one person, $1 and up; with bath, $2.50, and up; additional, $1 per person; at meeting place.

Buckingham Hotel, Kingshighway and West Pine, can take 100; rate, one person, European plan $1.50; with bath, $2.50; additional, $1 per person; rate, one person, American plan $3; with bath, $4; additional, $2.50 per person; 10 minutes from meeting place.

Hamilton Hotel, Hamilton and Maple Ave., 150 rooms; can take 50; European plan, rate, one person, $1; with bath, $1.50; additional, $1 per person; American plan, one person, $2; with bath, $2.50; additional, $1.50; 15 minutes from meeting place.

Hotel Berlin, Berlin and Taylor Ave., can take 25: American plan, rate, one person, $1.50; with bath, $2.50; additional, $1 per person; 10 minutes from meeting place.

Usona Hotel, Kingshighway and McPherson, 100 rooms; can take 50; American plan, rate, one person, $2.50; with bath, $3; additional, $1.50 per person; with bath, $2 per person; 10 minutes from meeting place.

West End Hotel, Vandeventer and W. Belle, can take 25; rate, one person, $1 and up; with bath, $1.50 and up; additional, $1 and up; 5 minutes from meeting place.

Westmoreland Hotel, Maryland and Newstead Ave., can take 50; all rooms with bath; rate, one person $2; additional, $1 per person; 8 minutes from meeting place.

Windermere Hotel, 5601 Delmar Blvd., American plan only; can take 25; rate, one person, $1.50; with bath, $2.50; additional, $1 per person; 15 minutes from meeting place.

### PRIVATE HOMES AND BOARDING HOUSES

In addition to the hotels listed there are numerous private homes and boarding-houses on and near Grand avenue, in close proximity to the section meeting-places, where good accommodations can be secured at rates ranging from 75 cents to $1.50 a day, American plan. Those who desire to obtain such accommodations should write to the chairman, Hotels Committee, at the address given above. State clearly what accommodations are desired, for how many people, and at what rate per day.

The committee announces that all members will be well taken care of, but those who have special preferences should apply at once.

## Section Hotel Headquarters

Hotel headquarters have been assigned as follows:

General Headquarters .................. Southern Hotel

| SECTIONS | HOTELS |
|---|---|
| Surgery | Jefferson Hotel |
| Dermatology | Jefferson Hotel |
| Laryngology and Otology | Jefferson Hotel |
| Practice of Medicine | Planters Hotel |
| Pathology | Planters Hotel |
| Pharmacology and Therapeutics | Planters Hotel |
| Ophthalmology | Marquette Hotel |
| Obstetrics and Diseases of Women | Marquette Hotel |
| Diseases of Children | Marquette Hotel |
| Nervous and Mental Diseases | Buckingham Hotel |
| Preventive Medicine | Buckingham Hotel |
| Stomatology | West End Hotel |

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## SECTION MEETING PLACES

### Compact and Convenient Grouping of Section Halls

The St. Louis Committee on Arrangements announces that it has located the section meeting-places on Grand avenue and on streets intersecting Grand avenue. Those meeting-places located on intersecting streets are not more than 300 feet distant from Grand avenue. The distance between the extremes of the district is about one-half mile, but all are in close proximity to other halls, and special attention was given to grouping correlated sections.

The only hall that is not in the Grand avenue district is the Coliseum, where the Registration Bureau, the Commercial and Scientific Exhibits, the Postoffice, etc., will be located. No hall in the vicinity of the meeting-places was large enough to accommodate these departments.

The street car facilities are most excellent, cars running at two and three minute intervals, and arrangements are being made for special service on occasions when the members will travel in large bodies at any particular hour. Taxicabs will also be at hand, and a special rate will be allowed for transporting the members from the Coliseum, where the Registration Bureau will be established, to the Grand avenue district.

The section and other meeting places are as follows:

General Session: Odeon Theatre, Grand and Finney Aves.
House of Delegates: St. Louis Medical Society, 3524 Pine St.
Scientific and Commercial Exhibits, Postoffice, Registration Office: Coliseum, Washington and Jefferson.
President's Reception: First Regiment Armory, Grand and Manchester Aves.
Medicine: Third Baptist Church, Grand and Washington Aves.
Surgery: Odeon Theatre, Grand and Finney Aves.
Obstetrics and Diseases of Women: Y. M. C. A. Building—Association Hall, Grand and Franklin Aves.
Laryngology and Otology: Sodality Hall, Grand Ave., between Pine and Laclede.
Ophthalmology: Aschenbroedel Hall, 3535 Pine St.
Diseases of Children: Grand Avenue Presbyterian Church, Sunday School Room, Grand and Washington Aves.
Pharmacology and Therapeutics: Delmar Avenue Congregational Church, Delmar, west of Grand Ave.
Stomatology: Y. M. C. A. Building—Small Hall, Grand and Franklin Aves.
Nervous and Mental Diseases: St. Louis University Library, Grand Ave., head of East Pine.
Dermatology: Odeon Bldg—Recital Hall, Grand and Finney Aves.
Preventive Medicine and Public Health: Knights of Columbus Bldg., 3549 Olive St.
Pathology and Physiology: Y. M. C. A. Building—Lecture Hall, Grand and Franklin.

### EQUIPMENT OF SECTION HALLS

The Committee on Section Meeting Places will endeavor to have all halls fully equipped with every needed appurtenance to facilitate the transaction of the work of the sections. Communications on this subject should be addressed to Dr. H. Tuholske, Chairman of the Committee on Section Meeting Places, 609 Metropolitan Building, St. Louis.

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## RAILROAD RATES

### Reduced Railroad Rates to St. Louis Secured and Special Trains Arranged

The Committee on Transportation and Place of Session submits the following report concerning railroad rates and trains.

The Central Passenger Association and the Western Passenger Association, which include all railway lines operating in the states of Ohio, Michigan, Indiana, Illinois, Iowa, Wisconsin, Minnesota, North and South Dakota and Missouri, will make a rate of one fare and a half for the round trip, tickets to be sold June 4 to 8, inclusive. The return limit is June 20, with provision for extension of the limit to July 20 if ticket is deposited with joint agent at St. Louis and deposit fee of $1 paid by the passenger.

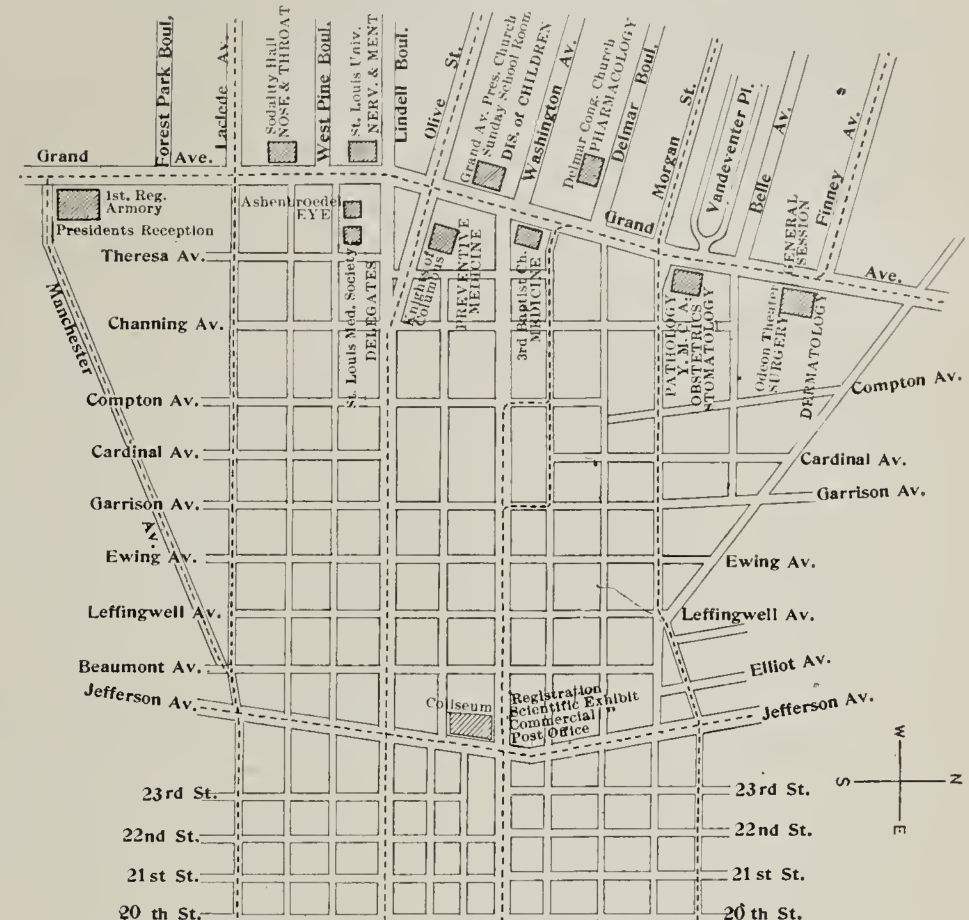
Information has been received from the Southeastern Passenger Association, whose territory embraces states south of the Ohio and the Potomac and east of the Mississippi rivers that a fare of one and one-half cents a mile in each direction will be granted, which is practically a rate of one and one-half fares, the same as the other territories. The Southwestern Passenger Association has granted a rate of two cents a mile in each direction from all points in this territory to the eastern gateways.

The Trunk Line and New England associations, which include all lines operating in the states of Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, Pennsylvania, New Jersey, West Virginia, Delaware, Maryland and the District of Columbia, have authorized a round-trip rate of one fare and a half, tickets to be sold June 3 to 6, inclusive. The return limit is June 20, with provision for extension to July 20 by deposit of ticket and payment of deposit fee of $1.

The Trans-Continental Association has authorized a one-fare rate of $67.50 from all California points, tickets on sale June 3, 4 and 5; the return limit is three months. The same rate is to apply from North Pacific coast points in Oregon and Washington, tickets to be on sale June 2 only; the return limit is three months from date of sale.

In the trans-Missouri territory, which covers the states of Kansas, Colorado, Nebraska, Utah, Wyoming, North Dakota and South Dakota west of Missouri river, the regular tourist rates to Missouri river stations added to one and one-half fare rates from such stations to St. Louis and return will be in force.

Considering the territory covered, these are the best rates which the Association has had since the two-cent laws went into effect.



Map of a portion of St. Louis, showing the General Headquarters, the Registration building, the section meeting places, the section hotel headquarters, etc., as explained in the descriptions on the accompanying pages.

### Special Trains

The following special trains have been arranged:

A day train over the Chicago and Alton road will leave Chicago Monday, June 6 at 9 a. m., arriving at St. Louis about 5 p. m., in ample time for members to get located in their hotels for the night.

This train will be composed of reclining chair cars for those who do not wish to patronize the Pullman parlor cars, a library club car with buffet, dining car, Pullman parlor cars and observation car. This train will provide a beautiful ride through the state by daylight.

A night special will leave Chicago over the Chicago and Alton road at 11:30 p. m., arriving at St. Louis about 8 a. m. This train will consist of reclining chair cars (if desired) without extra charge, club cars with buffet and Pullman drawing-room sleeping cars.

These special trains from Chicago will stop at Joliet, Dwight, Pontiac, Chenoa, Bloomington, Atlanta, Lincoln, Springfield, Carlinville and Alton to pick up members and will make any other intermediate stops if previous notification is given that members wish to board the trains.

For the special trains from Chicago to St. Louis over the Chicago and Alton railroad reservations may now be made of C. R. Davidson, assistant general passenger agent, Rector Bldg., Monroe and Clark streets, Chicago.

Members may leave Peoria at 12:20 p. m. on the Chicago and Alton, connecting with the special at Springfield.

Special trains will leave Kansas City over the Chicago and Alton road on Monday, June 6, at 9 a. m. and 11:30 p. m., the former making a day run through Missouri, arriving at St. Louis at 5 p. m., and the latter a night run, arriving at St. Louis at 8 a. m. In their makeup these trains will be the counterpart of the trains between Chicago and St. Louis and will stop at the following Missouri stations: Independence, Odessa, Higginsville, Marshall, Slater, Glasgow, Higbee, Centralia and Mexico and at intermediate points if previous notification is given that members wish to join the trains.

For the special trains from Kansas City, reservations may be made of W. H. Abel, assistant general passenger agent, Junction Ticket Office, Ninth and Main Sts., Kansas City Mo.

Fig. 31.—View of the Eads bridge across the Mississippi River.

From Minneapolis and St. Paul a special train will be run over the Chicago, Milwaukee and St. Paul road to Chicago, and from Chicago to St. Louis over the Chicago and Alton.

A special train, or special drawing-room sleepers set aside for the exclusive use of members, will be run over the Toledo, St. Louis and Western (Clover Leaf line) leaving Toledo, Ohio, at 7:15 p. m. and arriving at St. Louis at 8 o'clock in the morning. This train will stop at Continental, Delphos and Ohio City, Ohio, and Decatur, Marion, Kokomo, Frankfort and Veedersburg, Ind., and Charleston, Ill. Stops will be made at other points if previous notification be given that members wish to take the train.

For the special train from Toledo, Ohio, application should be sent to E. L. Browne, district passenger agent, Clover Leaf Route, Toledo, Ohio.

A special train, or cars as may be needed, has been arranged to run over the New York Central system, including the Boston and Albany from Boston. This train, which will stop at prominent intermediate points, will leave Boston and New York in time to reach St. Louis early Tuesday morning, June 7.

For reservations over the New York Central lines from New York and the east, apply to L. F. Vosburgh, general eastern passenger agent, 1216 Broadway, New York.

For reservations over the Boston and Albany from Boston apply to A. S. Hanson, Boston.

Reservations should be made as early as possible in order that all may be accommodated.

Arrangements have been made so that through tickets over the New York Central lines from Cleveland and all points east thereof may be exchanged in St. Louis at the city office of the Chicago and Alton for return trip by way of Chicago over the Chicago and Alton line, with stopover at Chicago. Likewise, tickets reading "by way of Chicago and Chicago and Alton" may be exchanged for return trip by direct route over New York Central lines.

### Rates from Various Cities

The following round trip fares from principal cities are made on the basis of the rates described above and will assist in computing the expense of travel from the various parts of the United States. Some cities are given in capitals to indicate, as stated above, that from those cities special through trains will be run for the exclusive use of members of the American Medical Association en route to St. Louis.

| | |
|---|---|
| Baltimore | $31.50 |
| Bloomington | 4.95 |
| Boston— | |
| via Standard Lines | 39.40 |
| via Buffalo & Differential Lines | 37.80 |
| via B. & M. and West Shore | 36.85 |
| via B. & M., D. & H. and Erie | 34.50 |
| via Montreal | 33.00 |
| Buffalo, N. Y.— | |
| via Lake Shore or Mich. Central | 25.15 |
| via Wab., G. T., N. Y., C. & St. L., Erie | 22.90 |
| CHICAGO. | 8.70 |
| Cleveland, Ohio. | 18.75 |
| Denver. | 34.00 |
| Des Moines, Iowa. | 11.70 |
| Detroit. | 16.95 |
| via Grand Trunk. | 16.20 |
| Ft. Dodge, Iowa. | 14.25 |
| Gr. Rapids, Mich. | 14.05 |
| KANSAS CITY, MO. | 10.00 |
| Madison, Wis. | 11.10 |
| Marshalltown, Ia. | 11.70 |
| Milwaukee, Wis. | 11.25 |
| MINNEAPOLIS | 17.65 |
| Montreal, Que. | 35.70 |
| New York City— | |
| via Standard Lines | 36.40 |
| via Differential Lines. | 31.90 |
| Omaha | 15.40 |
| Oskaloosa, Iowa. | 9.75 |
| PEORIA, ILL. | 5.10 |
| Philadelphia | 31.90 |
| Pittsburg, Pa.— | |
| via Pa. Lines. | 21.00 |
| via B. & O. and W. & L. E. | 19.50 |
| via Holgate | 18.75 |
| via Ft. Wayne Route and Chicago | 24.45 |
| via B. & O., P. & L. E. or Pan Handle and Chicago. | 22.95 |
| via W. & L. E. and Chicago | 22.20 |
| Salt Lake City | 64.00 |
| San Francisco | 67.50 |
| Seattle. | 67.50 |
| Sioux City, Iowa | 17.55 |
| ST. PAUL, MINN. | 17.65 |
| TOLEDO, OHIO. | 15.00 |
| Toronto, Ont. | 24.60 |
| Washington, D. C. | 31.50 |

M. L. Harris, Chairman,
Committee on Transportation and Place of Session.

## ST. LOUIS COMMITTEES

### *LOCAL COMMITTEE ON ARRANGEMENTS*

#### EXECUTIVE COMMITTEE

Walter B. Dorsett, Chairman
E. J. Goodwin, Secretary J. H. Amerland, Treasurer
Frank J. Lutz Henry Schwarz

#### CHAIRMEN OF SUBCOMMITTEES

| | |
|---|---|
| Committee on Finance | Warren B. Outten |
| Committee on Halls | M. B. Clopton |
| Committee on Hotels | Louis H. Behrens |
| Committee on Commercial Exhibits | E. Lee Dorsett |
| Committee on Scientific Exhibit | F. J. Lutz |
| Committee on Printing | Philip Skrainka |
| Committee on Program | Joseph Grindon |
| Committee on Reception | C. M. Nicholson |
| Committee on Bureau of Information | Emmett P. North |
| Committee on Section Meeting Places | H. Tuholske |
| Committee on Badges | W. E. Sauer |
| Committee on Entertainments | H. G. Mudd |
| Committee on Section Entertainments | W. W. Graves |
| Committee on Alumni Entertainments | Nathaniel Allison |
| Committee on Registration of St. Louis Members | Arthur C. Kimball |

## THE SCIENTIFIC EXHIBIT

### A Display of Unusual Interest in Prospect at St. Louis

The Scientific Exhibit at St. Louis will be located in the Colieum, and will be of great interest. Prominent in the exhibit his year, and of great practical value, will be the offerings of oards of health of the large cities, pure food and public recretion commissions, etc., emphasizing the hygienic side. The xhibits of the pathologic and research laboratories and of indiiduals will be numerous and arranged in the most compact orms to afford a maximum of instruction with the least xpenditure of time and effort. Expert demonstrators will be n hand to aid the visitors.

The following have signified their intention to participate:

University of Illinois
University of Minnesota
University of Missouri
University of Chicago
Tulane University, New Orleans
Northwestern University Medical School
St. Mary's Hospital, Rochester, Minn.
Babies' Dispensary and Hospital, Cleveland
Indianapolis Board of Health
New York City Board of Health
Missouri State Board of Health
Missouri State Veterinary Department
Washington University
Saint Louis University
City Hospital, St. Louis
City Department of Health, St. Louis
Saint Louis Medical History Club
St. Louis Antituberculosis Society
St. Louis Pure Food Commission
St. Louis Public Recreation Commission
D. H. Skinner, Kansas City
Fenton B. Turck, Chicago
H. D. Valin, Rochester, Minn.
W. W. Graves, Saint Louis
J. M. Ball, Saint Louis
J. J. Houwink, Saint Louis

FRANK B. WYNN, Director, Indianapolis.

## WASHINGTON UNIVERSITY CLINICS

Below is a list of clinics and lectures to be given by Washington University Medical School in connection with the session of the American Medical Association, running from May 23 to June 4 and from June 13 to June 18. This schedule was received too late to be printed with the schedule of the St. Louis University, which appears on page 1535. No fee will be charged, but physicians expecting to attend must register for the clinical courses by letter to the medical department. Sections will be limited.

### LECTURES 9 A. M. TO 10 A. M. DAILY

| | | |
|---|---|---|
| Monday, May 23 | Wassermann test | Prof. Tiedemann |
| Tuesday, May 24 | Protein molecule | Prof. Warren |
| Wednesday, May 25 | Protein food | Prof. Mueller |
| Thursday, May 26 | Hormones | Prof. McGuigan |
| Friday, May 27 | Stool | Prof. J. Myer |
| Saturday, May 28 | Air embolism | Prof. Blair |
| Monday, May 30 | Infected hands | Prof. Newman |
| Tuesday, May 31 | Hematology | Prof. Salter |
| Wednesday, June 1 | Food Absorption | Prof. McGuigan |
| Thursday, June 2 | Graphic methods in heart disease | Prof. Taussig |
| Friday, June 3 | Present knowledge of cancer | Prof. Tiedemann |
| Saturday, June 4 | Blood parasites | Prof. Whelpley |
| Monday, June 13 | Gross pathologic breast cancer | Prof. Newman |
| Tuesday, June 14 | Stomach contents | Prof. Hempelmann |
| Wednesday, June 15 | Immunity | Prof. Tiedemann |
| Thursday, June 16 | Laboratory methods | Prof. Taussig |
| Friday, June 17 | Neurology | Prof. G. Campbell |
| Saturday, June 18 | Medicine | Prof. Bewig |

The following clinics will be given daily except Saturday:

### DAILY CLINICS

#### CLINICAL MEDICINE

10 to 12 a. m.—Washington University Hospital: Drs. W. E. Fischel, A. E. Taussig, O. H. Campbell, Walter Fischel and W. H. Rush.

10 to 12 a. m.—Mullanphy Hospital: Drs. Elsworth Smith, L. H. Hempelmann and Fred Fahlen.

10 to 12 a. m.—Jewish Hospital Dispensary: Drs. Jesse S. Myer and Jerome Cook.

#### NEUROLOGY

10 to 12 a. m.—Washington University Hospital Dispensary: Drs. Given Campbell, William L. Nelson and J. M. Bradley.

10 to 12 a. m.—O'Fallon Dispensary: Drs. F. R. Fry, M. W. Hoge and Percy Farmer.

10 to 12 a. m.—Mullanphy Hospital: Fridays only, Dr. M. A. Bliss.

#### PEDIATRICS

11 to 1 p. m.—Washington University Hospital Dispensary: Drs. E. W. Saunders, John Zahorsky, M. J. Lippe and A. S. Bleyer.

3 to 4 p. m.—O'Fallon Dispensary and St. Louis Children's Hospital: Drs. G. M. Tuttle and H. M. Lowenstein.

3 to 5 p. m.—Bethesda: Drs. E. W. Saunders, B. W. Moore, A. Levy and T. W. White.

#### MEDICINE

3 to 4 p. m.—Washington University Hospital, Thursdays only: Drs. L. H. Behrens and W. L. Clapper.

3 to 5 p. m.—O'Fallon Dispensary: Drs. Elsworth Smith, Henry S. Brookes, H. W. Bewig, F. C. E. Kuhlmann and R. W. Mills.

#### SURGERY (CLINICAL AND OPERATIVE)

10 to 12 a. m.—Mullanphy Hospital: Drs. N. B. Carson, M. B. Clopton and C. E. Hyndman.

10 to 12 a. m.—St. Anthony's Hospital: Dr. Willard Bartlett.

10 to 12 a. m.—Jewish Hospital: Dr. Tuholske and assistant.

10 to 12 a. m.—Baptist Sanitarium: Only on notice, Dr. Tupper and assistant.

3 to 5 p. m.—Washington University Hospital: Drs. H. Tuholske, V. P. Blair, W. T. Coughlin, W. S. Deutsch, C. H. Dixon, Ernst Jonas.

10 to 12 a. m.—St. Luke's Hospital: Only on notice, Dr. Mudd and assistant.

#### GENITOURINARY

4 to 5 p. m.—O'Fallon Dispensary: Drs. E. C. Burnett and H. McC. Johnson.

4 to 5 p. m.—Washington University Hospital· Dr. W. M. Robinson.

#### OBSTETRICS AND GYNECOLOGY

*Obstetrics:* 10 to 12 a. m.—Washington University Hospital: Drs. Henry Schwarz, R. H. Fuhrmann, A. G. Schlosstein, Henry C. Storrs and William H. Vogt.

*Gynecology:* 10 to 12 a. m.—Washington University Hospital: Drs. H. S. Crossen, George Gellhorn, F. J. Taussig and H. A. Hanser.

*Gynecology:* 3:30 to 4:30 p. m.—O'Fallon Dispensary: Dr. Willis Hall.

*Gynecology:* 9 to 11 a. m.—Mullanphy Hospital: Thursdays only, Drs. F. A. Glasgow and A. C. Kimball.

#### SPECIALTIES

*Eye:* 2 to 3 p. m.—O'Fallon Dispensary: Drs. A. E. Ewing, Shoemaker, Charles, J. H. Gross and N. M. Semple.

*Eye:* 2 to 3 p. m.—Washington University Hospital Dispensary: Drs. H. L. Wolfner, M. Wiener, F. E. Woodruff and L. Williamson.

*Nose and Throat:* 2 to 3 p. m.—O'Fallon Dispensary: Drs. Greenfield Sluder, H. E. Miller and H. B. Miller.

*Nose and Throat:* 2 to 3 p. m.—Washington University Hospital Dispensary: Drs. H. C. Creveling and W. E. Sauer.

*Otology:* 2 to 3 p. m.—O'Fallon Dispensary: Drs. J. B. Shapleigh, A. F. Koetter and W. G. Krenning.

*Otology:* 2 to 3 p. m.—Washington University Hospital: Drs. H. N. Spencer, Selden Spencer and E. T. Senseney.

*Dermatology:* 2 to 3 p. m.—Washington University Hospital: Drs. W. A. Hardaway, R. H. Davis and A. H. Friedeberg.

11 a. m.—O'Fallon Dispensary and Mullanphy Hospital alternating: Drs. Joseph Grindon, Theodore Greiner and G. H. Raithel.

*Orthopedic Surgery:* 2 to 3 p. m.—Washington University Hospital: Drs. A. J. Steele and Nathaniel Allison.

*Orthopedic Surgery:* 2 to 3 p. m.—O'Fallon Dispensary: Drs. Philip Hoffman and F. H. Albrecht.

### SPECIAL SATURDAY CLINICS

11 a. m. to 1 p. m.—Clinic not limited, at Washington University Hospital.

#### MEDICINE

Professor Fischel, Professor Fry, Professor Smith.

#### SURGERY

3 to 5 p. m.—Professor Tuholske, Professor Carson, Professor Tupper.

## OTHER MEETINGS AT ST. LOUIS

### Many Organizations to Hold Meetings Before or After the A. M. A.

A number of organizations of specialists or of those engaged in special lines of work are accustomed to hold their annual meetings just before or after the session of the American Medical Association and in the same city. They thus take advantage of the railroad rates and other arrangements and of the fact that their members will largely be present at the American Medical Association session. Some of these bodies have sent us preliminary announcements.

American Academy of Medicine, June 4-6.
American Gastro-Enterological Association, June 6-7.
American Medical Editors' Association, June 6.
American Proctologic Society, June 6.
American Society of Tropical Medicine, June 11.
American Urological Society, June 6-7.
Association of American Teachers of Diseases of Children, June 6.
American Association of Medical Milk Commissions, June 6.
National Confederation of State Medical Examining and Licensing Boards, June 6.

The fourth annual meeting of the American Association of Medical Milk Commissions will be held at the St. James Hotel, St. Louis, Monday, June 6. The three sessions will begin at 10 a. m., 2:30 and 8:30 p. m. The work of medical milk commissions has become a fairly definite science through the conferences and the labors of the special committees of this Association. Physicians, sanitarians and research workers will further elaborate the progress made the past year.

Among the subjects thus far assigned by the program committee are: "The Essentials Underlying the Production of Clean Milk," "The Bacterial Content of Milk from Cows Continuously Stabled," "The History, Development and Statistics of Milk Charities in the United States," "The Advantages, the Limitations and Some of the Results of Milk Charity Work," "The Production of Certified Milk." The secretary is Dr. Otto P. Geier, 124 Garfield place, Cincinnati.

The National Confederation of State Medical Examining and Licensing Boards will hold its twentieth annual meeting in St. Louis, Monday, June 6, at the Southern Hotel.

The subjects to be taken up at this meeting will be practical clinical instruction in medical colleges, a report on medical education in the United States by a representative of the Carnegie Foundation, and a report on a proposed materia medica list by a special committee. The chief object of this symposium is to determine, as far as possible, whether clinical instruction in medical schools can be made sufficiently practical and thorough so as to warrant the medical boards in demanding practical examinations in the principal branches of the medical course.

The secretary of the confederation is Dr. Murray Galt Motter, 1841 Summit place, N. W., Washington, D. C.

### ALUMNI REUNIONS

The annual sessions always provide pleasant opportunities for renewing old friendships and alumni associations take especial advantage of this.

Alumni associations of medical schools wishing to establish bureaus for registration of their members, or to have reunions or banquets during the session, should communicate with Dr. Nathaniel Allison, chairman of the Subcommittee on Alumni Entertainments, 609 Metropolitan Building, St. Louis. These communications should be received by May 15.

The medical women's banquet will be held Tuesday, June 7, at 7 p. m. at the Jefferson Hotel, corner of Twelfth and Locust.

Alpha Epsilon Iota will hold a reunion, to be announced later. Headquarters will be maintained at the tea-room of the Jefferson Hotel between 12 and 2 p. m.

### BALLOON RACES

In addition to the entertainments noted on a previous page, the visitors to St. Louis may see a balloon race. Through the efforts of Dr. M. B. Clopton, chairman of the Subcommittee on Halls, the governors of the Aero Club of St. Louis have decided to give a balloon race for the entertainment of the visitors to the session of the A. M. A. during the week of June 6, from the ascension grounds of the club on Choteau avenue. The exact date and time will be announced later.

### VISITORS FROM ABROAD

Among the distinguished men from abroad who will take part in the sessions are:

Holger Mygind, Professor of Otology and Laryngology, University of Copenhagen, and connected with the Ear and Throat Clinic and the Finsen Light Institute, Copenhagen, is to be the guest of the Section on Laryngology and Otology.

Paul Fleischmann, Assistant in the First Medical Clinic in Berlin, is invited by the Section on Diseases of Children.

J. Herbert Parsons, F.R.C.S., etc., Assistant Surgeon Royal London Ophthalmologic Hospital, Assistant Ophthalmologic Surgeon University College Hospital, Ophthalmologic Surgeon Hospital for Sick Children, London, etc., will take part in the work of the Section on Ophthalmology.

A. Primrose, M.B.C.M., M.R.C.S., Professor of Anatomy and Clinical Surgery, University of Toronto, Toronto, Canada, will be the guest of the Section on Surgery and Anatomy.

### ADDITIONAL RAILROAD INFORMATION

After this page was closed and about to go on the press, additional railroad information was received which appears in the News Department, under Philadelphia, this issue.

## THE COMMERCIAL EXHIBIT

### Books, Instruments, Appliances, Foods, Drugs, Furniture, Carriages, Automobiles, Etc., to Be Shown at St. Louis

The commercial exhibit at the St. Louis session will have commodious quarters in the Coliseum, at the corner of Washington and Jefferson avenues, together, with the Scientific Exhibit, the Registration Bureau, the Post Office, etc.

Books, surgical instruments, diagnostic and therapeutic appliances, electric and *x*-ray apparatus and many other specialties of practical value for use in the medical art will be found in the Exhibit Hall. Well-known pharmaceutical houses and manufacturers of therapeutic and dietetic specialties will be represented. Several of these are making special arrangements to have exhibits which will not only be unusually attractive but unique and instructive in character. Among the books—as may be noted from the brief descriptions given below—there are many works on new subjects.

The surgical instrument exhibits, also, will show a distinct advance in practicability, the past year having added many new forms of diagnostic and operative instruments—especially those pertaining to eye, ear, nose and throat work. Important improvements in electric, *x*-ray, light, vibratory and other apparatus will be demonstrated. New designs of physicians' office and reception-room furniture and equipment, operating tables, examining chairs, medicine cabinets of general utility, nebulizers, sterilizers, and other appliances are among the many articles to be displayed.

The whole exhibit will be of such interest and educational value that physicians will derive not only a great deal of pleasure but should secure many new ideas from a careful inspection of the various displays.

All correspondence with reference to reservations should be sent to Mr. Will C. Braun, Superintendent of Exhibits, 535 Dearborn avenue, Chicago. Dr. E. Lee Dorsett, 609 Metropolitan Building, St. Louis, is local chairman. The following firms will be represented at this exposition. Reservations have also been received from a number of others who have not, however, submitted descriptions of their exhibits:

D. Appleton & Company, New York City. Space 33.—The progressive character of this house will be shown by a glance at the new books and revisions of standard works, published during 1909. 1910 publications up to date are, Hall's "Nutrition and Dietetics," Haubold's "Preparation and After Treatment of the Patient in Operative Cases," Warbasse's "The Conquest of Disease Through Animal Experimentation," a revised edition of Keyes' "Genitourinary Diseases." Other American and foreign works that will appear within the next few weeks are Burrage's "Gynecological Diagnosis," Hoxie's "Symptomatic and Regional Therapeutics," Barr's "Modern Treatment of Syphilis," and Manquat's "Practical Therapeutics," a translation from the French.

Armour & Company, Chicago. Space 58.—The extensive amount of research work dealing with hormones of the ductless glands has aroused renewed interest in the thyroid and has extended the application of suprarenal preparations. The stimulating and growth-regulating properties of the pituitary body are known. Many lecithins and organ lipoids seem to play important rôles in immunizing processes. The preparations of thyroid, suprarenal, pituitary and parathyroid substances and other organotherapeutic agents will, therefore, be of great interest to the profession.

The Abbott Alkaloidal Company, Chicago. Spaces 8 and 13.—Will demonstrate the manufacture, therapeutic application, etc., of representative active principles, together with certain council-passed specialties. Different stages of manufacture, from the crude, raw material to the finished granule or tablet, will be shown. It is planned that a special part of the exhibit shall demonstrate the advantages of active-principle medication as compared with the use of galenical preparations.

The Allen Filter Company, Toledo, O. Space 92.—The Allen germ-proof filter will be the prominent feature of this display. That pure drinking water is one of the most essential factors in the prevention of infections of the alimentary tract needs no demonstration and an efficient filter is one of the best ways of procuring pure water.

W. D. Allison Co., Indianapolis. Spaces 22 and 39.—At the booth of this firm will be seen some new and improved features in the line of equipment—specialists chair, specialists cabinets, medicine and instrument cabinets, examination and treatment tables, reception room furniture and general accessories. Also a special rectal treatment table combined with an operating table and specialists' chair, which is said to be a complete appliance for both general and special practice.

Ambulatory Pneumatic Splint Mfg. Co., Chicago. Space 104.—This company will demonstrate ambulatory pneumatic splints for the treatment of fractures of the hip, thigh, leg, ankle and knee, either in or out of bed, as directed, by the surgeon. Dressings, massage and traction in all directions are readily applied and fixation maintained with these adjustable, washable splints.

American Case and Register Company, Salem, Ohio. Spaces 4 and 17.—This exhibit will consist of a complete physician's and surgeon's account register in desk form. By the use of this system, and with comparatively little labor, accounts are at all times kept posted to date and easily accessible, and case records in the same way are kept complete and available. The desk itself is a handsome piece of furniture.

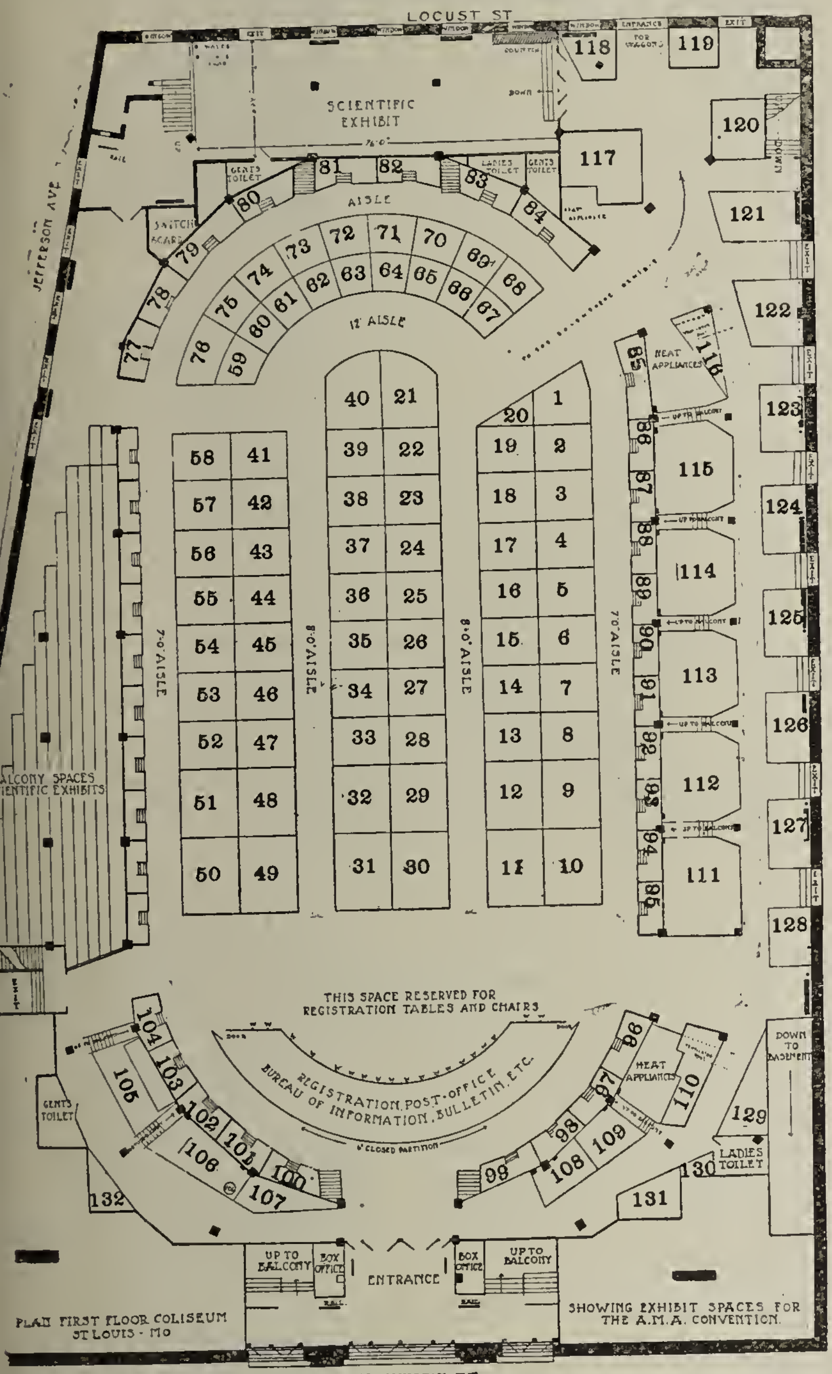

LOCUST ST
SCIENTIFIC EXHIBIT
JEFFERSON AVE
AISLE
12' AISLE
7'0" AISLE
8'0" AISLE
BALCONY SPACES SCIENTIFIC EXHIBITS
GENTS TOILET
LADIES TOILET
HEAT APPLIANCES
THIS SPACE RESERVED FOR REGISTRATION TABLES AND CHAIRS
REGISTRATION, POST-OFFICE, BUREAU OF INFORMATION, BULLETIN, ETC.
UP TO BALCONY
BOX OFFICE
ENTRANCE
DOWN TO BASEMENT
PLAN FIRST FLOOR COLISEUM ST LOUIS - MO
SHOWING EXHIBIT SPACES FOR THE A.M.A. CONVENTION
WASHINGTON AVE

Diagram of the Coliseum, showing the location of the Registration Bureau, where each member should register as soon as he can name his hotel in St. Louis; also the Postoffice, Scientific Exhibit, Daily Buletin office and the Commercial Exhibit. The accompanying list shows what firms will occupy the various numbered spaces.

The Anatomik Footwear Company, New York. Spaces 79 and 80.—Will demonstrate rational footwear, shoes for the prevention and correction of weak ankles and flat foot, illustrating the principles involved by a working model. There will also be a display of discarded braces which have been replaced by Anatomik shoes made to correct the deformities. Stereopticon talks on the use of Anatomik shoes as substitutes for braces and operation will be given at intervals each day.

Apollinaris Agency Company, New York. Space 97.—This company will exhibit Apollinaris, the well-known sparkling mineral water; Apenta, a natural aperient water, and Neuenhar, Germany, and Apenta from the neighborhood of Johannis-Lithia. Apollinaris comes from the spring at Budapest, Hungary. The exhibit will be in charge of a representative of the above agency.

Arlington Chemical Company, Yonkers, N. Y. Space 49.—This company will exhibit liquid peptonoids and dry peptonoids soluble, and hemaboloids, together with some interesting scientific data regarding food values and the methods of preparation of these goods. An attractive and artistic souvenir will be presented to all physicians who visit the exhibit.

Art-Aseptible Furniture Co., St. Louis, Mo. Space 110.—This company will exhibit a recently developed line of metallic furniture finished with porcelain enamel; not the heavy cast iron bath room styles, but designs artistic and pleasing for offices. Also steel furniture resembling that made of wood, a line of pressure sterilizers for hospitals, of new design, an improved operating table, and many other developments that prove interesting and edifying to every physician.

Alexander Beauvais, New York. Space 90.—Food products of the Brusson Jeune Establishment (France) new to this country, consisting of gluten bread, gluten maccaroni, vermicelli, semolina, noodles, etc., which have an enviable reputation in Europe.

Frank S. Betz Co., Hammond, Ind. Spaces 23, 37 and 38.—This company will make an exhibition of a general line of surgical instruments, special razors and operating knives manufactured by experienced razor makers, nose and throat instruments imported from Vienna, also electrical outfits for general and diagnostic purposes and a variety of artificial legs. A special feature of the exhibit will be a German electric pocket telephone for the deaf. The telephone will be demonstrated on patients presented by physicians.

P. Blakiston's Son & Co., Philadelphia. Space 9.—At this exhibit will be shown, Gould's Illustrated Dictionary of Medicine with Supplement of 38,000 words bringing it up-to-date. Buckley; "Dental Materia Medica," second edition just issued. Lewis; "Medical Vademecum" in German and English. Thorington, "Refraction;" Spencer and Gask, "Practice of Surgery;" Gatewood, "Naval Hygiene;" Webster, "Diagnostic Methods;" Beard, "Ophthalmic Surgery;" Edgar, "Practice of Obstetrics;" Beattie and Dickson, "Pathology;" Turner and Stewart, "Nervous Diseases;" and other standard books.

Blees-Moore Instrument Company, St. Louis. Space 5.—The exhibit will be limited to those instruments and appliances representing new ideas for the general practitioner and surgeon, and will show especially the latest pattern of improved cystoscopes and blood-pressure apparatus.

Borden's Condensed Milk Co., New York. Space 117.—Exhibit of their Malted Milk. They call attention to the fact that the casein of the milk has been partially predigested in the process of manufacture, and is entirely free from starch and cane sugar. They will have an analysis showing the energy (caloric) value of their food, which will be of assistance to physicians in percentage feeding.

Burroughs, Wellcome & Co., New York City. Spaces 18 and 19.—This firm will exhibit "Tabloid," "Soloid," "Vaporole," "Enule" and "Wellcome" brand chemicals, demonstrating the advancement made by the application of science to pharmaceutical products. Among recent additions may be mentioned "Vaporole," pituitary (infundibular) extract, "Soloid" brand water, sewage and urine test cases, "Soloid" bacteriologic outfits and "Tabloid" brand first-aid equipments for motor boats, aviators, autosists, etc.

Cabinet Manufacturing Company, Quincy, Ill. Space 81.—A demonstration will be given by this firm of the latest improvements in the methods for obtaining fresh air at night in extreme cold weather. There is a demand on the part of many physicians for something better than the outdoor porch or open windows at night. The Walsh window tent is one of the few attempts made to solve this question. The benefit claimed for the tent is that it saves the energy which in a cold room would go to fight the cold. The tent can be made adjustable to any window or bed.

G. W. Carnrick Company, New York. Space 65.—The products of this company, antithermoline and trypsinogen, will be exhibited, and descriptive reading matter distributed to physicians. Drawings from microscopic sections of the human pancreas showing degenerative changes in the islands of Langerhans as a result of diabetes will be shown.

The Chicago Medical Book Company, Chicago. Spaces 47 and 48.—This company will display a complete assortment of the latest American and English medical publications. Books on the specialties and monographs will be a special feature of the exhibit. A full line of their own publications will also be shown.

The Chicago Surgical and Orthopedic Company, Chicago. Space 88.—This firm will exhibit a complete line of hand-forged surgical knives of their own make and Mr. Kratzmueller will have personal charge of the display. His associate, Mr. Ambrosius, will demonstrate a number of orthopedic appliances made according to the "Hessing" method, exhibited for the first time in this country.

Clark & Roberts Company, Indianapolis. Space 57.—Aseptic furniture has become recognized and approved by the medical profession as a scientific aid in the prevention of infection in the operating room and it has become indispensable in physicians' offices, hospitals, and even in private houses. The above firm is showing a complete and up-to-date line of these goods which will be very interesting from both a scientific and educational standpoint.

The Deimel Linen-Mesh System Company, New York. Space 35.—Many of our readers are acquainted with the product which this well known concern manufactures, namely, the Dr. Deimel linen-mesh underwear. It was placed before the public some seventeen years ago and is recognized as the correct covering for the human body in all seasons and in every land. Their exhibit will consist of garments in all styles and weights.

The DeVilbiss Manufacturing Company, Toledo, O. Space 52.—This company, manufacturers of Medicinal Atomizers, Nebulizers and Powder Blowers exclusively, will have a display of their well known line as usual, and among other things will show for the first time their new improved instrument rack and heater combined, which will be very interesting to physicians. They will take pleasure in demonstrating their instruments, and showing the many advantages of DeVilbiss Atomizers, either for office use or for the home use of the patient.

The DeZeng-Standard Company, Philadelphia. Space 66.—A complete line of electrically lighted diagnostic eye, ear, nose and throat instruments will be exhibited by this company, including cystoscopes, urethroscopes, rectal tubes, etc., of new and improved design; also electrical controllers, batteries and portable apparatus. Demonstrators will be in attendance. The demonstration of the new DeZeng Headlight should prove an interesting feature of the exhibit.

The Duntley Manufacturing Company, 234 Michigan Avenue, Chicago. Space 118.—Will have an exhibit which should claim the interest of every physician in attendance. The Duntley pneumatic cleaner and the Duntley air purifier is said to represent a step forward in preventing medicine and physicians should be amply repaid for the time spent at their exhibit.

Electro Surgical Instrument Company, Rochester, N. Y. Space 36.—Will exhibit a complete line of electrically lighted surgical instruments, including auriscopes, nasal and other scopes and specula for all body cavities, illuminated eye spuds, transilluminators, and tongue depressors. There will also be shown a variety of batteries; the E. S. I. Co. socket current controller, which adapts the street current for use with electrically lighted instruments, and the new E. S. I. Co. socket cautery transformer.

Fairchild Bros. & Foster, New York City. Space 5.—This firm, which makes a specialty of the digestive ferments, will exhibit products from the gastric and pancreas glands, for use in internal medicine, for preparing foods for the sick; for "topical" application; for hypodermatic use. They will also exhibit, in capsules, an extract of the pancreas combined with bile salts, and a preparation in tablet form, of the true Bulgarian (oriental) bacillus, for the treatment of autointoxication.

Fayette Manufacturing Company, Lexington, Ky. Space 84.—Exhibit will consist of a display on plaster figures of the different styles of Fayette supporters. The supporter is claimed to be a scientific device built on mechanical principles for the purpose of holding the organs of the body in correct position. They are said to be used by earnest physicians all over the United States and in many foreign countries.

Joseph C. Ferguson, jr., Philadelphia. Space 24.—An interesting and up-to-date exhibit is promised by this firm, of instruments and supplies used in the treatment of affections of the eye, ear, nose and throat. As the work of this company is devoted exclusively to the manufacture of apparatus and instruments used in these special branches, it is intended to make the display both comprehensive and complete.

The Franco-American Food Company, New York. Spaces 43 and 56.—Propose to exhibit and demonstrate their special broths for invalids. This company's soups are largely sold throughout the United States, but the profession generally does not know that they prepare broths with very little salt and no vegetables or spices. This specialty should overcome the difficulty that nurses experience in many households in obtaining good broths for their patients.

Fouts & Hunter Carriage Manufacturing Company, Terre Haute, Ind. Space 122.—The exhibit of the Cozy Cab at the 1910 convention will be of an educational nature, important features being brought out prominently by models. The 1911 Medic Cozy Cab will attract more than passing attention for the reason that it is to be given away to some lucky physician attending the convention. Every physician will have an opportunity to take part in the contest.

Funk & Wagnalls Company, New York. Space 85.—Publishers of "The Literary Digest." They have the American rights in the Cassell (London) medical books. There are several new titles, including Bramwell's "Hypnotism," Wichkam & Degrais' "Radiumtherapy," Ricketts & Byles' "Smallpox;" also new additions of Hutchinson's "Syphilis," etc. Dubois' and Schofield's books on mental therapeutics are also published by this house, and with books of Gould, Bland-Sutton, Bosanquet, Bruce, Malcolm Morris, Frederick Treves and others, will be shown at St. Louis.

F. A. Hardy & Company, Chicago. Spaces 14 and 15.—This exhibit will be complete and contain many new and improved surgical instruments pertaining to the eye, ear, nose and throat. This firm caters particularly to specialists doing this line of work, and has made many new instruments during the year designed by a number of well-known specialists. In addition a full exhibit of ophthalmic specialties will be made, including a new Cogan prism chart for detecting and placing muscular errors.

Hettinger Bros. Manufacturing Company, Kansas City, Mo. Space 3.—This firm will exhibit a general line of high grade surgical instruments, special features being nose and throat and genitourinary instruments, latest pattern cystoscopes and sphygmomanometers, and high grade leather goods.

The Wm. Hettich Co., Chicago.—This company will present the Wagner mica plate static machine, having purchased the patent rights, good will and stock of the late R. V. Wagner Co., of Chicago, and in connection with their own line of *x*-ray coils and electro-therapeutic apparatus their exhibit will be interesting to physicians, especially those having static machines made by the late Wagner company and those interested in *x*-ray and electro-therapeutic apparatus.

The Hoffmann-La Roche Chemical Works, New York (branch of F. Hoffman-La Roche & Company, Basle, Switzerland, and Grenzach, Germany). Space 2.—The exhibit will embrace not only the specialties, Digalen, Thiocol, Airol, Thephorin and Benzosalin, but also an imposing array of high-class chemicals and alkaloids—Atropin, Homatropin, Eserin, Pilocarpin, etc. This display should be well worth careful inspection.

Horlick's Malted Milk Company, Racine, Wis. Spaces 41 and 42.—Horlick's Malted Milk is an easily disgested food-product of delightful flavor, and very convenient, since a meal may be prepared in a moment. The chief claims made for it are that it is reliable and uniform, made with the experience, methods, and apparatus evolved by their work of over a third of a century in this line. As a dietetic adjunct it has been largely used and freely endorsed.

The Kirby System Company, Detroit. Space 77.—"Penny wise" or "pound foolish," which? In many ways you forget items of vital interest in connection with the clinical and financial history of your patients. You haven't the time to keep a set of books; your practice doesn't warrant a bookkeeper;

therefore your bookkeeping is neglected. "The Kirby System" is said to solve the problem.

Kny-Scheerer Company, New York City. Space 16.—This firm will display the products of its manufacturing plants, located in the United States and in Europe. The scope which this company covers is rather extensive; it comprises (1) high grade surgical instruments; (2) aseptic hospital furniture and sterilizers; (3) electromedical apparatus including a new type of $x$-ray apparatus, and (4) scientific apparatus for laboratory work. Among these will be many new articles which no doubt will be of unusual interest to the surgeon and diagnostician.

Lea & Febiger, Philadelphia and New York. Space 11.—The imprint of the "House of Lea," now in its 126th year, is accepted as *prima faeie* evidence of value in any book bearing it. Examples to be exhibited are, Osler's "Modern Medicine," in seven volumes; Martin's "Surgical Diagnosis," compact and comprehensive; Weeks on the "Eye," the coming authority. Important new editions are, Adami's "General Pathology," Koplik on "Children," Stimson on "Fractures and Dislocations," Whitman's "Orthopedic Surgery," Hyde on the "Skin," Edwards' "Practice," Brewer's "Surgery," Hare's "Therapeutics," Hare on "Typhoid and Other Exanthemata," Starr on "Nerves," Woolsey's "Surgical Anatomy," Ballenger on the "Throat, Nose and Ear," Park's "Micro-organisms" and Abbott's "Bacteriology."

Ernst Leitz, New York City. Space 7.—Will demonstrate the Leitz universal projection apparatus (microscopic projection in the highest magnification, $x$-ray plates, mounted and unmounted anatomical specimens, and even parts of the human body), and illustrate a method of teaching microscopy with the apparatus after Professor Edinger. Unstained micro-organisms will be shown under dark ground illumination; also microscopes, microtomes and photo-micrographic apparatus.

J. B. Lippincott Company, Philadelphia. Space 10.—This company will have an unusually large number of important medical books, and an examination of the display will convince the physician that the rapid advance in medicine is being kept space with. Among those to be shown are De Forest Willard's "The Surgery of Childhood," Rotch's new work, "The Roentgen Ray in Pediatrics," Gwilym G. Davis' "Applied Anatomy," George A. Piersol's revised "Normal Histology;" "Lippincott's New Medical Dictionary," with many new features; Hirschfelder's "Diseases of the Heart;" Earl's "Diseases of the Anus, Rectum and Sigmoid," and James C. Wilson's "Medical Diagnosis," a new second edition having been required within eight months.

The Macalaster-Wiggin Company, Boston and Chicago. Space 93.—Will exhibit some new types of $x$-ray tubes, especially adapated for use with heavy apparatus. This firm manufactures a complete line of $x$-ray tubes and accessories. Various forms of protective goods, including tube shields of all kinds, gloves, spectacles, and the like, will also be shown by it. The new catalogue will be distributed at that time.

The Maltine Company, Brooklyn, N. Y. Space 34.—Will exhibit Maltine and its various combinations, together with the crude drugs, etc., which enter into their composition, and demonstrate their diastasic strength, miscibility and nutritive value, directing particular attention to maltine with olive oil and hypophosphites, a recent addition. Many physicians claim that olive oil is as valuable a medicinal food as cod liver oil and that patients take it more readily.

L. S. Matthews & Co., St. Louis, Mo. Spaces 94 and 95.—Will have a complete and interesting display of all the latest standard publications on surgery, eye, ear, nose and throat in space 95, while general medicine and subjects allied thereto will be found in space 94, both located well to the front of the coliseum, on the right as you enter. This division will greatly facilitate the house's efforts in demonstrating their books.

McIntire, Magee & Brown Company, Philadelphia. Space 107.—It is said that every operator who has tried to hold the ordinary condensing lens between the fingers of the left hand, and at the same time, hold the patient's eyelid open when removing foreign bodies, will be impressed with the usefulness and adaptability of the Dr. Powell's adjustable condensing lens put out by this firm. This instrument, made with adjustable arm to fit over the third finger of the hand, is one of the many interesting things that will be shown in this exhibit.

Mellin's Food Company, Boston. Spaces 59 and 60.—To every physician interested in the problem of infant feeding the company presents this year a new edition of their book, "Formulas for Infant Feeding." In this book the question of calories as well as percentages is given consideration, and suggestions are offered for varying the amount of fat, proteid and carbohydrate to meet individual conditions. This work is the result of an effort to give a method of infant feeding that is scientific, rational and practical.

The McIntosh Battery and Optical Company, Chicago. Space 54.—Will exhibit their new Type 12 Wall Plate, a unique design, containing a dial selector, affording choice of eleven modalities, eliminating all switches; also their improved alternating current rectifier with potential equalizer, an exclusive device, affording a steady, direct current for wall plates. Their line of transformers and head lamps will be of interest to eye, ear, nose and throat specialists.

The Wm. Meyer Company, Chicago. Space 121.—A new type of Roentgen apparatus, several types of portable high frequency coils, new types of head lamps, urethroscopes, cautery appliances, transformers, batteries, wall plates, rectifiers (in operation) giant magnets, and other useful electrical appliances adapted to the needs of the up-to-date physician will be demonstrated.

Meier Dental Manufacturing Company, St. Louis. Space 67.—The Elbrecht Proctoclysis Outfit will be demonstrated. By means of an automatic heating device especially designed to maintain the physiologic saline solution at a uniform heat, this apparatus will hold a constant temperature at all times without attention. In the same space the C. DeWitt Lukens Surgical Company will exhibit a line of aseptic suture material and other surgical specialties.

E. B. Meyrowitz, New York City. Spaces 45, 46 and 53.—This firm will exhibit: An entirely new system for generating currents for $x$-ray and high frequency operations; an apparatus which will deliver initial frequencies of from 30 to 500 cycles into a closed magnetic circuit transformer, producing a uni-directional secondary current without the use of valve tubes or rotating high potential switches; also a new compression diaphragm for rapid radiography.

C. V. Mosby Medical Book and Publishing Company, St. Louis. Space 50.—A complete line of English, French and German medical publications will be shown, including Ochsner and Thompson's "Surgery and Pathology of the Thyroid and Parathyroid Glands," Dock and Bass' "Hook Worm Disease," Taussig's "Prevention and Treatment of Abortion," Hirschman's "Hand Book of Diseases of the Rectum," and Longyear's Nephrocoloptosis." They are special agents for Jacobi's "Dermochrome," "Atlas of Clinical Surgery," Burghard's "Operative Surgery," and "A System of Syphilis," by Power and Murphy.

V. Mueller & Co., Chicago.—Space 12.—The specialist as well as the general practitioner is constantly in search of apparatus to help him in establishing correct diagnoses. At the coming meeting this firm will display its best and most useful electrically lighted diagnostic instruments, such as pharyngoscopes, bronchoscopes, etc. New instruments for the general surgeon and the eye, ear, nose and throat specialist will also be on exhibit.

H. K. Mulford Company, Philadelphia. Space 32.—Charts and apparatus will be shown illustrating the manufacture and preparation of diphtheria antitoxin and globulin, the bacterial vaccines and smallpox vaccine, together with the medicinal preparations of this well-known firm.

Philadelphia Surgical Specialty Company, Inc. Space 118.—Will exhibit their multum in parvo "Simplex Surgeon," a practical and scientific instrument, and in connection with the Weder Manufacturing Company, Inc., a line of eye, ear, nose and throat instruments. Being a strictly wholesale house, all orders received will be forwarded through your local instrument dealers.

The Physicians' Record Company, Chicago. Space 70.—Will display and demonstrate a moderate priced and simple system of case-history recording and accounting, consisting of history sheets which carry the complete, illustrated case history and the account and which simplify materially the work of recording. Other parts of the system, as the leather pocket cases, filing cabinets in various finishes, charts, etc., will constitute part of the display.

Reinschild Chemical Company, New York City. Space 71.—This firm will have on exhibition its new organic iron and manganese salts. These, it is claimed, can readily be dissolved in cold water, furnishing neutral, clear inodorous liquors; this enables physicians to have their liquors made when wanted, in any quantity, and always fresh. Professor Schmidt's regulin for chronic constipation will also be shown and sampled, as well as other specialties.

Roentgen Manufacturing Company. Space 73.—The Snook Roentgen Apparatus, placed on the market three years ago, which is used by many of the best *x*-ray experts and hospitals in this country and abroad, will be exhibited by its manufacturers and patentees. The latest development in stereoscopic apparatus and automatic plate-changer will also be shown.

The Robertson Manufacturing Company, Cincinnati. Space 74.—Expect to exhibit their vacuum cleaning machines and the Gold Medal spraying and nebulizing outfits advertised in The Journal. These inexpensive outfits are said to be growing in favor with the profession because they do the same work as the old cumbersome, complicated and expensive machines and require less labor and are less liable to get out of order.

The Rochester Surgical Appliance Company, Rochester, N. Y. Space 116.—Makers of electrically lighted instruments, will exhibit their latest models, containing new features, including their new magnetic eye spud, Mark's air dilating urethroscope, Law's pneumatic procto-sigmoidoscope, cystoscopes and instruments for the transillumination of the antrum of Highmore and the frontal sinus, electrical controllers, etc.

W. B. Saunders Company, Philadelphia and London. Spaces 30 and 31.—Will occupy a prominent position opposite the Bureau of Registration and Information and the Post Office. They will exhibit new books of interest, among them, Keen's "Surgery," Moynihan's "Duodenal Ulcer," Crandon's "Surgical After-Treatment," Gant's "Constipation and Intestinal Obstruction," Tousey's "Medical Electricity and *X*-Ray," Kemp on the "Stomach and Intestines," Deaderick on "Malaria," McKenzie on "Exercise," Cotton's "Dislocations and Joint Fractures;" new editions of deSchweinitz on the "Eye," McFarland's "Pathology," and DaCosta's "Modern Surgery;" advance sheets and illustrations of the Musser-Kelly work on "Treatment," Mumford's "Practice of Surgery," Hinsdale's "Hydrotherapy," Sisson's "Veterinary Anatomy," Anders-Boston's "Diagnosis," Fenwick on "Dyspepsia," and Davis' "Operative Obstetrics."

The Schacht Manufacturing Company, Cincinnati. Space 127.—This firm have specialized in making a car that will meet the requirements of physicians. They will exhibit their Doctor's Special Runabout. Claims made for this car are that it is speedy, dependable, easily controlled, simply constructed, handsome and inexpensive in maintenance and first cost. The manufacturers will explain by demonstration how this model solves the transportation problem for the profession.

Scheidel-Western *X*-Ray Coil Co., Chicago. Space 29.—Each year radiography is being reduced to a simpler and more comprehensive science. The Scheidel-Western *X*-Ray Coil Company will demonstrate this year their method for taking radiographs by formula and show their Radiographic Special, adapted for this purpose. Their radiographic portable developing rockers, illuminating cabinets and compression apparatus in several forms will make a most interesting exhibit.

Dr. G. H. Sherman, Detroit. Space 89.—Wright's Bacterial Vaccines prepared from carefully selected cultures and put up in sterile vials will be displayed. The value of prepared vaccines from cultures of specific organisms is becoming each year more generally recognized by the profession and this exhibit will undoubtedly prove instructive.

Smith, Kline & French Company, Philadelphia. Spaces 63 and 64.—This exhibit will be entirely in the interest of Eskay's Food. A practical demonstration will be given in the way of display jars, showing the composition of the food. One will contain the cereals, one the sugar of milk and eggs, while another will show the finished product. It will also demonstrate how the curd of cow's milk is formed in the human stomach and how Eskay's Food prevents the formation of such curd.

E. R. Squibb & Sons, New York. Spaces 61 and 62.—Announce that they will exhibit something special that will be a surprise to the physicians.

Taylor Instrument Companies, Rochester, N. Y. Space 119.—Exhibit of the Dr. Rogers "Tycos," sphygmomanometer, a portable, blood pressure instrument, with new sleeve, having no hooks, eyes, buttons, buttonholes, or straps and buckles; the "Tycos" fever thermometer, case and holder, thoroughly protecting thermometer, doing away with chain and pin, while providing a safety clasp for the vest pocket; high grade urinalysis glassware and the Hygrodeik for determining humidity.

The Terre Haute Inhalatorium Cabinet Co., Terre Haute, Ind. Space 128.—Will contain an exhibit of the inhalatorium manufactured by the company. All progressive physicians will be interested in this exhibit. The inhalatorium is used in treating catarrh, hay fever, bronchitis, asthma and pulmonary tuberculosis by means of volatilized medication.

Truax, Greene & Co., Chicago. Spaces 25, 26, 27 and 28.—Will have one of the largest individual displays at this convention, covering the latest designs and methods of construction in hospital and physicians' office furniture, sterilizing apparatus and the latest patterns in instruments and appliances for the physician and surgeon. This exhibit will embrace bone specimens and anatomic models which will be of special interest to the members of the Association.

The Victor Automobile Mfg. Co., St. Louis, Mo. Space 112.—Will exhibit at the convention hall, in addition to its regular touring car, a Victor M. D. style, especially designed for doctors, with interchangeable solid-tire wheels for winter use. This is a "classy" runabout for professional work and contains space for medicine case, instruments, etc. It can be converted into a handsome four-passenger rig for family use.

Victor Electric Co., Chicago. Spaces 21 and 40.—This company will exhibit a most complete line of *x*-ray and electrotherapeutic apparatus. Several important additions have been made to their line, and among the new apparatus is the Wantz radiographic induction apparatus, capable of doing instantaneous radiography, and a universal compression-diaphragm, tube-shield and stand. This outfit is one of the newest appliances turned out by the Victor company, and every interested physician is urged to see it.

The Wallace Adjustable Bed Company, Chicago. Space 72.—Will demonstrate a bed designed for the easy handling of the sick and injured; eliminating a great amount of labor in nursing. It is made of metal, in four sections, each independent, and operated with a removable crank, giving all positions. Bed is equipped with springs and mattress complete for use.

Henry K. Wampole Company, Philadelphia. Spaces 44 and 55.—This company will make an exhibit of elegant pharmaceuticals, comprising pulverous pills, compressed tablets, fluidextracts, elixirs, effervescent salts, capsules, etc., and direct especial attention to the new things brought out during the past year, and to its ability to produce efficient and elegant products for the physician.

The Wappler Electric Controller Company, New York. Space 87.—Will exhibit the Brown Buerger and F. Tilden Brown composite and other cystoscopes, and urethroscopes, the Hays pharyngoscope, head lights, diagnostic lamp controllers, cautery generators and portable high frequency machines. Also their new Cautery and Light Transformers; one for alternating current only, and another for direct or alternating current, 110 or 220 volts.

Weissfeld Brothers, New York. Space 130.—Will exhibit their duck uniforms and a line of hospital uniforms and physicians' coats. To those physicians who have use for such products this display should prove of more than ordinary interest.

The Welch Grape Juice Company, Westfield, N. Y. Spaces 75 and 76.—Will have an exhibit of their well-known product, as usual.

William Wood & Company, New York. Spaces 1 and 20.—Among other books on exhibit will be: Byrant and Buck's "American Practice of Surgery," by America's foremost surgeons; "Reference Hand Book of the Medical Sciences," Witthaus and Becker's "System of Medical Jurisprudence;" "Urgent Surgery," by Felix Lejars, a unique work; Chapin and Pisek's "Diseases of Children," complete and compact; Craig's new book on "Malaria;" Jardine's "Clinical Obstetrics," a book for the practitioner; Onodi's "The Optic Nerve and the Accessory Sinuses of the Nose," containing fifty superb life-size illustrations, and fifty other new books on all medical topics.

THE YEAR BOOK PUBLISHERS, CHICAGO. SPACE 86.—The Practical Medicine series published by this company is a system of practice covering every department of medicine and surgery as these departments have appeared in the literature of the year. It consists of ten small, well-edited volumes issued at equal intervals during the year, each on a different subject, the ten comprising a permanent record of the year's progress.

## *New and Nonofficial Remedies*

SINCE THE PUBLICATION OF THE BOOK "NEW AND NONOFFICIAL REMEDIES, 1910," THE FOLLOWING ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK ARE ASKED FOR.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

*(Continued from page 1209)*

**AGAR-AGAR.**—Agar-agar (Agar-agar. Pharm. Française, 1908) is a substance extracted in the East Indies from various sea weeds.

This substance seems to come principally from Eucheuma gelatinum, E. spinosum (Linné) J. Agardh., Gelidium corneum (Hudson) Lam., G. cartilagineum Gaill., Gloiopeltis tenax (Turner) J. Agardh.

Agar-agar is extracted by hot water and dried for commercial purposes in the form of bundles of shreds, or powder form. It is odorless and insipid, insoluble in cold water but soluble in hot water. A solution containing 1.5 per cent. gives quite a stiff jelly on cooling.

Agar-agar consists practically of gelose, which dissolves in 500 parts of water and is precipitated in an impure form by alcohol. Gelose is a carbohydrate which is converted into galactose on boiling with dilute sulphuric acid. On drying at 100° C. agar-agar loses about 20 per cent. of water. 100 parts of dry substance furnish about 4 parts of ash, which, when treated with hydrochloric acid and examined with the microscope, shows the presence of diatoms, the most characteristic of which are Arachnoidiscus—Ehrenbergii Baill. and several Grammatophora and Cocconeis. An aqueous solution of agar-agar gives no precipitate with solution of tannic acid (absence of gelatin), and no blue color with solution of iodin (absence of starch).

*Actions and Uses.*—Agar-agar absorbs water in the stomach and intestines and forms a jelly, which being indigestible increases the bulk of the feces.

It is employed as a demulcent and for the treatment of constipation.

*Dosage.*—From 5 to 15 Gm. (75 to 240 grains). Agar-agar is administered in substance, coarsely comminuted and mixed with food.

**COPPER CITRATE.—Cuprum Citricum.**—Cupric Citrate.—Copper citrate is the cupric salt of citric acid, containing 34 to 36 per cent. of copper.

It occurs as a green, or bluish-green, finely crystalline, odorless powder. It is but slightly soluble in cold water. Somewhat more soluble in a cold solution of an alkali citrate, forming a greenish blue solution. More soluble in a hot solution of an alkali citrate; also soluble in ammonia water and in mineral acids.

When dissolved in ammonia water copper citrate yields an intense blue solution.

When heated to 90° C. (194° F.) the salt loses water of hydration and assumes a pale blue color. At higher temperature it blackens and at a low red heat leaves a black residue of cupric oxide.

Copper citrate should contain copper equivalent to from 34 to 36 per cent. of metallic copper.

If about 1 Gm. of copper citrate be dissolved in 20 Cc. of diluted hydrochloric acid, the solution diluted to 200 Cc. with hot distilled water, the mixture saturated with hydrogen sulphide, filtered, and the filtrate evaporated nearly to dryness on the water bath, the residue should respond to the usual tests for citric acid.

If 0.5 Gm. of copper citrate be dissolved in 10 Cc. of diluted hydrochloric acid and 1 Cc. of barium chloride test solution be added no turbidity should at once occur (limit of sulphate).

A solution of 0.5 Gm. of the salt in 10 Cc. of diluted sulphuric acid should not evolve any odor of acetic acid when boiled.

The salt should be free from nitrates, chlorides and carbonates.

*Actions, Uses and Dosage.*—Copper citrate possesses the astringent and antiseptic properties of other salts of copper somewhat modified by its sparing solubility.

It may be used for the same purposes and in doses similar to those of other salts of copper.

Non-Proprietary Preparations:

*Copper Citrate, Mallinckrodt.*—Manufactured by the Mallinckrodt Chemical Works, St. Louis, Mo.

*Copper Citrate Ointment, 5 per cent.*, M. E. S. Co.—An ointment containing 5 per cent. of copper citrate and 95 per cent. of white petrolatum, without alcohol or preservative. Manufactured by the Manhattan Eye Salve Co., Owensboro, Ky.

*Copper Citrate Ointment, 10 per cent.*, M. E. S. Co.—An ointment containing 10 per cent. of copper citrate and 90 per cent. of white petrolatum, without alcohol or preservative. Manufactured by the Manhattan Eye Salve Co., Owensboro, Ky.

**CARBOSANT.—Santalolis Carbonas.**—Carbosant is santalyl carbonate, $CO(OC_{15}H_{23})_2 = C_{31}H_{46}O_3$, the carbonic acid ester of santalol.

Carbosant is produced by the chemical interaction of santalol with carbonyl chloride, $COCl_2$, and alkalies, or with carbonic acid esters.

Carbosant is an oily yellow fluid, almost tasteless and odorless, insoluble in water, and soluble in alcohol and ether. It contains 94 per cent. of santalol.

Carbosant is saponified when heated with an alcoholic solution of caustic alkali with the production of potassium carbonate and santalol, both of which can be identified by appropriate tests.

*Actions and Uses.*—The action of carbosant which is chemically broken up into its component parts in the intestine is identical with that of santalol, the official constituent of sandal wood oil. It tends to diminish the secretions of the mucous membrane of the urinary tract, and to relieve pain in the urinary organs.

Carbosant is said to be useful in the treatment of gonorrhea, cystitis and prostatitis.

*Dosage.*—0.6 Cc. (10 minims) three times daily. It may be given in capsules, each containing 0.3 Gm. (5 grains), 2 capsules being given three times daily.

Manufactured by the Chemische Fabrik von Heyden at Radebeul near Dresden, Germany. German patent No. 182,627. U. S. trademark applied for.

*(To be continued)*

**The Functional Adaptability of the Walls of the Blood-Vessels to New Blood-Pressures and the Histology of Transplanted Blood-Vessels.**—Experiments were undertaken in a series of dogs to determine to what extent the walls of the blood-vessels, particularly the veins, are capable of accommodating themselves to an increased blood-pressure, and to study the histologic changes that take place in a transplanted blood vessel. B. Fischer and Schmeden (*Frankfurt. Ztschr. f. Path.*, 1909, iii, 8) transplanted pieces of blood-vessels according to the method devised by Carrel. At various intervals after the operation the segments of the blood-vessels which contained the point of union between the transplanted and the normal blood-vessel were taken out, placed in fixing fluid and examined histologically. To test the effect of an altered current and blood-pressure on the vessels, two types of experiments were carried out; the arteria carotis communis was cut and its central end sutured to the peripheral end of the cut vena jugularis externa and vice versa; and a piece of the vena jugularis externa was resected and transplanted, with double row of circular sutures, between the two stumps of the cut carotid artery. These vessels were selected because there is a greater difference in the thickness of their walls and in their respective blood-pressures than in any other corresponding vessels. It was found that, at the point of junction, histologic union established itself remarkably well in all cases, including the transplants. "Increased blood-pressure cannot in itself produce a lasting progressive dilatation of the blood-vessel." Although there normally never exists in any of the veins a blood-pressure as high as in the arteries (and in the jugulars the pressure is very slight—often negative) it was found that the veins in both types of experiments were capable of withstanding the increased blood-pressure and, apparently as a result of it, became smaller in caliber. Macroscopically and microscopically the walls of the veins showed stronger than before the operation.

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[*For other information see second page following reading matter*]

SATURDAY, MAY 7, 1910

## PREVIOUS ST. LOUIS SESSIONS: A RETROSPECT

### THE SESSION OF 1854

The approaching session of the American Medical Association will be the fourth to be held in St. Louis. In 1854, the Association, then only seven years old, met on May 2, in Veranda Hall. In the absence of the President, Dr. Jonathan Knight of Connecticut, Dr. Usher Parsons of Rhode Island presided. Dr. James R. Washington of St. Louis, chairman of the local committee on arrangements, welcomed the members and, according to the minutes, "concluded by reading a list of the members who had registered—those present, at the suggestion of Dr. March of Albany, rising and answering as they were severally called." This was not difficult of accomplishment, as only 269 were present.

The minutes of the session are most interesting, as showing the condition of medical practice and professional affairs fifty-six years ago. A letter was read from Dr. John G. Adams, a member traveling in Europe, stating that he had presented the sixth volume of the *Transactions of the American Medical Association* to the Imperial Academy of Medicine at Paris, and asking that the five preceding volumes be sent, as the academy had assured him that it would be pleased to "establish a correspondence with the American Medical Association." The volumes were ordered sent as requested.

Dr. John L. Atlee of Pennsylvania reported as chairman of the committee appointed to procure a stone with a suitable inscription for insertion in the Washington monument, which was at that time being built. He reported that at the suggestion of Dr. Pierson, of Salem, Mass., the design selected "represented Hippocrates refusing the presents of the ambassadors of King Artaxerxes, who invited him to go to Persia and succor the enemies of Greece. The sculpture, which was on Vermont marble, was wrought by Mr. Samuel Beck, a young artist of Lancaster County, Pa." Dr. Atlee presented with his report daguerreotypes of the stone and "solicited further contributions from members; the sum yet required to complete the work being about $400." Dr. Ninian Pinckney, United States Navy, read a paper expressing the thanks of the medical staff of the United States Navy for the assistance afforded by the Association in bringing about the proper organization of the medical staff.

On the second day of the session, Dr. Linton of St. Louis presented certain views which he entertained in regard to the pathology of yellow fever, "endeavoring in an able argument to prove the identity, in cause and nature, of yellow, bilious, and other so-called miasmatic fevers. He attributed them all to a hydrocarbonaceous state of the blood." Dr. F. Donaldson of Baltimore read a report on the present and prospective value of the microscope in disease, which aroused considerable interest. The Committee on Prize Essays reported that the prize for the year had been awarded to Dr. Daniel Brainard of Chicago, for an essay on "Treating Ununited Fractures." Dr. C. B. Guthrie of Memphis, Tennessee, introduced resolutions commending the action of the Secretary of the Treasury in recommending that the duty on crude drugs be abolished. Dr. A. D. Spoor of New York presented a report on hydrophobia, containing the results of an investigation which he had undertaken into the question whether it was safe and wise for municipal authorities to enact laws restricting the muzzling of dogs to "dog-days" only; also, what influence climate might have in the production of hydrophobia. Dr. Ramsey of Tennessee asked for the appointment of a committee to investigate charges made against members of the Association who had given testimonials for proprietary remedies. Dr. N. S. Davis of Chicago called the attention of the Association to "the great sacrifice of health and life which takes place annually, especially among the children of large cities, on account of the difficulty of procuring a proper supply of pure and wholesome milk, and the great importance of devising some mode by which milk can be preserved."

Systematic organization of the profession was evidently being discussed then as now. A committee on plans of organization for state and county societies was appointed and on motion of Dr. Atlee of Pennsylvania the immediate organization of state and county medical societies, where such did not already exist, was earnestly recommended. The report of the treasurer showed that the financial transactions of the Association for the year amounted to $3,962.50, and that the balance in the treasury at the time of the St. Louis session was $293.84.

### THE SESSION OF 1873

The second session of the Association held in St. Louis was on May 7-9, 1873. The Association met at the Masonic Temple, and was called to order by the retiring President, Dr. D. W. Yandell of Kentucky, the President-Elect, Dr. Thomas M. Logan of California, taking the chair after the opening exercises. Dr. John S. Moore, chairman of the local Committee on Arrangements, in welcoming the delegates in behalf of the local profession, referred to the wonderful growth of St. Louis, which he said "has grown up, like Jonah's gourd, in a night. Thirty-three years ago, when I first became a resident of this city, it was a French village.... with a population of 16,000. Now, we have a river frontage of fourteen miles and a population of 450,-

000." Dr. Moore also referred to the medical colleges of St. Louis, saying, "The St. Louis Medical College has a building on the corner of Seventh and Myrtle Streets. The Missouri Medical College is now erecting a college edifice on the corner of Twenty-third and Christie Avenue, its former capacious building on the corner of Eighth and Gratiot Streets having been used by the Federal Army during the war as a military prison." The attendance at this session was much larger than at the previous one, 452 delegates being present. The Committee on Arrangements reported that the following entertainments had been provided for the Association: "On Tuesday evening at 8 o'clock, the members of the Convention are invited to a *soirée musicale,* to be held at Mercantile Library Hall, corner of Fifth and Locust Streets. On Wednesday evening, at 8 o'clock, the delegates and their ladies are invited to a levee to be held at the residence of Col. J. L. D. Morrison, on the corner of Locust and Ewing Avenues. On Friday, the Association will make an excursion to Tower Grove Park and Garden. The directors of the St. Louis Mutual Life Insurance Company invite the Association at their convenience to visit their building from the top of which can be obtained an excellent view of the city and its surroundings."

Much attention was devoted at this meeting to organization matters, a long report on the organization of the sections being presented. At this session, Dr. N. S. Davis presented an amendment to the By-Laws providing for the first time for a Judicial Council to take the place of the old Committee on Ethics. Dr. J. J. Woodward of the United States Army presented a memorial from the medical officers of the Army asking that the Association take action to secure for Army surgeons an equal footing with those of the Navy. Dr. N. S. Davis offered an amendment to the By-Laws limiting the right to send delegates to permanently organized state and county societies. Dr. Frederick Horner, Jr., of Virginia, offered a series of resolutions providing for the appointment of a committee of one member from each of the thirteen original states to prepare an exhibit on medical, surgical and biographic literature of the medical profession of 1776 for exhibition "at the approaching Centennial Celebration to be held in Philadelphia." Dr. A. N. Bell of New York offered resolutions advocating the establishment of a national sanitary bureau, with relations to the general government similar to those of the Bureau of Agriculture and the Bureau of Education, as a means of promoting sanitary science and the protection of the public health. In spite of the fact that nineteen years had elapsed since the previous St. Louis session, the financial affairs of the Association were in about the same condition, the treasurer's report showing total transactions of $6,614.40, with a balance on hand of $496.74. A report appears in the *Transactions* for this year showing all of the medical associations and hospitals in the United States at that time, the total number of medical societies being given as 408, with a total membership of 22,791, while the total number of hospitals at that time was 178, of which 83 were public and 39 private.

### THE SESSION OF 1886

The third St. Louis session of the Association occurred in 1886, the Association meeting in the Exposition Building on May 4, the president, Dr. William Brodie of Detroit, being in the chair. Mayor D. R. Francis delivered the address of welcome to the Association. In his address, the President recommended that Congress be memorialized on the resolutions then pending to appoint a scientific commission of three physicians to visit Cuba, Mexico and Brazil to study yellow fever, with a view to determine the validity of the claims made that the means of preventing this disease had been discovered. Resolutions were presented denouncing the endorsement by certificate, advertisement, testimonial, or indirect approval of proprietary medicines and appliances, the President stating in his address that "the stigma of professional disgrace shall rest on any regularly educated physician who allows his name to be advertised as the endorser of any patent, secret or proprietary medicine."

The Board of Trustees reported regarding the publication of THE JOURNAL, then in its third year. This report showed a circulation of 4,271 copies, of which 3,337 went to members and 645 to subscribers. Dr. N. S. Davis, the editor of THE JOURNAL, reported that during the preceding year, he had established a printing office, owned and conducted exclusively in the interests of THE JOURNAL and that the Association owned property which was insured for $800. The entire cost of the plant, with expenses to date of the report amounted to $1,044.88. A resolution offered by Dr. Albert L. Gihon, United States Navy, was adopted directing the Section on State Medicine to prepare and report at the next meeting a form of law regulating the practice of medicine for uniform adoption by the different states.

Regarding this session, THE JOURNAL stated that the attendance was unusally large, about 1,100 being present. No mention is made of social features in connection with this meeting, but there is no doubt that the physicians and citizens of St. Louis entertained the Association with the hospitality which always characterizes her people.

The approaching session of the Association bids fair not only to eclipse all of the previous sessions held in St. Louis, as is to be expected from the remarkable growth of the Association, but to surpass in attendance and interest any previous session of the Association, with the possible exception of the 1908 session in Chicago. It is by no means certain that, largely owing to the energy and enthusiasm of the St. Louis members, even that record, which now stands as the high-water mark of the Association, may not be passed. Members of the Association will see a city far larger than that in which they were welcomed in 1854, 1873, or 1886, while the citizens and physicians of St. Louis will greet an Association vastly greater in numbers, influence, responsibility and possibilities. The scientific programs published in this issue, indicate that the coming session will equal if not surpass in scientific work any meeting heretofore held.

## GINGIVITIS IN DIABETES

The importance of mouth symptoms in the acute infections, such as scarlet fever, diphtheria and measles, is recognized. It is less generally known, however, that in many constitutional conditions the mouth secretions and the mucous membranes covering the gums, cheeks, tongue, etc., furnish early and positive data for diagnosis.

It has been proved that gingivitis is an early and prominent symptom in many cases of diabetes mellitus and continues throughout the course of this disease. Many good books on general medicine ignore this fact, however. Osler, who so seldom misses a point, makes no mention of gingivitis in diabetes, but does say that "the tongue is usually dry, red and glazed and the saliva scanty; the gums may become swollen, and in the later stages of the disease aphthous stomatitis is common."

J. Redier[1] makes the definite statement that in diabetes the saliva contains sugar which undergoes lactic fermentation, in consequence of which both the teeth and the gums suffer.

G. Lemoine[2] thinks that the complications of diabetes involving the digestive apparatus are far from rare, especially the mouth complications. "Among the more frequent," he says, "is gingivitis of the simple congestive, suppurative or expulsive type; this gingivitis seems due to the rapid multiplication of microbes in the buccal cavity."

Ludwig Brandt[3] says that alveolar atrophy begins around the incisor teeth of the lower jaw, which have the weakest roots and the most delicate alveolar lamellæ. He mentions especially the influence of disorders of nutrition on pyorrhea, and cites as constitutional causes mercury taken as a medicine or introduced into the system by constant handling, diabetes, rheumatic and acute arthritides, scurvy, syphilis, tuberculosis and certain nervous diseases such as neurasthenia, tabes and progressive paralysis.

The first symptom of gingivitis is usually a sensation of itching and burning in the gums, which is sometimes disquieting enough to bring the patient to the physician, when careful examination may discover one or more loose teeth. Suppuration may not be present at this time. At a later stage little or no pain is present, but there is marked retraction of the gums, loosening of all the teeth and the oozing of pus from the tooth sockets. In late stages the teeth drop out or must be extracted.

It is interesting to note that the onset, both of pyorrhea and of diabetes, takes place most frequently between 20 and 30 years of age and that males are more frequently affected. The upper jaw is more resistant than the lower, and the disease usually begins around the lower incisors, as already mentioned. The treatment is of course essentially constitutional, supplemented by local applications.

It becomes a matter of extreme importance, therefore, that the general practitioner shall examine the mouths of all patients, taking careful note of the mucous membrane of the cheeks, beneath the tongue, on the tongue itself, the roof of the mouth, and especially the gums.

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[1] Stomatologie, Paris, 1909, I, 331.
[2] Thérap. méd., Ed. 5, 1909, p. 224.
[3] Chirurgie für Zahnärzte, Berlin, 1908, pp. 226 et seq.

## PROFESSIONAL FEES FOR PHYSICIANS IN ANCIENT BABYLONIA

In the Code of Hammurabi, a king of Babylon about 2250 B. C., we have the earliest extant record of a legal scale of physicians' fees. The late Professor Harper, of the University of Chicago, in his translation of the Code of Hammurabi[1] gives in their entirety the articles of that code relating to physicians' fees as follows:

"215. If a physican operate on a man for a severe wound (or make a severe wound on a man) with a bronze lancet and save the man's life; or if he open an abscess (in the eye) of a man with a bronze lancet and save that man's eye, he shall receive ten shekels of silver (as his fee).

"216. If he be a freeman, he shall receive five shekels.

"217. If it be a man's slave, the owner of the slave shall give two shekels of silver to the physician."

For less important operations smaller fees were fixed. The same proportion was maintained between the fees for the upper, the middle, and the laboring classes. The code said:

"221. If a physician set a broken bone for a man or cure his diseased bowels, the patient shall give five shekels of silver to the physician.

"222. If he be a freeman, he shall give three shekels of silver.

"223. If it be a man's slave, the owner of the slave shall give two shekels of silver to the physician."

On the other hand, penalties were inflicted for malpractice. The three paragraphs on this subject are interesting:

"218. If a physician operate on a man for a severe wound with a bronze lancet and cause the man's death; or open an abscess (in the eye) of a man with a bronze lancet and destroy the man's eye, they shall cut off his fingers.

"219. If a physician operate on a slave of a freeman for a severe wound with a bronze lancet and cause his death, he shall restore a slave of equal value.

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[1] The Code of Hammurabi, King of Babylon, University of Chicago Press, 1904. See also Holmes, Bayard: The Most Ancient Medical Practice Laws, The Journal A. M. A., Jan. 28, 1905, p. 293.

"220. If he open an abscess (in his eye) with a bronze lancet, and destroy his eye, he shall pay silver to the extent of one half of his price."

It will be noted that this code recognizes the principle of regulating fees according to the patient's ability to pay. Just what would be the value of these ancient fees in our present money is extremely difficult to determine. We do not know the exact value of a shekel at that time, nor do we know the comparative value of silver then and now. In Babylon, sixty shekels made one mina, a weight equal to nearly one kilogram, or about two pounds. Ten shekels would weigh about a hundred and sixty-five grams. Five and a half ounces of silver in our time would be a comparatively small fee; but the value of money, of course, depends on its purchasing power. In Babylonia, in the time of Hammurabi, the yearly wage of an ordinary laborer was eight shekels of silver. For a capital operation therefore, that is, one that saved the life or an eye of a patient, the Babylonian physician was paid a fee equal to one and a quarter times the wages of a workman for a year. In our time this would be something between five hundred and one thousand dollars. Such charges were for the ordinary men of means. For the nobility and rulers special arrangements were made, and then, on the other hand, there were gradual reductions in the fees, as stated, for the poorer classes. Even making allowance for the probability that the level of subsistence among ordinary laborers was very low, it would seem that the Babylonian physician received a fairly satisfactory remuneration for his skill and learning, and that four thousand years ago the medical profession was highly esteemed and rewarded.

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## PUBLIC LECTURES ON CIVIC TOPICS

The City Club of Chicago has inaugurated a free lecture bureau through which lectures on civic and social subjects are offered to the public by members of the club and others. These lectures are placed at the disposal of churches, societies, clubs and other organizations and are a part of the campaign of the club undertaken to arouse greater interest in civic problems. While most of these lectures have to do with economic and social matters, many of them touch on subjects which have a medical interest, as, for instance, "What the Chicago Tenement Should Be," by Mr. Charles D. Ball, Chief Sanitary Engineer of the Chicago Health Department; "Chicago's Health and Its Economic Value," by Dr. W. A. Evans, Commissioner of Health; "Fatigue in Industrial, Commercial and Professional Life," by Dr. Henry B. Favill. This is one indication of an important movement, the significance of which may easily be overlooked, and the part which physicians are taking in it should arrest attention for a moment. There is a growing demand on the part of the public for information on all subjects which pertain to improvement in living, whether along social, economic or sanitary lines. This is well shown by the eagerness with which people buy and read articles on such subjects which have appeared in recent periodical literature. This demand cannot be too carefully heeded by the profession. The county society, as the organized representative of the medical profession, can and should cultivate this promising field for public instruction. When all parts of our existing organization study the signs of the times and improve to the full the opportunities of the present, the influence of the medical profession, both individually and collectively, will be vastly increased and society will be greatly benefited thereby.

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## DR. RICKETTS A MARTYR TO SCIENCE

As we go to press, notice reaches us of the death of Dr. Howard Taylor Ricketts at Mexico City, from typhus fever, a disease which he was at the time engaged in investigating. Dr. Ricketts was one of the foremost research investigators of this century; his researches on blastomycosis, his study of the Rocky Mountain fever, which occupied several summers in Montana, and his most recent work on typhus fever, have made his name known and honored throughout the scientific world. Some of this work has been done under grants from the Committee on Scientific Research of the American Medical Association, and for many years he has been a valued editorial writer on THE JOURNAL. Since his graduation in medicine in 1897, Dr. Ricketts has been an investigator and teacher. He was associate professor of pathology in the University of Chicago, and recently had been made professor of pathology in the University of Pennsylvania, a position which he accepted with the proviso that he was to be free during the winter, spring and coming summer to pursue his research work on typhus fever in Mexico. His untimely death is due indirectly to his insatiable desire for work, as he was almost worn-out from overwork before he went to Mexico. Dr. Ricketts was modest and unassuming in demeanor, earnest and sincere in all his dealings, and his fine character endeared him to all who were privileged to know him. His work was for humanity and his death is a loss to the world of science.

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# *Medical News*

## ALABAMA

**Fraternity Election.**—At the annual election of the Phi Chi Medical Fraternity, held in Mobile during the session of the State Medical Association, the following officers were elected: President, Dr. John A. Lanford, Tuscaloosa; vice-president, Dr. James H. Blackwell, Birmingham; and secretary-treasurer, Dr. Thomas F. Taylor, Tuskegee.

**State Association Meeting.**—At the annual session of the Medical Association of the State of Alabama, held in Mobile, April 19-22, under the presidency of Dr. Wooten M. Wilkerson, Montgomery, the following officers were elected: President, Dr. Wyatt H. Blake, Sheffield; junior vice-president for the northern division, Dr. Charles Lee Guice, Gadsden; censors, Drs. Vivian P. Gaines, Mobile, and Thaddeus L. Robertson, Birmingham; orator, Dr. Jesse G. Palmer, Opelika, and councilors-elect, Drs. Lamartine O. Hicks, Jackson; Thaddeus J. Pruett, Hurtsboro; Albert J. Peterson, Goodwater; Mack Rogers, Birmingham; Charles Hayes, Hanceville, and James G. Donald, Pineapple. Montgomery was selected as the next place of meeting.

## ARIZONA

**Sanatorium for Fraternal Order.**—A committee of the Knights of Columbus is investigating sites for a tuberculosis sanatorium for the order in Arizona. Phoenix, Flagstaff, Tucson, Bisbee and Douglas are the localities under consideration.

**State Society Meets.**—The nineteenth annual meeting of the Arizona Medical Association was held in Phoenix, April 20-22, under the presidency of Dr. Robert N. Looney, Prescott, the subject of whose address was "Medical Education." The oration in medicine was delivered by Dr. J. Wilson Shiels, San Francisco, and the oration in surgery by Dr. Wesley W. Beckett, Los Angeles. The following officers were elected: President, Dr. John W. Foss, Phoenix; vice-presidents, Drs. Francis E. Shine, Bisbee; Ira E. Huffman, Tucson, and Roderick D. Kennedy, Globe; secretary, Dr. John W. Flinn, Prescott (reelected); treasurer, Dr. Enoch B. Ketcherside, Yuma (reelected); councilor, Dr. William I. Simpson, Phoenix, and delegate to the American Medical Association, Dr. William V. Whitmore, Tucson. It was decided to hold the next annual meeting in Bisbee. The House of Delegates passed resolutions endorsing the resolutions adopted by the House of Delegates of the American Medical Association regarding the amendments to the national Food and Drugs Act.

## ARKANSAS

**New Graduates.**—The College of Physicians and Surgeons, Little Rock, graduated a class of 29, April 29.——The annual commencement exercises of the Medical Department of the University of Arkansas were held May 2. Professor Brough of the university delivered the commencement address, and the valedictory was delivered by Dr. Orange K. Judd, city physician of Little Rock.

**Personal.**—Major George D. Deshon, Medical Corps, U. S. Army, commanding officer of the Army and Navy General Hospital, Hot Springs, has been made a member of the Hot Springs Medical Board, which hereafter is to be known as the Federal Registration Board.——Dr. Henry O. Walker has been elected president of the board of health of Newport.——The home of Dr. John A. Henry, Hope, was destroyed by fire, April 11, with a loss of $1,500, partially covered by insurance.

**County Society Meetings.**—Drew County Medical Society, at its meeting held in Monticello, elected the following officers: Dr. William A. Brown, Monticello, president; Dr. Albert S. J. Collins, Monticello, secretary, and Dr. Michael B. Corrigan, Hot Springs, delegate to the state society.——Chicot County Medical Society, at its annual meeting in Eudora, elected Dr. Elwood Baker, Dermott, president; Dr. Samuel A. Scott, Eudora, vice-president, and Dr. Paul E. Johnson, Blissville, secretary-treasurer.——Nevada County Medical Society, at its meeting in Prescott, elected the following officers: President, Dr. Simeon J. Hesterly; vice-president, Dr. G. O. Marsh; secretary-treasurer, Dr. Albert S. Buchanan, and delegate to the state society, Dr. William W. Rice, and alternate, Dr. Albert S. Buchanan, all of Prescott.——Hempstead County Medical Society, at its annual meeting in Hope, elected the following officers: Dr. T. J. Garner, Washington, president; Dr. John L. Kelley, Hope, vice-president; Dr. John H. Weaver, Hope, secretary-treasurer; Dr. John S. Waddle, Shelton, delegate to the state medical society, and Dr. John H. Weaver, Hope, alternate.——At the annual meeting of Boone County Medical Society, held in Harrison, Dr. Alfred M. Hathcock, Harrison, was elected president; and Dr. Hugh L. Routh, Batavia, treasurer.——Craighead County Medical Society was reorganized April 20, at Jonesboro with a membership of 14. Dr. Charles M. Lutterloh was elected president; Dr. John T. Altman, treasurer, and Dr. Homer A. Stroud, librarian, all of Jonesboro.

## CALIFORNIA

**Will Not Continue Emmanuel Movement.**—It is announced that St. Luke's Hospital, San Francisco, after a year's experience with the Emmanuel movement, the treatment of disease by the combination of mental suggestion and medicine, has discarded the treatment.

**Antituberculosis Society Meets.**—At the annual meeting of the San Diego branch of the California Association for the Study and Prevention of Tuberculosis, Dr. Fred R. Burnham was elected first vice-president; Dr. Francis M. Allen, second vice-president; Dr. Thomas S. Whitelock, treasurer, and Dr. Addison Morgan, a director.

**Society Meeting.**—Orange County Medical Society, at its annual meeting, held in Orange, elected the following officers: President, Dr. Charles C. Violett, Garden Grove; vice-president, Dr. Jesse M. Burlew, Santa Ana; secretary, Dr. Ida B. Parker, Orange, and treasurer, Dr. Howard S. Gordon, Santa Ana.

**Health Associations Merged.**—A federation of the public health associations of California was formed at Sacramento, April 18. The new organization is to be known as the California Public Health League.——Dr. Fitch C. E. Mattison, Pasadena, was elected first vice-president; Dr. George H. Aiken, Fresno, third vice-president; Dr. William F. Snow, secretary of the State Board of Health, secretary-treasurer, and Drs. W. Jarvis Barlow and George H. Kress, Los Angeles; Dr. Rexwald Brown, Santa Barbara, and Dr. Gayle G. Moseley, Redlands, members of the board of directors.

**Personal.**—The charge of battery made by Mateo Brezzini against Dr. Dunlop Moore, U. S. P. H. and M. H. Service, was dismissed by the United States Commissioner of San Francisco, April 19.——Dr. William G. Beattie, Colma, has been reappointed health officer of San Mateo county.——Drs. Robert P. McReynolds, Orville O. Witherbee and H. Haynes Koons have been suggested as a board of assistant consulting surgeons of Los Angeles.——Dr. William E. Downing has been elected president, and Dr. Frederick T. Bond (reelected), health officer of Vallejo.——Dr. David Powell has been chosen president of the board of health of Marysville.——Dain L. Tasker, Los Angeles, has been elected president of the State Board of Medical Examiners.

**Hospital Notes.**—The recently appointed staff of the Pasadena Hospital has decided to establish free clinics for the school children of the city. Dr. Henry B. Stehman has been elected president of the staff of the hospital and Dr. William D. Dilworth, secretary.——The new St. Mary's Hospital, which will occupy the block bounded by Hayes, Grove, Shrader and Stanyon streets, San Francisco, will be the largest hospital west of Chicago; will be a five-story and basement steel-frame structure of mission style, and will cost about $1,000,000. The central portion and east wing will be completed this year, at a cost of $350.000.——Mrs. Lewis Monteagle, San Francisco, has offered to erect an additional building for St. Luke's Hospital, San Francisco, in memory of her late uncle, Calvin Page, to cost $400,000.

**State Society Meeting.**—At the fortieth annual meeting of the Medical Society of the State of California, held in Sacramento, April 19-21, under the presidency of Dr. James H. Parkinson, Sacramento, the following officers were elected: President, Dr. John C. King, Banning; vice-presidents, Drs. A. B. Grosse and J. Henry Barbat, San Francisco; secretary and editor of the *California State Medical Journal*, Dr. Philip Mills Jones, San Francisco (reelected); councilors, Drs. George H. Kress, Los Angeles, Second District; Curtis G. Kenyon, San Francisco, Sixth District; Francis M. Pottenger, Los Angeles, at large (reelected), and James H. Parkinson, Sacramento, Eighth District, and delegate to the American Medical Association, Dr. Joseph L. Milton, Oakland. The next meeting will be held in Santa Barbara in April, 1911.

## COLORADO

**Building for Doctors.**—The Metropolitan Building now being erected at Sixteenth street and Court Place, Denver, is a six-story structure to cost $400,000, and to be used for offices for physicians.

**Consumptive Camps.**—The Colorado Association for the Prevention and Control of Tuberculosis will establish two free camps for consumptives in Denver, one in Pueblo, one in Colorado Springs, and one in the Arkansas Valley.

**Personal.**—Dr. Charles F. Andrew, Longmont, has started for Europe.——Dr. George B. Gilbert, resident physician at Cragmore Sanatorium, Colorado Springs, has resigned.——Dr. David P. Mayhew, Colorado Springs, has returned from abroad.

**Health Farm Closed.**—The Y. M. C. A. Health Farm of 35 acres in Wheatridge, Jefferson county, the site for which was given by David Brothers six years ago, was closed May 1, on account of lack of funds. The ground will revert to the donor.

**Sanatorium Notes.**—More than $25,000 has already been subscribed for the Associated Charities Sanatorium, Colorado Springs.——The first of the course of lectures under the auspices of the Colorado State Association for the Prevention and Control of Tuberculosis was given before the State Normal School, Denver, April 11.

**Dependents in State Institutions.**—The State Board of Charities is prosecuting a rigorous inquiry regarding the status of dependents in state institutions for the purpose of deporting those whose support properly belongs in other countries. The federal government will return the insane and tubercular who have not been in this country three years.

## GEORGIA

**Graduation Exercises.**—The annual graduation exercises of the Atlanta School of Medicine were held April 25, when a class of 67 was graduated. Dr. Wyman W. Pilcher, Warrenton, delivered the annual address and Bishop Nelson delivered the diplomas.——At the commencement exercises of the University of Georgia, Augusta, held May 2, diplomas were conferred on a class of 18 by Chancellor David C. Barrow.

**Personal.**—Dr. Henry M. Fullilove, Athens, has been reelected physician of Clarke county.——Dr. Tully M. Talbott, Valdosta, is reported to be seriously ill.——Dr. J. R. B. Branch, Macon, has succeeded Dr. Eugene B. Elder as physician to the Macon Hospital.

**Protest Against Tuberculosis Hospital.**—A temporary injunction is said to have been issued April 22 against C. S. Hodson and Clarence T. Holliday, Atlanta, restraining them from establishing a tuberculosis sanatorium on a tract of land at Cornell Station, on account of the proximity of dairy farms to the site.

**State Association Meeting.**—The Medical Association of Georgia held its sixty-first annual session in Athens April 20-22, under the presidency of Dr. Thomas J. McArthur, Cordele. The following officers were elected: President, Dr. Edward C. Davis, Atlanta; vice-president, Dr. Marcus F. Carson, Griffin; secretary-treasurer, Dr. William C. Lyle, Augusta (reelected), and councilors, Drs. Isham H. Goss, Athens, Eighth District; William B. Hardman, Commerce, Ninth District; J. Lawton Hiers, Savannah, First District; Wyman W. Pilcher, Warrenton, Tenth District; Frederick D. Patterson, Cuthbert, Second District, and Abner W. Calhoun, Atlanta, Seventh District. The councilors from the other districts were reelected. Rome was selected as meeting place for 1911.

## ILLINOIS

**State Society Meeting.**—The Illinois State Medical Society will hold its sessions in the Woman's Club Rooms, Danville, and the public reception will be given at the First Methodist Church. The address in medicine will be delivered by Dr. Charles G. Stockton, Buffalo, N. Y.

**Hospital Notes.**—The directors of the corporation of Silver Cross Hospital, Joliet, have taken steps to establish a maternity cottage at the institution, to cost $15,000.——The work on the Moline City Hospital is almost completed, and the new building will soon be ready to receive patients.——Dr. Benjamin H. S. Angear, Sublette, will erect a sanatorium in that city, to cost about $5,000.

### Chicago

**Hospital Days.**—May 15 and 16 have been decided on as Hospital Days, on which contributions for hospitals will be asked by 176 women volunteers.

**Dispensary Opened.**—The new Emmanuel Memorial Dispensary, at Maxwell and Wallace streets, erected at a cost of $50,000, was dedicated April 24.

**Training School Incorporated.**—The Passavant Hospital Training School for Nurses has been incorporated by Dr. Oren J. Waters, Herman L. Fritchel and Martha Gensike.

**Personal.**—Dr. and Mrs. Casey A. Wood have returned from Europe.——Dr. Henry B. Favill has been elected president of the City Club.——Dr. Aloys Heinen has started for Germany.

## INDIANA

**Mutual Protective Association.**—Physicians of Bartholomew county have organized a mutual protective association to insure better collections.

**Had His Stomach Removed.**—Peter Ruby, New Albany, aged 45, who had his stomach removed four years ago and had been fed through a fistula since that time, died from starvation April 19. The case had been reported in various medical journals.

**Donation to Antituberculosis Society.**—Dr. James Y. Welborn, Evansville, president of the Vanderburg County Antituberculosis Society, announces a donation of $5,000 to the association, provided that $5,000 additional is raised in membership fees or by subscription.

**Pure Food Prosecution.**—During March, 18 successful and 3 unsuccessful prosecutions were instituted by the State Pure Food and Drug Commissioner against food dealers, and in the 18 successful cases the defendants were fined each $10 and costs. During the month 918 places where food is prepared or sold were inspected. Of these 25 were reported excellent; 445, good; 360, fair; 74, poor, and 14, bad.

**District Society Meeting.**—At the fifth annual meeting of the Eighth District Medical Society, held April 21 in Muncie, the bill before congress for the creation of a national department of health was endorsed. Dr. William D. Schwartz, Portland, was elected president; Dr. Samuel Hollis, Hartford City, vice-president; Dr. Frederick McK. Ruby, Union City, secretary-treasurer, and Dr. Clay A. Ball, Muncie, censor.

## MARYLAND

**Social Hygienists Meet.**—The third annual meeting of the Maryland Society of Social Hygiene was held in Baltimore April 19. The principal address was made by Dr. Lewellys F. Barker, Baltimore, on "The Importance of the Eugenic Movement and Its Relation to Social Hygiene." Dr. Franklin B. Smith, Frederick, was elected president; Dr. Lewellys F. Barker, Baltimore, first vice-president; Dr. Brice W. Goldsborough, Cambridge, third vice-president; Dr. Donald R. Hooker, Baltimore, secretary, and Dr. Charles O'Donovan, Baltimore, member of the executive committee.

**County Society Meetings.**—The semi-annual meeting of the Montgomery County Medical Society was held in Rockville, April 19. Dr. William L. Lewis, Kensington, was elected president; Dr. James D. Morgan, Chevy Chase, vice-president; Dr. John L. Lewis, Bethesda, secretary-treasurer; censors, Drs. Claiborne H. Mannar, Rockville, and Frederick N. Henderson, Rockville; delegate to the Medical and Chirurgical Faculty of Maryland, Dr. James E. Deets, Clarksburg, and alternate, Dr. Otis M. Linthicum, Rockville.——Cecil County Medical Society, at its annual meting, held in Elkton, April 21, elected Dr. Charles M. Ellis, Elkton, president; Dr. Samuel T. Roman, Conowingo, vice-president; Dr. Howard Bratton, Elkton, secretary-treasurer; Dr. Charles F. Miller, Zion, censor, and Dr. Robert M. Black, Cecilton, delegate to the Medical and Chirurgical Faculty of Maryland.

**State Society Meeting.**—The one hundred and twelfth annual session of the Medical and Chirurgical Faculty of Maryland was held April 26-28 and the following officers elected: President, Dr. Franklin B. Smith, Frederick; vice-presidents, Drs. John Staige Davis, Baltimore; Harry B. Gantt, Millersville, and Timothy Griffith, Frostburg; secretary, Dr. John Ruhräh, Baltimore; treasurer, Dr. William S. Gardner, Baltimore; trustee, Dr. Thomas A. Ashby, Baltimore; delegate to the American Medical Association, Dr. Ridgeley B. Warfield, Baltimore, and councilors, Drs. Hiram Woods, Lewellys F. Barker, G. Milton Linthicum and R. Lee Hall, all of Baltimore. A bronze medallion of Dr. William H. Welch was presented to the society by Dr. Charles M. Ellis, Elkton, and $5,222.51 was turned over by the president, on behalf of the society, for the establishment of a fund to be known as the Isaac Ridgeway Trimble fund. This fund is to be invested and the interest used for scientific lectures at the hall. The annual oration was delivered by Dr. Clemens S. Von Pirquet.

### Baltimore

**Painting Presented.**—An oil painting of Dr. Moreau Forest, a graduate of the class of 1826 of the University of Maryland School of Medicine, has been presented to that institution by the daughter of Dr. Forest.

**Personal.**—Dr. David Streett, dean of the Baltimore Medical College, was operated on, April 26, for appendicitis.——Dr. William F. Schwartz has been appointed physician of the state penitentiary, vice Dr. Theodore Cooke, Jr., and Dr. Gustave H. Wolterack has been appointed assistant physician.——Dr. Eugene L. Opie has been appointed a member of the faculty of Washington University, St. Louis.——Dr. Robert W. Johnson sailed for Europe April 30.——At the annual meeting of the Johns Hopkins Chapter of the Phi Beta Kappa Fraternity, held April 26, Dr. Ira Remsen was elected president and Dr. Lewellys F. Barker vice-president.

## MASSACHUSETTS

**Society Meeting.**—The annual meeting of the Hampden District Medical Society was held in Springfield April 19. Dr. Harvey W. Van Allen was elected president; Dr. Ralph H. Seelye, vice-president, and Dr. Parker M. Cort, secretary-treasurer, all of Springfield.

**Clinical Week.**—The annual clinical week exercises of the Boston University School of Medicine, consisting of clinics, clinical lectures, demonstrations and didactic lectures, will be held at the school buildings from May 30 to June 4, inclusive. The course is open to all graduates in medicine without charge. Information regarding the course may be obtained from Dr. Frank C. Richardson, 80 East Concord street, Boston.

**Military Medical Items.**—Major William R. P. Peterson has been made president, Major B. F. Butler, recorder, and Major Frank P. Williams, Boston, a member of the Board of Medical Examiners of the Massachusetts Volunteer Militia.——Lieutenant Calvin B. Faunce, Boston, Medical Department M. V. M., has been relieved from duty with the ambulance section of the hospital corps and transferred to the hospital section.

**Infantile Paralysis.**—The State Board of Health has issued a circular concerning anterior poliomyelitis, in which the following points are emphasized: The disease is infectious; the disease is contagious; the disease is probably transmitted not only from patient to patient but through the mediation of third persons; many so-called abortive or atypical cases occur in every epidemic of the disease, and these cases should be regarded with suspicion and constitute an important link in the epidemic chain. The board suggests the use of hexamethylenamin in the treatment and prophylaxis of the disease.

**Personal.**—Dr. Francis X. Mahoney has been appointed health commissioner of Dorchester.——Dr. Harry H. Nevers, city bacteriologist of Lawrence, has been assigned to act in place of the board of health until such time as the board of aldermen confirm the mayor's appointees as members of the new board.——Dr. Carl E. Meyer has been appointed chief medical inspector of public schools of Chicopee.——Drs. Walter E. Fernald, Waverly, superintendent of the Massachusetts School for the Feeble Minded; Everett Flood, Palmer, superintendent of the Massachusetts Hospital for Epileptics, and Ernest V. Scribner, Worcester, superintendent of the Worcester Insane Asylum, have been appointed members of the state commission to investigate the increase of criminals, mental defectives, epileptics and degenerates.——Dr. William J. Brown, head of the south department of the Boston City Hospital, has resigned.

## MICHIGAN

**Will Erect Sanatorium.**—The Ann Arbor Antituberculosis Society has leased seven acres on the outskirts of the city for a term of five years and will erect a tuberculosis sanatorium on this site.

**Physician Loses Suit.**—In the case of Dr. James E. Taylor, Ovid, who sued the Detroit, Grand Haven and Milwaukee Railroad for $10,000 for injuries alleged to have been sustained in an accident recently, the judge directed a verdict of no cause of action.

**Medical Society Wants Building.**—The membership of the Wayne County Medical Society has actually taken up the formulation of plans for a building for the exclusive use of the society, to cost $50,000. Thus far about $30,000 has been pledged.

**County Society Meeting.**—At the annual meeting of the Benzie County Medical Society, held at Benzonia, April 20, Dr. James E. Peltier, Thompsonville, was elected president; Dr. Charles P. Doyle, Frankfort, vice-president; Dr. Edward J. C. Ellis, Benzonia, secretary-treasurer, and Dr. Gerald O. Edmunds, Honor, delegate to the state society.

**Personal.**—Dr. William F. Metcalfe, Detroit, returned from Europe April 25.——Dr. Roy C. Perkins has resigned as health officer of Bay City, and has been succeeded by Dr. Lewis C. Hammond.——Dr. Frank W. Martin has been elected president of the Portland Antituberculosis Society.——Dr. Peter D. MacNaughton, for nine years health officer of Calumet, has resigned.

## MONTANA

**Personal.**—Dr. Arthur Morrow, Kalispell, announces his retirement from practice.——Dr. Roy E. Seitz, Musselshell, has moved to Roundup, and will be surgeon to Mine No. 2 in that place.——Dr. Howard C. Randolph, assistant surgeon of the Northern Pacific Hospital, Missoula, has resigned and gone to Aberdeen, Wash.——Dr. Carl H. Horst has succeeded Dr. John B. Sullivan as city physician of Butte.

**Society Meetings.**—At the recent meeting of the Yellowstone Valley Medical Society, held in Billings, the following officers were elected: President, Dr. William G. Richards, Hardin; vice-president, Dr. James D. Barrett, Billings; secretary, Dr. E. G. Nelson, Billings; treasurer, Dr. Carl Shulin, Billings, and delegate to the state society, Dr. Henry E. Armstrong, Billings.——At the annual meeting of Gallatin County Medical Society, held in Bozeman, Dr. Joseph Piedalue, Bozeman, was elected president; Dr. Albert D. Brewer, Storrs, vice-president; Dr. Cornelius B. Boyle, Bozeman, secretary and delegate to the state society; and Dr. James E. Ragsdale, Bozeman, treasurer.

## NEBRASKA

**Physician Wins Suit.**—In the suit instituted by Ella Guard against Dr. Paul H. Ellis, Omaha, in which $25,000 damages was asked on account of alleged malpractice, a verdict for the defendant was returned April 16.

**Elections in County Societies.**—Burt County Medical Association met at Craig, April 9, and elected Dr. William C. Keettel, Lyons, president; Dr. Axel E. Hedlund, Oakland, vice-president; and Dr. Merrit Wood, Tekamah, secretary-treasurer. The question of fees was discussed and an increase decided on.——Fillmore County Medical Society met at Geneva, March 29, and elected the following officers: Dr. Frederick L. Beck, president; Dr. Royal Woods, vice-president; Dr. Joseph Bixby, secretary-treasurer; Dr. Morgan Propst, censor, all of Geneva; and Dr. Frederick L. Beck, delegate to the state medical society to meet in Lincoln May 10-12, and Dr. V. V. Smrha, Milligan, alternate.

## NEW HAMPSHIRE

**Personal.**—Dr. Harold Palmer, Plymouth, has located at Rumney.——Dr. G. M. Sullivan has opened an office at Derry.——Dr. Robert F. Oliver, Alstead, has opened an office at Enfield.——Dr. Gardner N. Cobb of White River Junction, Vermont, has removed to West Lebanon.

**Bequests.**—By the will of the late Mrs. Elvah G. Mann, $10,000 is bequeathed to the Concord City Hospital.——The late Albert C. Buzzell, Exeter, in his will, bequeathed $10,000 to the Boston Floating Hospital, and railway shares valued at $20,000 to the Exeter Cottage Hospital.

## NEW JERSEY

**Hospital Bed Endowed.**—Muhlenberg Hospital, Plainfield, has received a bequest of $5,000 from the estate of Arthur W. Talmadge to endow a bed in perpetuity.

**Personal.**—Dr. Peter J. Zeglio, Plainfield, has been appointed attending surgeon of the Muhlenberg Hospital, vice Dr. Monroe B. Long, deceased, and Dr. William H. H. Anthony has been appointed attending physician.

**Osteopath Bill Vetoed.**—The bill passed by the State legislature regulating the practice of osteopathy and giving the osteopaths one member on the Board of the State Medical Examiners, was vetoed by Governor Fort, April 16.

**County Society Meetings.**—Camden County Medical Society, at its annual meeting, April 26, is reported to have adopted resolutions condemning Governor Fort for his action in regard to the bill, introduced by Dr. Ramsey, and known as the Assembly bill to regulate the practice of medicine. Dr. Joseph B. Baer was elected president; Dr. A. Haines Lippincott, vice-president; Dr. Daniel Strock, secretary; Dr. Alexander S. Ross, assistant secretary; Dr. William H. Pratt, treasurer; Dr. Henry H. Sherk, reporter; Dr. Alfred Cramer, Jr., historian; Dr. Joseph L. Nicholson, censor; Dr. Edmund L. B. Godfrey, trustee; all of Camden; William A. Westcott, Berlin, William I. Kelchner, Camden, and John K. Bennett, Gloucester City, delegates to the Medical Society of the State of New Jersey.——At the annual meeting of Somerset County Medical Society, held in Somerville April 14, Dr. Claudius R. P. Fisher, Boundbrook, was elected president; Dr. Josiah Meigh, Bernardsville, vice-president; Dr. Francis DuBois, North Plainfield, secretary; Dr. Thomas H. Flynn, Somerville, treasurer; Dr. William H. Long, Jr., Somerville, reporter; Dr. Howard L. Kaucher, Boundbrook, censor, and Dr. Arthur H. Dundon, North Plainfield, delegate to the state society.——At the annual meeting of Cumberland County Medical Society in Bridgeton, April 12, Dr. Alfred Cornwell, Bridgeton, was elected president; Dr. Charles W. Wilson, Vineland, secretary; Dr. Joseph Tomlinson, Bridgeton, treasurer, and Dr. John H. Moore, Bridgeton, reporter.

## NEW MEXICO

**Additional Appropriation for Sanatorium.**—The secretary of war has recommended to congress an appropriation of $65,000 to construct a water works system for the army sanatorium for tuberculosis at Fort Bayard.

**New Hospital.**—The contract for the erection of the Deming Ladies Hospital has been let. The building will be located on Copper avenue; will be of brick, 36 by 24 feet; two stories and basement, with six rooms for patients on each floor.

**Personal.**—Dr. Robert Smart, Albuquerque, formerly captain in the Medical Corps, U. S. Army, has been appointed surgeon of the National Guard of the territory.——Dr. Homer H. Dally, Folsom, who has been ill in the hospital in Trinidad, is reported to be improving.

## NEW YORK

**Personal.**—Dr. Roswell Park, Buffalo, was taken ill with pneumonia, while en route from his home to Washington, April 30, and is reported to be seriously ill in the New York Hospital.

**Insurance Company to Establish Sanatorium.**—The Metropolitan Life Insurance Company has purchased 225 acres of land in Summers Center, West Chester county, where it will erect a sanatorium for its employés infected with tuberculosis. The company announces that it has appropriated $100,000 for its tuberculosis work.

**Appropriation for Letchworth Village.**—Governor Hughes has signed the bill appropriating $179,000 for the beginning of construction of Letchworth Village, the new state institution at Thiells for the care of epileptics and idiots. Of this appropriation $65,000 is available immediately and the remainder on October 1.

**Lectures for Health Officers.**—A course of lectures, laboratory exercises and demonstrations have been arranged for the health officers of New York State. The first course will be given in Albany during the week beginning May 9. The course will begin with introductory work at the State Hygienic Laboratory and morning and afternoon sessions will be held throughout the week. There will be no charge for instruction or for laboratory apparatus.

**Public Health Meeting.**—The Rochester Public Health Association held a mass meeting April 22, at which about 1,500 were present. The chief speakers were Drs. John H. Lowman, Cleveland, and S. Adolphus Knopf, New York City, and Rev. Clarence A. Barber.——On April 30 a vaudeville was given by the Ad Club at the Lyceum Theater, Rochester, the proceeds of which were devoted to the warfare against tuberculosis. ——On April 24, Dr. Montgomery E. Leary delivered an address on the Crusade Against Tuberculosis in the Lake Ave. Baptist Church, Rochester.

**Municipal Health Problems.**—A conference of the chief magistrates and other officials of second and third class cities of the state will be held in Schenectady June 9 and 10. Among the subjects to be discussed are the following:

1. Municipal Hospital Care of Contagious Diseases.
2. Municipal Duties in the Conquest of Tuberculosis.
3. The Housing Problem and Health.
4. The Prevention of Disease by the Elimination of Dust—Modern Methods of Street Cleaning, and the Care of Public Buildings, Including Proper Ventilation.
5. What the Small City Can Do to Protect the Food Supply of Its People.
6. The Organization and Work of an Effective Health Department.
7. The Protection of Life vs. the Protection of Property—The Health Inspector, the Policeman, and the Fireman.
8. Where Shall We Get the Money for Municipal Health Activities?

### New York City

**The Polyclinic Purchases Property.**—The New York Polyclinic School and Hospital has purchased another dwelling adjoining the ten other houses on West 50th street which the institution has recently purchased as a site for a new building.

**Osteopath Denied Writ of Mandamus.**—A decision has been handed down by the Appellate Division of the Supreme Court in Brooklyn upholding a refusal to grant a writ of peremptory mandamus to an osteopath who is seeking to force the Board of Health and the Coroner to accept death certificates signed by him.

**Physician Wins Suit.**—On the ground that a coroner's physician is a deputy coroner, with quasi-judicial powers, Judge Bijur, on April 7, dismissed the suit of Mary Hasard, who sued to recover $10,000 from Dr. Timothy D. Lehane, alleging that after an autopsy on her son, who was killed in an accident, Dr. Lehane had retained the heart and spleen of the deceased.

**Personal.**—Dr. James J. Walsh, dean of Fordham University Medical College, was the guest of honor at the nineteenth anniversary dinner of the New York Celtic Medical Society. ——Dr. Eugene Hodenpyl is ill with pneumonia.——Dr. and Mrs. Charles H. Archibald and Dr. Daniel F. Linehan have sailed for Europe.——Dr. George C. Jeffery, Brooklyn, has been elected consulting surgeon of the Cumberland Street Hospital.

**Hospital Loses Public Aid.**—The aid which the city gives to hospitals on the recommendation of the State Board of Charities has been withdrawn temporarily from the Williamsburg Hospital because of the alleged unsatisfactory condition of the building which it now occupies. Plans have been prepared for a new building on the plot adjacent to the present one and ground will be broken as soon as sufficient funds have been secured.

**Brooklyn Asks for Bacteriological Laboratory.**—The President of the borough of Brooklyn requested Health Commissioner Lederle to attend a meeting of the Kings County Medical Society recently where the administration of the Health Department of Brooklyn was discussed. A very strong plea was made for the establishment of a bacteriological laboratory in that borough. It is claimed that the delay encountered in sending cultures to New York for examination is a serious handicap, and that the results of this delay are especially dangerous in diphtheria.

**Hospital Changes.**—The following changes and appointments have been made in the staff of Mount Sinai Hospital: Dr. Herbert L. Celler has been appointed assistant adjunct visiting physician; Dr. Reuben Ottenberg, assistant in clinical microscopy; Dr. Israel Strauss, assistant adjunct visiting neurologist; Dr. Harold Neuhof, adjunct admitting physician, and Dr. Julian J. Meyer, assistant adjunct admitting physician.——The George Blumenthal, Jr., Fellowship for 1910 has been awarded Dr. Albert A. Epstein, assistant in the department of physiologic chemistry.

**Graduate Course on Tuberculosis.**—A clinical course in pulmonary tuberculosis is offered to graduates in medicine, to be given at Bellevue Hospital on Monday, Wednesday and Friday afternoons for four weeks, beginning May 8. The course will be in charge of Dr. James A. Miller, director of the tuberculosis clinic and will consist of twelve clinics and lectures on the more important and modern problems of tuberculosis, together with opportunity for the individual examination and study of a large number of patients. Information regarding the course may be obtained from the registrar of the College of Physicians and Surgeons, 437 W. 59th street.

**Hospital Fund Divided.**—The distributing committee of the Hospital Saturday and Sunday Association has decided to apportion the collection which amounted to $76,000 as follows: Montefiore Home and Hospital for Chronic Invalids, $7,600; Mount Sinai Hospital, $7,550; St. Luke's Hospital, $3,385; Orthopedic Dispensary and Hospital, $4,253; the German Hospital, St. Mary's Free Hospital for Children, Roosevelt Hospital, the Ruptured and Crippled Hospital and the New York Infant Asylum each received over $3,000; the Lying-In Hospital, the Post Graduate and Lebanon Hospital each received over $2,000. Many other institutions received sums ranging from $2,000 to $250.

## NORTH CAROLINA

**Personal.**—Dr. Carl V. Reynolds and Jere E. Cocke have succeeded to the work of the late Dr. James A. Burroughs, Asheville, in the treatment of pulmonary diseases.——Dr. Edward J. Wood, Wilmington, has been elected president of the Medical Society of the State of North Carolina to fill the unexpired term of Dr. James A. Burroughs, deceased.

**Decision Regarding Unlawful Sale of Cocain.**—The Supreme Court handed down a decision on April 21 affirming the right of the State Board of Pharmacy to refuse license to a druggist convicted of unlawful selling of cocain in the case of Thomas vs. N. C. State Board of Pharmacy. Thomas was a druggist at Thomasville and was indicted in the Superior Court for selling cocain without a physician's prescription. He pleaded guilty in the several cases against him and was fined by the trial judge. N. C. State law requires the annual renewal of all druggists license by the State Board of Pharmacy. Shortly after his conviction Thomas applied to the State Board of Pharmacy for the renewal of his druggist's license, tendering the usual fee. The board refused to issue him a license and a writ of mandamus was brought to compel the State Board of Pharmacy to issue him license which being heard in the Superior Court was decided in favor of the Board. Appeal being taken to the Supreme Court decision is made in favor of the Board of Pharmacy. In delivering the opinion Chief Justice Clark says:

"The selling of drugs is an important matter to the health and lives of the public. The Legislature has carefully guarded it, by the provisions to be found in Revisal 4471-4490. The sale of cocain and other deleterious drugs is the subject of carefully drawn provisions. The plaintiff (Thomas) knew that the violation of these provisions subjected him to fine and imprisonment in the discretion of the court, and to a revocation of his license—the latter not being discretionary, but the necessary result of his conviction. The evidence was so clear that the plaintiff pleaded guilty, and the facts found by his honor show a case of great turpitude, yet the plaintiff (Thomas) in less than ten days thereafter, applied for license and contends that the payment of $2.00 entitles him to resume the important business of selling drugs."

Briefly speaking, the Supreme Court decides that if a druggist is convicted of unlawfully selling cocain and is a licensed druggist, that the Board of Pharmacy must refuse his renewal of license. Thus ends a hard-fought contest in favor of the powers of a State Board.

### OHIO

**State Association Meeting.**—The annual meeting of the Ohio State Medical Association will be held in Toledo, May 10-12.

**Patients Transferred to Tents.**—On April 26, the 120 tubercular patients of the Columbus State Hospital were transferred to tents, in which they will live until late in the fall.

**Licenses Revoked.**—The State Medical Board, on April 5, is said to have revoked the certificates to practice of E. J. Rose, Toledo, and Morton G. Lambright and B. F. Ivy, Cincinnati.

**Tuberculosis Dispensary Opened.**—A public dispensary for the issuance of information, and aid in the suppression of tuberculosis has been opened in the office of the Charity Organization Society, Youngstown. The medical committee in charge is composed of Drs. Raymond E. Whelan, Colin R. Clark and Harry E. Welch. The dispensary will be open on Tuesdays and Fridays between 4 and 5 p. m.

**Medical Library Association Started.**—It has been decided by the Allen County Medical Association to establish a medical library in the rooms of the association at the Lima Hospital. The association has a membership composed of physicians, dentists and laymen and the membership fee is to be employed in purchasing books and subscribing for medical publications recommended by the committee.

**Personal.**—Dr. Ezra B. Heistand, Kenton, the oldest practitioner of Hardin county, entertained the medical profession of the county, April 23, at a dinner in honor of his eightieth birthday anniversary.——Dr. K. H. Yeretzin of the staff of St. Francis Hospital, has been made night physician at the Columbus State Hospital.——Dr. Alvin C. Lee, Mansfield, has retired from practice and will move to Tiffin.——Dr. John C. Martin, Findlay, has been appointed special examiner for the pension department.——Dr. Thomas G. Gordon, New Philadelphia, is reported to be critically ill with uremia.——Dr. Cornelia B. Kennedy, Findlay, has resigned as physician to the Girls' Industrial Home, Delaware, and will locate in Akron.——Dr. Charles Graefe has been appointed a member of the board of health of Sandusky.——Dr. Benjamin F. Hawn, Youngstown, is reported to be seriously ill.

### PENNSYLVANIA

**Personal.**—Dr. Harry E. Kilgus, St. Mary's, returned from Europe April 26.——Dr. William E. Wright, Harrisburg, who was operated on for appendicitis recently, is convalescent.——Dr. Abraham N. Fretz, Fleetwood, is reported to be critically ill.——Dr. Henry C. Earnshaw has been appointed surgeon for the Pennsylvania System at Bryn Mawr.

**Tuberculosis Sanatorium.**—Plans for the buildings of the new State Tuberculosis sanatorium at Cresson are nearing completion. The necessary clearing is being done on the Carnegie tract and there will be plenty of timber and stone on the ground for all the buildings. A number of tests have shown the water supply to be of the purest.——Mrs. B. F. Jones, Pittsburg, has given her cottage at Cresson to the State Department of Health for the use of the Sanatorium.

#### Philadelphia

**Bequests.**—The will of the late Harriet Abbey bequeaths to the Episcopal Hospital $10,000 to endow two free beds, and to the Home for Incurables $5,000 to endow a free bed.

**To Enlarge Orthopedic Hospital.**—A three-story ward building, 34 by 122 feet, is to be built by the Orthopedic Hospital adjoining the present buildings of the hospital. Work on the addition will begin immediately.

**Cocain Peddler Fined and Imprisoned.**—Pleading guilty to unlawfully selling cocain, Abraham Hall, a negro, was sentenced by Judge Carr to the penitentiary for "not less than six months or more than two years" and to pay a fine of $500.

**Class Reunion.**—The class of 1900, Jefferson Medical College, will hold a reunion on June 3, 1910. As the addresses of some members are not known, those who do not receive a circular letter are earnestly requested to immediately send their names and addresses to Dr. Allen G. Ellis, Jefferson Medical College.

**Personal.**—Dr. Howard S. Anders has resigned his position as chief in the tuberculosis department at the Philadelphia General Hospital.——Dr. Barton H. Potts, chief of the Nose and Throat Department of the German Hospital, is confined to his bed, suffering from a breakdown due to overwork.——Dr. Henry M. Fisher sailed for Europe April 27.

**Trachoma Institute Established.**—To treat immigrants suffering from trachoma free of charge and give them a chance of being cured instead of being immediately transported, the Trachoma Institute was formed, April 27, at the office of Dr. Aaron Brav and the institute will apply for a charter. Dr. B. S. Krisher was elected secretary and Dr. Aaron Brav, chief of the medical staff.

**Class Reunion and Banquet.**—On April 27, the twenty-fifth anniversary of the class of 1885, Jefferson Medical College, was celebrated by a reception to the members and their wives. Dr. J. Chalmers DaCosta entertained the class at luncheon at the college at noon on April 28, and that evening a banquet was held. Dr. Joseph D. Orr, of Leechburg, Pa., president of the class, acted as toastmaster.

**Meeting of the Physicans' Motor Club.**—The regular monthly meeting and smoker of the Physicans' Motor Club was held at the Hotel Walton, April 26. Mr. F. Wilkie, prominent in automobile circles, spoke to the members on "The Anatomy, and Physiology of Transmissions, Gears and Differentials." The run to Valley Forge, Pa., which was delayed on two occasions on account of rain, was made Sunday afternoon, May 1.

**Typhoid Decreases.**—Dr. Neff, head of the Department of Health and Charities, in his weekly report of transmissible diseases, announced that there were but 9 cases of typhoid fever in the city during the week ending April 30. This is the smallest number reported during any one week in the history of the department. The month of April showed but 71 cases, which is the lowest monthly record of the Health Department. In April, 1907, there were 500 cases; April, 1908, 368 cases, and in April, 1909, 124 cases.

**Pure Food Prosecutions.**—Three cases of food adulteration prosecuted by the State Dairy and Food Commission, were heard before Magistrate Beaton, April 29. All the defendants were held for court after agents of the commission had testified against them.——Lewis Weinfeldt, a baker, was held because it was testified that sponge cake made by him had been found to contain coal tar coloring on examination by Dr. C. H. LaWall, chemist.——William Rohlbach, brewer and bottler, was charged with selling "Jellyfoam," a preparation used to cause bubbles in soda water and also with the sale of "Dublin Ginger Ale Extract," which contains capsicum to give the drink pungency. The "Jellyfoam" contains saponin.——I. Geller was held on the charge of wholesaling sponge cakes, containing coal tar coloring.——A notable victory was achieved by Harry P. Cassidy, special agent of the State Dairy and Food Commission, when Jacob D. Weiss, butter and egg dealer, was convicted before Judge McMichael, April 26, of selling rotten eggs. Sentence was deferred by the judge until the defendant can be tried on two more charges. The penalty is a fine of $200 to $1,000 and from three to nine months' imprisonment.

**Philadelphia Special Train to St. Louis.**—The following notice is received too late for inclusion in its proper place in the front part of this issue: The Pennsylvania Railroad has organized a special train to St. Louis, leaving Broad Street Station, Sunday, June 5, at 1:10 p. m., and arriving in St. Louis June 6, at 1:25 p. m. New York members may take this train at the West Twenty-third Street station at 10:55 a. m.; Pennsylvania members at Harrisburg, Sunday, at 3:35 p. m., at Altoona at 6:40 p. m., or at Pittsburg at 8:35 p. m. (central time). This is a solid Pullman electric-lighted train of highest possible equipment, has a club car with a barber, valet and manicure, also a stateroom observation car. A dining car will serve all meals. The train is an exact counterpart of the Pennsylvania eighteen-hour special. Arrangements will also be made to have a special train for the return trip, leaving St. Louis Friday, June 10, at 1:02 p. m., and arriving at Philadelphia Saturday at 3:20 p. m. Those who take the outward train need not return on the special, as their tickets will be good for any other train on which no special fare is charged. On account of the American Medical Association, the round trip can be made for one and one-half fares, $34.15, exclusive of sleeping-car accommodations; and the return ticket is good until June 20. Those who desire to take this train should communicate at once with William Pedrick, Jr., District Passenger Agent, P. R. R., 1433 Chestnut St., Philadelphia. Ophthalmologists will please specify "ophthalmology car."

## SOUTH CAROLINA

**Medical Secretaries Meet.**—The South Carolina Medical Secretaries Association met in Laurens April 20, and elected the following officers: Dr. Claude C. Gambrell, Abbeville, president; Dr. Mary R. Baker, Columbia, vice-president, and Dr. L. Rosa H. Gantt, Spartanburg, secretary-treasurer.

**Personal.**—Dr. Carlisle Johnston, St. George, while leaning from the step of a passenger car, came in contact with a post and was thrown from the car, dislocating both shoulder blades. ——Dr. J. LaBruce Ward, Georgetown, has been appointed assistant to Dr. C. Frederick Williams, Columbia, state health officer, and will have charge of the hookworm campaign.

**State Society Meeting.**—At the sixty-seventh annual meeting of the South Carolina Medical Association, held in Laurens April 20-22, under the presidency of Dr. John L. Dawson, Charleston, the following officers were elected: President, Dr. James H. McIntosh, Columbia; vice-presidents, Drs. J. Wilkinson Jervey, Greenville; Rufus B. Epting, Greenwood, and Rolfe E. Hughes, Laurens; secretary, Dr. Edgar A. Hines, Seneca; treasurer, Dr. Charles P. Aimar, Charleston; and delegates to the American Medical Association, Dr. John L. Dawson and Dr. Edgar A. Hines. The association endorsed the proposed legislation for the inspection of medical schools, the president's appeal for legislation requiring better preliminary education of applicants to practice medicine, and Senator Owen's bill for the national department of health.

## TEXAS

**State Medical Society.**—The forty-second annual meeting of the State Medical Association of Texas will be held in Dallas May 10, 11 and 12, under the presidency of Dr. Witten B. Russ, San Antonio.

**Personal.**—Dr. Ira C. Herrington, Orange, has been appointed local surgeon for the Gulf, Colorado and Santa Fe Railway. ——Dr. Herbert E. Stevenson, El Paso, has built a laboratory for the use of himself and medical friends for research work.

**Commencement Exercises.**—The eighth annual session of the Southwestern University Medical College closed April 28. The faculty address was delivered by Dr. James H. Black, and the baccalaureate address by Rev. D. K. Porter. Dr. Robert S. Hyer, president of the college, conferred the degrees.

**Antitoxin at Cost.**—The State Department of Health has inaugurated a plan for the distribution of antitoxin at cost to those who are able to pay, and free of charge to the poor and indigent. At least fifteen distributing centers will be established in the state and distribution will be made through local health officers.

**Post-Graduate School Incorporated.**—The charter of the Dallas Post-Graduate Medical School and Hospital was filed with the state department April 11. The purpose of the corporation is the promotion of the science of medicine in Texas. The incorporators are Drs. Joseph H. Reuss, John M. Neel, Samuel E. Milliken and others.

**Society Meetings.**—The Physicians' Association of Northwest Texas, at its meeting in Wichita Falls, April 13, elected Dr. Charles H. Harris, Fort Worth, president; Dr. Leopold H. Reeves, Decatur, vice-president, and Dr. Everett Jones, Wichita Falls, secretary. The next meeting will be held at Mineral Wells.——At the annual meeting of Taylor County Medical Society, held in Abilene, April 10, Dr. Franklin E. Haynes, Abilene, was elected president; Dr. Charles T. Scott, Abilene, vice-president; Dr. Manton M. Carrick, Dallas, State Epileptic Colony, secretary-treasurer; Dr. Thomas B. Bass, Abilene, delegate to the state association, and Dr. Franklin E. Haynes, Abilene, alternate.——Denison Medical Society has elected Dr. Alexander W. Acheson, president; Dr. Asahel B. Gardner, vice-president, and Dr. Joseph G. Ellis, secretary.——At a meeting of physicians of Brazoria county, held in Angleton, April 14, a county medical society was organized with an initial membership of 13. Dr. Samuel B. Maxey, Angleton, was elected president.

## UTAH

**Personal.**—Dr. Arthur A. Bird has been elected city physician of Murray, taking the place of Dr. R. R. Kennedy, deceased.——Dr. Jepson has been appointed city physician of Willard.

**Hospital Association Incorporated.**—The Thomas D. Lee Memorial Hospital Association, organized to build a memorial hospital in Ogden at a cost of $75,000, has filed articles of incorporation.

**Modified Quarantine Rules.**—Dr. Samuel Paul, health commissioner of Salt Lake, has issued a new set of rules governing contagious diseases. The time of quarantine for scarlet fever has been changed from three to four weeks. This rule has aroused considerable opposition.

**Woman's Medical Society.**—The women physicians of Utah have organized a Woman's Medical Society with the following officers: President, Dr. Luella P. Miles, Salt Lake; vice-president, Dr. Anna F. Ries, Ogden; secretary-treasurer, Dr. Elsie A. Faust, Salt Lake; and Dr. Martha H. Cannon, Salt Lake, chairman of the credentials committee and advisory board.

## WISCONSIN

**Sanatorium Needs More Money.**—Blue Mound Sanatorium for the Treatment of Incipient Tuberculosis, at its annual meeting, April 23, announced an annual deficit of $2,500. Dr. George W. Morehouse has succeeded Dr. Charles H. Stoddard as physician in charge, and Drs. Gilbert E. Seaman and Arthur J. Patek, Milwaukee, have been reelected directors.

**Personal.**—Drs. R. B. Clark and S. B. Soseman have been elected members of the board of health of Monroe, and Dr. W. B. Gnagi has been elected health commissioner.——Dr. W. H. Brown has been appointed assistant professor of pathology in the State University of Wisconsin, Madison.——Dr. J. B. Spaulding has been elected health officer of Kenosha.——Secretary A. B. Cargill has been placed in charge of the Milwaukee health department pending the selection and installation of a commissioner of health.

## GENERAL NEWS AND COMMENT

**Study of the Feeble-Minded.**—The thirty-fourth annual conference of the American Association for the Study of the Feeble-Minded will be held at the Lincoln State School and Colony, Lincoln, Ill., May 16-18, under the presidency of Miss Mattie Gundry, Falls Church, Va.

**Asks Appropriation for Cancer Test.**—In a message sent by President Taft to Congress April 9, he asks an appropriation of $50,000 for the establishment of a laboratory in which to conduct investigations regarding the cause of cancer, with especial reference to the disease in fishes.

**Tropical Medicine.**—At the regular session of the Far-Eastern Association of Tropical Medicine, held in Manila March 3, Dr. Gilbert E. Brooke, delegate from the Straits Settlements, Singapore, delivered an address on "Trachoma." The remainder of the session was taken up by the discussion of tropical fevers, including malaria, typhoid, etc.

**Insurance Examiners Meet.**—The Western Insurance Exchange, made up of medical directors of companies in the American Life Convention, met in St. Louis, and elected Dr. Allison Maxwell of the State Life Insurance Company, Indianapolis, president; Dr. Oscar F. Maxon of the Franklin Insurance Company, Springfield, Ill., vice-president; and Dr. Edgar R. Hawley of the Illinois Life Insurance Company, Chicago, secretary.

**Railway Surgeons Meet.**—The Association of Surgeons for the Central of Georgia Railway held its annual meeting in Atlanta April 19, under the presidency of Chief Surgeon William H. Elliott, Savannah, in the absence of the president, Dr. John D. Dabney, Birmingham, Ala., who is still ill. Dr. James E. Mangam, Reynolds, Ga., was elected president; Dr. Andrew J. Farley, Leeds, Ala., vice-president, and Dr. Joseph R. Burdette, Tennille, Ga., secretary.

**Typhoid Epidemic in Omaha.**—During the past winter an epidemic of typhoid fever has prevailed in Omaha, 600 cases with 60 deaths being reported for the first three months of this year. As there was considerable difference of opinion regarding the cause of the outbreak, the governor, at the request of the Omaha Medical Society, asked the U. S. Public Health and Marine-Hospital Service to send some one to make an investigation. Dr. Lumsden was detailed for this purpose and has made a very thorough investigation, if we may judge from Dr. Lumsden's preliminary report, which appears in the Omaha papers April 24. In this report he exonerates the milk and food supply, but demonstrates that the city water was badly infected and was probably the cause of the outbreak. In addition to some sources of investigation on the Nebraska side of the Missouri River, the investigator, by means of a surface and submerged float, was able to trace the path of drainage from the garbage and night soil dumps on the Iowa side and to show that it was carried directly over to one of the Omaha intakes. The report points out a simple method of removing some of the more dangerous sources of infection and outlines a plan for the complete correction of the evils.

## LONDON LETTER

*(From Our Regular Correspondent)*

London, April 23, 1910.

### Suicide by Hypodermic Injection of Potassium Cyanid

A new method of committing suicide has been practiced in India. The coroner of Calcutta has had to investigate the case of a medical student who was found dead in bed with the puncture mark of a hypodermic needle in the cardiac region. Close by were a measure glass containing potassium cyanid and an antitoxin syringe. The deceased had recently lost his wife. He left a letter to his brother stating that he had committed suicide by injecting poison, but did not name the drug used. Cyanid of potassium was found in the tissues and blood and hydrocyanic acid in the urine. It is noteworthy that no poison was detected in the viscera (stomach, liver, kidneys or lungs). It is evident that in a case of poisoning by hypodermic injection of potassium cyanid, whether suicidal or homicidal, the poison might not be detected if, as is usual in cases of suspected poisoning, only the viscera were analyzed. This appears to be the first case on record of poisoning by hypodermic injection of potassium cyanid. The rapid elimination of the drug in the urine is of interest.

### A Physician's Heroism

A story of great heroism was disclosed at the inquest on two miners who were suffocated in Dudley colliery by poisonous gases. Rescue parties were driven back again and again by the deadly atmosphere of the mine. Dr. Dando went down into the mine, remained there three hours and was overcome by the gas and became unconscious. The coroner said that more heroic conduct was not possible on the battlefield, where sometimes men did things they would not do under less exciting circumstances.

### The Compulsory Notification of Epizootic Diseases

The government has issued an important order under the Diseases of Animals Act rendering compulsory notification of the most important diseases of domestic animals—cattle plague, pleuropneumonia, foot-and-mouth disease, sheep-pox, sheep-scab, swine fever, anthrax, epizootic lymphangitis, rabies, glanders and farcy. Every veterinary surgeon who examines an animal or the carcass of animal must, if he suspects that one of the above-mentioned diseases exists, notify an inspector. He must also notify a policeman, who must transmit the information by telegram to the board of agriculture. The board has been carrying on a very energetic campaign against epizootic disease and has already stamped out of Great Britain five of these diseases—cattle-plague, contagious pleuropneumonia of cattle, epizootic lymphangitis and rabies. In the case of anthrax, glanders and farcy (diseases which affect man) the inspector must notify the local health officer.

### The Struggle Against Trachoma in Egypt

For centuries trachoma has been a scourge of Egypt and has caused an enormous amount of blindness—hence its name, Egyptian ophthalmia. Among the many beneficial results of the British occupation is an attempt to repress this dire malady, which is almost universal in the lower and middle classes. According to the census of 1907 more than half a million Egyptians are blind in one or both eyes, and it is thought that this number is under the mark owing to a reluctance to declare personal or family infirmities. Those blind in one eye form 3.2 per cent. of the population and those blind in both eyes 1.2. In 1903 Sir Ernest Cassel, a well-known philanthropist, presented $200,000 for the relief of ophthalmia in Egypt. Two movable ophthalmic hospitals were formed and placed under the control of Mr. A. F. MacCallan, an ophthalmic surgeon. They consisted of a dozen large Indian tents with the necessary equipment and a complete set of ophthalmic instruments. Attached to them are two Egyptian surgeons with the necessary attendants, and servants. Accommodation is provided for 12 in-patients, but the greater part of the work consists in the treatment of out-patients, of whom about 300 attend daily. A camping ground is selected in or near a town and occupied for about six months. Then the hospital is transferred to another place. So vast is the amount of work to be done that the site is changed, not because there is any diminution in the number of patients, but because it is thought fairer to give the different provinces a turn. The movement started by Sir Ernest Cassel is extending. Seven years ago little was done for ophthalmic patients; there were no ophthalmic surgeons of repute outside Cairo and Alexandria. Now the traveling hospitals have aroused interest in the country and the Egyptian public has subscribed $50,000 for building purposes, to which the government has added $75,000, and $25,000 a year for maintenance. Three permanent ophthalmic hospitals are now in course of construction.

### An Anesthetics Museum

The officers of the anesthetics section of the forthcoming annual meeting of the British Medical Association have decided on a novel feature. Under the auspices of the medical museum committee there will be an exhibition of past and present anesthetic apparatus and appliances. A special committee has been appointed to select from the vast number of modern anesthetic appliances those which are worthy of exhibition.

### The Prone-Pressure Method of Artificial Respiration

In The Journal, Sept. 5, 1908, p. 801, Prof. Schäfer described a new method of artificial respiration which a committee of the Royal Medical and Chirurgical Society (of which he was chairman), appointed to investigate the efficiency of various methods of artificial respiration, recommended on the basis of experiments made on the passive living subject and on dogs. Prof. Schäfer showed that under these circumstances a greater air exchange was obtained than under the older methods of Silvester, Marshall, Hall and Howard. Being simple and easily learned, he thought the method was always indicated in cases of drowning. In Great Britain it has displaced the older methods in the teaching of the Royal Humane Society (a society which instructs the public in methods of resuscitation). But some authorities, notably Prof. Keith, were not sure that the evidence was strong enough for the supression of the older methods. Indeed, this distinguished anatomist described the adoption of the method by the society as an experiment on a large scale on supposedly drowned individuals. The method was also adopted by the London police. The report of their chief surgeon, Mr. Clinton Dent, which has been just published, is the first clinical evidence of any amount on the subject. So far as figures can, it bears out the efficacy of the method. During the 12 months ending Jan. 31, 1910, artificial respiration was employed by the police in 48 cases. In 34 of these the Schäfer method alone was used; 25 of these were cases of immersion and in 18 the method was successful. In 9 cases other than immersion it was successful in 6. It appears established that the method is efficacious in the hands of those without special medical training, and that it is applicable to children. In 13 of the cases the subjects were under the age of 10, and 10 of them recovered. In one successful case, in which it appeared that death had occurred before the method was adopted, it was observed that the air expelled was sufficient to blow out a lighted match. In another failure both lungs were found postmortem "distended to the fullest extent." One policeman said that he had found the method most efficient and superior to the old method.

## PARIS LETTER

*(From Our Regular Correspondent)*

Paris, April 22, 1910.

### International Office of Hygiene

The Committee of the International Office of Public Hygiene has just held a meeting in Paris. Nineteen powers were represented there, namely, Belgium, Brazil, Bulgaria, Egypt, Spain, the United States, France, Great Britain, India, Australia, Italy, Mexico, Peru, Persia, Russia, Servia, Sweden, Switzerland and Tunis. At this meeting the delegates examined the various questions pertaining to the extermination of rats, especially that of the adoption of international regulations requiring the periodical extermination of rats on merchant ships. They also took up the question of the basis for an international agreement bearing on the unification of methods of titration now applied to the preparation of antidiphtheritic serum. They also examined the question of weekly statistics on epidemic and transmissible diseases and the disinfection of water taken on to insure the stability of "water-ballast" ships.

### Disturbances at Dr. Doyen's Lecture

Dr. Doyen was recently authorized by the council of the University of Paris to give an unofficial course on surgical anatomy in its relation to operative technic. The announcement of this course, the first lesson in which was to have been given April 18, attracted a considerable attendance from the college of medicine. A great many of the students came, however, only for the purpose of making a hostile demonstration and of preventing the celebrated surgeon from speaking; they created such a disturbance that Dr. Doyen had to withdraw at he end of an hour without having been able to begin his ecture. Consequently, the dean of the college of medicine ecided to suspend this open course provisionally.

Dr. Doyen believes that this hostile manifestation was instigated by some *agrégés* of the college of medicine. Moreover, everal students feel that he attempted to throw discredit on he medical profession at a lecture on the "Malade Imaginaire" which he had given some days previously at the déon Theater, in which he compared certain physicians of he present day to the physicians of Molière. At all events r. Doyen intends to give his course in a private hall, and he vill take all necessary measures to avoid fresh disorder.

### Association of Women Students

The women students of the University of Paris have just rganized themselves into an association for the purpose of iving facilities to its members in their studies and of organ-zing an employment bureau.

### A Gift Refused by the Government

Eighteen months ago the Paris college of medicine received gift of about $4,000 (20,000 francs) to be offered for certain vorks on homosexuality, which were to show that this abnornal instinct constitutes a disease and makes those who are fflicted with it suffer greatly. The college accepted the gift nd the conditions. The government has just decided that the ift must be rejected.

### Association for the Benefit of the Blind

It appears from the report read at the last general assembly f the Association Valentin-Haüy pour le bien des aveugles hat during the year 1909 there were 491 new blind bene-iciaries of the association. The most interesting work of the ssociation is the Braille library, named after the inventor, onsisting of volumes printed in raised points, by the industry f fifteen hundred persons scattered over the whole of France. uring 1909 this library was increased by 1,921 volumes, vhich makes 26,000 altogether. There are 40,000 volumes nnually in constant circulation, not only in Paris but in the rovinces, where fifty-five branches are in regular operation.

### lection of Two Foreign Correspondents to the Academy of Medicine

In its session of April 19 the Académie de Médecine elected wo foreign correspondents in the section of surgical pathology nd obstetrics, Professors Pestalozza of Rome and Martin of eneva.

## BERLIN LETTER

(*From Our Regular Correspondent*)

BERLIN, April 21, 1910.

### Personal

Professor Lenhartz, the well known director of the Hamburg ospital, died unexpectedly April 20. While it was known that e was suffering from pernicious anemia and that there was carcely any hope of recovery, his death occurred suddenly. enhartz was a pupil of the Leipsic clinician, E. Wagner, and ad received general recognition as an able clinician, both hrough his work in the clinic and his literary efforts. His ext-book "Mikroskopie und Chemie am Krankenbett" has assed through many editions, and his contributions to Nothagel's Special Pathology and Therapy and to the Handbook f Practical Medicine by W. Ebstein and J. Schwalbe have eceived very favorable notice.

### Jubilee of Robert Koch

On April 8, twenty-five years had passed since the appointent of Robert Koch as professor of hygiene in the Berlin uni-ersity. Five years previously he had been called from Wolltein to Berlin as a member of the imperial health office. He ontinued in this position on partial service after he became rofessor. Koch began his academic work in 1885 by conduct-ng the practical courses in the hygienic laboratory on Kloster treet, giving a three hours' course on hygiene and a one hour ourse on methods of bacteriologic examination. On Nov. 3, 885, he gave his first lecture, in which he illustrated by vari-us examples the value of hygiene for all departments of medi-ine. Koch carried on the duties of a university teacher, which e found burdensome, for only five years. In 1890 he resigned is professorship and undertook the direction of the newly ounded Institute for Infectious Diseases. He remained in the aculty as an honorary professor. Rubner succeeded him as the egular professor of hygiene. Unfortunately a few days after this twenty-fifth anniversary Robert Koch suffered a severe attack of angina pectoris which very greatly endangered his life. Although at present he is satisfactorily improving, all anxiety as to the recurrence of such an attack has not disappeared for he has suffered from arteriosclerosis for a number of years.

### The Virchow House

As I have previously mentioned, the Berlin medical society desires to build the contemplated Virchow house in conjunction with the German surgical society. The latter society at a general meeting on the occasion of the recent annual session voted to give the executive committee full power to sell the Langenbeck house and to acquire a new plot of ground, either for itself or in combination with the Berlin medical society. There is hope therefore that the contemplated arrangement will be made and the proposed building erected in common.

### The "Puro" Trial

The suit against the manufacturer of the meat extract, "puro," to which I have previously referred, has taken on a new phase. The imperial court, on an appeal of the convicted manufacturer, has reversed the verdict and remanded the case to the county court at Munich. The imperial court is of the opinion that the judges erred in their decision with reference to the property damage. A property damage could not be produced if the price of a remedy can be considered as entirely proportionate to the favorable action of the preparation. It was sufficiently shown by the fact that many physicians had ordered the puro preparation for many years with good results for their patients, and that the price of the preparation must be regarded as entirely suitable in consideration of this action and in comparison with other similar preparations. If this view of the imperial court has weight with the judges at the new trial, as is to be expected, the manufacturer will either be acquitted or be let off with a light fine. This can make no difference with the estimation of his proceeding by physicians, for the fact is that the manufacturer has given a false composition for his preparation and thereby has deceived both the medical and the lay public.

### Night Rest Secured for Pharmacists

The pharmacists have been endeavoring to secure night rest at times as they have Sunday rest. A few days ago permission was given by the police department of this city to three pharmacists to close their pharmacies alternately at night, in such a manner that of the three pharmacists only one will offer night service each week. The pharmacies furnishing night service, as well as others that are open in the neighborhood, will be indicated on a plain sign at the closed pharmacy.

### Smoking to Be Allowed in Dining Cars

Some two years ago smoking was forbidden in the dining cars, not only during meals, but also in the intervals. This order roused a storm of protest by the smokers. The prohibition has heretofore been strictly maintained in view of the interest of patients who use the dining cars. Now, however, the general management of the Baden railroad announces that the prohibition will be removed May 1 on the railroad lines in that country.

### Monument for Professor von Renvers

A call for contributions for the erection of a monument for the late Professor von Renvers, who was much beloved, has been issued. Any surplus is to be devoted to a Renvers foundation for the Moabit hospital, of which he was the director of the department of internal medicine.

### Cerebrospinal Meningitis in the Bavarian Army

The authorities have ordered that the entire body of troops at the Munich garrison shall be investigated to determine whether they are not unconscious carriers of the germs of cerebrospinal meningitis. In view of the large number to be examined (about 10,000 men), the investigation will require a number of months. The director of the hygienic department of the military medical school is charged with the carrying out of the investigation and is to be provided with a number of sanitary officers who are trained bacteriologists. As it has been shown that the germs of this disease settle on the mucous membrane of the throat and may remain there for many months, even more than a year, without producing any positive disease, the appropriate means of investigation is the examination by bacteriologic, cultural and serodiagnostic methods of the mucus of the nose and throat. In order to discover the germs of infection, the military medical school, in March of last year, when the cases began to multiply, began so-called environment examinations among the healthy men of the garrison, and especially of the two regiments particularly affected with cerebrospinal meningitis. Up to March 1 of this year more than 3,400 examinations had been undertaken, involving 2,763 persons. These examinations revealed altogether 52 cocci carriers. Moreover, there was found in one company a chain of infection including four patients and eight carriers, which had its origin in the civil population. The relations between diseases in the garrison and in the city form generally a notable factor in the conveyance of disease to the personnel of the army. The principal aim of the investigation is of a prophylactic character, viz.: to render the cocci carriers harmless by appropriate treatment and so to prevent the further spread of cerebrospinal meningitis among the military. The material of the investigation, however, may give an indication whether in future there will be need of the tedious search for germ carriers and extensive isolation measures or whether sanitarians can and must be content with ordinary sanitary measures on acount of the widespread distribution of the germ, as is the case with tuberculosis.

### New Building for the Institute for Maritime and Tropical Diseases in Hamburg

As the institute for maritime and tropical diseases in Hamburg, established in 1900, is no longer sufficient for the constantly increasing demands on it, a new building is to be erected. The number of physicians who desire to prepare themselves for the tropics in this institution or to utilize their observations made in the tropics is constantly increasing. The teaching work of the institute has been increased, lately, especially by the establishment of the colonial institute. The entire cost of the project will amount to $320,000 (1,339,300 marks), of which $55,000 will be devoted to the hospital and $35,000 to the animal house.

## VIENNA LETTER

*(From Our Regular Correspondent)*

VIENNA, April 18, 1910.

### Inquiries into the Hospital Abuse

The precarious financial position of the public hospitals in Vienna has attracted public attention, as previously mentioned (Vienna Letter, THE JOURNAL, March 19, 1910, liv, 982). Dr. Hofmoke has investigated the out-patient departments and the wards. In 1908, 650,000 persons applied for treatment as out-patients in the nine large Vienna public hospitals and three private institutions, and 100,000 persons were received besides as in-patients. The population of Vienna being a little over 2,000,000, these figures show that fully 35 per cent. of the inhabitants were hospital patients. (These figures require some correcting, as they comprise also patients who came from abroad or the country or other towns.) Of these patients, 122,000 were treated in the three children's hospitals, and 160,000 in the clinics. No inquiry is made into the social or financial position of out-patients. For in-patients the rate of payment is 2½ kronen (about 55 cents) per day, which is paid either by the patients themselves, by their sick-benefit associations or by the communities to which they belong, if they can obtain a "letter of poverty" (*Armutszeugnis*). As there are more than 500,000 members of the compulsory sick-benefit associations (*Krankenkassen*) in Vienna, naturally they form a large percentage of the out-patients, for the physician of the benefit association is often, from sheer pressure of work, glad to be able to send patients to the hospital, where they get free treatment, while he signs their certificates for sick-pay. Naturally, this is expensive for the hospitals, and members of benefit associations ought not to receive free treatment from the hospitals, as they pay their rates to their clubs. Lately opposition has arisen among the patients and the hospital staffs. The free organization of practitioners has asked all hospital boards and private institutions to investigate the social status of their out-patients more strictly. In the Poliklinik lately persons have been refused treatment on the ground that they were members of a benefit association. Many members of such clubs have demanded the appointment of a large number of doctors, which would relieve the burdens of the present appointees. Of all the 650,000 out-patients, only 60 per cent. would have really been entitled to free medical aid. If the expenditure made for the other 40 per cent. could be saved, or if they could be made to pay for their treatment, the hospital deficit could be paid off easily. The greatest abuse, and consequently the largest loss of hospital money, occurred in the surgical cases, in which the cost of bandages and dressing material, for minor surgery, was very heavy. Special departments (ear, eye, nose and throat and skin) are also very much abused. The least amount of abuse takes place in this city in the children's hospitals.

### Excitement in the Austrian Profession

Much excitement has been aroused among the practitioners here by the bill for compulsory insurance against sickness which has now passed the stage of subcommittee. The resolutions of the committee recommend that every person wh is employed at a fixed monthly or weekly salary, by a private person or corporation, and whose earning does not exceed 2,600 kronen (about $750) a year, or who may be dismissed a a notice of less than three months' time, shall be obliged to belong to a sick-benefit association. The medical profession disapproves the new plan, since its adoption would mean the rui of the private practitioner. The medical representatives suggested an upper limit of 2,400 kronen ($500) yearly income for the members of sick-benefit associations. But the provis with regard to three months' notice is simply misleading, fo there is no three months' notice in this country betwee employers and employees. It would mean that everybody without regard to income, could join the compulsory sick benefit associations, and consequently, since the public onl too gladly shirk doctors' bills, it would mean the destructio of the profession with us. Therefore mass-meetings of th physicians are being held at various points. Several ver pointed resolutions have been passed and sent to the parliament. The profession is determined to call a general strik of all medical men in Austria. The public officers of health i the country, especially the numerous unpaid doctors of th hospital staffs, the physicians of the sick-benefit association and those appointed by private corporations have been s organized that they are able and willing to leave off thei work at a moment's notice. The responsibility, both mora and material, would rest with the legislative body whic forced the profession to such a step.

## Pharmacology

### FOOD AND DRUG PURITY

### Connecticut Report on Breakfast Foods, Canned Milk, Catarr Powders and Other Nostrums

Although we are in the age of scientific, diagnostic acume and more rational treatment of disease, the necessity for exac knowledge of food purities and values and drug strength an adulterations should not be overlooked. Consequently, som of the data furnished by the last report of the Connecticu Agricultural Experiment Station is both of interest and value

This report shows that most breakfast foods are clean an good, but exception must always be taken to such terms a those which many of the labels exploit. In other words, mos cereals are wholesome, starchy foods, but such assertions a that they are "brain foods," or give special "muscular vigor, is misstatement of fact, and comes under the head of "misbranding." Also, such attempts to keep within the law an yet to fool the public as offered by the "Holland rusk," whic states in large type, under a picture of a typical Dutch wind mill, that it is "made in Holland," and then in small, inconspicuous type, "Holland, Mich.," should be absolutely condemned. The phrase on "grape nuts" declaring that it is " food for brain and nerve centers," and on "Saxon Wheat Food stating that it is "a brain, nerve, and muscle food," are untru statements that are uncalled for and should be eliminated.

It is pleasing to find that of 28 samples of coffee examined, 6 unground and 22 ground, none was found adulterated while thirteen years ago 25 per cent. of the coffee examine was found adulterated.

Thirty-six samples of condensed milk, representing all th brands of both sweetened and unsweetened milk, were examined. Dr. Hand's condensed milk (page 177 of the report) stated to be "made from low grade or partially skimme milk."

On this same page it is further stated that if the directio for use given on the labels are followed, "the resulting mixtures will contain, in all but one instance, only about half much solids or fats as good cow's milk." The prescriptio given for making substitutes for mother's milk by diluting ondensed milk shows that "these dilutions supply very much ess of the essential food ingredients than mother's milk, while wo-thirds of the nutritive matter may consist of cane sugar." The Emery brand of sweetened condensed milk is the only one that yielded, when prepared according to directions, a solution "containing normal quantities of milk solids and fat, but even this contained a great excess of cane sugar." "The other sweetened milks yielded products containing from 5.5 to 8.8 per cent. of milk solids, and from 1.5 to 2.2 per cent. of fat; in other words, a mixture only a little over half as rich as milk of good quality" (page 187).

"Of the unsweetened milks, the Blue Label brand alone yielded a product approaching good milk in richness."

Gelatin is the chief constituent of connective tissue, and any form of connective tissue may be made to yield gelatin. Much commercial gelatin is really a purified glue obtained from hide clippings. The purest form of gelatin is stated to be made from isinglass, obtained from the swimming bladder of turgeon and other fish. Gelatin obtained from calves' feet is of high quality. Though gelatin is easily digestible in the tomach, it is not a tissue builder, and is not a substitute for proteids, but it is claimed that it protects protein destruction, and in such a sense might become a conservator of nutrition. Therefore, gelatin is not a real food, although perhaps of value in convalescence or as a calcium carrier when there is a endency to hemorrhage and the blood is short on calcium. The best gelatin for medicinal purposes, at a fair price, is hat prepared from calves' feet.

The Connecticut Experiment Station found unmistakable races of alcohol ranging from 0.17 to 0.68 per cent. by volume n grape juice. Of course, such a small amount of alcohol is a negligible quantity. In no sample of the nine examined was here found salicylic acid, benzoic acid, or saccharin.

It is urged in this report that the consumer should undertand that the so-called fruit extracts, banana, pineapple, trawberry and raspberry, are usually synthetic, and therefore elly powders which are used as quick desserts do not repreent flavors obtained from the fruits named (page 200).

Of 104 samples of lard examined, 97 were found not adulerated. The adulterated brands were shown to be adulterated with cotton-seed oil, with a certain percentage of beef tearin."

As the alcohol costs about four times as much, in a good xtract of lemon, as all the other constituents together, some manufacturers substitute a dilute alcohol and, rarely, even wood alcohol. As some oils, especially lemon oil, are pracically insoluble in dilute alcohol, this renders some of the reparations of lemon extract worthless so far as the lemon is oncerned. Of 55 samples of lemon extract examined, 22 were ound not to be adulterated.

Sixty-five samples of vanilla extract were examined; "41 were found not adulterated, 2 artificially colored, 12 were ompounds illegally labeled, and 17 were compounds or imitaions, but labeled as such."

Of 30 samples of maple syrup examined, 8 were found to e adulterated, and 22 were correctly labeled as compound in ature.

It is interesting to note that of 44 samples of olive oil xamined, obtained from grocery and delicatessen stores, all were found free from cottonseed, sesame and peanut oils, while of 65 samples obtained from druggists in 1907, 11 were ound adulterated.

TEMPERANCE DRINKS

Eleven samples of "temperance drinks" were analyzed. "Rasperry shrub" and "wine mint" state on their labels that they ontain benzoic acid. Neither benzoic acid nor salicylic acid were found in any of the other samples. "Wine mint," "coco-ola," and one sample of "Ron-Bre" contained over 1 per cent. f alcohol, while both samples of "iron brew" and a second ample of "Ron-Bre" contained smaller amounts. "Kolox," Moxie," and "Phenix" contained no alcohol. The coloring was artificial in every case. In three samples a coal-tar dye was used, in the others caramel. The solid matter ranged from 0.60 to 64.41 per cent., consisting almost entirely of ugar. Saccharin was found in one sample of "Ron-Bre." This was a very dilute preparation, consisting essentially of water, traces of sugar, and iron, colored with caramel, and sweetened with saccharin." "Coco-Cola" contained the active drug caffein.

OTHER PREPARATIONS

The Anglo-American Medicine Co.'s Catarrhal Powder was found to contain 0.88 per cent. of cocain. Dr. Birney's Catarrh Pulver was found to contain 1.10 per cent. of cocain. Dr. Cole's Catarrh Cure (the word "cure" being a misbrand) contained, in two samples, 3.08 and 3.22 per cent. of cocain respectively. Gray's Catarrh Powder contained 1.68 per cent. of cocain. Later samples of Gray's Catarrh Powder contained no cocain. Six samples of a powder sold under the name of "Bing," contained from 1.95 to 2.81 per cent. of cocain.

The sale of coca wine in Connecticut without a physician's prescription is illegal. If the coca wine contains cocain, as it should, it comes under the cocain law requiring a physician's prescription. If, on the other hand, it contains no cocain, as is stated on the label of "Vin Mariani," it is misbranded.

Wampole's Kola Wine contained 20.75 per cent. of alcohol by volume.

Of 32 samples of hydrogen dioxid solution examined, 23 were guaranteed by the label to contain acetanilid as a preservative. Two samples were claimed to contain boric acid as a preservative. In the remaining 7 samples no preservative was indicated. As peroxid of hydrogen is generally used externally, its acetanilid content would be harmless, but still it is not generally known that this substance is contained in these solutions. Six samples were found below standard strength and to exceed the limit of acidity required by the Pharmacopeia.

## TOXICITY OF ARSACETIN

Dr. O. H. Benker, St. Louis, writes: "The article on Soamin in THE JOURNAL, April 16, 1910, p. 1323, brings to my attention sodium p-acetylaminophenyl arsonate (arsacetin) manufactured by Farbwerke vorm. Meister Lucius & Bruening, Hoechst, a.M., Germany. The literature from the manufacturer cites such authors as Neisser using it for subcutaneous applications in 9 grain doses, up to 20 injections. Kindly state whether this drug has produced any blindness or whether it is free from such dangers."

As the use of atoxyl showed that it was liable to produce blindness, an attempt was made to secure a less poisonous product by introducing other radicles in place of hydrogen in the amino group. Arsacetin was one of these which appeared likely to be less liable to produce unfavorable results than atoxyl. It differs from atoxyl by the introduction of the acetyl radicle into the amino group of atoxyl, in other words, it is acetyl-atoxyl. Experiments on animals showed it to be less poisonous than atoxyl, thus the experiments of Blumenthal, (*Med. Klin.*, Nov. 1, 1908, p. 1687) show that rabbits which would succumb to a dose of 0.4 to 0.5 gm. of atoxyl, bore doses of 0.6 to 0.8 gm. of acetyl-atoxyl (arsacetin). It is to be noted that these doses show relatively less toxicity for arsacetin but the difference does not seem to be very great. Arsacetin has now been used in a considerable number of cases and it appears that it has given rise to blindness in such a number of cases that it does not seem likely that it will fulfill the expectations of its originator by proving much less toxic than atoxyl. Reute (*München. med. Wchnschr.*, April 6, 1909, p. 718) reports a case of atrophy of the optic nerve after the use of 3.6 gm. of arsacetin.

J. Iversen (*München. med. Wchnschr.*, Aug. 31, 1909, p. 1785) used arsacetin in 148 cases of relapsing fever, in one of which permanent blindness due to toxic retro-bulbar neuritis occurred. The patient received 0.7 gm. and after seven days 0.5 gm. of arsacetin. Paderstein (*Berl. klin. Wchnschr.*, May 31, 1909, p. 1023) reports the observation of H. Lehmann, who administered atoxyl to a patient to the extent of 3.4 gm. without benefit. After some months six injections of arsacetin, amounting in all to 1.5 gm. were given, and soon after this complete blindness suddenly occurred. F. Hammes (*Deutsch. med. Wchnschr.*, Feb. 10, 1910, p. 267) reports a case in which he gave in eight doses 0.8 gm. of arsacetin, which was followed by complete blindness and finally by death; the death, however, was probably not due entirely to the arsacetin. He refers also to the report of Eckard (*Archiv f. Shiffsund Tropenhygiene*, xiii, 16), who saw 3 cases of blindness among 134 cases of sleeping sickness treated with arsacetin.

There are therefore in the literature reports of 7 cases in which blindness was undoubtedly due to this remedy. It is interesting to note that the experiments of Blumenthal with various derivatives of atoxyl in which substitutions were made in the amino group showed no constant reduction of toxicity. Blumenthal suggests that a change in the arsenic group may cause an enormous increase in the toxicity. A para-aminophenyl arsenous oxid obtained by the reduction of atoxyl produced death in a rabbit weighing 2,800 gm. in the small dose of 0.02 gm. It is quite possible that the occasional instances of severe poisoning by atoxyl and arsacetin are due to reduction in the system which the physician can neither foresee nor control.

G. Meszczersky (*Vrach. Gaz.*, 1909, No. 27) reports unfavorable results in the treatment of syphilis by arsacetin and remarks on the toxic action of the kidneys. In view of the foregoing it is evident that the greatest caution should be exercised in using a remedy capable of producing such serious side results. In this connection the conclusions of Hammes are worth quoting: "Finally I am inclined to believe that in arsacetin we have made a step forward in a path that promises marked success, but for general use this method is not yet applicable. As far as the application of this new preparation of arsenic in internal medicine, it is for the present not suited to displace the forms of arsenic previously used and to influence our previous treatment. The apparent benefits occasionally obtained in a small series of observations are abundantly counterbalanced by the damage which under some circumstances will quite overcome all of the satisfaction received from a success obtained in a probably unexpected way. Especially for physicians in practice to whom other considerations are of importance in addition to the general ethical viewpoint of our science, an attitude of marked conservatism toward the remedies of this group is decidedly to be recommended."

In the foregoing no criticism is intended on the method of introduction of arsacetin. The remedy has been put before the profession with very conservative statements and with an evident desire to supply a less dangerous preparation than atoxyl.

### Chlorophosphate of Calcium

A correspondent asks: "What is the nature and therapeutic action of chlorophosphate of calcium which is given as an ingredient of Pautauberge's solution on the enclosed postal? W. H. S."

The postal sent by our correspondent is an advertisement of Pautauberge's solution purporting to be "Notes on Modern Pharmaceutical Remedies from American Medicine." "Bibliography omitted to save space." From this postal we learn that each tablespoonful contains "creosote 2 minims, chlorophosphate of lime 8 grains." Under "indications" we are told that "Pautauberge's solution of creosote with the chlorophosphate of lime is extensively used and recommended by French physicians in the treatment of pulmonary tuberculosis, chronic bronchitis, emphysemia (?), asthma, tuberculous infections in general, chronic intestinal diseases and wherever creosote would be indicated."

There is no such substance as "chlorophosphate of lime." There is chlorid of calcium and there are also several phosphates of calcium. Possibly the enterprising manufacturer has given this name to a solution of phosphate of lime in hydrochloric acid in the effort to mystify and impress the physician who may be led to believe that he is using a new and important remedy.

This is another example of the attempt to make scientific theories serve the needs of manufacturers of proprietary remedies. The manufacturer infers from two views of tuberculosis the need of remedies which his solution is designed to supply. A. Robin and Ferrier claim that a deficiency in calcium salts favors tuberculous infection, hence the need of "chlorophosphate of lime" which Pautauberge can alone supply. Even if there were a basis of truth in the theory, there is certainly no reason to suppose that the quality of calcium salts supplied by American pharmacists is in any way inferior to similar salts made in France.

Again, we are informed that the most probable port of entry for the tubercle bacillus is the intestinal tract and the creosote in the solution (2 minims to the tablespoonful) is supposed to ward off the danger of intestinal infection. Considering that several pounds of matter, solid and liquid, pass through the intestinal canal daily, is there not great danger that the 6 minims of creosote will fail to find some of the tubercle bacilli in the large mass of food and drink and swallowed sputum through which they are distributed?

## REVISION OF THE PHARMACOPEIA

### Abstract of the Report of the Committee on the United States Pharmacopeia

The American Medical Association's Committee on the United States Pharmacopeia has prepared a report to the Board of Trustees which may be briefly summarized as follows. It will appear in full later and is given in part here because of the convention next week.

The U. S. Pharmacopeia is at present the exclusive property of the Pharmacopeial Convention, whose privilege it is to determine what the Pharmacopeia shall be. Under the present constitution one-third of the members of the convention are from the medical profession, and the chief interest of the profession being the scope of the Pharmacopeia, it has been the opinion that the medical delegates should determine this, and the chairman of the committee on the coming revision has formally requested the American Medical Association to prepare a list of drugs for addition to or deletion from the Pharmacopeia. In order that the whole profession might be allowed to express its choice as to admissions, committees from the sections on Practice of Medicine, Ophthalmology, Stomatology, Pathology and Physiology, Obstetrics and Diseases of Women, Dermatology, Laryngology and Otology, and Nervous and Mental Diseases were appointed, and reports from all but the last three sections have been published in The Journal, Sept. 4, 1909, p. 791; Oct. 30, 1909, p. 1491; April 23, 1910, p. 1389, and April 30, 1910, p. 1457.

The professors of materia medica and pharmacology of the medical schools of the United States were asked to express their opinions on the general principles to be followed in the revision and on the admissions and deletions, and 131 replies were received after they had consulted with colleagues and alumni, and after examination of hospital records, etc. The answers to certain questions were sufficiently uniform, so that it is fair to formulate the following propositions as representative of the attitude of the medical schools. These propositions, therefore, merit the consideration of the Committee on Revision:

> The Pharmacopeia should not be a book of minimum standards, merely for the regulation of commerce in drugs and chemicals and the restriction of adulteration and fraud.
>
> It should be a compilation of acceptable standards for desirable medicaments, and designed primarily for the protection of the public health.
>
> It should be the standard of medicaments of recognized value and established use, and therefore be restricted rather than extended in number of titles.
>
> Food substances, such as figs and prunes, and beverages, such as brandy and whisky, should not be retained.
>
> Substances of no direct therapeutic value, but of value as solvents, should be relegated to the appendix.
>
> Duplications of preparations of the same drug, such as wines, vinegars, tinctures, etc., should be discouraged.
>
> Complex formulas should be deleted and placed in the N. F.
> The Pharmacopeia should conform to international nomenclature and standards.
>
> Compound proprietary or secret mixtures should be denied admission.
>
> The Pharmacopeia should be the accepted standard for medicinal prescribing.

The majority of those replying were in favor of deleting ractically 300 drugs and preparations at present included in he Pharmacopeia. On a number of preparations, including everal recently introduced, many did not express a direct pinion.

The committee makes no specific recommendations as to the evision of the Pharmacopeia, but suggests that if an advisory ommittee of 50 is determined on, one-half be from medical rganizations.

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## dditional List of Delegates to Pharmacopeial Convention

Dr. Murray Galt Motter, assistant secretary, sends us the ollowing list of officials, etc., and also an additional list of elegates to the United States Pharmacopeial Convention to be eld in Washington, D. C., May 10, 1910. Previous lists were ublished in THE JOURNAL, February 26, page 719; March 12, age 890, and April 16, page 1324. The list is offered for pub-cation "without prejudice," it being understood that such pubcation does not of necessity mean that these delegates will be ceived and seated by the Convention, as their credentials have ot as yet been passed on by the Committee on Credentials and rrangements.

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# Correspondence

## Orthoform Erythema—Idiosyncrasy

*To the Editor:*—While treating a varicose ulcer last winter I had occasion to employ an ointment containing 10 per cent. of orthoform, this being my first personal experience with that drug. About ten hours afterward I developed a severe erythema which rapidly spread over the entire body, involving the eyes, nasal mucosa, mouth, external ear, prepuce, etc., very much like rhus poisoning. Following the appearance of huge wheals, the itching became almost intolerable, and the only rest to be had for four days and nights was momentary relief while lying in a dilute phenol bath. Washes, dusting powders, ointments, narcotics in every variety and dose, seemed useless. The skin gradually cleared after some ten days, though evanescent wheals appeared for several weeks. The etiology was then unsuspected. Some two months later I employed orthoform again as an insufflation in a case of ulcerative pharyngitis. I handled the powder about 8 p. m., and the following morning awoke with both eyes swollen shut, face, ears, neck and upper chest erythematous to a degree resembling erysipelas. This disappeared in 48 hours. The determination of the etiology now included orthoform as a tentative feature. April 29, I dusted orthoform on a fissure in a woman's hand to relieve the pain she complained of, taking precautions not to come in direct contact with the drug. The next morning, nevertheless, I awoke with my face in a condition of erythema that caused my patients to express their surprise or to look at me with the suspicion that I am a "drinking man." Some of them say nothing but look twice, which is worse punishment for a teetotaler. The diagnosis is now positive and complete. Hereafter I shall apply orthoform only on the end of a ten-foot pole. I have been unable to find any similar reports in the literature on orthoform available to me.

WM. BRADY, M.D., Elmira, N. Y.

# Miscellany

**Gastric Ulcer.**—At the meeting of the British Royal Society, January 20 (reported in *Nature*, January 27) Dr. C. Bolton made a further report on his studies of gastric ulcer. In four previous papers he demonstrated the properties of gastrotoxic serum, obtained by immunizing the rabbit with guinea-pig's gastric cells, and showed that ulcers produced by the serum healed within three or four weeks if the animal were in normal condition and with its normal diet. The importance of gastric ulcer in the human subject led him to investigate the causes of its chronicity. He found in his experiments that so long as the stomach emptied itself in the normal time it was impossible to delay the healing of gastric ulcer by decreased or increased acidity of the gastric contents, or by feeding with infected food. The situation of the ulcer in the stomach did not materially affect the results. In this latest communication he deals with the effects of disturbance of motor function of the stomach on the healing of ulcer, the food and acidity being normal. Cats were employed for this experiment and the gastric ulcers were produced by local injection of gastrotoxic serum into the stomach wall, the serum being prepared by immunizing a goat with the gastric cells of the cat. Motor insufficiency leading to retention of the stomach contents, which is a common form of indigestion in man, was produced by constricting the pylorus with a rubber tube, the ulcer forming on the anterior wall of the stomach. Healing was found to be delayed for at least twice the usual time. Though the ulcers ultimately healed, the regenerated mucous membrane was of a lower type than normal. Thus it may consist on the forty-first day of a single layer of cubical cells such as should have been formed by the tenth day; or of glands formed entirely of duct epithelium. The more sclerotic the base of the scar the more imperfect was the redeveloped mucosa. In certain cases the normal healing of ulcers was delayed by necrosis of their basal granulation tissue or by excessive formation of fibrous tissue and here also the mucous membrane formed was of a lower type. He considers, therefore, that the delay of healing in case of motor insufficiency was an exaggeration of the condition occasionally seen in the normal state. Both conditions are due to digestion of the base of the ulcer leading to necrosis or increased formation of fibrous tissue so that the regenerated membrane is unable to grow over it or does so in an imperfect manner. When the base is very fibrous the glands have not a sufficient vascular and cellular stroma in which to proliferate.

**Hemagglutinins, Hemopsonins and Hemolysins in Normal and Pathologic Blood.**—L. S. Dudgeon and H. A. F. Wilson reported to the Royal Society, Dec. 9, 1909 (*Nature*, December 23), their latest results of studies on the presence of these substances in human blood. These results are based on hundreds of experimental observations which have been made on normal and pathologic blood, and are as follows: 1. Autoagglutination of the red blood cells, as tested for by the methods which we have employed, may be shown to occur with specimens of pathologic blood only occasionally, but never with normal blood; and autohemolysis has not been met with. 2. Isoagglutination is often met with in specimens of blood obtained from patients suffering from the same disease. 3. Hemoagglutination is largely a specific phenomenon, both in normal and pathologic blood, and the specific effect can be shown to persist even if the red cells have been subjected to high degrees of temperature or to complete drying. 4. Hemoagglutination and bacterial agglutination are distinct phenomena. 5. Well-marked isohemolysis in specimens of normal and pathologic blood is not common, although some degree of hemolysis can frequently be demonstrated. 6. Concerning phagocytosis: It would appear necessary to avoid mixing specimens of normal or pathologic blood, because just as samples of serums are known to vary in value, so do the leucocytes, although to a less extent, whether they are obtained from specimens of normal or pathologic blood. Still further, by mixing samples of normal or pathologic blood a hemolytic action may be induced which in itself has been found capable of exciting abnormal results in phagocytosis. 7. It appears to be incorrect to regard a specimen of blood as normal until it has been subjected to a detailed examination by the methods referred to in this and the two previous communications, irrespective of its actual source.

**Prognosis of Pelvic Tuberculosis.**—The prognosis of intrapelvic tuberculosis is bad, especially in advanced cases. If, however, the patients could be seen in the early stages, whether primary or secondary, provided the original focus in the secondary cases is under control or not far advanced, removal of the offending organs gives the best percentage of cures. At present the rate of mortality is as high or higher than that of cancer.—F. J. Shoop, in *Long Island Medical Journal*.

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# Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

### Stain for Laboratory Benches

*To the Editor:*—There is a method of treating or staining tops of laboratory benches so that they will not be affected by chemicals spilled on the wood. I have seen the method described somewhere, but cannot recall where. There were three preparations used. I think, one of sulphuric acid, one of copper solution, and a third of oil or wax. Can you give me the formula or refer me to some one from whom I can get it?

George D. Henderson, M.D., Holyoke, Mass.

Answer.—The formula referred to is no doubt the preparation which is said to give laboratory tables the so-called "ebony" finish—which is resistant to chemical reagents which either stain or corrode ordinary wood. Professor Barnes (Proc. Am. Pharm. Assn., 1899, p. 397) stated that the following method is employed in several laboratories in Copenhagen. The two following solutions are required:

*Solution A.* Copper sulphate,, 125 gm.; potassium chlorate, 125 gm.; water, 1,000 gm. Boil until salts are dissolved.

*Solution B.* Anilin hydrochlorid, 150 gm.; water, 1,000 gm. or, anilin, 120 gm.; hydrochloric acid, 180 gm.; water, 1,000 gm.

Apply two coats of Solution A while hot, applying the second as soon as the first has dried. Then apply two coats of Solution B and allow wood to dry thoroughly. Next a coat of raw linseed oi is rubbed in by means of a cloth to give a polish. In the treatment with the oil, the deep black color is partially brought out but this does not uniformly appear until the table has been thoroughly washed with hot soap-suds. This latter treatment removes superfluous chemicals. To keep table in condition it is said to be necessary only to wash off occasionally with soap and water, and then to rub with oil. The cost of both solutions above given will not be over fifty cents. The amount given above is sufficient for ten square yards of surface.

### OFFICIAL ANTITOXINS

*To the Editor:*—I wish information concerning the antitoxin which are official in the U. S. Pharmacopeia and how they ar standardized.

J. E. Olsson, Omaha.

Answer.—There is but one official antitoxin: Serum Antidiphthericum. The Pharmacopeia requires that "the standard of strength expressed, in units of antitoxic power, should be that approved or established by the United States Public Health and Marine-Hospital Service." This standard is described in Bulleti 21 of the Hygienic Laboratory, U. S. P. H. and M.-H. S. The Hygienic Laboratory has also established a standard for tetanu antitoxin which is published in Bulletin 43. The standardizatio of tetanus antitoxin is discussed in The Journal, Jan. 26. 1907, p. 338, and (editorially) May 18, 1907, p. 1680, and May 30, 190 p. 1798.

The method of determining the potency of antidiphtheric seru is substantially as follows: 1 c.c. of a standard test serum, dilut so that each c.c. contains 1 antitoxic unit, is mixed with vario quantities of diphtheria toxin and injected into guinea-pigs, weighing, each, 250 gm., and the least amount of the toxin which wi neutralize the 1 c.c. of standard antitoxic serum and just kill guinea-pig within four days is determined. This amount is call the L + or lethal dose. The serum to be tested is then mixed varying but definite quantities with 1 L + dose of the toxin and injected into guinea-pigs, weighing 250 gm. From the guinea-pig which dies within four days under the largest dose of the serum to be tested is determined the amount of serum, which is equivalent to a single antitoxic unit. From this the antitoxic strength of the serum is calculated.

The standard for tetanus antitoxin is defined as follows: "The immunity unit for measuring the strength of tetanus antitoxin shall be ten times the least quantity of antitetanic serum necessary to save the life of a 350-gm. guinea-pig for 96 hours against the official test dose of a standard toxin furnished by the Hygienic Laboratory of the Public Health and Marine-Hospital Service." The standardization of tetanus antitoxin does not differ radically from the standardization of diphtheria antitoxin. The toxins and antitoxins are measured against each other reciprocally, so that change or deterioration of either the standard toxin or the standard antitoxin may readily be determined. Duplicate toxins and antitoxins made from time to time will act as checks against deterioration of either the standard toxins or antitoxins. The value of an unknown serum is measured indirectly through the toxin, using the L + dose as the test dose. The L + dose is the smallest quantity of tetanus toxin that will neutralize one-tenth of an immunity unit, plus a quantity of toxin sufficient to kill the animal in just four days.

# The Public Service

## Medical Department U. S. Army

Changes for the week ended April 30, 1910:

King, Edgar, lieut., April 20, the leave of absence heretofore granted for ten days is extended fifteen days.

Norriss, H. C. R., 1st lieut., M.R.C., April 13, ordered to Fort Stevens for temporary duty.

Lyster, Theodore C., major, April 13 arrived at San Francisco and assigned to temporary duty at Headquarters, Department of California, pending sailing of transport to Manila, P. I.

Marietta, S. U., 1st lieut., M.R.C., April 23 left Fort Des Moines, Iowa, en route to Fort Mackenzie, Wyo., for temporary duty.

Suggs, Frank, 1st lieut., M.R.C., April 22 granted 30 days' leave of absence, about May 20, 1910.

Ruffner, Ernest L., major, April 22, granted leave of absence for two months.

Girard, Joseph B., colonel, April 25, granted leave of absence for four months, to take effect on or about June 15, 1910, with permission to go beyond the sea.

Mills, R. H., dental surgeon, April 21, reports return to Fort Adams, R. I., from temporary duty at Fort Ethan Allen, Vt.

Casaday, George H., dental surgeon, April 16, ordered to proceed from Presidio of Monterey, Cal., to Fort Rosecrans, Cal., for temporary duty.

Thornburgh, R. M., major, promoted to such, to rank from April 7, 1910.

Buchsbaum, Maurice, 1st lieut., M.R.C., April 20, reports arrival at San Francisco, Cal., from Manila, P. I., on 30 days' leave of absence.

Holingsworth, R. M., dental surgeon, April 22, reports on two months' leave from date.

Rutherford, Henry H., captain, April 23, granted leave of absence for four months, with permission to return to the United States via Europe, to take effect on his relief from duty in the Philippines Division.

Kelly, John P., 1st lieut., M.R.C., April 23, relieved from duty at Fort Ruger, H. Ty., and will proceed to San Francisco, and on arrival report by telegraph to the Adjuant General of the Army for further orders.

Marshall, John S., examining and supervising dental surgeon, April 23, relieved from duty in the Philippine's Division, and will proceed on the transport to sail from Manila, P. I., about Oct. 13, 1910, to San Francisco for further orders.

McAlister, John A., Jr., dental surgeon, April 23, relieved from duty in the Philippine's Division, and will proceed on the transport to sail from Manila, P. I., about Dec. 15, 1910, to San Francisco for further orders.

The following named officers of the Medical Corps and of the Medical Reserve Corps are relieved from duty in the Philippines Division, and will proceed on the transport to sail from Manila, P. I., about Aug. 13, 1910, to San Francisco for further orders: Whitmore, Eugene R., major; Nelson, Kent, captain; de Krafft, S. Chase, 1st lieut., M.R.C.; Brownlee, Charles Y., major; Bartlett, William H., lieut.; Pyles, Will L., captain; Cullen, Charles W., 1st lieut., M.R.C.

Same as above, except to sail from Manila, P. I., about Sept. 15, 1910: Rich, Edwin W., captain; Walker, Thomas C., 1st lieut., M.R.C.; Kellogg, Preston S., 1st lieut., M.R.C.

Same as above, except to sail from Manila, P. I., Oct. 15, 1910: McKinney, Garfield L., lieut.; Phillips, Hiram A., lieut.; Weston, Henry R., 1st lieut., M.R.C.; Dulin, Charles T., 1st lieut., M.R.C.

Same as above, except to sail from Manila, P. I., Dec. 15, 1910: Fife, James D., captain; Scott, George H., captain; Kilbourne, Edwin D., captain.

Norriss, H. C. R., 1st lieut., M.R.C., April 23, relieved from duty at Vancouver Barracks, Washington, and will proceed to San Francisco, and take transport to sail from that place about July 5, 1910, for duty in the Philippines Division.

Peck, Luke B., 1st lieut., M.R.C., April 23, relieved from duty at Fort Banks, Mass., and will proceed to San Francisco and take the transport to sail from that place about July 5, 1910, for duty in the Philippines Division.

Billingslea, C. C., captain, April 23, granted leave of absence for one month, with permission to apply for an extension of one month.

Mills, Robert H., dental surgeon, April 27, granted 20 days' leave of absence.

Lyster, Wm. J. L., major, April 16, detailed as Instructor at the State Rifle Range, Camp Williamson, Mass., from May 23 to 27, 1910.

Gunckel, George I., dental surgeon, April 15, ordered to Fort Barrancas, Fla., for temporary duty for the period of six weeks.

McCord, Donald P., 1st lieut., M.R.C., April 26 on arrival at San Francisco, Cal., to proceed to Fort Ward, Washington, for duty.

Krebs, Lloyd Le R., captain, April 26, relieved from duty at Army General Hospital, Fort Bayard, N. M., and ordered to Fort Baker, Cal., for duty.

Tefft, William H., captain, April 26, relieved from duty at Fort Baker, Cal., and ordered to the Army General Hospital, Fort Bayard, N. M., for duty.

Owen, Leartus J., captain, April 18, granted 30 days' leave of absence to take effect about May 10, 1910.

Harris, Jesse R., captain, April 24, left Fort George Wright, Washington, en route to Boise Barracks, Idaho, for temporary duty.

## Medical Corps, U. S. Navy

Changes for the week ended April 30, 1910:

Davidson, A. B., asst.-surgeon, detached from the naval hospital, Mare Island, Cal., and ordered to the *Iris*.

Holeman, C. J., asst.-surgeon, detached from the *Iris* and ordered to duty in connection with fitting out the *Petrel* and to duty on board the latter vessel when placed in commission.

Valz, E. V., asst.-surgeon, ordered to the navy yard, Portsmouth, N. H., and to additional duty at the naval prison at that yard.

Bacon, S., asst.-surgeon, detached from the naval training station, San Francisco, and ordered to duty in connection with the *Wheeling* and to duty on board that vessel when placed in commission.

Spratling, L. W., surgeon, detached from the *Missouri* and ordered to the navy yard, Washington, D. C.

Brownell, C. D., surgeon, detached from the *New Jersey* and ordered to the *North Dakota*.

Berryhill, T. A., surgeon, ordered to the marine recruiting station, New York.

Traynor, J. P., P. A. surgeon, detached from the *North Dakota* and ordered to continue other duties.

Wickes, G. L., P. A. surgeon, detached from the navay recruiting station, Cedar Rapids, Iowa, and ordered to the Asiatic station.

Robnett, A. H., P. A. surgeon, detached from the naval training station, Newport, R. I., and ordered to the naval recruiting station, Cedar Rapids, Iowa.

Stibbens, F. H., asst.-surgeon, ordered to the naval training station, Newport, R. I.

Pollard, J. B., asst.-surgeon, detached from the *Missouri* and ordered to the *North Dakota*.

Murphy, J. A., surgeon, April 26 detached from the marine recruiting station, New York, and ordered to the Naval Academy.

Asserson, F. A., surgeon, commissioned surgeon from Feb. 5, 1910.

Hayden, R., P. A. surgeon, commissioned P. A. surgeon from March 11, 1910.

## U. S. Public Health and Marine-Hospital Service

Changes for the week ended April 27, 1910:

Trask, J. W., asst.-surgeon general, leave granted for 1 month from March 16, 1910, amended to read 29 days from March 16, 1910.

Irwin, Fairfax, surgeon, granted 1 month and 10 days' leave of absence from Sept. 1, 1910.

Kalloch, P. C., surgeon, detailed to represent the Service at the next annual meeting of the Oklahoma State Health Association, to be held in Tulsa, Okla., May 11, 1910.

White, J. H., surgeon, leave granted for 14 days from April 1, 1910, amended to read from April 4.

Wertenbaker, C. P., surgeon, detailed to represent the Service at the meeting of the Association for the Study and Prevention of Tuberculosis, to be held in Washington, D. C., May 2-3, 1910.

Moore, Dunlop, P. A. surgeon, relieved from duty at San Francisco, and directed to proceed to Baltimore, Md., and report to the medical officer in command for duty and assignment to quarters.

Lloyd, B. J., P. A. surgeon, granted 1 month's leave of absence from April 20, 1910, on account of sickness.

Warren, B. S., P. A. surgeon, detailed to represent the Service at the annual meeting of the Missouri Medical Association, to be held in Hannibal, Mo., May 3-5, 1910.

Grimm, R. M., asst.-surgeon, relieved from duty on the U. S. Revenue Cutter *Algonquin* and directed to proceed to Evansville, Ind., and assume temporary command. Granted 7 days' leave of absence en route to station.

Bailey, C. A., acting asst.-surgeon, granted 7 days' leave of absence from April 21, 1910.

Diaz, Jose A., acting asst.-surgeon, granted 30 days' extension of leave from Jan. 5, 1910, on account of sickness.

Naulty, C. W., Jr., acting asst.-surgeon, granted 6 days' leave of absence from April 27, 1910.

Parker, T. F., acting asst.-surgeon, granted 15 days' leave of absence from April 16, 1910.

Stewart, W. J. S., acting asst.-surgeon, granted 1 month's leave of absence, without pay, from March 23, 1910.

Wilbert, Martin I., technical assistant, Hygienic Laboratory, detailed to represent the Service at the meeting of the American Pharmaceutical Association, to be held in Richmond, Va., May 2-7, 1910.

Stiles, C. Wardell, Chief, Division of Zoology, Hygienic Laboratory, designation changed to Professor of Zoology, effective March 23, 1910.

Hunt, Reid, Chief, Division of Pharmacology, Hygienic Laboratory, designation changed to Professor of Pharmacology, effective March 23, 1910.

Boards of medical officers were convened to meet on April 26, 1910, for the purpose of making physical examinations of applicants for the position of cadet in the Revenue-Cutter Service as follows:

Boston, Surgeon L. L. Williams, chairman; P. A. Surgeon T. W. Salmon, recorder.

Cleveland, Ohio, P. A. Surgeon C. W. Wille, chairman; Acting Asst.-Surgeon R. Morgan, recorder.

# Deaths

**Herbert Leslie Burrell, M.D.**, surgeon and educator; president of the American Medical Association in 1908-9; died at his home in Boston, April 27, from valvular heart disease, associated with disease of the kidney, aged 54.

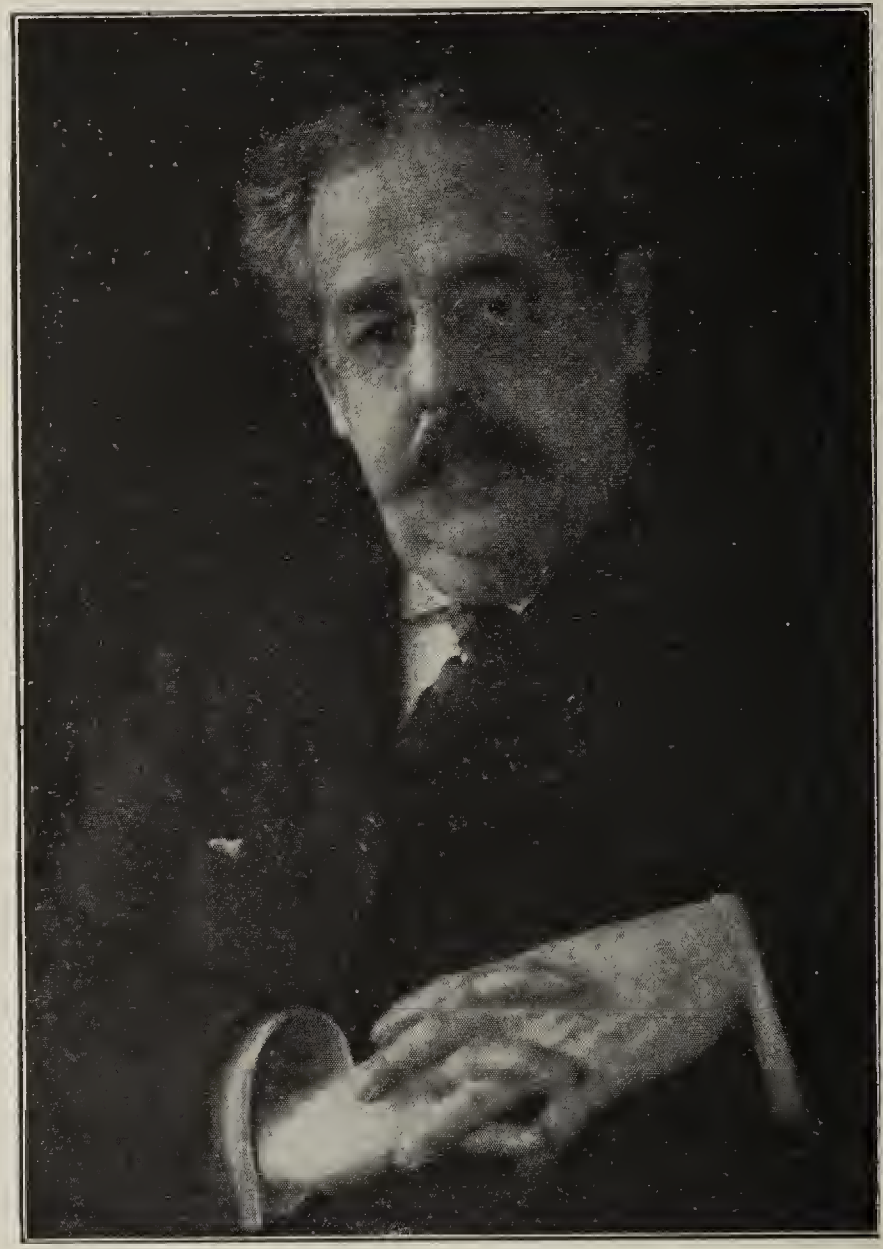
Dr. Burrell was born in Boston, received his preliminary education at the English High School in that city; and graduated from Harvard Medical School in 1879; after a few years of general practice, during which he gradually turned toward surgery, he commenced his work as a teacher as demonstrator of surgical technic in his alma mater; for many years he gave a systematic course of lectures on surgery and in 1903 was made professor of clinical surgery.

He was made surgeon-general of Massachusetts in 1893, and in 1898, saw service during the Spanish-American War as surgeon in charge of the Massachusetts Volunteer Aid hospital ship, *Bay State*.

He became surgeon in the Children's Hospital in 1893; and was made consulting surgeon to the Carney Hospital in 1899 and senior surgeon of the Boston City Hospital in 1897; he was made chairman of the Committee on Arrangements for the session of the Association in Boston in 1906; and the success of every detail of arrangement for this session demonstrated his remarkable ability as an executive officer. Dr. Burrell was a surgeon of high grade; he was one of the first successfully to ligate the innominate artery and was the first successfully to reimplant an entire trephine button.

Dr. Burrell's society membership included the American Surgical Association, of which he was secretary for several years; the American Society of Clinical Surgery, American Orthopedic Association, and American Association of Pathologists and Bacteriologists, and from 1899 to the time of his death he was president of the Massachusetts Branch of the American Red Cross.

During the last year, Dr. Burrell had been an invalid on account of chronic disease of the kidney with cardiac complications, and had been unable to teach or to practice. It will be remembered that, at the Atlantic City session of the American Medical Association in 1909, he was ill and unable to be present and to preside over the House of Delegates and to open the General Meeting.



Herbert Leslie Burrell, M.D., 1856-1910

By his death the Association loses a valuable officer and member; American surgery a skilful exponent; and the medical profession one who was always ready to give his best efforts and to make any sacrifice for the realization of ideals, the elevation of medical standards, and the equalization of privileges.

A committee of the third year class of Harvard Medical School, the last class taught by Dr. Burrell, met April 28 and passed resolutions expressing their sense of loss in the death of Dr. Burrell, and their appreciation of his life of completed endeavor as a distinguished surgeon, a genial teacher, and a firm friend.

**George Hershey Fox, M.D.** Medico-Chirurgical College of Philadelphia, 1897; assistant surgeon of volunteers, assigned to the Seventh U. S. Cavalry during the Spanish-American War; later in charge of a private sanatorium for tuberculosis at Asheville, N. C.; and afterward associated in practice with his brother, Dr. L. Webster Fox, in Philadelphia; for several years bacteriologist of the Pennsylvania State Sanatorium for Tuberculosis, Mount Alto; died at the home of his father in Hummelstown, Pa., April 14, from pulmonary tuberculosis, aged 37.

**Augustin H. Goelet, M.D.** Bellevue Hospital Medical College, 1874; a member of the American Medical Association and New York Academy of Medicine; once president of the American Electro-Therapeutic Association, and first vice-president of the Tri-Professional Medical Society of New York City; professor of gynecology in the New York School of Clinical Medicine, and gynecologist to the Metropolitan Hospital and the West Side Dispensary, New York City; died April 26, aged 56.

**William Reed Cisna, M.D.** University of Pennsylvania, Philadelphia, 1865; a member of the American Medical Association and American Academy of Medicine; assistant surgeon and brevet major of volunteers during the Civil War; for many years chief medical examiner of the Pennsylvania Railroad Relief Department, and four years ago placed on the retired list; died at his home in Ickesburg, Pa., April 17, aged 72

**Bigelow T. Sanborn, M.D** Medical School of Maine Brunswick, 1866; a member of the Maine Medical Association; for twenty-seven year superintendent of the Maine Insane Hospital, Augusta and for seventeen years prio to that time first assistan physician to the institution died at his home, April 18 from cerebral hemorrhage aged 70.

**R. D. L. Evans, M.D.** Berkshire Medical College, Pittsfield, Mass., 1859; for nearly half a century a practitione of Bainbridge, N. Y., and fo many years a member of th State Medical Association; member of the school boar and board of health of Bainbridge; died at his hom April 10, from nephritis aged 74.

**Garretson Lyon Carhart M.D.** Albany (N. Y.) Medica College, 1848; formerly member of the Iowa Stat Medical Society; surgeon o the Thirty-first Iowa Volunteer Infantry, and later division surgeon during the Civi War; a pioneer practitione of Linn county; died at hi home in Marion, April 2 aged 86.

**Frederick Brooke McGuffey M.D.** Missouri Medical Colleg St. Louis, 1872; for twelv years postmaster of Fairmount, Tenn.; died at hi home in that place, April 16, from a gunshot wound of th heart, believed to have been self-inflicted with suicidal inten while despondent on account of ill-health, aged 60.

**John Roberts Haley, M.D.** Medical School of Maine, Brunswick, 1884; a member of the American Medical Associatio and Maine Academy of Medicine; died in his office in Kennebunk, April 21, from the effects of a gunshot wound of th head, self-inflicted, it is believed with suicidal intent, aged 5

**Thomas Bland Camden, M.D.** Jefferson Medical College, 1854 from 1871 to 1881, superintendent of the West Virginia Stat Hospital for the Insane, Weston; formerly a member of th West Virginia State Medical Association; died at his home i Parkersburg, April 17, from cerebral hemorrhage, aged 80.

**Calvin Alonzo Spencer, M.D.** Dartmouth Medical Scho Hanover, N. H., 1873; a veteran of the Civil War; healt officer of Spring City, Pa.; and formerly president of th Luzerne County Medical Society; died suddenly in front his home, April 20, from heart disease, aged 68.

**Albert L. Brands, M.D.** Missouri Medical College, St. Loui 1880; a member of the American Medical Association a outhern Illinois Medical Society; once state senator; and ostmaster of Prairie du Rocher, Ill.; died at his home in that lace, April 20, from heart disease, aged 53.

**James W. Sanders, M.D.** Gate City Medical College, Texarana, Texas, 1907; formerly of Stilson, Ga., but recently of ulsa, Okla., died at police headquarters in the latter city, ebruary 7, from the effects of strychnin, self-administered, ; is believed, with suicidal intent, aged 30.

**Sanford M. Burrell, M.D.** Kentucky University, Medical Deartment, Louisville, 1904; a member of the Oklahoma State ledical Association; formerly a member of the health board f Dustin, I. T.; died at his home in Eufala, Okla., February 1, from pneumonia, aged 48.

**James S. O'Brien, M.D.** Rush Medical College, 1885; a memer of the State Medical Society of Wisconsin; died at his ome in Milwaukee, April 25, from cerebral hemorrhage, folwing septicemia of nearly two years' standing, due to an peration wound, aged 50.

**Edson E. Boyd, M.D.** New York University, New York ity, 1854; of Ashville, N. Y.; assistant surgeon of the One undred and Twelfth New York Volunteer Infantry during e Civil War; died at the home of his son in Erie, Pa., April , aged 78.

**Abraham Bernstein, M.D.** Cornell University, New York ity, 1902; a member of the Eastern Medical Society, New ork City; a medical inspector of the department of health of rooklyn; died at his home in New York City, April 15, ged 35.

**Harry R. Morris, M.D.** Saginaw Valley Medical College, Sagaw, Mich., 1897; formerly a member of the American Medal Association, and a practitioner of Sebewaing, Mich.; died his home in Vassar, April 19, from pernicious anemia, ged 36.

**Seth Bradbury Hinkley, M.D.** Medical School of Maine, runswick, 1870; Jefferson Medical College, 1890; died at his me in Stanberry, Mo., where he had practiced for 33 years, pril 18, from septicemia, due to a scratch of the hand, ged 65.

**Charles Mitchell Baker, M.D.** Missouri Medical College, St. ouis, 1893; of Santa Fe, Mo.; a member of the American edical Association; was found dead in his bed, April 2, from e effects of an overdose of chloroform and morphin, aged 41.

**Joseph Milleron, M.D.** Northwestern University Medical hool, Chicago, 1869; of Salt Lake City; a member of the tah State Medical Association; was accidentally shot and lled in Parley's Canyon, Utah., April 22, aged 67.

**Dudley Beckwith Smith, M.D.** University of Vermont, Burgton, 1856; at one time representative from Plainfield, Vt., the state legislature; died at his home in Plainfield, April , from cerebral hemorrhage, aged 77.

**Charles S. Swan, M.D.** Leonard School of Medicine, Raleigh, . C., 1892; a colored practitioner of Columbus, Ga.; died sudly while testifying in the City Court of that city, April . from cerebral hemorrhage, aged 43.

**Loima B. Woolson** (license, Minn., exemption certificate, 83); a homeopathic practitioner of Currie, Minn.; died in e Odd Fellows' Home, Northfield, Minn., Jan. 12, 1909, from nile debility, aged 96.

**Abraham Grove Magill, M.D.** American Medical College, lectic, Cincinnati, 1854; died at his home in Silver Lake, an., February 27, from heart disease, complicating disease of e kidney, aged 76.

**Louis H. Kniskern** (license, Iowa, years of practice, 1886); rgeon in the Navy during the last two years of the Civil ar; died at his home in Clinton, Iowa, April 17, from senile bility, aged 73.

**Daniel D. Brengle** (license, years of practice, Ill., 1879); r 65 years a practitioner of Winchester, Ill.; died at the me of his son in that city, April 22, from cerebral hemorage, aged 92.

**William W. Gould, M.D.** Berkshire Medical College, Pittsld, Mass., 1852; for 50 years a practitioner of Rochelle, Ill.; ed at his home, April 24, from cerebral hemorrhage, aged 83.

**Robert R. Pollock, M.D.** College of Physicians and Surgeons, eokuk, Iowa, 1878; a practitioner, and of late a banker of ebo, Ill.; died at his home in that place, April 18, aged 67.

**William M. Miller, M.D.** Jefferson Medical College, 1889; a ember of the Medical Society of the State of Pennsylvania; ed at his home in McAlevy's Fort, April 23, aged 46.

**Winfield Scott Martin, M.D.** Starling Medical College, Columbus, Ohio, 1872; formerly of Kingwood, W. Va.; died suddenly at his home in Sutton, W. Va., April 22, aged 67.

**John Andrew Callaway, M.D.** College of Physicians and Surgeons, New York City, 1881; died at his home in Milledgeville, Ga., May 17, 1909, from heart disease, aged 50.

**John Francis Perry, M.D.** New York University, New York City, 1884; of Boonville, N. Y.; died in Titusville, Fla., January 30, from intestinal obstruction, aged 50.

**George P. Cook, M.D.** Medical College of the State of South Carolina, Charleston, 1852; of Paris, Texas; died at the home of his son in Terrell, Texas, April 16, aged 79.

**Samuel H. Thomas, M.D.** University of Louisville, 1893; of Spencer, Ky.; died at the home of Dr. Morton Faulkner in that place, April 21, from nephritis, aged 37.

**Micheal Henry Lynch, M.D.** University of Vermont, Burlington, 1882; for six years city physician of Chicopee Falls, Mass.; died at his home, April 16, aged 52.

**William T. Lawler, M.D.** University of Nashville, Tenn., 1868; a Confederate veteran; died at his home in Martin, Tenn., April 17, from pneumonia, aged 73.

**Osborne Totten, M.D.** Trinity Medical College, Toronto, 1885; died suddenly at his home in Forest, Ont., April 14, from cerebral hemorrhage.

**James F. Cross, M.D.** University Medical College of Kansas City, Mo., 1903; died at his home in Pape, Mo., February 21, from pneumonia, aged 38.

**Edward W. Thomason, M.D.** University of Alabama, Mobile, 1861; of Nashville, Tenn.; died at the home of his sons in that city, April 23, aged 74.

**Elihu B. Thomas, M.D.** Homeopathic Medical College of Missouri, St. Louis, 1883; died at his home in St. Louis, April 25, aged 83.

**William David Jones, M.D.** University of Maryland, Baltimore, 1905; died at his home in Canton, Baltimore, April 18, aged 31.

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## *Marriages*

Leo Jacobi, M.D., to Miss L. Wolfenstein, both of New York City, April 21.

John P. Stover, M.D., Shady Grove, Md., to Miss Nora Snively, April 17.

David Franklin, M.D., to Miss Mollie Bearman, both of Baltimore, April 17.

Leo Mayer, M.D., to Miss Edith Heinmann, both of New York City, April 14.

Elza W. Burris, M.D., to Mrs. Nellie G. Stout, both of Indianapolis, April 20.

Joseph L. Lane, M.D., to Miss Bertha I. Freyd, both of Seattle, Wash., April 5.

Augustus B. Wadsworth, M.D., to Miss Caroline Delano, both of New York City, April 19.

William M. Bradshaw, M.D., New York City, to Miss Harriet H. Haight, of Brooklyn, April 9.

Gary Thomas Gossard, M.D., Perry, Ill., to Miss Jessie M. Fisher, of Chicago, at Perry, April 5.

Abraham Huntsinger, M.D., Mishawaka, Ind., to Miss Ida Phoebe Piper, of Rockfield, Ind., April 6.

John Henry Breyer, M.D., Pasadena, Cal., to Miss Georgia Allen of Chicago, at Los Angeles, April 9.

Edward Cameron Thompson, M.D., to Mrs. Josephine Simis Marvel, both of Newburg, N. Y., April 21.

J. Holridge Kidwell, M.D., Parkersburg, W. Va., to Miss Elizabeth Ann Hutson, at Rawlings, Md., April 20.

John Sebastian Derr, M.D., Baltimore, to Miss Jeannette Rose Humphreys, of Charlottesville, Va., April 20.

James Stephenson Hopkins, M.D., Frederick county, Md., to Miss Elizabeth Finney Hopkins, at Belair, Md., April 19.

Harry L. Rothblatt, M.D., formerly of Willimantic, Conn., to Miss Bessie Hurwitz of Boston, at Roxbury, Mass., April 14.

William Alexander Macdonald, M.D., Windsor, Ont., to Miss Annie Elizabeth Goodchild of Craighton, Ont., at Toronto, April 13.

# *Medical Education and State Boards of Registration*

## COMING EXAMINATIONS

ARKANSAS: Regular; Little Rock, May 10-11. Sec., Dr. F. T. Murphy, Brinkley.

LOUISIANA: Regular; New Orleans, May 19-20. Sec., Dr. Felix A. Larue, 211 Camp Street.

MASSACHUSETTS: State House, Boston, May 10-12. Sec., Dr. E. B. Harvey, Room 159, State House.

MISSISSIPPI: State Capitol, Jackson, May 10. Sec., Dr. S. H. McLean, Jackson.

NEBRASKA: State House, Lincoln, May 11-12. Sec., Dr. E. Arthur Carr.

NEW YORK: Albany, May 24-27. Chief of Examinations Division, Mr. Charles F. Wheelock, Albany.

### College Merger in Oklahoma

From Oklahoma comes the report that the Epworth College of Medicine of Oklahoma City has been liquidated and in its stead the State University of Oklahoma School of Medicine will open a clinical department, thereby providing for a complete four-year course in medicine. The first two years will be given at Norman as heretofore, which is eighteen miles south of Oklahoma City. This leaves but one medical school in Oklahoma.

### Proposed College Merger at Cleveland

Negotiations are under way for a consolidation of the Cleveland College of Physicians and Surgeons (Medical Department of Ohio Wesleyan University) with the Medical Department of Western Reserve University. It is understood that a part of the teaching staff of the former will become members of the teaching staff of the latter. Such students as have met the requirements maintained by the Medical Department of Western Reserve University may become candidates for the degree from Western Reserve; for other students, the instruction will be carried by Western Reserve and on completion of the course, such students will be graduated by Ohio Wesleyan University. No students will be admitted in advanced standing from other schools nor will any new matriculants be received except such as have the entrance requirements of the Medical Department of Western Reserve University, namely, a college degree or three years of college work with the assurance of having the work of the first medical year accepted by the college from which the student comes as completing the requirements for the bachelor degree. After this consolidation, the Medical Department of Western Reserve University will be the only regular medical school in Cleveland and northeastern Ohio. The arrangement is planned to go into effect at the close of the present college year.

### Only One Medical School for Colorado

The Denver and Gross College of Medicine, organized in 1902 by the union of the Denver College of Medicine with the Gross Medical College, has merged with the University of Colorado School of Medicine. Then there will now be but one medical school in Colorado. This will doubtless result in a united medical profession in that state which will work as a unit for the passage of the amendment to the State Constitution to be submitted to the people this fall to permit the University of Colorado to teach medicine in Denver. Until that amendment is passed all teaching by the State University must be given at Boulder. It is planned to continue the first two or laboratory years of the course at Boulder, while the clinical years will be transferred to Denver.

### Colorado January Report

Dr. S. D. VanMeter, secretary of the Colorado State Board of Medical Examiners, reports the oral and written examinations held at Denver, Jan. 4-8, 1910. The number of subjects examined in was 8; total number of questions asked, 80; percentage required to pass, 75. Eleven candidates were examined, of whom 8 passed and 3 failed, including 1 osteopath. Thirty-nine candidates were registered on presentation of satisfactory credentials, including state licenses. The following colleges were represented:

PASSED

| College | Year Grad. | Per Cen |
|---|---|---|
| University of Colorado | (1909) | 86. |
| Denver and Gross College of Med. | (1909) | 75, 75.7, 81, 81.1, 81. |
| University of Iowa, College of Homeopathic Med. | (1909) | 89. |
| Jefferson Medical College | (1909) | 78. |

FAILED

| College | Year Grad. | Per Cen |
|---|---|---|
| Barnes Medical College | (1906) | 70. |
| Eclectic Medical Institute, Cincinnati | (1908) | 6 |

REGISTERED ON CREDENTIALS

| College. | Year Grad. | State Licenses. |
|---|---|---|
| Chicago Homeopathic Medical Coll. (1893) Iowa; | (1901) | Illinoi |
| Rush Medical College | (1897) | Wisconsi |
| Northwestern University Medical School (1901) Iowa; (1902) Wisconsin | (1909) | Illinoi |
| Bennett Medical College | (1909) | Illinoi |
| Hahnemann Medical College and Hosp., Chicago | (1909) | Illinoi |
| Keokuk Medical College | (1897) | Iow |
| Coll. of Phys. and Surg., Keokuk..(1880) Iowa; | (1895) | Illinoi |
| Keokuk Medical College, Coll. of Phys. and Surg. | (1906) | Iow |
| Louisville Medical College | (1889) | Kentuck |
| College of Physicians and Surgeons, Baltimore | (1891) | Penna |
| Baltimore Medical College | (1892) | W. Virgini |
| Detroit College of Medicine | (1897) | Iow |
| University Medical College, Kansas City | (1896) | Kansa |
| American Medical College, St. Louis | (1892) | Illinoi |
| Missouri Medical College | (1885) | Missour |
| Washington University, St. Louis | (1905) | Missou |
| St. Louis University | (1906) | Kansa |
| Kansas City Medical College | (1897) | Kansa |
| Beaumont Hospital Medical College | (1892) | Washingto |
| St. Louis College of Physicians and Surgeons | (1891) | Missour |
| University of Nebraska | (1907) | Nebrask |
| Omaha Medical College | (1894) | Nebrask |
| University of Buffalo | (1904) | New Yor |
| Columbia University, College of Phys. and Surg. | (1908) | New Yor |
| Miami Medical College | (1903) | Ohi |
| Eclectic Medical Institute, Cincinnati | (1896) | Penna |
| University of Pennsylvania.....(1900) Penna.; (1900) Wyoming; (1892) New Jersey | (1909) | Marylan |
| Medico-Chirurgical College, Philadelphia | (1908) | Penna |
| Memphis Hospital Medical College..(1895) Kentucky; (1898) Tennessee | (1908) | Mississipp |
| University of Paris, France | (1873) | Californi |

### Illinois January Report

Dr. J. A. Egan, secretary of the Illinois State Board o Health, reports the written examination held at Chicago Jan. 19-21, 1910. The number of subjects examined in wa 16; total number of questions asked, 100; percentage require to pass, 75. The total number of candidates examined wa 52, of whom 31 passed, 17 failed and 1 withdrew. Thre candidates did not complete the examination. The followin colleges were represented:

PASSED

| College. | Year Grad. | Total N Exam'd |
|---|---|---|
| Howard University, Washington, D. C. | (1909) | 1 |
| Bennett Medical College | (1909) | 1 |
| Chicago Homeopathic Medical College | (1886) | 1 |
| Chicago College of Medicine and Surgery | (3, 1909) (4, 1910) | 7 |
| College of Medicine and Surgery, Physio-Medical | (1910) | 1 |
| Northwestern University Medical School | (1894) (5, 1909) | 6 |
| College of Physicians and Surgeons, Chicago | (1907) (1908) | 2 |
| Rush Medical College | (1879) (1897) (2, 1909) | 4 |
| Keokuk Medical College | (1898) | 1 |
| University of Louisville | (1904) | 1 |
| St. Louis College of Physicians and Surgeons | (1909) | 1 |
| Cornell University Medical College | (1908) | 1 |
| University of the City of New York | (1895) | 1 |
| Hahnemann Medical College, Philadelphia | (1890) | 1 |
| University of Tennessee | (1906) | 1 |
| Vanderbilt University | (1909) | 1 |

FAILED

| College. | Year Grad. | Total N Exam'd |
|---|---|---|
| Bennett Medical College | (1909) | 1 |
| Chicago College of Medicine and Surgery | (1908) (1909) | 2 |
| College of Medicine and Surgery, Chicago | (1908) (1909) (1910) | 3 |
| Hahnemann Medical College and Hospital, Chicago | (1909) | 2 |
| National Medical University, Chicago | (1909) | 2 |
| College of Physicians and Surgeons, Chicago | (2, 1909) | 2 |
| Reliance Medical College | (1909) | 1 |
| Sioux City College of Medicine | (1906) | 1 |
| Hospital College of Medicine, Louisville | (1904) | 1 |
| St. Louis College of Physicians and Surgeons | (1909) | 1 |
| Meharry Medical College | (1907) | 1 |

### Kansas February Report

Dr. F. P. Hatfield, secretary of the Kansas Board of Medic Registration and Examination, reports the written examin tion held at Topeka, Feb. 11-12, 1910. The number of sul jects examined in was 10; total number of questions aske 100; percentage required to pass, 75. The total number candidates examined was 18, of whom 7 passed and 11 faile The following colleges were represented:

| College | Year Grad. | Per Cent. |
|---|---|---|
| PASSED | | |
| Johns Hopkins University | (1906) | 91 |
| Ensworth Medical College | (1909) | 78 |
| Barnes Medical College | (1908) | 84 |
| Washington University, St. Louis | (1909) | 84 |
| Lincoln Medical College | (1907) | 76 |
| Columbia University, College of Phys. and Surg. | (1907) 90, | 91 |
| FAILED | | |
| Bennett Medical College | (1909) | 70 |
| University of Louisville | (1909) | 63 |
| Kansas Medical College, Topeka | (1899) | 72 |
| Ensworth Medical College | (1908) 72; (1909) 49, 64, | 73 |
| St. Louis University | (1907) | 64 |
| St. Louis College of Physicians and Surgeons | (1908) | 74 |
| Kansas City Hahnemann Medical College | (1909) | 70 |
| University Medical College, Kansas City | (1908) | 69 |

### North Dakota April Report

Dr. H. M. Wheeler, secretary of the North Dakota State Board of Medical Examiners, reports the written examination held at Grand Forks, April 5-7, 1910. The number of subjects examined in was 14; percentage required to pass, 75. The total number of candidates examined was 12, of whom 11 passed and 1 failed. Six candidates were licensed through reciprocity. The following colleges were represented:

| College. | Year Grad. | Per Cent. |
|---|---|---|
| PASSED | | |
| Rush Medical College | (1901) | 85 |
| University of Minnesota. (1896) 90; (1900) 83; | (1909) | 80 |
| Hamline University | (1908) | 76 |
| College of Physicians and Surgeons, Baltimore | (1904) | 81 |
| Wisconsin College of Physicians and Surgeons | (1909) | 80 |
| Milwaukee Medical College | (1897) | 80 |
| Queen's University, Kingston, Ontario | (1909) | 83 |
| University of Toronto, Ontario. (1901) 88; | (1908) | 88 |
| FAILED | | |
| Missouri Medical College | (1893) | 72 |

LICENSED THROUGH RECIPROCITY

| College. | Year Grad. | Reciprocity with |
|---|---|---|
| University of Southern California | (1905) | Illinois |
| Hospital College of Medicine, Louisville | (1897) | Illinois |
| University of Minnesota, College of Medicine | (2, 1908) | Minnesota |
| University of Michigan, Department of Medicine | (1907) | Minnesota |
| Cleveland Homeopathic Medical College | (1907) | Oklahoma |

# *Society Proceedings*

## COMING MEETINGS

American Medical Association, St. Louis, June 7-10.

American Academy of Medicine, St. Louis, June 4-6.
American Assn. of Medical Milk Commissions, St. Louis, June 6.
American Gastro-Enterological Association, St. Louis, June 6-7.
American Proctologic Society, St. Louis, June 6.
American Society of Tropical Medicine, St. Louis, June 11.
American Urological Society, St. Louis, June 6-7.
Assn. of Amer. Teachers of Diseases of Children, St. Louis, June 6.
Connecticut State Medical Society, New Haven, May 25-26.
llinois State Medical Society, Danville, May 17-19.
owa State Medical Society, Des Moines, May 20-21.
Maine Medical Association, Bar Harbor, June 29-30.
Massachusetts Medical Society, Boston, June 7-8.
Montana State Medical Assn., Hunter's Hot Springs, May 11.
Nat. Con. State Med. Exam. and Licensing Bds., St. Louis, June 6.
Nebraska State Medical Association, Lincoln, May 10-12.
New Hampshire Medical Society, Concord, May 12-13.
New Jersey Medical Society, Atlantic City, June 28-30.
North Carolina, Med. Soc. of State of, Wrightsville Beach, June 21.
North Dakota State Medical Association, Grand Forks, May 10-11.
Ohio State Medical Association, Toledo, May 11-13.
Oklahoma State Medical Association, Tulsa, May 10-12.
Rhode Island Medical Society, Providence, May 31.
Texas, State Medical Association of, Dallas, May 10-12.
U. S. Pharmacopeial Convention, Washington, D. C., May 10.
Wisconsin, State Medical Soc. of, Milwaukee, June 22-24.

## MISSISSIPPI STATE MEDICAL ASSOCIATION

*Annual Meeting, held at Oxford, April 12, 1910*

The President, Dr. D. W. Jones, Brookhaven, in the Chair

A request from Clay, Oktibbeha and Lowndes societies to be allowed to surrender their charters and form a tri-county (Clay-Lowndes-Oktibbeha) society was granted.

Dr. E. F. Howard, Vicksburg, announced that the membership now exceeded one thousand.

### Discuss Vasectomy for Habitual Criminals

A resolution advocating that the association go on record as favoring vasectomy for criminals and defectives was seriously considered. Although the great importance of this procedure was recognized, the council stated that, in the present state of tangle in medical legislation, the introduction of this matter would not be advisable. Accordingly this matter was laid on the table.

### Want the Southern Medical Association Made Branch of A. M. A.

Dr. W. W. Crawford, Hattiesburg, spoke in behalf of the Southern Medical Association, of which he is president, and at the close of his address the following resolution was passed:

> *Resolved*, That the House of Delegates of the Mississippi State Medical Association hereby instructs its delegates to the American Medical Association to request that the Southern Medical Association, with its present constitution and by-laws, be given recognition as the southern branch of the American Medical Association and that it be given voice in the House of Delegates.

### Officers Elected

The following officers were elected for the ensuing year: President, Dr. J. W. Young Grenada; vice-president, Dr. G. C. Phillips, Lexington; secretary, Dr. E. F. Howard, Vicksburg (reelected); treasurer, Dr. H. L. Sutherland, Rosedale (reelected); delegate to the A. M. A., Dr. D. W. Jones, Brookhaven; alternate, Dr. J. B. Bullitt, University.

### Inevitable Abortion

Dr. F. J. Underwood, Nettleton, reported a case of abortion due to gonorrheal endometritis and advised as to methods of handling abortions. In operative procedures he prefers the fingers to the curette. The cause should always be ascertained, if possible, in order to prevent a recurrence of the calamity.

DISCUSSION

Dr. E. L. Robertson, Sunflower: The first thing to do in a case of this kind is to determine whether or not we have inevitable abortion, and then determine how we are going to get rid of it. I use a curette and find that the woman will not be injured if it is properly used. I use the finger where the fundus is down low, but such cases are infrequent. I do not like packing the vagina and os. Hemorrhage may be making progress inside the uterus. If I pack at all I pack the uterus and then the vagina.

Dr. J. S. Ullman, Natchez: It may be necessary to open the uterus but in my experience the uterus opens too soon. This should be stopped if possible. The women should be kept perfectly quiet at all times. The finger is the only practical means; I have found no trouble in introducing the finger when the uterus is pressed down with the other hand.

Dr. G. S. Bryan, Amory: I think that the patient should be anesthetized. I have no difficulty in introducing the finger into the uterus. The curette often causes death by puncture.

Dr. W. W. Mathis, Orwood: I have had uniform success in these cases by emptying the uterus. A dull curette should be used.

Dr. B. H. Booth, Drew: I object to the use of the finger because it is almost impossible to sterilize the hand properly on such occasions. At least 50 per cent. of the cases in which the finger is used show bad results. It is much better to use the curette, and if we know how to use it there is no greater danger than in the use of the finger.

Dr. J. W. Barksdale, Winona: I think that it is impossible to introduce the finger. Pains should be taken to irrigate constantly, and when a large curette without a cutting edge is used there is no danger arising from its use.

Dr. G. W. Land, Louin: Both contentions are right. In town, where an assistant can be had, I find it practical to use the finger, but sometimes a curette must be used, especially in the country.

Dr. J. G. Gaither, Oxford: I have found no difficulty in introducing the finger into the uterus; gloves should be used.

Dr. H. H. Haralson, Vicksburg: In some cases it is possible to use the finger, and in some cases it is not. I think each case is a law unto itself. Unless there is a hemorrhage one should not proceed under twelve or twenty-four hours. I am convinced that there are some cases in which it is impossible to remove the débris with the finger, and that the use of the finger is sometimes absolutely brutal.

Dr. W. W. Crawford, Hattiesburg: A woman who has had one abortion has a tendency toward another. We must appreciate the fact that a large majority of these patients can be safely carried through. As an anesthetic, I use chloral in conjunction with morphin, and administer it by rectum. We should not think of performing abortion so long as the patient's general condition is good.

Dr. F. J. Underwood, Nettleton: I want to measure fingers with a few of the physicians here. I believe that the finger will reach the product of conception if the fundus be pushed down hard enough.

### A Plea for Asepsis in Labor

Dr. R. M. Boyd, Houston, considered asepsis in labor and condemned the carelessness with which these cases are frequently handled. He considers that the midwife is not the sole sinner in this regard, but that physicians are prone to view the subject too lightly. An obstetrical case should be considered from an aseptic standpoint as much as is a surgical operation.

DISCUSSION

Dr. J. S. Ullman, Natchez: I believe that the hand can be thoroughly sterilized. Further, an ordinary cottage is perfectly safe if a room is set aside, prepared, and thoroughly cleaned. If the country practitioner will scrub his hands and sterilize them he will get at least as good results as his city brother in the hospital, if not better.

### The Duty of the Family Physician as an Obstetrician and in Pregnancy

Dr. W. L. Little, Wesson, considered the importance and benefit of obstetrical work and advised methods looking to the care of the pregnant woman. Many of the discomforts and dangers of confinement may be obviated, he said, by proper care during pregnancy and the physician should watch and advise his patients constantly.

### Care of the Expectant Mother

Dr. I. W. Cooper, Newton, said that the pregnant woman should be informed of those symptoms that forecast danger. He discussed the diet and general care of the pregnant woman and insisted on the necessity of frequent urinalysis.

### Discussion on Care of Pregnant Women

Dr. John Y. Murry, Ripley: It is nice to think of curing diseases, but it is even better to prevent the diseases. An ounce of prevention is better than a pound of cure.

Dr. H. H. Haralson, Vicksburg: I do not think it good and safe practice to empty the uterus before convulsions; the result cannot be determined with accuracy in any particular case.

Dr. T. B. Holloman, Itta Bena: I want to emphasize the importance of the patient advising her physician as soon as she believes herself pregnant. Frequent examination of urine is also important.

Dr. W. L. Little, Wesson: I average about 75 such cases a year and have never had a death. I make it a rule to keep in touch with patients and keep them in good shape.

Dr. I. W. Cooper, Newton: I do not favor the plan of carrying the patient along, trying to get her through and then losing her.

### Treatment and Cure of Cutaneous Cancer by the Escharotic Method

Dr. S. H. McLean, Jackson, has been using this method since 1898 and is firmly impressed with the benefits to be derived therefrom. He believes that one great trouble and a chief reason why results are poor is that treatment is half-hearted and not sufficiently thorough. He described methods of applications and several pastes that had done good service in his practice.

DISCUSSION

Dr. W. L. Little, Wesson: If physicians would follow Dr McLean's advice they would meet with excellent results. The physician who takes up this work takes it out of the hands o the quacks who travel from town to town.

Dr. G. C. Phillips, Lexington: I have watched Dr. Mc Lean's successful work for several years and after using hi remedies in a number of cases I have had perfect success i several cases thought to be incurable.

### Health Conditions in Bolivar County, Miss., with Mortality Report

Dr. H. L. Sutherland, Rosedale, discussed the importance of vital statistics and their commercial value to a community He then described the improved condition of affairs in Bolivar county, especially as regards malaria. This is the doctor's third quinquennial report on the mortality of his county which is in the part of Mississippi known as the Delta. He concluded with a tabulated mortality report, based on the white population, and a discussion of the health conditions especially regarding school children.

DISCUSSION

Dr. J. T. Longino, Jonestown: This question of vita statistics is of great importance, especially to those who live in the delta. We should get a basis on which we can work with some degree of correctness. Physicians in Coahoma county generally responded to requests for statistics; they get statistics on the negro as well as the white population and as the negro's habits are much more insanitary than those of whites the statistics in that county do not compare favorably with those of Dr. Sutherland. Last summer there was a little typhoid fever—an epidemic in one locality—which was attributed to the typhoid carrier, the house fly. The usual small number of cases of typhoid fever in that county is due to the excellence of the water supply. A great improvement is evident in Coahoma county in respect to malaria, and this improvement I credit to the development of the country and the cultivation of land. Our people are becoming bette educated in matters of this nature. They screen their houses and are careful that there is no standing water near thei homes. Many of them sleep under mosquito netting. Eve negroes are doing this to some extent.

Dr. R. M. Boyd, Houston: Nothing has injured our country so much as malaria, and the legislature ought to give the State Board of Health sufficient funds to rid the country o this disease.

Dr. J. W. Gray, Clarksdale: Coahoma county I believe ca compare favorably with any, and is, in fact, suitable for health resort.

Dr. W. L. Little, Wesson: When Coahoma county gets first-class town it will have typhoid fever. I made an investigation five years ago and the death rate was 14.9. Sinc that time the people have been told how to live so as not t contract malaria and other ills, and the death rate is now 14.6.

Dr. B. H. Booth, Drew: The population of my town i between 600 and 800, white and black, and there has bee one death since August, 1907. All authorities will tell yo that malaria is decreasing in amount and mortality. To-da there is little malaria, and the patients all recover. Peopl wrongly judge the delta by former and not by present conditions.

Dr. A. A. Young, Oxford: I can recall only one death i the last fifteen years among the 300 school children in th Oxford schools.

Dr. E. A. Cheek, Arcola: The insurance companies wrot me a few years ago that they based their rate on the genera reputation of the country. On comparison, I found the deat rate the same in the delta as in the hill section. Fifteen c twenty years ago many people in my county died of malari but they are becoming educated in such matters now an take better care of themselves than do the people in the hill Many of them sleep under mosquito bars, many screen the houses. Another reason for the low death rate in the delt is the fact that typhoid is rare and less severe in that sectio than in the hills. Tuberculosis is thought by some physicia to be less prevalent in the delta.

Dr. J. B. Magee, Prentiss: I practiced in Bolivar county in 1896 and at that time I did not think there was a single case of typhoid, but now he thinks that there were several—they called it something else.

Dr. H. L. Sutherland, Rosedale: As a rule the white people are well informed on these matters. I was highly gratified to find the mortality for the years 1904 and 1909 so close—it made me feel more sure that my data were correct. I took pains to make this report absolutely correct. I had a young man go to every house and store with a book made especially for this work, and in this way I acquired all the information I wanted. The physicians helped me in this work. I investigated data personally and have been working hard on it since last year. I am perfectly satisfied that I know every person who died in Bolivar county in that time. On a plantation in that county where about 250 or 300 Italians were employed, I did not know the rate of mortality among them but the first year my bill was $900, the next year $650, the next year $450, and this year about $50 or $75. They have learned to take care of themselves.

### Pneumonia: Cause, Prevention, Treatment

Dr. T. B. Holloman, Itta Bena, discussed the various micro-organisms implicated in pneumonic cases and advised as to their avoidance. He emphasized the importance of rest in the treatment.

### Eczema

Dr. I. Dyer, New Orleans, reviewed and criticized the usual habit of practitioners of diagnosing eczema without proper examination of the eruption, and the routine treatment of eczemas irrespective of type. The element of exudative catarrh in areas was dwelt on as the cardinal point in the disease. A classification of eczema was detailed, showing the relation of causes to variety and its location and distribution. Discussing treatment, he urged individualizing patients and treating the disease on common-sense principles, which consisted in not using salves for moist exudative eruptions but, rather, lotions or powders or compresses, as these would apply in the particular case.

### Tuberculosis: Its Relation to State Medicine

Dr. H. H. Haralson, Vicksburg, considered the responsibility of the state in connection with this disease and urged state supervision along the lines of the greatest comfort possible for the patient while protecting the public. In order to secure such protection he contended that compulsory notification and registration are necessary and that pauper consumptives should become the charge of the state; home treatment and care of consumptives is preferable to institutional.

#### DISCUSSION

Dr. H. L. Sutherland, Rosedale: This is a question of great and growing importance. It is hard to tell how many negroes die from this disease; they live in such poorly ventilated houses; I have no doubt that for every negro who dies of this disease five are infected. Education seems not to do much good in this matter among the negroes and unless put under some control it seems as if the extinction of the race will follow. Dr. Wortemburg of Norfolk, Va., suggested curing the evil among the negroes by organizing for them antituberculosis secret societies. This plan was found to be worthless, on account of the negroes taking no interest in the society after the first meeting. Some plan like that suggested by Dr. Haralson must be adopted.

Dr. J. B. Magee, Prentiss: The cause of a great amount of tuberculosis among the negroes lies at our own door because we fail to teach them the necessity of ventilation. During slavery the negroes had plenty of air and ventilation, and there was practically no tuberculosis among them. There is nothing in the world like fresh air—we ought to teach that to the people.

Dr. H. H. Haralson: I would like to impress the importance of notification and registration and that it can be done only on the requirement by the state. A mother would not employ a negro nurse for her children if she knew that the nurse was afflicted with tuberculosis.

(*To be continued*)

## THE CITY OF WASHINGTON BRANCH OF THE AMERICAN PHARMACEUTICAL ASSOCIATION

*Joint Meeting held April 6, 1910, with the Local Delegates to the U. S. Pharmacopeial Convention*

### General Principles to be Followed in Revising the Pharmacopeia of the United States

Mr. S. L. Hilton, the president, reviewed the history, scope and authority of the Pharmacopeia and called attention to the need for concerted efforts on the part of physicians and pharmacists to make the U. S. P. IX a reliable and generally accepted standard for the articles which it contains. He further asserted that: In regard to the recognition of the U. S. Pharmacopeia IX, that is settled, provided the standards therein adopted are fair and reasonable and meet the conditions now provided for by law. It then becomes a matter of necessity for every delegate to this convention, which meets in Washington in May. to realize the seriousness of the situation and to be prepared to lend his best efforts in assisting the Committee on Revision to provide a Pharmacopeia that will meet every fair and reasonable requirement that is demanded of it under these new conditions. No doubt many attempts will be made to secure action that will favor special interests; in the past attempts have been made when the authority of the Pharmacopeia was slight and unimportant. This fact was brought out recently by the chairman of the Committee on Revision, and this being true, it is but fair to presume such attempts will again be made when more is at stake and more to be gained. We should prepare for any such emergencies by selecting only the best available men, whose previous records are beyond reproach, for members of the revision committee and the Board of Trustees, and by giving publicity to the work as it progresses for detecting errors not only of judgment, but intentional acts of deception. The eye of the public and of the honest allied interests are the best means to secure purity and accuracy in this great work. With the above facts and conditions taken into consideration. it is desirable that a reasonable sharp definition as to what should constitute the function and the scope of this work should be agreed on.

In concluding, he presented the following resolutions for the guidance of the delegates present and for subsequent submission to the United States Pharmacopeial Convention:

Whereas, It has been recommended that the Pharmacopeia of the United States be recognized and used as the basis for medicinal prescribing; and

Whereas, It has been recommended that medical colleges use the Pharmacopeia as a text-book, or book of reference for students; now, therefore, be it

*Resolved:* That the Pharmacopeia should be a compilation of the acceptable standards for desirable medicaments of known and recognized value; and be it further

*Resolved:* That the United States Pharmacopeial Convention, to be held in Washington, May 10, 1910, be requested seriously to consider the adoption of the following rules for general principles to govern admissions to and deletions from the Pharmacopeia of the United States:

1. That drugs which possess no well-recognized medicinal value be not included in the U. S. P.
2. That the duplication of drugs having essentially the same medicinal action be discouraged.
3. That drugs which are fully represented by an official active principle be omitted from future editions of the U. S. P.
4. That substances which are of but secondary importance as drugs and are used primarily as foods be not retained.
5. That whisky and alcoholic beverages be deleted from the U. S. P.
6. That substances which have no direct therapeutic value and are used as solvents or reagents be included in the appendix.
7. That the unnecessary duplication of pharmaceutical preparations, such as wines, vinegars, syrups, tinctures and fluidextracts of the same drugs be discouraged.
8. That the continuing of fixed formulas for complex mixtures be discouraged.
9. That all formulas for preparations that can be made extemporaneously be recommended for admission to the National Formulary.
10. That all complex preparations not provided for by international treaties be transferred to the National Formulary.
11. That further efforts be made to establish and to adopt international nomenclature and standards for drugs and preparations.
12. That compounds and mixtures permanently controlled either by secrecy or proprietary rights be not admitted to the U. S. P.

**Dr. H. G. Beyer**, one of the delegates to the U. S. Pharmacopeial Convention from the U. S. Department of the Navy, Bureau of Medicine and Surgery, in seconding the resolutions under consideration, expressed the belief that the recommendations were self-evidently reasonable and scarcely required further discussion. He pointed out that any departure from the old classical significance of the Pharmacopeia would amount to but one additional step into the therapeutic chaos in which we are already involved. He believes that any deviation from the original ideal of the Pharmacopeia would result in the more or less complete surrender of future drug administration to irresponsible commercial agencies, and that this would mean the undisputed sway of the nostrum evil with all of its attending dangers to the public, the pharmacist and the physician. He further expressed the belief that the Pharmacopeia would be useless as a guide unless its scope and purposes be made of value to both physicians and pharmacists, and the revisers of the book should be made cognizant of their responsibility and be urged to recognize that the Pharmacopeia should be a collection of drugs, medicinal compounds and preparations of recognized therapeutic value and of known strength. He also said that admission to the Pharmacopeia of any drug or compound of drugs should stand as the synonym for the general acceptability of the purity, value and composition.

**Dr. Murray Galt Motter** quoted from a paper by Torald Sollmann on the use of the Pharmacopeia as the standard for medical prescribing, and called attention to the general agreement of the views expressed in that paper with the aims and objects of a pharmacopeia as outlined in the Pharmacopeia of the Massachusetts Medical Society, published in 1806, and in the original Pharmacopeia of the United States published in 1820.

**Dr. Reid Hunt**, the chairman of the Committee on U. S. P. of the American Medical Association, called attention to the work being done by his committee to arouse interest in the U. S. P., and reported, in some detail, the consensus of opinions of professors of materia medica, therapeutics and pharmacology in medical schools. He pointed out that while there were but a comparatively few articles that were not objected to by some people a consensus of a fair majority of the opinions received would appear to offer a sound basis for the consideration of prospective deletions. So far as the vote on the resolutions under consideration was concerned, the majority of the replies received by him were in favor of endorsing them.

**Dr. M. F. Finley**, a prospective delegate from the National Dental Association, expressed himself as being pleased with the summary just presented, as the resolutions under consideration appeared to be formulated on correct principles and should be enforced.

**Mr. M. I. Wilbert** called attention to a number of communications, which he had received, bearing on the resolutions under discussion.

A communication from Prof. Joseph P. Remington commends the efforts that are being made to assist in framing a report on general principles for revising the U. S. P. Professor Remington says: "I feel that any help that can be given the Pharmacopeial Convention by discussion beforehand will be greatly appreciated and will save time in the Convention. I hope that when we get down to actual business in the Convention that time will not be frittered away in discussing minor details. In the past this has always been the trouble. Some one will get up and move that the quantity of glycerin be increased or decreased in the cataplasm kaolini, and if the presiding officer does not guide the Convention in these matters the big things will be hurried over and the little things will waste time." Mr. Burt E. Nelson, a writer on pharmaceutical subjects, expresses the hope that all obsolete and inert material will be eliminated from the Pharmacopeia in the next revision, so that the book will really be, as it should be, an authoritative list of substances useful to and used by physicians in the treatment of disease. Prof. H. V. Arny, Cleveland, believes that the only sane method of deciding what shall be official in the new Pharmacopeia is by statistics; that is, on lines already started by Professor Hallberg in his attempted compilation of one million prescriptions. Mr. Leonard A. Seltzer, Detroit, forwarded a communication enclosing a set of resolutions adopted at a joint meeting of the Detroit Association of Retail Druggists and the Wayne County Medical Society, covering essentially the same general principles as the resolutions now being discussed.

**Dr. W. M. Barton**, a delegate from Georgetown University Medical School, expressed the belief that constituted as it is the Pharmacopeia of the United States is neither desirable as a text-book for medical students, nor useful as a book of reference for the medical practitioner. He would favor deleting 65 per cent. of the now official substances, and believes that the elimination of all inert or useless substances from the Pharmacopeia would rob the nostrum maker of much of his present advantage. Thus he thinks that the deletion of the lithium salts from the Pharmacopeia would go far toward correcting a now widespread impression that the lithium ion is really a useful therapeutic agent; and, in conclusion, he expressed the hope that the next Committee on Revision would inquire carefully into the possible medicinal value of official drugs and have the courage to refuse recognition to all compounds that are demonstrated to be inert.

**Dr. Lyman F. Kebler** asserted that while he himself was impressed by the fact that there are but few really valuable medicinal agents, he nevertheless felt that the Pharmacopeia as now constituted was a valuable adjunct in the enforcement of pure food and drug laws. He pointed out that unless the Pharmacopeia supplied such standards it would be necessary to develop them independently.

The resolutions were adopted without a dissenting vote as representing the consensus of opinion of those present.

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## TENNESSEE STATE MEDICAL ASSOCIATION

*Seventy-seventh Annual Meeting, held at Memphis, April 12-14, 1910*
*(Concluded from page 1468)*

### The Surgical Aspect of Epilepsy

Dr. G. G. Buford, Memphis: Clinical results have demonstrated the fact that little or no good comes from operative procedures when two or more years have elapsed from the time of the injury even when there are prominent Jacksonian signs. In all head injuries followed by any degree of shock, loss of consciousness, mental confusion lasting more than a few minutes, or sensory or motor disturbance, a close examination should be made of the cranial bones, and proper surgical procedures instituted at once, if there is any depression or a continued mental, sensory or motor disturbance. Often the degree or extent of scalp wound is out of proportion to the amount of injury done to the cortex, and indications for interference are evidenced more by the brain disturbance than by the open wound.

DISCUSSION

**Dr. Duncan Eve**, Nashville: Surgical intervention for the relief of epilepsy is demanding more and more attention and surgeons are now trephining more frequently than formerly for the relief of this condition. By improved methods of technic it is now possible to go deeper than the cortex, if necessary, and remove portions of the dura by making a trapdoor in the ordinary manner and perhaps remove a large amount of bone, thus effecting relief or permanent cure.

**Dr. Jere L. Crook**, Jackson: Dr. Harvey Cushing of Baltimore, operated on our lamented member and friend, Dr. Happel, doing a decompression operation and removing a brain tumor which proved to be a glioma. Unfortunately, the result of the operation was not all that was expected and after Dr Happel's return to Tennessee he never recovered his speech beyond a whisper.

**Dr. John A. Witherspoon**, Nashville: I saw Sir Victo Horsley operate in London last summer and the thoroughnes of his work impressed me very much. One thing that struck me forcibly was the absolute indifference to the loss of brai substance. In one tumor case in which I saw him operate h ust have taken out about two tablespoonfuls of brain subtance, simply taking it out and throwing it aside and searchng for the tumor. Horsley is a pioneer in this work. If sureons can add anything to the treatment of epilepsy, which has een practically the *bête noir* of the profession for many years, hey will have done more for the profession even than they ave done in the abdomen.

Dr. G. G. Buford: Any injury below the cortex of the rain does not produce epilepsy but paralysis. Anything that estroys the cortex of the brain produces paralysis. Anything hat aggravates an irritable center in the brain produces conraction of the muscles that get their nerve supply from that art of the brain. An important point is to make an accurate iagnosis of the location of the point of irritation.

### Sprained Ankle

Dr. Duncan Eve, Jr., Nashville: For the past three years have used a modified Gibney dressing. In its use and applicaion the following points are to be emphasized: It limits the ffusion of blood. It immobilizes the joint. It relaxes the nuscles. There is uniform pressure. It prevents stiffening. t reduces the time of treatment. It produces a massage. It s a sure relief for pain.

DISCUSSION

Dr. Jere L. Crook, Jackson: My modification of the Gibey dressing differs in some slight particulars, but the general lan of treatment and the general methods are the same. After 0 or 12 years' experience with the modified Gibney method of reating sprained ankles, I can see no good reason for making ny change.

Dr. R. S. Miller, Knoxville: There is no class of surgical onditions in which the surgeon must individualize more than in cases of sprained ankle. I believe one would make a great mistake by strapping every bad sprain of the ankle, for if this is done trouble is likely to follow. But there are cases in which, if they are carefully selected, that treatment is ideal, and the patient can get up and walk with comparative comfort. I want to emphasize one point in the treatment of the severe cases of sprained ankle where there is a great deal of effusion in the joint, namely, for the purpose of giving relief, besides hot application and a bandage, I would suggest the use of an ice-bag during the night.

Dr. S. T. Rucker, Memphis: Every severe sprain should be examined under an anesthetic and an examination made by the $x$-ray.

### Treatment of Acute Otitis Media

Dr. G. C. Savage, Nashville: At the earliest possible moment treatment should be instituted. If the inflammation is due to any other cause than one of the eruptive fevers, and the diagnosis has been made before pus has formed, the following prescription may effect a speedy cure: chloroform fl.ʒi to iss; olive oil (pure), fl.℥i. This mixture should not be warmed as the heat would dissipate the chloroform. The ear should be filled by dropping the medicine out of the bottle and a folded towel should be placed over the ear, the patient lying on the other side. The medicine should remain in the ear for 30 minutes. A second instillation should be made in from 2 to 4 hours even if there has been no return of the pain. Usually if there has not already been pus formation the pain has been entirely relieved by the end of the half hour and may not return; however, its return should be guarded against by repeating the instillations as often as every 4 hours for 2 or 3 days. Should the chloroform not bring the relief desired at the first or second use, it should be discontinued, and the following combination should be substituted: atropin sulphate, gr. 1; morphin sulphate, gr. 10; boracic acid sol., fl.ʒi; distilled water, 1 ounce. From 5 to 10 drops of this mixture should be warmed and poured into the ear and should be allowed to remain at least one-half hour. During this time the ear should be covered with a warm folded towel. This instillation should be repeated every 4 hours for 2 or 3 days, even if the pain should not recur. The atropin mixture may be used from the first in any case. Either of these agents when begun early may cut short an inflammation without pus formation.

The following prescription should always be given for external application: tincture of aconite, fl.ʒi; tincture of iodin, fl.ʒii. This should be applied in front of and behind the ear once a day unless the skin becomes too tender. The following should be prescribed for internal administration when the patient is a child and the cause is either influenza or a cold; tincture of aconite, m. xxx; deodorized tincture of opium, m. xxv; sweet spirits of niter, fl.ʒiv; syrup of balsam of tolu, q. s., fl.℥ii; mix. The dose to be given while the fever and restlessness continue, is one teaspoonful every 3 hours. For this formula, which is very efficient, I am indebted to Dr. Woodson of Birmingham, Ala.

DISCUSSION

Dr. L. B. Graddy, Nashville: During the last 2 months there has been an epidemic of otitis media in Nashville, and I do not think I have seen more than 12 or 15 cases treated in the manner mentioned by Dr. Savage, and they were under treatment 8 or 10 days and in nearly all of them it became necessary, within a few hours after the last visit of the regular attendant, to incise the drum head and empty the drum cavity. This atropin, boracic acid and morphin mixture has been modified materially in the last 3 or 4 years. Before that time atropin and boracic acid were given as a specific in the prevention of aural troubles in scarlet fever, and it was stated before the Middle Tennessee Medical Association that it was almost criminal to permit ear complications in cases of scarlet fever; that they could easily be prevented by dropping into the external auditory canal a solution of atropin, that is, 10 grains of boracic acid, and 1 grain of atropin to 1 ounce of water. Since then morphin has been added, I do not know why. Ten days after the meeting referred to, a case of mastoiditis following scarlet fever was referred to me. The patient had been treated by a practioner who had used atropin and boracic acid very freely, the case showing that the mixture is not a specific.

Dr. T. J. Herron, Jackson: In cases of acute otitis media I use sprays and inhalations, and put the patient to bed, believing that the rest treatment is the best thing after all. When there is pain and sufficient trouble to cause inflammation the patient ought to be cared for just as much as if some other organ of the body were involved. The pain is due to cold or to an inflamed condition of the internal structure of the drum membrane and we should use some remedy that will relieve the pain. I generally use some hot solution.

Dr. O. Dulaney, Dyersburg: I have seen a number of cases of acute otitis media following influenza in elderly people and some have gone on to suppuration. The more quickly we get rid of the suppuration the better the results. Locally, I have used a solution of cocain, and then if I used anything else locally it was hot water bags. If it is not convenient to have that, I take a towel and ring it out of hot water and apply it to the ear. In some of these cases early inflation of the Eustachian tube will afford relief instantly. If the cocain does not give relief in a few hours, and if the inflammation and pain should return, the best thing to do is to incise the drum and get rid of the poison.

Dr. J. J. Waller, Oliver Springs: My experience in treating inflammation of the middle ear with local applications dropped into the external auditory canal has been unsatisfactory, and I believe these cases will go on to suppuration unless the drum is punctured and the exudate let out. If the local applications mentioned do not afford relief I generally resort to puncture of the anterior inferior quadrant of the drum.

Dr. C. V. Stephenson, Centerville: I have in mind a case I had two months ago. I was at a loss to know what the trouble was and my consultants did not know what the condition was. The patient was a little girl of 7, whom I was called to see one afternoon. The mother told me she had given the child some home remedies. I did not think there was very much the matter with the child. I made a second visit the next morning and noticed that the girl in speaking sentences would stop at the third or fourth word and repeat the last word three or four times and never finish what she wanted to say. She had no pain, but the temperature was 101 F. Respiration was not very good. I noticed in examining the throat, nasal passages and ears that there was a little inflammation of the internal ear, and the nasal mucous membrane was somewhat congested. There was slight frontal pain. The child in touching her brow complained of pain. On the third day a physician from Nashville was called who pronounced the case one of tuberculous meningitis. I did not concur in that diagnosis. The child drifted along for 2 or 3 days. Another physician was called and said it was meningitis, but not tuberculous meningitis. The child lay in a stupor, but the temperature never exceeded at any time 102 F., the respiration being from 40 to 50. On the tenth day of the illness a suppurative condition developed and there was a discharge both from the mouth and ear; the child died on the eleventh day of the disease. I was of the opinion that the child had some internal trouble, and I still cling to it, and that the stupor was due to some toxic condition.

### Peptic Ulcer

Dr. M. C. McGannon, Nashville: More attention should be given to this disease than is accorded it at the present time. I call attention to the surgical treatment of this condition, because when we consider the great mortality which formerly followed operations of this character, general practitioners were warranted in procrastinating and adopting a waiting or expectant mode of treatment. But now, when the mortality is less than 2 per cent. in competent hands, this excuse no longer holds. I would not be understood as advocating surgical treatment in all cases of peptic ulcer, but when a complete cure cannot be obtained by medical treatment after a reasonable time, then I think the patient should be given the benefit to be obtained from surgical treatment.

#### DISCUSSION

Dr. Richard A. Barr, Nashville: The concluding remarks of Dr. McGannon are justified in that he advises in cases of persistent gastric ulcer that patients be given such relief as can be promised by surgical treatment, but we should be exceedingly careful in telling patients what we can promise them as the result of such treatment. Gastroenterostomy for gastric or duodenal ulcer is an indirect method of treatment, and while it may bring about temporary results, it does not effect a cure. If we treat gastric or duodenal ulcer surgically, we must treat it by removing the ulcerative process and inserting sutures. The Rodman operation of removal of the ulcer-bearing area is satisfactory. By that procedure we treat the ulcer surgically, and if we do a gastroenterostomy in addition to that, and the patient recovers, we may feel that we have actually done something surgically for the relief of that patient. Even at the operation it is not only difficult but sometimes impossible to locate the ulcer when present.

Dr. M. C. McGannon: At present, gastric or peptic ulcer is primarily recognized as a disease to be treated by the internist, and the patient is referred to the surgeon only when he has failed to effect a cure. That is the logical position to assume at the present time, but in the centers of medical teaching and medical work to-day this is fast becoming a surgical disease, and the surgeon sooner or later will have to deal with it.

### Pneumonia

Dr. D. A. Walker, Trenton: Pneumonia is an acute infectious disease, and it is necessary to differentiate between croupous pneumonia and the other varieties. The disease may be divided into three different stages—congestion, red hepatization and grey hepatization or resolution. The physician should individualize each patient and make a thorough diagnosis in each case, noting the parts of the lung affected. Routine treatment is dangerous.

#### DISCUSSION

Dr. Herman Hawkin, Jackson: In considering the treatment of pneumonia we should treat the patient rather than the disease. We should avoid confining the patient in a closed room. We talk about the use of oxygen in the treatment of pneumonia in the later stages; why not give the patient oxygen all the way through? We can best get that from the atmosphere in the natural way.

Dr. John A. Witherspoon, Nashville: In the management of a case of pneumonia there are two considerations—toxemia and protection of the heart. If we can combat the toxemia until crisis occurs in true croupous pneumonia, and maintain cardiac integrity, we have won the battle. We should treat the individual and not the disease.

### The Nervous Unfit

Dr. S. S. Crockett, Nashville: There should be a broader and deeper conception of the complaints of this class of patients, a conception which will carry the diagnostician beyond the consideration of local expression as an evidence of local pathology into the realm of mental control, where the seat of injury is often found in the loosening of that tie, which should normally bind the higher subliminal self to functional activity. These patients are certainly entitled to every means of relief that can be afforded—dietetic, medical, surgical and hygienic; but shall we stop there, abandoning that wide field of psychotherapy which is now holding such promise of development for the future? All therapeutic measures belong to the medical profession, and failure on the part of the physician to add mental therapeutics to other treatment is, in my opinion, largely responsible for the ever-increasing numbers of devotees to those false religions whose tenets are neither scientific nor Christian, but who adroitly swell their ranks and promulgate their false doctrines by practice of this principle, so long well-known, yet only recently being seriously put on a sane and healthy basis for the use of every practitioner.

### The Diagnosis of Retroperitoneal Enlargements

Dr. W. H. Allport, Chicago, read a paper on this subject by invitation, in which he drew the following conclusions:

Educative method lies at the bottom of all diagnosis. The genius for surgical diagnosis is rarely anything more than systematized knowledge. Take no man's word in abdominal diagnosis. Do your own guessing, but do it scientifically. Recollect that abdominal diagnosis, like all applied knowledge, has its limitations, and it is more scientific to announce that they have been reached, than to confess an error later on. Probability is the rule of life, and the rule holds equally good between the ribs and the pelvis. Abdominal regions are for the students of normal anatomy; boundaries concern the surgeon and the pathologist. Displaced organs still move most readily toward their normal habitat. The growth of the abnormally enlarging organ is still apt to occur within the zone and fascial plane normal to that organ; such growth is usually along rather than across the normal cleavage planes. To the surgical pathologist the part of anatomy which is most profitably studied is that which concerns the distribution of fascias. Neoplasms are usually closely associated with organs, the irregular and atypical enlargements which follow fascias rather than organs are apt to be either secondary deposits or chronic suppuration, more likely the latter. In case of doubt never forget that arch deceiver, the cold abscess. Chronic suppuration is rarely recognized by the direct method; the rule is diagnosis by exclusion. Attention should be especially directed to the history sheet, the temperature chart, the blood count, and the urinary analysis report. Inflation of the colon by Ziemssen's method often enables us to assist diagnosis by crowding the tumor into one or the other space in front of or behind the posterior layer of the peritoneum. If the growth is found by this method to be retroperitoneal, study the kidney again by palpation, urine analysis, and the *x*-ray, and finally by metallic ureteral catheterization combined with skiagraphy as recommended by James Brown, and by Schmidt and Kolischer. The neglect to recognize and properly appraise hysteria is as frequently a cause of the miscarriage of diagnosis as is the failure to identify the cold abscess.

#### DISCUSSION

Dr. Battle Malone, Memphis: As illustrating the difficulty attending diagnoses, I recall a case I had several years ago. The only symptom of which the patient complained was constant excruciating pain which was referred to the lumbar region. After exhausting every method of diagnosis I frankly told the people I did not know what was the matter with the man, and they naturally asked for a consultant. The consultant made a diagnosis of tuberculosis of the spine. The symptoms of tuberculous spine were lacking. In the strength of the diagnosis made by the consultant the patient was sent West, and three months later died suddenly. Post-mortem examination revealed aneurism of the internal iliac artery.

**Dr. Bransford Lewis**, St. Louis: No contribution to medicine or surgery as a general thing is more valuable at the present day than that on the subject of diagnosis. I believe that in both medicine and surgery if we have fallen by the wayside it is because we have not advanced in diagnosis so rapidly as we have in the technic of surgery. A correct diagnosis cannot always be made by the symptomatology and the history of the case. The history or symptomatology with reference to renal troubles is notoriously misleading.

**Dr. Frank D. Smythe**, Memphis: A careful history of the case is most essential, and without it it is impossible to make even a probable diagnosis. If one is familiar with the progress and the natural tendency of diseases, a correct history will enable him to make a probable diagnosis in the great majority of cases. That must necessarily embrace a knowledge of the etiology of the disease, and especially does this apply to the infectious diseases, particularly those of an ascending nature from the genital tract and rectum. We should know also how metastases disappear or travel from one place to another, whether by means of the lymphatics, or the blood vessels, or by contiguity. A knowledge of these facts will help us greatly in arriving at a probable diagnosis.

### Tumors of the Bladder

**Dr. E. M. Sanders**, Nashville: A symptomless hemorrhage means tumor of the bladder until excluded by the cystoscope. Palliative treatment should not be undertaken, and when the diagnosis is made a radical operation should be performed. All patients should be carefully examined with the cystoscope before operation. All tumors of the bladder should be considered malignant from the standpoint of the patient, and treated accordingly. The intraperitoneal route is the operation of choice in about three-fourths of the cases, but should not be used when in doubt, except by the most expert operators.

#### DISCUSSION

**Dr. E. M. Holder**, Memphis: Papillomas of the bladder become malignant on account of constant irritation. A papilloma of the bladder will take on a prostatic deposit that makes it hard to the finger, so that if one adopts the suprapubic route, he at once concludes that he has a malignant condition to deal with. The methods of diagnosis are intricate, and the handling of the cystoscope by the average practitioner is rather unsatisfactory. The first suspicion in a case of this sort is aroused when a history of bloody urine is given, and the physician at once concludes that he has to deal with a tumor probably of a papillomatous type. The next consideration is whether the tumor is benign or malignant, and on that diagnosis rests the further treatment. The method of operating will depend on the location of the tumor. Nearly all these tumors which I have seen have been above the trigone.

**Dr. Jere L. Crook**, Jackson: I saw Dr. Bransford Lewis remove a papilloma of the bladder last year. He used the cystoscope in making a diagnosis, and removed the tumor by the suprapubic route. The case was satisfactorily handled, all the way through.

**Dr. Bransford Lewis**, St. Louis: I am a firm believer in accurate and comprehensive diagnosis. If possible, an accurate diagnosis should be made first, and the mode of operation selected afterward. The removal of a pedunculated tumor from the bladder, together with its base, is successful in a considerable proportion of cases. A patient, 70 years of age, had an epithelioma removed from his tongue. The growth returned, and the tongue was again operated on with no return of the disease in that organ for four years, but a year after the last operation on the tongue there was a return of the growth in the bladder, which I removed three years ago, with no recurrence of the growth either in the tongue or in the bladder since that time.

### Subphrenic Abscess

**Dr. A. B. Cooke**, Nashville: The only point of special interest connected with the operative technic is as to the best means of avoiding infection of the pleura in uncomplicated cases. Suturing of the diaphragmatic and costal layers, so as to enclose a circular or oval area, through which the incision is made, is recommended by some, but usually proves unsatisfactory because the tension and respiratory movement prevent the sutures from holding. Probably the most reliable method consists in securely walling off the pleural cavity on all sides with sterile gauze before opening into the abscess. Then, by first introducing a full-sized trocar, and partially evacuating the pus, the wall of the abscessed cavity may be seized with clamps and drawn out through the incision, thus obviating contamination. A large-size drainage tube, preferably double, should be securely sutured in position, and the protecting wall of gauze left undisturbed for two or three days. When adequate drainage is provided, the abscessed cavity will contract with remarkable rapidity. If deemed advisable, daily irrigations, with mild antiseptic solutions may be employed. However clearly the symptoms and physical signs may point to subphrenic abscess, the diagnosis should invariably be verified and the pus definitely located by aspiration before the operation is begun. Neglect of this precaution has resulted in embarrassing and dangerous mistakes even at the hands of the most competent surgeons.

### A Plea for a Higher Standard of Medical Education

**Dr. Ambrose McCoy**, Jackson: A wonderful amount of good has been accomplished by the Council on Medical Education of the American Medical Association, and with its present organization and its list of able, effective and progressive membership, much more lasting good and advancement will be brought about. The Council should have the hearty support and cooperation of medical men, of medical societies and medical schools everywhere. Every one in a position to know acknowledges the need of elevating the standard of medical education in this state, and in the entire South, and we hail with delight those measures calculated to bring about the desired improvements. The profession at large must be on good terms with the schools and colleges, and the schools and colleges must be on good terms with the medical council, and the medical schools and the profession at large must do what it can to uphold and support and assist the state boards of medical examiners. They must be on friendly terms, and each have the help and cooperation of the other. Last of all, the public should be taught the necessity of this higher standard of medical education. It is the people who rule, and when they are taught the blessings that will follow the elevation of the standard of medical education, they will not only demand it, but will, knowing that the public welfare requires it, make laws effective to carry out such a purpose.

#### DISCUSSION

**Dr. Herman Hawkins**: The men who graduate from medical colleges should be equipped with at least a measurable amount of preliminary education, otherwise they are handicapped in their work, and it has a double effect in that it reflects on the school that sends them out, because they cannot in the time at their disposal acquire a literary education, and at the same time a medical education.

**Dr. John A. Witherspoon**, Nashville: In the last 7 years I have visited and talked on medical education in 28 states in this Union. I feel that the Council on Medical Education of the American Medical Association has done, and is doing honest, sincere work. I have been associated with the men on the Council, and I can honestly say that there has never been a disposition to do anybody harm, but to give everybody a fair show, and in every way to try and let the people know—especially those of our own beloved South—that they deserve just as good physicians and our schools are just as competent, and our professors just as capable to turn out men who understand disease, and who practice medicine in a scientific way as any other place on earth.

**Dr. B. G. Henning**, Memphis: I would like to see the standard of medical education raised as much as possible. The only fear I have is that the standard is going to be placed beyond the reach of many worthy men. When we speak of a high-school education and a four years' medical course, that is simple enough, but is that all? If so, why is it that 60 or 80 medical colleges in the United States will be barred from the association? I would not have you believe that I do not place a proper value on the elevation of the standard of medical education. I believe it ought to be raised, but, from a financial standpoint, is it possible for some of our worthy men to reach that standard? I am afraid that the standard is being raised so rapidly that we in the South cannot meet the pace.

Dr. G. G. Buford, Memphis: I have been connected with educational institutions more or less all my life, and the great bar to advanced medical education in the South is not among medical men, but in the fundamental education received in the country schools. Our education there is not enough. It is not in keeping with higher education. Boys come to use whose minds are not sufficiently trained to comprehend what we say to them. Their rudimentary education should be such as to enable them to comprehend what we say to them as medical students.

## *Medical Economics*

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

### New York to Give Instruction to Health Officers

The New York State Department of Health has recently announced that it will inaugurate a course of lectures, laboratory exercises and demonstrations for health officers desiring modern training for public health service. The first course will be given May 9 to 14 next at the State Hygienic Laboratory at Albany, N. Y. This course is only open to health officers of the state of New York, and is offered free of cost for both instruction and apparatus.

The course consists of laboratory demonstrations from nine to twelve each morning on applied bacteriology and chemistry, covering such subjects as "Preparation of Culture Media," "Morphology of Bacteria," "Use of Cultures and Preparation of Colonies," "Isolation of Specific Germs," "Preparation of Toxins, Serums, etc," "Determination of Nitrogen in Water and Examination of Bacteria in Water, Milk, etc." Each afternoon, from 1:30 to 2:30, a public health lecture is to be given by some member of the State Department of Health, while from 2:30 to 5:30 p. m. each student performs in the laboratory the experiments covering the morning work. The afternoon lectures include the following subjects: "The Health Officer as a Sociologic Factor of Modern Civilization," Commissioner of Health Eugene H. Porter; "The Legal Duties, Responsibilities and Powers of the Health Officer of the State of New York," Deputy Commissioner of Health Alec H. Seymour; "Prompt and Efficient Quarantine: How to Establish and How to Release from a Quarantine," Director of Division of Communicable Diseases Dr. W. A. Howe; "The Safe Disposal of Excreta and Wastes," Chief Sanitary Engineer Theodore Horton; "Importance and Utilization of Vital Statistics in Modern Civilization," Director of Division of Vital Statistics F. D. Beagle. Arrangements have also been made for practical training in the actual work of inspection, diagnosis, quarantine, disinfection, etc., in connection with the quarantine station of the port of New York.

The course of instruction, as outlined above, while one which must necessarily be rudimentary and general, on account of the limited time at the disposal of those in charge, is, nevertheless, a most significant and hopeful sign of better things to come in the way of instruction for physicians who desire to take up the duties of health officers. The tendency of the times, toward prevention and state regulation of disease so far as possible, has been frequently commented on. The need of adequate training is evident. This need will increase in proportion to the demand for trained men to fill not only the positions now existing but the large number which will develop in the future.

### POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
Bowling Green, Kentucky

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

#### Ninth Month—Fourth Weekly Meeting

Neuroses of the Upper Air Passages

Nose and Nasopharynx: Anosmia, hyperosmia, parosmia. Hay fever, etiology, pathology, treatment. Nasal hydrorrhea. Hyperesthesia and anesthesia.

Pharynx: Hyperesthesia, anesthesia and paresthesia. Xerostomia. Paralysis of muscles of pharynx and soft palate. Spasm of muscles of pharynx and soft palate.

Larynx: Hyperesthesia, anesthesia and paresthesia. Paralysis of laryngeal muscles; adductor paralysis, abductor paralysis, paralysis of tensors of cords. Spasm of laryngeal muscles; spasmodic cough, spasm of tensors of vocal cords, spasm of adductors (laryngismus stridulus).

Foreign Bodies in the Upper Air Passages

Nose: Diagnosis, treatment.

Pharynx: Fish-bones, pins, etc.

Larynx: Diagnosis, treatment.

#### Monthly Meeting

Diagnosis and Treatment of Tuberculous Lesions of the Upper Air Passages.

Pathology and Diagnosis of Purulent Infections of the Accessory Sinuses of the Nose.

General and Local Treatment of "Chronic Catarrh" of the Nose and Throat.

## *Book Notices*

Practical X-Ray Therapy. By Noble M. Eberhart, A.M., M.S., M.D., Professor and Head of the Department of Electrotherapy, Chicago College of Medicine and Surgery. Second Edition. Cloth. Pp. 250, with illustrations. Price, $1.50. Chicago: New Medicine Pub. Co.

This manual is divided into two parts. The first one hundred and fifty pages are devoted to the general subject of *x*-rays and the following one hundred pages to its therapeutic use. It is more than a book on *x*-ray therapeutics, because it considers also the diagnostic use of *x*-rays, both by direct examination and by skiagraphs. The author first takes up briefly the physics of the subject and then a description of apparatus. The subject of physics is briefly but clearly considered and the description of the apparatus while short is satisfactory and practical. Two short chapters are given to the use of the fluoroscope and to skiagraphs. No attempt is made to go into the detailed diagnosis of different pathologic conditions. The chapters on the general principles governing the therapeutic action of *x*-rays are satisfactory; they show a well-grounded knowledge of the subject and an ability to impart it.

The one hundred pages devoted to the therapeutic application of *x*-rays to various diseases is necessarily concise, but it gives a good statement of the present state of our knowledge of this subject. No one can give a summary of the application of *x*-rays without speaking of their use in certain conditions in which they have been tried without rational grounds, but the author is no blind enthusiast; he is not carried away by his subject and indulges in no absurd claims. Altogether the book is an excellent manual of *x*-ray therapeutics and it is easy to understand why a second edition has been demanded promptly.

Teachers' Course, Department of Correspondence-Study, Bancroft Training School, Haddonfield, N. J. Course I, Physiology. By E. A. Farrington, M.D. Section A, Elementary Anatomy and Physiology of the Nervous System. Paper. 1910.

This pamphlet is designed for the instruction by correspondence of teachers who have to deal with subnormal children. The definition of a subnormal child is given as one whose mental faculties are below the standard accepted as normal for the average child. The instruction is based on the principle that the teaching of subnormal children must recognize the following general principles: 1. Mental subnormality arises from organic or functional defects of the physical body. 2. The training should therefore aim to correct physical defects. 3. In the correction of these defects every possible method that proves in any way efficacious should be utilized. The course given in the pamphlet deals with the anatomy and physiology of the nervous system. The plan consists of a text of carefully graded descriptions or of assigned readings in designated text-books. Accompanying each lesson sheet is a recitation sheet containing questions, the answers to which are to be returned to the teacher by the student. An examination of the text and of the questions shows that the work is fairly thorough and designed to secure a good foundation for further study.

ATLAS UND GRUNDRISS DER ZAHNÄRZTLICHEN ORTHOPÄDIE. Von Zahnarzt Emil Herbst, D.D.S., in Berlin. Lehmanns Medizinische Handatlanten, Band XXVI. Cloth. Price, 14 marks. Pp. 395, with 438 illustrations. Munich: J. F. Lehmann's Verlag, 1910.

This excellent work which includes regulation of teeth, treatment of nasal obstruction, prognathism, displacement of teeth, injuries of the face, etc., is based almost entirely on American methods of procedure. The appliances and their adjustment are distinctly American and the author (unlike many American authors) has given due credit for them. The work in some places, from an histologic standpoint—so unlike the German—shows the slipshod methods so common among American dentists. This is especially noticeable in Chapter 8, "Histologic Influence of Regulation." The study of histology by the use of the *x*-ray is so unscientific it should be condemned by all stomatologists. The perfection in appliances for the correction of deformed jaws and teeth is well displayed. The knowledge of the action of these appliances can be acquired only by those who have received a thorough medical education. The work is recommended to all German-reading students who are considering the practice of this specialty. The illustrations and presswork are commendable.

DIET IN TUBERCULOSIS, WITH COSTS OF FOOD AND THEIR PREPARATION. By Noel Dean Bardswell, M.D., and John Ellis Chapman, M.R.C.S. Paper. Pp. 62. Price, $1. New York: Oxford University Press, 1910.

This monograph is the result of researches begun by the authors to determine the principles on which the diet of tuberculous patients should be constructed and to determine a standard diet suitable to large classes of patients. The authors advocate an increase of protein above the physiologic requirement to the extent of 30 per cent., which is to be maintained until the disease is obsolete. At the same time the non-protein constituents are to be increased in the same proportion until the patient has regained his normal weight, after which they can be reduced. Diets for the working-class have to be constructed so as to afford the same amount of protein and energy in a cheaper form and need to be more bulky than ordinary diets. Diets for various conditions and for the tuberculosis of various organs are considered and instructions given for the cooking of food. In this way the book endeavors to cover the whole subject of the dietary relations of tuberculosis and the task has been performed in a very satisfactory way.

LEHRBUCH DER KRANKHEITEN DES HERZENS UND DER BLUTGEFÄSSE. Von Dr. Ernst Romberg, O. Professor und Direktor der Medizinischen Klinik in Tübingen. Second Edition, with 69 illustrations. Paper. Pp. 573. [Price, in cloth binding, 14 marks.] Stuttgart: Ferdinand Enke, 1909.

In this new edition of this standard work no departure from the original plan has been attempted. Forty pages are added which are made up of sentences and paragraphs inserted here and there, bringing the work well abreast of the times. Its strong, clear and scientific discussion of cardiac disease will make it for a long time one of our authoritative treatises. The bibliography is one of the valuable features of the book.

In his preface to this edition Romberg sounds a note of warning against the danger of placing too much reliance on the graphic methods of studying the diseases of the heart to the exclusion of the older methods. He is inclined to think that the practical results of these methods, in particular the study of the variations in the venous pulse, have been overestimated by some. One must heartily endorse his plea for the employment of all known methods rather than the undue use of one to the exclusion of others.

RHINOLOGY. A Text-Book of Diseases of the Nose and the Nasal Accessory Sinuses. By Patrick W. Williams, M.D., Lecturer on Diseases of the Nose and Throat at the University of Bristol. Cloth. Price, $4.20. Pp. 273, with illustrations. New York: Longmans, Green & Co., 1910.

This book, intended for practitioners and advanced students, is an amplification of a former work on Nose and Throat. The chapter on rhinitis seems rather short in its description of the simple and catarrhal forms, in view of the many cases of this class encountered and their importance as causative factors of complications involving other parts of the respiratory tract.

The chapter on chronic and atrophic rhinitis with the advancement of the various theories as to etiology, as well as the succeeding chapter on infectious diseases, is ample and thorough. Of particular interest are the chapters on inflammatory diseases and suppurations of the accessory sinuses and their treatment, the author here giving a résumé of many different methods of operative procedures, including his own. The book is well written and profusely illustrated and closes with 38 stereopticon plates that are of value in showing actual anatomical conditions.

GRAPHIC METHODS IN HEART DISEASE. By John Hay, M.D., M.R.C.P., Assistant Physician, Liverpool Royal Infirmary. With an introduction by James Mackenzie, M.D., M.R.C.P. Cloth. Pp. 184, with illustrations. Price, $3.00. New York: Oxford University Press, 1909.

In this book nothing is to be found concerning the examination of the heart by the ordinary methods of palpation, percussion and auscultation. It is intended solely as an introduction to the clinical study of disease of the heart by the aid of graphic instrumental methods. The beginner who is perhaps disheartened at his early attempts to study the various types of venous pulse, the extrasystoles or the epigastric pulsations, will here find help both in methods of using the instruments and in the interpretation of their records. He will naturally be led to consult the more extended writings of Wenckebach, Tigerstedt and Mackenzie. The latter writer is the inspirer of this little work by Hay, and has written a brief, yet interesting introduction.

The mechanical features of the book are excellent and the 128 illustrations are unusually well executed.

THE STOMACH, INTESTINES AND PANCREAS. The Medico-Chirurgical Series No. 2. By W. C. Bosanquet, M.A., M.D., Assistant Physician to Charing Cross Hospital and to Brompton Hospital, and H. S. Clogg, M.S., F.R.C.S., Assistant to Surgeon Charing Cross Hospital. Cloth. Pp. 665, with 110 illustrations. Price, $4 net. New York: William Wood & Co., 1910.

This book includes the affections of the entire gastro-intestinal tract with the exception of the liver and covers the ground of surgery as well as of internal medicine. The surgical side seems rather to be emphasized. The treatment in general is concise and practical and leaves little to be desired on the score of accuracy. It is, however, surprising to see the advice given to pour in water if difficulty is experienced in obtaining the stomach contents for analysis. Such analyses can make no pretension to accuracy, even according to clinical requirement. On the whole, however, the book may be recommended as a reliable guide to the diagnosis and treatment of these important diseases.

POCKET THERAPEUTICS AND DOSE-BOOK. With Classification and Explanation of Actions of Medicines, etc. By Morse Stewart, Jr., M.D. Cloth. Price, $1 net. Fourth Edition. Pp. 263. Philadelphia: W. B. Saunders Co., 1910.

This little work has been rewritten, dead timber eliminated, and new drugs of approved value added. With its classification of drugs, doses and therapeutic indications, formulas for hypodermic medication and for inhalations, suggestions of drugs for various diseases, treatment of asphyxia, poisons and their antidotes, it contains in its 263 pages a mass of information compactly arranged for ready reference. The attempt to teach the Latin of prescription writing has not been entirely successful, owing to a number of misprints of case endings.

# Medicolegal

## Validity of Individual and Medical Society Contracts for Poor Practice

The Supreme Court of Iowa says, in the case of Brock vs. Jones County (124 N. W. R. 209), that a negro fell from a circus train passing through the state and had both of his legs crushed and mangled. It appeared from the record that the township clerk notified the township trustees; that two of the members appeared, and with the clerk took up the matter of caring for the injured man, and it was then agreed that the trustees should provide a place for the man, and that the plaintiff should render such medical services as he thought were necessary, and that they would sign and approve his bills. This was a sufficient meeting of the trustees, and a sufficient basis for the plaintiff's claim for medical attendance, unless there was something in the other defenses pleaded.

One of these latter was that no proper certificate of the plaintiff's employment was ever filed with the board of supervisors and that the bill filed by him was not certified to by the trustees. Two names were signed as those of trustees, but the terms of office of the parties had expired before they signed the certificate they did. But, after filing his claim, the plaintiff was twice before the board of supervisors with reference thereto, and at neither of those times, nor at any other, did the board or any of the members thereof raise any objections to the sufficiency of the certificate of the trustees, either in form or substance. On the contrary, they bottomed their action in disallowing the claim solely on the ground that they had a contract with the county medical association or society for doing the work. The court is constrained to hold that this conduct constituted a waiver of a proper certificate from the trustees. The statute is not mandatory in the sense that such a certificate is essential to an allowance of a claim by the board. In other words, payment or allowance by the board of a claim which is defectively certified cannot be said to be illegal or unauthorized.

But the court holds good the defense that, as the county had a contract with the medical society, of which the plaintiff was a member, for rendering medical attendance to the poor, the plaintiff could not recover for his services in this case. The plaintiff, however, to avoid the effect of his being a member of the society when its contract with the county was made and receiving his proportion of the proceeds, made two contentions: The first one was that the contract or arrangement with the board of supervisors was contrary to public policy, illegal, and void because the contract was not let to the lowest bidder, because no bond was given to secure the performance of the contract, because the plaintiff and the other members of the society had undertaken to create a trust or monopoly, and, second, because the contract did not cover services performed for a non-resident pauper.

The medical society was not incorporated, but purely a voluntary association. Yet the plaintiff was a member of it, and no claim was made that the secretary was not authorized to submit the bid for and on behalf of the society, while at a regular meeting of the society the proposition as accepted by the board of supervisors was fully ratified by the society. Having participated in all the acts of which he complained, having received some of the fruits of the contract or agreement, having induced and been a party to the contract, the plaintiff was in no position, after profiting thereunder, to say that the contract was illegal, to disavow and disown it, and claim that he should be reimbursed for services contemplated by the contract as if it had never been made. Moreover, the plaintiff was precluded from saying that the contract was illegal because not let to the lowest bidder, or because the society filed no bond as the statute requires. The contract was not void, although not let to the lowest bidder, and the failure to require a bond did not invalidate it. No such collateral attack as was here attempted will be tolerated or recognized.

Again, the plaintiff could not be heard to say that the bid or proposal did not meet the publication for bids, or was not accepted at a proper time. It was accepted and agreed to by both parties; and the plaintiff, after having recognized it and profited therefrom, could not in such an action as this repudiate it. No one will be permitted to take advantage of his own wrong, and to permit the plaintiff to recover on such a showing as was here made would be obnoxious to every principle of law or morals with which the court is familiar.

There was no merit in any of the first claims relied on by the plaintiff to defeat the contract or agreement. It was said, however, that the contract had no reference to non-resident paupers, and that the plaintiff might recover for services rendered them. There might be some basis for this claim if the statute read as it once did, but as it now reads it seems to cover all poor persons or all poor of the county, no matter where resident. The statutes taken together seem to indicate that the county is to take care of all the poor, although they may have no legal settlement therein. The remedy is to recover the amount expended from the county settlement. The fact that the poor person treated in this case had a settlement in Ohio was the same as if he were domiciled in a foreign country and he was a poor person of the defendant county within the meaning of the law.

The medical society undertook to take care of the poor practice in the county, and to this agreement the plaintiff should be held. When the board of supervisors has employed physicians to do the work the trustees cannot employ others to do the work, and they certainly cannot employ one who is bound to do it and give him an enlarged compensation.

## Implied Authority of Foreman to Employ Physicians for Injured Worker

The Court of Civil Appeals of Texas recently had in Texas Building Co. vs. Drs. Albert & Edgar, 123 S. W. R., 716, what was apparently the first case for decision in that state involving the question of the implied authority of a foreman of a company to employ physicians or surgeons to attend an injured worker. The company, which had its headquarters at a distant city, was engaged in the construction, with a crew of men under the foreman, of a storeroom in the yards of a railroad. The employee in attempting to move and then stop a car loaded with brick, which he had been sent to help unload, was run over and so badly injured that his legs had to be amputated and death ensued in a few days. Some one, but who was not discovered, summoned by telephone this firm of physicians. The foreman, who said that he would have called them himself if it had not already been done, urged them to do all in their power for the man, suggesting that they employ a specialist, if in their judgment it became necessary to do so, and quieted the distressed family with the assurance that he would see that anything that was needed would be paid for. One of the physicians, knowing that both the foreman and injured man were employees of the building company, relied on the conduct of the foreman and was induced to render the services by reason of what was said and done, supposing that the company would pay therefor, though no direct promise of payment was made by the foreman.

No greater emergency, the court says, could have existed than that disclosed by this record for prompt action and attention to the injured man. The duty to render this attention and service was imposed on some one, and, the court thinks, under the circumstances, the company was properly charged with this duty, and that its foreman, its only representative at the time, was authorized to do whatever was necessary to alleviate the injured man's sufferings; and it seemed, from what was said and done by him, that the physicians reasonably believed that he had the authority to employ them and bind the company to pay for their services. The question then arose: Did he have this authority? This court is inclined to believe that, whenever a company employing laborers sends them out under the supervision and control of a foreman, it clothes him with, at least, the implied authority and power to do, not only such things as may be incident to the work in hand, but all things that might be necessary for the advancement of the master's interests. Here the servant was seriously injured in the direct line of his employment. Surely it was to the master's interest that the servant should have medical attention, to the end that he might be the better enabled to perform the master's service; and, outside of the doctrine of humanity, this court is inclined to the view that its decision in this case (affirming a judgment in favo of the physicians) can also be rested on the implied authority, on the part of the foreman, in the absence of the master, to act for the master and procure the necessary medical aid for the injured employee, and that the foreman in so doing created a liability against the master for the services of the physicians, for which they were entitled to recover.

The principles of justice and the dictates of humanity, in the court's judgment, as well as the law, imposed on the company, under the circumstances disclosed by this record, the duty to furnish the wounded man medical aid; and the foreman acting for it, in the absence of any higher authority, had the implied power to bind the company for the payment of the services of the physicians whom he had employed.

### Railway Company Maintaining Hospital Department Held Possibly Liable for Malpractice

The Court of Civil Appeals of Texas says, in Zumwalt vs. Texas Central Railroad Co. (121 S. W. R. 1133), that it feels no inclination to disagree with the great weight of authority to the effect that, where a railroad company or person undertakes as a pure charity to furnish medical treatment to a sick or injured person, the duty of such company or person requires only the exercise of due care in the employment of a prudent and careful physician, and that such company or person cannot be made liable beyond this for negligence on the part of the physician. But it seems to the court a misnomer to designate as a pure charity a railway company's conducting a hospital department where it agrees to furnish its employees medical and surgical treatment in case of sickness or injury during employment for a certain sum to be deducted each month from their wages and the employees have no control over the fund or the employment of the physicians or other attendants, etc., although for the time being all deductions may be applied to the payment of the physicians or surgeons.

The fact that it does not appear that there is a distinct pecuniary profit in the conducting of the hospital should not be deemed conclusive. As an incident to the company's main business it may be deemed to be otherwise beneficial and profitable. The court would feel a hesitancy in saying that as so incidental to its business as a railway carrier it is outside of the scope of its corporate powers to maintain a hospital department. Aside from charitable purposes, for which railway companies are not recognized, it may be said to be in the pecuniary interest of such a company to maintain a state of health and capability among its employees as instrumentalities of its business. Why should it be said that this is in no sense of profit to the company? True, perhaps, no direct pecuniary benefit is received, but the same may be said to be the case in the conduct of its machine shops and other departments, where its insensate physical properties are repaired when injured. At least it would seem that it was for the jury, and not the court, to say, from all the circumstances, including its general plan, whether the hospital department was conducted as a mere charity and not for profit.

While it has been said that charity "covereth a multitude of sins," the court does not think this mantle should be used to hide the wrongs, if any, of which the plaintiff complained, namely, negligence in the treatment of his eye by a surgeon of the defendant's hospital department, if in fact committed under the circumstances and with the agreement as to furnishing medical treatment for the deductions from wages as alleged by him.

### Death from Septicemia After Removal of Fish Bone from Rectum

The Supreme Court of Iowa says, in Jenkins vs. Hawkeye Commercial Men's Association (124 N. W. R. 199), that the insured, feeling a severe pain in the rectum, cleansed his hand, and, putting vaseline on his finger, inserted it and withdrew the rib of a fish 1½ inches in length, and as large as a darning needle, tapering toward the end. Upon extracting his finger it and the bone were bloody. On an examination the following day a physician discovered laceration of about three-eighths of an inch in length inside of the rectum and through the mucous membrane. Dropping a bit of absorbent cotton into a solution of equal parts of chloral hydrate, tincture of iodin and carbolic acid, he touched the wound with it, and advised the patient that he saw no cause for apprehension of serious danger, but that he should not move about more than necessary. The next day the man returned, complained that he had been obliged to attend to some business, was suffering pain, and asked for something to relieve him, which was given, with advice to remain at home. The day following that the physician found him in a high fever, unable to pass urine, with the parts surrounding the anus swollen and suffering great pain. Death ensued, said by the physician to have resulted from blood poisoning due to infection from the fish bone or the man's finger in removing it.

The court is of the opinion that the facts recited showed the death to have been the result "of external, violent and accidental means," within the meaning of his certificate of insurance. The decisions in various cases, the court says, proceed on the theory that the design of this provision of the policy is to guard the insurer against a liability on a fraudulent claim of the insured for indemnity for bodily injuries of which the only evidence might be the word of the person, and that, as the terms of the policy are to be construed most strongly against the insurer, the means coming from outside the body, though the injury be internal, should be regarded as external.

There was no evidence of how the fish bone came to be in the rectum, and therefore it is presumed that it reached there in the ordinary course of nature, as other excretions—through the alimentary canal. If it was likely to cause injury, then, as the insured is presumed to have given heed to the instincts of self preservation, it is not to be inferred that he swallowed the bone voluntarily. But, regardless of whether in eating fish he might have carelessly swallowed the bone and all, it is to be said that indigestible materials ordinarily pass out of the system without injury or inconvenience. That this bone caught in the rectum and inflicted the wound was so out of the ordinary course of things as to constitute an accident. The effect was one which does not ordinarily follow, could not reasonably have been anticipated, and cannot be charged to have resulted from design. Manifestly, then, it was within the well-recognized definitions of accident. Nor is this conclusion obviated by the circumstance that death resulted from septicemia or blood poisoning. Without the accidental wound by the fish bone, blood poisoning would not have ensued, and therefore the disease was incidental to the wound.

## Current Medical Literature

### Medical Record, New York

*April 23*

1 The Pathology and Diagnosis of Gall-Stones and Diseases of the Biliary System. H. Roth, New York.
2 End-Results Following Operations for Prostatic Obstruction. C. H. Chetwood, New York.
3 *Twenty-Four, Forty-Eight and Seventy-Two Hour Pneumonias in Children. LeG. Kerr, Brooklyn.
4 Conceptual Factors in Vertigo and Nystagmus. P. Fridenberg, New York.
5 *Hip-Joint Disease. J. A. Wyeth, New York.
6 Duodenal Ulcer with Perforation Accompanied by Chronic Appendicitis. H. W. Austin, U.S.P.H. and M.-H.S.
7 *Electric Anesthesia. M. M. Johnson, Hartford, Conn.

3. **Pneumonia in Children.**—Kerr gives examples of pneumonia in children, in which, with typical pneumonic symptoms, the course of the disease was so shortened as to cast doubt on the diagnosis of lobar pneumonia. He believes that when there are symptoms of sudden onset, the high temperature, early prostration, increased respiration with the pulse-respiration ratio changed, and the physical signs definite, with initial vomiting and chill, we are justified in making the diagnosis of lobar pneumonia, and of sustaining it even with a duration that is less than normal.

5. **Hip-Joint Disease.**—Wyeth reports a case of hip-joint disease occurring at the age of 3 years, in which the patient recovered so completely after wearing a long hip splint that at 14 years he ran 5 miles in 32½ minutes.

7. **Electric Anesthesia.**—In the case cited by Johnson, the anesthesia was obtained by the use of storage batteries sending a current through electrodes placed over the nerves supplying the tissues to be anesthetized. The negative electrode was applied over the sacrum, and three positive ones over the anterior crural, anterior tibial and posterior tibial nerves. The capacity of the storage batteries was 100 amperes, and

the current was interrupted from 6,000 to 7,000 times a minute. Anesthesia began as soon as the electrodes were applied, and there were no bad effects, the patient sitting up in bed two hours after the operation. The patient felt absolutely no pain, even when healthy tissue was incised.

### Boston Medical and Surgical Journal

*April 21*

8 Harvard Medical School in 1788-89. D. Heald, Boston.
9 Treatment of Cervical Rigidity in Obstetrics. N. R. Mason, Boston.
10 *Treatment of Acute Dysentery by Intestinal Irrigation with a Five Per Cent. Solution of Silver Nitrate. H. F. Hewes, Boston.
11 *Depressed Fracture of the Malar Bone: A Simple Method of Reduction. E. A. Codman, Boston.
12 Avulsion of the Patellar Tendon, with Report of Case. D. P. Penhallow, Boston.

10. **Treatment of Acute Dysentery.**—Irrigation with silver nitrate has been recommended before and used more or less widely in the treatment of dysentery. The only independent element of Hewer's procedure was the use of a stronger solution than has commonly been used by those physicians who have heretofore employed this method of irrigation. In 10 cases the treatment was instituted at an early stage, from the second to the fourth day of the disease, as so judged by the appearance of symptoms. No protracted cases developed. The average duration of the cases was 10 days; the maximum duration seen in one case, 14 days. The details of the treatment used in this series of cases are as follows: The patient when first seen was given a dose of magnesium sulphate. As soon as this drug had acted, irrigation by silver nitrate was given. The rectal tube was inserted from 8 to 12 inches and a pint or more, according to the capacity of the patient to hold the solution, of 5 per cent. silver nitrate was injected. The injection was retained by the patient as long as possible, up to a half hour. Defecation was then allowed. Rectal injections of salt solution were given regularly after each movement during the course of treatment. A second injection of silver nitrate was, as a rule, given after a period of 2 days. In some cases one injection only was used. A diet selected with the idea of reducing the amount of fecal food residue was given. The daily content of this diet was as follows: Lean meat, 300 gm.; three slices of toast with maple syrup; albumin water consisting of the white of 8 eggs in water. This was continued for 5 days. The diet was then increased by the addition of more toast, butter, tapioca, potato juice and macaroni.

11. **Reduction of Fracture of Malar Bone.**—In three cases Codman has used the following simple method with complete success: Firmly grasp the bone through the swollen tissues of the cheek with bullet forceps in the manner an iceman holds a cake of ice. The upper prong of the forceps is first inserted just back of the orbital rim and the lower through the cheek below the prominent part of the malar bone and a firm pull made on the scissor-like handles of the instrument. The bone comes up into place with surprising ease and tends to remain in position when once reduced. No dressing is necessary as the two punctured wounds in the skin made by the points of the forceps are negligible.

### New York Medical Journal

*April 23*

13 The Present Status of Medicine and its Outlook. G. F. Butler, Wilmette, Ill.
14 The Teaching of Anatomy in Medical and Dental Colleges. G. F. Kleinschmidt, Milwaukee.
15 Dreams and their Relation to the Neuroses. A. A. Brill, New York.
16 *Pulmonary Tuberculosis with Late Wassermann Reaction. A. P. Francine, Philadelhia.
17 Lobar Pneumonia. J. V. Shoemaker, Philadelphia.
18 Fracture of the Base of the Skull, Compound Fracture of Zygoma, Hemiplegia; Osteoplastic Flap Operation over Motor Area: Complete Recovery. M. S. Kakels, New York.
19 Sphenopalatine Ganglion (Motor, Sensory, Gustatory). G. Sluder, St. Louis.
20 Amygdalotomy or Amygdalectomy: Which Shall it be? J. Solow, Brooklyn.
21 The Cammidge Reaction in the Urine (concluded). J. M. Swann and J. J. Gilbride, Philadelphia.

16. **Late Wassermann Reaction.**—Francine's case is of clinical interest for the following reason: The patient contracted a chancre and bubo in 1866 while in the army; he was invalided for three months, during which time he received a course of mercurial inunctions and returned to active service. Since, he has had no syphilitic manifestations whatever, while to-day, after 44 years, he gives a marked reaction to both Wassermann and Noguchi reactions. A second patient gives a markedly positive Wassermann reaction from an infection 33 years ago, and has been and is without tangible symptoms of syphilis.

### Lancet-Clinic, Cincinnati

*April 2*

22 From Mesmer to Freud—A Review of Psychotherapy. R. W. Reed, Cincinnati.
23 The Freshman Year in the Medical School. J. Medbury, Columbus, Ohio.
24 Tuberculosis and its Prevalence in Cincinnati. B. F. Lyle, Cincinnati.

### Northwestern Lancet, Minneapolis

*April 1*

25 Obstruction of the Bowels. A. T. Mann, Minneapolis.
26 Cooperation Between the State Medical Society and the Boards of Health Throughout the State in Matters Pertaining to Legislation. W. L. Beebe, St. Cloud, Minn.
27 Differential Diagnosis of Diseases Causing Gastric Disturbances. C. Graham, Rochester.
28 The Typhoid Situation in Minneapolis. H. M. Bracken, Minneapolis.
29 *Malformation of the Rectum. C. D. Harrington, Minneapolis.

29. **Malformation of Rectum.**—A thorough examination of the lower bowel was made by Harrington with a pneumatic proctoscope. When the rectum was fully distended with air, a diverticulum on the anterior side of the rectum could plainly be seen, about 3 inches in diameter and 4 inches long. The sigmoid, instead of being curved, continued from the rectum in a straight line into the abdominal cavity. The patient had always suffered from constipation, and lately had had a great deal of discomfort from hemorrhoids.

### Kentucky State Medical Journal, Bowling Green

*April 1*

30 The Iodids, Mercury and Arsenic. G. J. Herman, Newport.
31 Coal-Tar Products; Which and Why? W. R. Moss, Clinton.
32 *Fat Embolism. W. H. McCracken, Louisville.
33 The Diseased Inferior Turbinate. W. B. McClure, Lexington.
34 Modern Stomach and Intestinal Lore. R. M. Rankin, Covington.
35 Scarlet Fever. B. J. Overall, Coxs Spring.
36 Complications of Scarlet Fever as Seen in the Treatment of Diseases of the Eye, Ear, Nose and Throat. A. O. Pfingst, Louisville.
37 Catarrh of the Upper Air Passages. W. A. McKenney, Fairmouth.
38 Drugless Therapeutics. J. A. Young, Hopkinsville.
39 Prophylaxis. J. R. Scarborough, Clinton.
40 Diagnosis of Tuberculosis Apart from Physical Signs. W. Litterer, Nashville.
41 Etiology and Treatment of Lobar Pneumonia. D. H. McKinley, Winchester.
42 Diphtheria—Prophylaxis and Treatment. O. B. Demaree, Frankfort.
43 Adenoids—Cause of Deformed Alveolar Arch. J. D. Kisner, Lexington.
44 Influenza. W. A. McKenney, Falmouth.
45 Tumor of the Parotid. J. G. Sherrill, Louisville.
46 Acne Treated by Staphylo-bacterin. H. E. McCord, Ludlow.
47 Influenza. J. E. Fox, Marion.

32. Abstracted in The Journal, Nov. 13, 1909, p. 1682.

### The Military Surgeon, Washington, D. C.

*April*

48 Esperanto. F. M. Munson, U. S. Navy.
49 What is the Most Effective Organization of the American National Red Cross for War: What should be its Relation to the Medical Departments of the Army and Navy? W. C. Rucker, U.S.P.H. and M.-H.S.
50 Personal Hygiene and Camp Sanitation and the Respective Duties of the Line and Medical Officers in Regard Thereto, and the Necessity of Early Discovery and Removal of Persons Infected with Communicable Disease. W. G. Bissell, Medical Corps, N.G.N.Y.
51 The Value of Camps of Instruction for Medical Officers of the National Guard. H. W. Jones, U. S. Army.
52 Laboratory Work at the Army General Hospital, San Francisco. P. M. Ashburn, U. S. Army.
53 The Bacteriology of an Epidemic of Bacillary Dysentery. J. M. Phalen and E. D. Kilbourne, U. S. Army.

### Surgery, Gynecology and Obstetrics, Chicago

*April*

54 *"Erosio" Portionis Vaginalis Uteri. F. L. Adair, Minneapolis.
55 Experiments on Omental Adhesions. H. Neuhof and S. Wiener, New York.
56 Recent Advances in Treatment of Nephrolithiasis. D. N. Eisendrath, Chicago.
57 *The Fatty Fascial Flap in Plastic and Other Operations on the Pelvis of the Kidney. W. J. Mayo, Rochester, Minn.
58 Chorioma. J. Ewing, New York City.

59 *Carcinoma of the Pancreas. A. H. Ferguson, Chicago.
60 Growth of Bone against Resistance. N. Kerr, Chicago.
61 Mistakes in Diagnosis Relating to the Urinary Tract in Women. J. C. Webster, Chicago.
62 Perigastric Adhesions Simulating Pyloric Stenosis in Infants. C. G. Grulee and J. E. Kelley, Chicago.
63 Acute Diffuse Suppurative Peritonitis from a Ruptured Pus Tube. J. W. Bovee, Washington, D. C.
64 Suprapubic Prostatectomy. L. L. McArthur, Chicago.
65 *Raffia Ribbons as Drainage Material. S. E. Newman, St. Louis.
66 *Removal of Tumors of the Pituitary Body. A. B. Kanavel and J. Grinker, Chicago.
67 *Nail Extension in Fractures. W. Anschütz, Kiel, Germany.

54. **Erosion of the Vaginal Portion of the Cervix Uteri.**—As the result of a detailed clinical and pathologic study, Adair concludes that pregnancy seems to be an important factor in the development of erosions because they occur so frequently in that condition. The labor with its attendant injuries gives a splendid chance for infection and the devolpment of an erosion. Inflammation is the most important factor in the origin as well as the extension of the erosion; all of the other things are accessory. The basal layer of the squamous epithelium appears to be the first of the epithelial layers to die as a result of the underlying inflammation. This points definitely to a cause working under the epithelium, and while many other factors may enter into the formation of an erosion, this one certainly cannot be ignored.

Hemorrhages under the epithelium are often associated with the inflammatory process and this raises it from supporting tissue and helps in throwing it off. The newly formed squamous epithelium extends outward from the margins of the erosion over the denuded surface. It is perfectly reasonable to expect that it might come from epithelial islands or from mother cells, but Adair was not able to find proof of this. The glands under the squamous epithelium and under the erosion originate from various sources. They may come from glands which were normally present in the individual which includes those of congenital origin. The outgrowth of glands under the squamous epithelium of the portio accounts for some of them; this is especially noticeable in the softened tissue of the pregnant uterus or in that softened by inflammation. Cysts arise from the shutting off of outgrowing glands or from a stopping of their openings with squamous epithelium. In one case Adair saw papillary outgrowths from the surface which were partially covered with columnar epithelium. In another case he saw a marked papillary growth in the lumen of a gland but it had not broken through to the surface. The process of healing is accomplished by the growth of granulation tissue. The glands disappear in various ways.

57. **Fatty Fascial Flap in Operations on Pelvis of Kidney.**—The fine-grained fat lying in the fascia which is closely attached to the kidney, especially about the sinus and pelvis (inner layer of fatty capsule), Mayo finds is very valuable as a covering after operations on the pelvis of the kidney, and as a means of protecting the suture-line in the pelvis of a kidney which has been opened for the removal of stones. The plan of utilizing a fatty fascial flap has been employed for the last three years or more by Mayo, and in the patients operated on there has been no leakage of urine, even when the suture coaptation was imperfect. In using the fatty fascial flap it is not necessary to suture it closely, but merely to place it over the point to be protected and hold it in place with 2 or 3 catgut sutures applied in such a manner as to keep the parts in apposition. The fatty capsule is stripped from the kidney to the extent necessary to free the organ, and a fatty fascial flap raised either before or after making the working incision in the pelvis. After the operation is complete, the flap is placed in position and held by a few catgut sutures; the kidney is replaced and drainage secured by folded strips of rubber tissue, not with gauze, as that might lead to secondary fistula.

59. **Carcinoma of Pancreas.**—The case reported by Ferguson presents some points of interest. There was no gall-bladder; instead there was a small pouch about the size of a thimble, so that Courvoisier's law did not pertain in this case. This was probably due to the fact that the patient had suffered more or less from what was supposed to be cholelithiasis for many years, and the gall-bladder had evidently then become contracted. The carcinoma in this case was situated in the head of the pancreas. It involved the ampulla and had extended into the duodenum. The patient, a man, when first seen was complaining of considerable distress in the region of the gall-bladder, with pain radiating into the back, and rather persistent; he did not call it an unbearable pain. There were no attacks of hepatic colic. The illness began suddenly with a gradually deepening jaundice, intolerable itching of the skin, increasing weakness, rapid loss of weight, gastrointestinal disturbances, such as anorexia, constipation, indigestion, and clay-colored stools. He complained most of the nervous disturbances, a great restlessness, with mental depression and insomnia. His trouble began 13 years before, with symptoms of indigestion and hepatic colic. He had several attacks in two years. In 1897 he had a very severe colic, and for the first time was jaundiced. He was ill for a month, but no diagnosis was made. In 1899 he had hepatic colic, with jaundice and fever; his case was then diagnosed as one of gall-stones. On Feb. 7, 1902, he had a severe attack of nervousness, but no colic and no jaundice, which came on while he was at work, and the distress became so great that he had to be taken home in a carriage. As soon as he reached home he had a severe chill, with fever and slight jaundice. He had not lost any in weight up to that time. In 12 days the jaundice was extreme and his condition gradually became worse.

On February 28 a tumor mass could be felt in two places, (1) over the gall-bladder, but rather indefinite, and (2) over the head of the pancreas, and rather distinct. Deep percussion over the mass in the gall-bladder region indistinctly outlined the shape of the tumor, but the gall-bladder itself could not be felt. There was enlargement of the liver, and it extended upward rather than downward, above the right nipple. Tympany was general. As soon as the abdomen was opened there were encountered in the region of the gall-bladder extensive adhesions of the omentum which was gathered together like a ball. It was adherent to the large bowel, stomach, liver and anterior abdominal wall. This was the indistinct tumor that had been previously felt in the region of the gall-bladder. It was opened and about one pint of a clear fluid was evacuated. The liver was drained by a tube passed into the hepatic duct, and the abdomen was closed in the usual manner. The patient was transfused and put back to bed. He died the fifth day after the operation. The postmortem disclosed a carcinoma of the head of the pancreas, with extreme dilatation of the ducts and absence of the gall-bladder.

65. **Raffia Ribbons as Drainage Material.**—Raffia is a vegetable fiber obtained from a variety of palm trees indigenous to Madagascar Island. In this country the material is employed in basketry and florists use it as cordage. It is obtained in large twisted skeins, each skein containing a great many ribbons of from 3 to 4 lengths. When dry it is a pliable cord easily split in a lengthwise direction, but possessed of unusual strength and does not break. When wet, raffia is as soft as wet paper and tends to spread out in ribbons of from one-half to one inch in width. It does not deteriorate at the temperature of boiling water, nor is it injuriously affected by watery or antiseptic solutions. Capillarity is one of its qualities and the strands rapidly absorb water. Its capillarity is not, however, so marked as that of gauze, and when this feature is of importance, all things being equal, the gauze should take preference. The material may be boiled at the same time with the instruments, or it may be preserved ready for use, in an antiseptic solution. Drains which have not been used are not wasted and may be resterilized. So far as Newman's observations go raffia possesses no objectionable features. The ribbons are perfectly bland and remain in the tissues unaffected by the secretions. There is no danger of a decubitus from contact and healthy granulations grow around and not into the fibre. The inexpensiveness of the material is of practical importance.

66. **Tumors of the Pituitary Body.**—In Kanavel's infranasal method of approaching the pituitary, the turbinates and the ethmoid cells were untouched and except for the subsequent local infection engendered by the nasal pack and the hemorrhage encountered while the tumor was being removed, the operation presented no difficulties. A postoperative considera-

tion of these dangers leads Kanavel to suggest that the safest procedure in these cases would be a two-step operation. The first stage should comprise the removal of the bony septum and the anterior wall of the sphenoid cells. The middle turbinates may also be removed if they seem to obscure the field. This can all be done without any skin incision. After the field has entirely healed, the second stage dealing with the sella turcica and the tumor can be carried out.

67. **Nail Extension in Fractures.**—By this method the weight is attached directly to the distal fragment by means of a nail which is driven through the bone; the nails are either angular or flat and 4.20 cm. long. A nail may be driven into the bone on either side; or one nail may be driven entirely through the bone and soft parts, or the bone may be drilled through, the drill being allowed to remain, and the extension being applied to the ends of the drill as they project from either side. One nail or drill is better than two smaller nails, for the reason that the smaller ones become loose from absorption of bone. The drill is passed through the spongy portion near the epiphyseal line, the nearer the compact bone the better, as less pressure atrophy results than when the drill is entirely within the spongy portion. In fractures of the femur the drill is passed one handbreadth above the line of the joint, in fractures of the leg below the knee, either through the tibia or os calcis.

The method *a priori* seems productive of much pain to the patient. As a matter of fact this is not so. Not one of Anschütz's patients has complained more than the patient who has the ordinary adhesive plaster extension applied. Children also complain little of the treatment. The pain produced is in no way a contraindication to its employment. The greatest consideration is in regard to the danger of infection. In the light of modern views on asepsis and infection some anxiety may be caused by driving a nail through the skin into the bone or entirely through the limb and allowing it to remain for weeks. Anschütz does not employ nail extension in fresh uncomplicated fractures, especially when the nail must necessarily come near the hematoma. The direct results of the traumatism are allowed to subside before the nail extension is applied and cases are still amenable to the treatment weeks after the injury. Since there is a danger from infection, Anschütz will not at this time recommend that the nail extension should be generally used without strict indications for it. Further, on account of lack of sufficient experience he cannot say whether the joint function may or may not be interfered with by the nail's proximity to it.

### Journal South Carolina Medical Association, Florence

*March*

68 Preventive Tendencies and Measures in Medicine. F. Moore, Aiken.
69 Pellagra—Report of Six Cases. G. A. Neuffer, Abbeville.
70 Pellagra. C. M. Walker, Westminster, S. C.
71 The Spirit and Philosophy of Medical Ethics. L. B. Bates, St. Matthews.
72 Uncinariasis. W. Weston, Columbia.

### The New Mexico Medical Journal, East Las Vegas

*March*

73 The Etiology, Pathogenesis and Treatment of Vesical Calculus. J. W. Colbert, Albuquerque.
74 Two Cases of Hodgkins Disease. B. F. Stevens, El Paso, Texas.
75 Use and Abuse of Tuberculin. R. Smart, Albuquerque.
76 Use and Abuse of Surgery. W. C. Buchly, Roswell.

### Chicago Medical Recorder

*April*

77 *Proptosis of the Left Broad Ligament as a Cause of Chronic Constipation Associated with Abdominal Pain in Women. W. E. Miles, London, Eng.
78 Peroral Intubation. F. Kuhn, Kassel, Germany.
79 Traumatic Neuroses from a Medical Point of View. A. Church, Chicago.

77. **Proptosis of the Left Broad Ligament a Cause of Chronic Constipation.**—The possibility of there being some exciting cause of persistent constipation in women, associated with pain in the right iliac fossa, by the circumstance that such symptoms were often erroneously attributed to appendicitis, and by the fact that he had so often seen apparently healthy appendices removed without benefit to the patient, determined Miles to treat such patients by opening the abdomen by a median sub-umbilical incision in search for a possible cause. By so doing, he came to notice that in all patients thus operate on, the inlet to the pelvic cavity was considerably obstructe by the left broad ligament having assumed a horizonta instead of a vertical position and thus forming a distinct shelf He further observed that the proximal portion of the pelvi colon rested on this shelf, and that the remainder of tha portion of the bowel, in order to pass downward into th cavity of the pelvis, was thus obliged to cross over the tens free border of the ligament with the result that a definit kink in the lumen was made. Such a condition of affair seemed to account for the obstruction to the fecal movemen in the colon. Moreover, in all these cases definite adhesion were found to exist between the broad ligament or th uterine adnexa and the pelvic colon and were contributory t peristaltic impediment. These observations convinced Mile that obliteration of the left broad ligament was the onl means by which the obstruction to the pelvic inlet could b remedied, and accordingly he devised the operation by which i could be done. This operation consists of removing a wedge-shaped piece out of the ligament, the base of the wedge bein situated at the free border of the ligament. The chief symp toms indicative of the obstructive effect of a proptosed lef broad ligament on the passage of feces along the pelvic colo are (a) constipation; (b) left iliac pain; (c) right iliac pain; (d) flatulent distention of the abdomen; (e) gastric disturbances; (f) the passage of mucus by rectum; (g) pain in th lumbosacral region; and (h) a state of chronic invalidism Miles has operated on 150 patients with highly satisfactor results. With two exceptions they have all been relieved o the symptoms.

### Interstate Medical Journal, St. Louis

*April*

80 Vaginofixation of the Uterus for the Cure of Cystocele. S W. Bandler, New York.
81 Pregnancy in its Relation to Disease. H. Ehrenfest, St Louis.
82 The Causation of Otosclerosis. M. Yearsley, London, Eng.
83 Uncinariasis. W. Weston, Columbia, S. C.
84 Renal Calculus and Remarks of Oxaluria. G. Baumgarten St. Louis.

### Journal cf Cutaneous Diseases, New York

*April*

85 Elastic Tissue of the Skin. C. J. White, Boston.
86 Erythroderma Squamosum (Parapsoriasis). A. Ravogli, Cincinnati.
87 The Rare Dermatoses. W. B. Trimble, New York.
88 Keratosis Palmaris et Plantaris with Alopecia. J. Dunn U.S.P.H. and M.-H.S.

### Annals of Surgery, Philadelphia

*April*

89 Stovain Spinal Anesthesia. L. Noland, Canal Zone, Panama
90 *Terminal Arterial Anesthesia. J. L. Ransohoff, Cincinnati.
91 *Anesthesia by Colonic Absorption of Ether. W. S. Sutton Kansas City.
92 *Pus in the Abdominal Cavity. J. B. Deaver, Philadelphia.
93 *Treatment of Diffuse Progressive Free Peritonitis. A. G Gerster, New York.
94 Bone Plastic Operation for Skull Defects. E. R. Rost, Rangoon, Burma, India.
95 Ping-Pong-Ball Indentation of the Skull without Fracture W. H. Luckett, New York.
96 *Tuberculosis of the Lip. G. E. Armstrong, Montreal.
97 Suture of the Recurrent Laryngeal Nerve. J. S. Horsley Richmond, Va.
98 *Unilateral Laminectomy. A. S. Taylor, New York.
99 Deformties of the Renal Pelvis. W. F. Braasch, Rochester Minn.
100 *Angioma of Papillæ of the Kidney. G. MacGowan, Lo Angeles.
101 Combined Cystoscopic and Roentgenographic Examination o the Kidneys and Ureter. A. A. Uhle, G. F. Pfahler, W. H MacKinney and A. G. Miller, Philadelphia.
102 Treatment of Syphilis by Hypodermic Injections of Salicylat of Mercury. M. Brooks, Philadelphia.
103 Plastic Operation for Relief of an Incurvation of the Penis O. Horwitz, Philadelphia.
104 The Principle of the Teale Flap Applied to Amputation o the Penis. W. M. Mastin, Mobile, Ala.

90. **Terminal Arterial Anesthesia.**—The anesthesia employe by Ransohoff is induced by the injection of cocain solutio directly into the artery supplying the area to be anesthetized It is applicable only to a certain group of cases in limite areas of the body. The nature of the anesthesia is termina —that is, the cocain is carried by the capillaries to th individual nerve endings. The solution is diffused throug the capillary walls into the surrounding tissues, and very little, if any, is returned through the veins to the general circulation. The following technic is recommended for use i

man: The main artery supplying the part to be anesthetized s exposed under infiltration anesthesia. An Esmarch bandage is bound about the limb some distance above the point of proposed injection into the artery. The tourniquet should be used as in the Bier hyperemic treatment; that is, snug enough to constrict the veins, but not so tight as to interfere with the arterial circulation. From 4 to 8 c.c. of 0.5 per cent. cocain in normal salt solution should be injected into the artery in the direction of the blood stream. The needle should be as fine as possible. After anesthesia is complete, the Esmarch bandage is removed and the wound closed. The maximum dose suggested, that is, 8 c.c. of 0.5 per cent. cocain solution—contains only 0.04 of cocain, a safe dose.

This method of anesthesia is said by Ransohoff to be an deal one for certain areas of the body where general anesthesia is contraindicated. It is particularly applicable to the upper extremity, where the brachial, radial or ulnar artery may be exposed with little difficulty. For the larger operation on the lower extremity, when general anesthesia is contraindicated, spinal anesthesia seems more desirable, but for the operations about the foot and ankle this method of anesthesia has, he asserts, a distinct place. The greatest advantage of this procedure is its safety, which depends, Ransohoff states, on the small quantity of dilute cocain solution used and its probable diffusion into the tissues.

91. **Anesthesia by Colonic Absorption.**—The colonic method of administration of ether is more complex than the pulmonary method in general and requires from the anesthetist a broader appreciation of the physiologic factors involved. For these reasons alone its field of usefulness is limited to cases in which it presents distinct advantage over the pulmonary method. It is therefore not a method adapted to the experimental use of the tyro but rather a valuable addition to the armamentarium of the trained anesthetist. The indications for its use according to Sutton are as follows: Operations on or about the respiratory tract (head, neck and chest) especially such as lay open the mouth, larynx, pharynx and trachea; when ether absorption must be minimized on account of lung, heart or kidney lesions; respiratory embarrassment. The contraindications are lesions of the alimentary tract, especially such as might cause weakness of the wall of the colon; laparotomies in general, except such as do not open the general peritoneal cavity, *e. g.*, suprapubic cystostomy; markedly incompetent sphincter or with large complete fistula-in-ano; orthopnea; emergency cases in general because of the lack of preparation of the colon. Sutton describes an apparatus which he has devised.

92. **Pus in Abdominal Cavity.**—Deaver has observed in certain desperate cases with large amounts of vicious pus in the cavity that a long incision partially approximated and overlaid with gauze to retain the intestines permits a marked escape of exudate and seems to relieve abdominal tension in a far more satisfactory way than a single tube or multiple tubes brought out through an angle of the incision.

93. **Progressive Free Peritonitis.**—Gerster makes an analytic review of 609 cases but space forbids making an abstract which would do justice to the paper. Speaking of treatment, he says that all measures are dominated by these requirements: Early and rapid operation; stopping of leakage; peritoneal drainage aided by posture; maintenance of the patient's strength by enteroclysis; withholding of food and drink while vomiting persists; and finally the discreet administration of opiates. The average mortality in 461 cases of free progressive peritonitis of appendicular origin treated from 1899 to 1908 was 31 per cent.—the percentage diminishing steadily from 79 in 1899 to 14 in 1908. The mortality among 148 cases due to injuries and affections of other viscera was 100 per cent. in tumors; 76.5 per cent. in intestinal perforations; 87.5 per cent. in complicated hernias; 66.6 per cent. in disease of female genitalia; 73.9 per cent. in typhoid perforations; 46.1 per cent. in gastric and duodenal ulcers; 66.6 per cent. in perforation of liver abscess; 100 per cent. in thrombosis of mesenteric vessels.

96. **Tuberculosis of Lip.**—Armstrong says that tuberculosis should be suspected when an ulcer on the lip or tongue presents a soft base with but little evidence of induration or infiltration, and especially when there are evidences of tuberculosis elsewhere. A diagnosis cannot be definitely arrived at without a microscopic examination. It may be sufficient to examine scrapings from the surface. He reports one case.

98. **Unilateral Laminectomy.**—The advantages of unilateral laminectomy are said to be: Minimum loss of blood and of bone; and therefore minimum loss of bony protection to the cord; no postoperative deformity of the back or loss of flexibility of the spine; exposure sufficient for all exploratory work, except in certain cases of fracture of the spine; for all nerve root work on one or both sides, for the removal of many tumors, and for minimizing the operative trauma in others by first exposing their exact size and location; exposure such as to diminish the chance of overlooking an anterior tumor.

100. **Angioma of Papillæ.**—MacGowan reports three cases of persistent hematuria which were relieved by a conservative operation and in each case the kidney was saved.

### Memphis Medical Monthly

*March*

105 The Leucocytes in Appendicitis. B. N. Dunavant, Memphis.
106 The Relation of Adenoids to Facial Deformities. J. W. Price, Memphis.
107 Important Facts to be Considered in the Diagnosis of Diseases of Children. H. Hawkins, Jackson, Tenn.
108 Some Uses and Abuses of Quinin in the Malarial Districts. J. W. Armstead, Sidon, Miss.
109 Infantile Scurvy. A. G. Jacobs, Memphis.

### California State Journal of Medicine, San Francisco

*April*

110 *A New Vocation Dermatosis. H. E. Alderson, San Francisco.
111 Congenital Defects of the Muscles of the Face and Eyes: *"Infantiler Kernschwund"* of Moebius. M. B. Lennon, San Francisco.
112 One Hundred Radical Mastoid Operations. C. F. Welty, San Francisco.
113 History of a Lawsuit for Alleged Malpractice. H. J. Kreutzmann, San Francisco.
114 Tuberculosis and the Modes of Infection. C. C. Walker, Washington, D. C.
115 Study of Speech Disturbances. H. Horn, San Francisco.
116 Labyrinthitis. G. Selfridge, San Francisco.
117 Relation of Law to Medicine. J. G. Covert, Kings County.
118 Mastoiditis with Sinus Thrombosis. E. C. Sewell, San Francisco.

110. **New Vocation Dermatitis.**—Recent improvements in the process of manufacture of blasting caps, involving the use of the dry fulminate of mercury, have been so successful that the method will be more generally used. In view of the fact that several of the men working with this substance have developed severe dermatitis, Alderson describes the clinical history of the affection as shown in one instance. The patient is in excellent health and had always been so. Several years ago he had dermatitis venenata due to poison oak, from which he made a rapid recovery. He presented an acute erythemato-papular eruption of the face, neck, postaural region and the entire surface of both forearms (the hands, having rather tough, thick skin, are spared). The eyelids were very acutely inflamed and there was a violent conjunctivitis. Wherever the skin was thin and delicate the eruption was most severe. On the bearded portion of the face there was pustular folliculitis. On the forearm the eruption was papulo-pustular. The attack had lasted two weeks before the patient called for treatment. Alderson says that this dermatitis usually appears in men doing this work a very short while after exposure to the chemical, and it rapidly increases in severity. New papules may appear daily for some time after the onset of the inflammation. When warm and perspiring the skin seems to be particularly susceptible to the irritating effects of the chemical.

The following combination was found to be most efficacious:

| ℞. | gm. or c.c. | |
|---|---|---|
| Sodii carbonatis ........................ | 30 | ℥ii |
| Aquæ destillatæ, q. s. sat. sol........... | | |
| Lanolini anhydrosi, q. s. ad............. | 60 | ℥i |

M. Sig.: Smear thoroughly over exposed parts before going in fulminate rooms.

### St. Paul Medical Journal

*April*

119 Standardizing Antituberculosis Work. C. Easton, St. Paul.
120 The Tuberculosis Problem. E. L. Tuoghy, Duluth, Minn.
121 The Antituberculosis Association and the Municipality in the Control of Tuberculosis. B. Rosing, St. Paul.

122 Caring for the Consumptive in his Home. F. Lee, Duluth.
123 The State Federation of Women's Clubs *vs.* the White Plague. C. G. Higbee, St. Paul.
124 Methods and Results in Arousing the Small Town by the Traveling Tuberculosis Exhibit. A. R. Blackey, St. Paul.
125 Surgical Treatment of Antral Disease. A. Schwyzer, St. Paul.
126 Eduard Brissaud. A. Souques, Paris, France.

## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### British Medical Journal, London

*April 9*

1 *Surgery of the Lymphatic System. W. S. Handley.
2 *Recurring Jaundice in Four Successive Pregnancies, with Fatal Jaundice in Three Successive Infants. H. D. Rolleston.
3 *Pigmentation of the Buccal Mucosa in Pernicious Anemia. T. G. Moorhead.
4 Epilepsy. W. A. Turner.

1. **Surgery of the Lymphatic System.**—The surgery of the lymphatic vessels and spaces, especially the surgery of dropsy, is discussed by Handley under three heads: (a) the surgery of lymphatic edema; (b) the surgery of serous effusions; (c) cancer surgery as a branch of the ablational side of lymphatic surgery. Instead of resorting to amputation in cases of brawny or dropsical arm of breast cancer, Handley performs lymphangioplasty. He buries a number of silk threads in the subcutaneous tissues of the arm, affording for the tissue fluid a permanent conduit, sufficiently unabsorbable, and not liable to obstruction by organization or thrombosis. In favorable cases it has the following effects: (a) There is complete relief from pain within 24 hours, unless the pain is partially due to some cause—such as nerve pressure—independent of the edema. (b) There is a marked and rapid fall in the tissue tension of the whole area drained by the threads. The arm in consequence, instead of being hard and brawny, becomes abnormally soft and flabby. This may sometimes occur even though postural treatment is neglected, and in the absence of any marked diminution of the diameters of the arm. (c) There is rapid subsidence of the swelling, commencing immediately in the hand, and extending to the forearm within 24 hours. At first the upper arm is unaffected, or its diameters may even slightly increase. But within a week or two the diameters of the upper arm are also markedly lessened. The subsidence is usually permanent, unless and until pleural effusion supervenes to interfere with drainage. These defects are at first dependent on the adoption of proper postural after-treatment, but after a few months elevation of the arm may be abandoned without any marked increase of swelling. (d) There is return of power to the paralyzed arm if the paralysis is of recent date. If the paralysis is of more than a few months' standing, no return of power is to be expected. (e) There is an improvement in the general condition, dependent partly on relief from pain and its associated symptoms of insomnia and depression, and partly on the abandonment of sedatives.

2. **Jaundice in Pregnancy.**—A woman who had never had jaundice at any other time had jaundice in her four successive pregnancies, and her first three infants died of jaundice. In the fourth pregnancy the woman was treated with hexamethylenamin and sodium salicylate, and, though she became somewhat jaundiced about the sixth month, she gave birth to a healthy child. In the family reported here there is the remarkable and, so far as Rolleston knows unrecorded, association of the recurring jaundice of pregnancy in the mother with fatal jaundice in the offspring. The most reasonable method of treatment appears to be to treat the mother during the pregnancy with biliary and intestinal antiseptics, to regulate the diet, and to prevent constipation. The infant's jaundice should be treated on the same lines, and if there are urgent symptoms by subcutaneous transfusion of saline solution. In view of the probability that the infantile jaundice is due to maternal toxemia it is probably wise to prevent the mother suckling the infant.

3. **Pigmentation of Buccal Mucosa in Anemia.**—Moorhead adds one case to the four cases previously reported by others in which there was well-marked pigmentation of the mucous membrane of the mouth in pernicious anemia.

### Lancet, London

*April 9*

5 Angina Pectoris. W. Osler.
6 *Surgery of the Lymphatic System. W. S. Handley.
7 *Localization of Cerebral Function, Based on the Clinicopathologic Study of Mental Disease. J. S. Bolton.
8 *Modern Treatment of Pulmonary Tuberculosis. F. J. Wethered.
9 *Effects of a Serum on Carcinoma Occurring in Mice. C. Walker.
10 *Experimental Diminution of Resistance to Mouse Cancer. A. Leitch.
11 A Relic of the Jameson Raid. H. Curtis.
12 *The Use of Adrenalin Chlorid in Treatment of Plague. E. N. Thornton.
13 Barany's New Tuning-Fork Tests. E. C. Baber.
14 *Arthritis Deformans. R. L. Jones.
15 Life Assurance of Women. R. H. Fox.

6. See Abstract No. 1.

7. **Localization of Cerebral Function.**—As a summary of the results of his micrometric studies, Bolton says that the human cerebral cortex originally evolved from three primary cell laminæ, an inner or polymorphic, which is concerned with the performance of organic and non-voluntary activities; a middle or granule, which is receptive in function; and an outer or pyramidal, which serves as the physical basis of the associative functions of the cerebrum. The last of these is the distinctive feature of the cortex peculiar to the mammalia or the neopallium. These three laminæ appear during normal development in the order named, from within outward. The cortex of the visuo-sensory area is evolved before that of the visuo-psychic zone, and this before that of the prefrontal region.

In cases of mental disease grading from idiots and imbeciles through various types of non-demented and partially demented lunatics to the gross dement, marked differences in the degree of evolution and dissolution of the cortex exist, which, considered from the general aspect, follow the order of normal development. In amentia the condition is one of subevolution to different degrees; and in dementia the laminæ suffer in the reverse order to that of their evolution, the most affected being the latest developed, and the least affected being the earliest developed. The degree and type of these differences vary according to the region of the cortex, whether this be a projection area, a zone of special association, or the prefrontal region. In the case of the visuo-sensory area the prominent features are poor evolution of the pyramidal and polymorphic laminæ, and specialization of the granule or receptive lamina. There also exist individual variations in the degree of evolution of the granule or receptive lamina, and in that of the pyramidal or associative lamina, which individual variations bear no relationship to the degrees of amentia or dementia which exist in individual cases. In the case of the visuo-psychic zone, the important feature, apart from an especially good evolution of the granule or receptive laminæ, is a marked degree of individual variation with regard to the depth of the pyramidal or associative lamina. This individual variation, Bolton states, is not only independent of the existing grade of amentia or dementia, but also of the individual variation in this lamina which occurs in the visuo-sensory area.

In the case of the prefrontal region, both specialization and individual variation are practically or entirely absent, and the cortex merely exhibits degrees of subevolution or dissolution which vary according to the grade of amentia or dementia which exists in the individual cases. That the condition is one of true subevolution is shown by the fact that the laminæ are subevolved in the order of their normal development, the last to appear being the least developed and the first the most developed. The reverse order holds with regard to dissolution, the last lamina to appear during normal development being the first to undergo retrogression in dementia and the first the last to retrogress. In the case of the cortex of the prefrontal region, therefore, the associative function o the pyramidal lamina may be regarded as "voluntary associative," in view of the fact that the essential feature o amentia and dementia is decrease, instability or loss of voluntary control over the process or cerebral association.

8. **Modern Treatment of Pulmonary Tuberculosis.**—Wethered contends that the modern treatment of pulmonary tubercu

sis rests on the establishemnt of immunity. In order to rocure this it is, in the first place, necessary to prevent xcessive autoinoculation. The method most likely to effect is result is rest. Hence the benefit that accrues by the outine treatment hitherto adopted at special hospitals and anatoriums—rest in bed until the temperature is normal. ubsequently the production of autoinoculation by suitable xercise renders the patient immune to increasing doses of elf-manufactured tuberculin. If this is not possible, then nmunity may be induced by hetero-inoculation.

9. **Effects of Serum on Carcinoma in Mice.**—Walker believes hat what happens on the treatment of a mouse suffering om cancer with the testicle serum is rather the stimulation f the leucocytes to multiply and replace the cells of the mor than a direct destructive influence on the part of the erum on the cancer cells themselves.

10. **Resistance to Mouse Cancer.**—From Leitch's experiments is evident that the injection of cancer cells which are physi- lly disintegrated without probably being chemically ltered markedly affects the resistance toward living tumor ells. So far from conferring anything in the nature of nmunity it has undoubtedly exalted the susceptibility.

12. **Adrenalin Chlorid in Plague.**—In the course of an out- reak of plague at East London, March, 1905, Thornton gave drenalin chlorid a trial. On the administration of the drug the first few cases in which it was tried, the results were ufficiently satisfactory to ensure that all future patients dmitted during the outbreak should be treated in the same anner. For adults 31 minim doses of adrenalin chlorid of a trength of 1 in 1,000 were at first usually given by the outh, with 10-minims of tincture of strophanthus every 4 ours for the first 3 days and 3 times a day thereafter for pproximately another 14 days. Later, especially if the atient was extremely ill on admission, it was usual for the drenalin to be given hypodermically or intravenously, in omewhat similar doses until the patient was out of danger, hen it was given, as in the earlier cases, by the mouth. he mixture for oral administration was made up as required, or it does not keep. In the worst bubonic cases it was usual o commence the treatment by injecting 20 minims of the drenalin chlorid solution in the neighborhood of the buboes, specially when the buboes were unusually painful or when uch extravasation was occurring in the surrounding tissues. he axillary cases particularly (in which there are usually xtensive serous effusion and hemorrhagic extravasation volving the axilla, arms and ribs) appeared to benefit from njections into the neighborhood of the bubo, and in these ases much of the usual extravasation was prevented. The ospital mortality from plague (excluding septicemic cases) those patients not treated with adrenalin has been 37.4 per ent., or, excluding Asiatics, 35.9 per cent., as compared with mortality of 26 per cent., only among those treated with drenalin. This lower mortality does not appear to have een due to the fact that the patients treated with adrenalin ad the disease in an unusually mild form, for, if anything, hey appeared generally to have been somewhat worse than re patients who usually come under treatment, especially hose toward the middle and end of the series.

14. **Arthritis Deformans.**—Jones discusses the classification nd differential diagnosis of the various joint affections rouped generally under the term "arthritis deformans."

### Clinical Journal, London

*March 23*

16 Clinical and Therapeutic Aspects of the Pituitary Body. H. C. Thomson.
17 Extragenital Chancres. G. Pernet.

*March 30*

18 Etiology and Treatment of Tabes Dorsalis. D. Ferrier.

### Bristol Medico-Chirurgical Journal

*March*

19 Radium and Some of its Physical and Therapeutic Properties. J. M. Davidson.
20 Diffuse Destructive Changes in the Liver Associated with Jaundice. C. Coombs.
21 Infection of the Urinary Tract with *Bacillus Coli*. J. R. Charles.
22 Hypnotism. H. P. Costobadie.
23 Oriental Medicine—Stray Jottings. V. B. Green-Armytage.

### Presse Médicale, Paris

*March 26, XVIII, No. 25, pp. 209-224*

24 *Mongolian Spots. (La tache bleue congénitale mongolique.) E. Apert.
25 *Difficulty of Differentiating between Suppuration in the Lungs and Pulmonary Tuberculosis. R. Burnand.
26 Gastric Digestion of Starch with Hyperchlorhydria. (Digestion stomacale des féculents chez les hyperchlorhydriques.) L. Salignat.
27 The Streptococcus of Scarlet Fever and the Fixation of Complement Reaction. C. Foix and E. Mallein.

*March 30, No. 26, pp. 225-232*

28 Partial Baldness. (L'hémicanitie.) E. F. Dainville.
29 Agar-Agar in Chronic Constipation. A. Martinet.
30 Technic for Determination of Opsonic Index. (Pouvoir opsonique.) L. Deval.

*April 2, No. 27, pp. 233-248*

31 Pain in the Heel. (La talalgie et les exostoses sous-calcanéennes.) P. Reclus.
32 Appliance for Ambulatory Treatment of Fractured Femur. (Appareil de marche pour fracture de cuisse.) Savariaud.
33 Ultimate Outcome with Fracture of the Leg. (Consolidation dans les fractures du membre inférieur.) L. Imbert.
34 Myasthenia Gravis. C. Frugoni.
35 Mucomembranous Enterocolitis. (Sur l'évolution de la pathogénie et du traitement de l'entérocolite muco-membraneuse.) M. de Langenhagen.

24. **Mongolian Spots.**—Apert discusses the geographical distribution of this anomaly and its origin and significance. It usually disappears spontaneously before the age of 10.

25. **Differentiation of Suppuration in the Lung from Tuberculous Process.**—Burnand's patient was a man of 41 and all the signs indicated subacute pulmonary tuberculosis, but no benefit followed the usual fresh air and rest course. Puncture of the pleura gave issue twice to a serous effusion and the cytologic findings seemed to confirm the tuberculous nature of the process, as also the temperature curve, which was of the tuberculous type with nothing to suggest latent suppuration until the puncture needle happened to hit the pus pocket, the discovery of blood-stained pus clearing up the diagnosis. Operative treatment was delayed for six weeks but then confirmed the diagnosis. The patient, however, succumbed not long after to chronic septicemic intoxication. No tubercle bacilli were found at any time.

### Semaine Médicale, Paris

*April 6, XXX, No. 14, pp. 157-168*

36 *The General Syndromes in the Pathology of the Blood. P. E. Weil and A. Clerc.

36. **The General Syndromes in the Pathology of the Blood.**—Weil and Clerc remark that the term "blood disease" is a misnomer, as there is no actual disease of the blood but the blood merely varies according to the reaction of the blood-producing organs to various stimuli. Abstract speculation has given place now to practical conclusions, they state, and the blood syndrome is not only a guide for treatment but for prognosis also. They review and analyze the main types.

### Berliner klinische Wochenschrift

*March 21, XLVII, No. 12, pp. 517-564*

37 Experimental Research on Nature of Drug Eruptions. (Wesen der Arzneiexantheme.) C. Bruck.
38 The Emphysema Question. L. Hofbauer.
39 *Practical Method of Obtaining the Duodenal Contents in Man. (Ueber Gewinnung von Duodenalinhalt beim Menschen.) M. Einhorn (New York).
40 Nascent Oxygen Baths in Treatment of Infections Diseases. (Ueber Ozetbäder bei Infektionskrankheiten.) A. Wolff.
41 *Determination of the Coagulating Power of the Blood. (Neue Methode zur Bestimmung der Gerinnungsfähigkeit des Blutes.) W. Schultz.
42 Antitryptic Action of the Blood Serum. (Zur Frage der antitryptischen Wirkung des Blutserums.) P. Rondoni.
43 Influence of Diphtheria Toxin on the Suprarenals. (Einfluss des Diphtherietoxins auf die Nebennieren.) A. Strubell.
44 Urine Findings as Aid in Diagnosis of Cancer. (Verwertung des Harnbefundes zur Carcinomdiagnose.) E. Salkowski.
45 Modern Efforts in Surgery. (Moderne Bestrebungen in der Chirurgie.) A. Federmann.
46 Moving Pictures of Microscopic Findings. (Ueber mikrokinematographische Aufnahmen.) W. Scheffer.
47 Cystoscopy in Gynecology. E. Runge.

*March 28, No. 13, pp. 565-612*

48 *Experimental Surgery of the Thoracic Aorta by the Method of Meltzer and Auer. (Experimentelle intrathorakale Chirurgie mittels der Methode von Meltzer und Auer.) A. Carrel (New York).
49 Method of Respiration by Intratracheal Insufflation: Its Scientific Principle and Its Practical Availability in Medicine and Surgery. (Methode der intratrachealen Insufflation, ihr wissenschaftliches Prinzip und ihre praktische Anwendbarkeit.) S. J. Meltzer (New York).
50 Circular Suture of Vessels. (Praktische Erfahrungen mit der zirkulären Gefässnaht, zugleich ein Beitrag zur Behandlung der angiosclerotischen Gangrän nach Wieting-Pascha.) V. Schmieden.

51 Transplantation of Kidneys. II. (Nierentransplantationen.) E. Unger.
52 Practical Importance of Determining Viscosity of the Blood in Acute Surgical Disease. (Praktische Wert der Viscositätsmessung des Blutes bei akuten chirurgischen Erkrankungen, insbes. bei der akuten Perityphlitis.) F. Oehlecker.
53 Artificially Induced Production of Urinary Concrements. (Ueber Erzeugung von Steinkrankheit bei Zuchttieren.) L. G. Michael.
54 *Intravenous Mercurial Injections in Treatment of Varicose Veins in the Leg. (Neues Verfahren der intravenösen Behandlung der Varicositäten der Unterextremitäten.) P. Scharff.
55 Inefficacy of Antiferment Treatment of Suppurative Processes. (Zur Antifermentbehandlung eitriger Prozesse.) M. Hirsch.
56 Comparative Size of Organs in Mice and Rats with Tumors. F. Medigreceanu.
57 Improved Technic for Gastroscopy. (Ein Gastroskop.) H. Elsner.

41. **Determination of the Coagulating Power of the Blood.**—Schultz uses a capillary tube bulging to form a dozen hollow beads, which are broken off in turn and the contents poured out into a certain quantity of physiologic salt solution. Only a few drops of blood are necessary for the test; the blood is protected from drying by the shape of the tube, while the process of coagulation is followed through every phase. Each tube will hold one or two drops. As the first bead is dropped into the salt solution, the blood escapes and not a trace of clot is visible, but clot particles are noticed more and more as one bead is broken off after another. In the findings described from a few cases, considerable difference was noted between the coagulating faculty of blood from the ear and that from a vein elsewhere. The bead capillary method seems to offer a number of advantages, Schultz thinks, while its simplicity permits its use at the bedside, in combination with a set of a dozen test tubes, each containing 1 c.c. of physiologic salt solution, into which the broken-off beads are dropped in turn.

39, 48 and 49.—Practically the same articles were published in the *Medical Record*, New York, Jan. 15 (No. 39) and Mar. 19 (Nos. 48 and 49), 1910.

54. **Local Mercurial Injections in Treatment of Varicose Veins.**—Scharff states that he has successfully applied this method of treatment in about 90 cases of varicose veins during the last 6 years. It is based on the current observation that intravenous injections are liable to induce local thrombosis, an untoward effect when the injection is made for other purposes but an ideal result when the aim is to render smaller the lumen of a varicose vein. The same injection has a different action according as the walls of the vein are sound or diseased, consequently a very small amount of the drug is needed to accomplish the desired result. He obtained the best results with a 3 or 5 per thousand solution of mercury bichlorid with a little salt, his formula being 23 parts sodium chlorid, 1 part mercury bichlorid and 3,000 parts distilled water. For the first injection he uses only 0.5 c.c of the fluid, injecting this amount at three different points as the patient stands on a table or sits with the knee flexed. The more pathologic the veins, the smaller the amount that should be used and the weaker the solution. The amount is gradually increased and the injections repeated at more points, the intervals ranging from 3 to 6 days. The patients should be instructed that the injection should be painless; if more than a slight smarting is experienced, the tip of the needle is outside the vein. He begins at the lowest varicose vein and works upward, but he warns that the closer to the bone, the greater the caution needed. Ulcers heal, he asserts, as the conditions in the circulation are improved. The only mishaps in his experience were in a case in which he sought to hasten matters by making larger injections, with the result that a small patch of gangrene developed; since then he has been more cautious, and in a case in which the patient did not complain although the injection was intensely painful, thus misleading the physician so that the fluid was not injected into the vein but into the surrounding tissue, with a resulting phlegmon. One patient was a corpulent woman of about 56 who could scarcely walk up a flight of stairs on account of the disturbances from varicose veins notwithstanding the constant wearing of elastic stockings. After six months of intermittent treatment she was able to walk for miles at a time without the slightest disturbance. The treatment aims to imitate Nature's methods of healing. All the patients were subjectively and most were objectively cured, he declares, and the cure has persisted to date.

## Deutsche medizinische Wochenschrift, Berlin

*March 31, XXXVI, No. 13, pp. 593-640*

58 *Diagnosis and Treatment of Injuries of the Brain. (Diagnos
und Behandlung der Hirnverletzungen.) O. Tilmann.
59 *Pain in the Heel. (Zur klinischen Geschichte der Ferse
neuralgie.) F. König.
60 Drainage of the Knee back of the Condyles with Purule
Arthritis. (Drainage des hinter den Condylen gelegen
Kniegelenksabschnittes bei Arthritis purulenta genu.)
Riedel.
61 Experimental Production and Cause of Goiter. (Experime
telle Erzeugung und Ursache des Kropfes.) M. Wilms.
62 *The Sacral Displacement Method in Treatment of High Rect
Carcinoma. (Die sakrale Vorlagerungsmethode beim hoc
sitzenden Rectumkarzinom.) H. Küttner.
63 *Carcinoma of the Appendix. (Die Karzinome das Wur
fortsatzes.) A. Dietrich.
64 *Causes and Effects of Rigid Thorax Indicating Chondrotom
(Zur Klinik der pathologischen Statik und Mechanik d
Brustkorbes [der Thoraxstarre]). R. von den Velden.
65 Bismuth Paste Treatment of Fistulas. (Zur Fistelbehandlu
mit Einspritzungen von Wismutpaste nach E. G. Beck
Elbe.
66 Surgical Sterilization of the Skin with Alcohol and Iodi
(Ueber die Hautdesinfektion des Operationsfeldes mit Alc
hol und Jod.) M. Donati.

58. **Injuries of the Brain.**—Tilmann reviews the variou
types of injury of the brain from different causes, emphasizin
that injury may occur without inducing symptoms at firs
In such cases he has found of great diagnostic value the pr
jection of the lesion within on the scalp above as evidenced b
hyperesthesia of the scalp at points corresponding to Head
zones; it may extend down on the neck and chest, and ma
fluctuate in intensity with the course of the lesion. Th
hyperesthesia may persist for years, and it may be accepte
as a sign of an intracranial lesion if the area of tenderne
retains its outlines on repeated examination. If the cerebr
spinal fluid is blood-stained, the pulse is the index for prima
operative measures; convulsions do not demand an operati
unless they persist longer than twenty-four hours. He do
not advocate trephining until the pulse and other signs ind
cate pressure on the brain or there are indications of infectio
It is important in considering treatment to be able to di
tinguish between the signs of the injury itself and those
the secondary pressure on the brain. The latter inclu
intense headache from the hemorrhage, restlessness, excit
ment, the patient tosses to and fro, groans and screams, unt
he loses consciousness, or there are attacks of vomitin
vertigo and coma. Choked disc is an important sign but it
hard to examine the restless patient. The pupils are co
tracted at first but gradually dilate. The pulse is rapid
first but then becomes slow, dropping to 40 or 50, and respir
tion is slow as in sleep. After an interval the pulse becom
much accelerated running up to 160 in some cases; the pul
thus warns of the danger of delay. The symptoms of co
cussion of the brain come on at once, with unconsciousness
the predominant symptom, while with contusion of the bra
the local, motor and sensory symptoms are most promine
and epileptiform attacks occur, followed by improvement
the consciousness. The signs of compression develop later a
continue a progressive course. With concussion the sympto
retrogress; with contusion they persist at about the sa
level. In conclusion he warns expressly against opiates a
sedatives in case of injury of the brain.

59. **Pain in the Heel.**—König reports eight cases in whi
severe pains in the heel were cured by an operation.
revealed a bony outgrowth in some of the cases but in t
majority the trouble was infection of the calcaneal bursa
of a supernumerary bursa. He thinks that this bursa form
tion is probably the unsuspected cause in many cases of s
called neuralgia of the heel. In four of his cases the bursit
alone was responsible for the pain in walking; in two cas
there were concomitant bony outgrowths, evidently the resu
of the infectious bursitis. His experience has convinced hi
that "calcaneum spur" in itself does not cause pain; the pa
develops when the spur is injured by some trauma or becom
involved in an infectious process originating in an adjoini
bursa and frequently of gonorrheal origin; this was evide
in two of his eight cases. In treatment the bone outgrow
and the bursa were both resected, the joint being entered fro
the external aspect.

62. **Sacral Displacement of the Rectum in Operating for Hi
Rectal Cancer.**—Küttner extols the advantages of removi
high cancer in the rectum in two operations. The results we

od in the ten cases which he reports in detail; in some of em the cancer seemed almost inoperable at first.

63. **Carcinoma in the Appendix.**—Dietrich has encountered e cases in the last year and a half; the patients were tween 17 and 40 years old. The growth was a small epi- elial tumor resembling the carcinoid tumors sometimes und in the small intestine.

64. See Berlin Letter, April 30, page 1456.

### Medizinische Klinik, Berlin

*March 27, VI, No. 13, pp. 493-530 and Supplement*

7 Balneotherapy in Menstrual Disturbances. (Die Balneotherapie bei Menstruationsstörungen.) S. Gottschalk.
8 *Importance of Trauma for Development of Actinomycosis. (Bedeutung des Traumas für die Entwicklung aktinomykotischer Prozesse.) H. Noesske.
9 *The Karell Milk Cure in Obesity. (Stellung der Karell'schen Milchkur in der Entfettungsbehandlung.) H. Strauss.
0 *Does Sex Influence the Prognosis in Diabetes? (Kann dem Geschlecht eine prognostische Rolle bei Diabetes mellitus zugemessen werden?) S. Laache.
1 Plastic Induration of the Penis. F. Callomon.
2 Suprarenal Treatment of Gout. (Behandlung der Gicht mit Nebennierenextrakt.) E. Diesing.
3 Increased Elimination of Polypeptids in the Urine in Cancer. (Vermehrte Ausscheidung von Polypeptiden im Harne Krebskranker.) F. Falk, H. Salomon and P. Saxl.
4 Anaphylaxis-Producing Action of Serums Containing Antibodies. (Ueber das Anaphylatoxin und die Anaphylaxie erzeugende Wirkung von antikörperhaltigen Seris.) E. Friedberger.
5 Pathology and Treatment of Pertussis. F. Toeplitz.

68. **Importance of Trauma for Development of Actinomy- tic Lesions.**—Noesske has observed a number of cases in hich latent actinomycosis was roused to active proliferation y some intercurrent trauma. He has also found similar stances in the literature. There may be an interval of years tween the trauma and the manifest actinomycotic process; one case 17 and in another 10 years had elapsed, and tervals of 5 and 10 years are by no means uncommon. In me cases an operation for old chronic appendicitis provided e trauma which caused the flaring up of a hitherto latent tinomycotic lesion in the abdomen, its gradually progressive ourse in striking contrast to that observed with postoperative eritonitis or with tuberculous lesions which are liable to evelop at any point of lessened resistance. The actinomyces eems to possess the property of destroying the elastic tissue nd this is responsible for the progressive propagation of the sion by continuity simulating to a certain extent a malig- ant growth, although cases of actinomycotic pyemia are on ecord, developing from a simple superficial injury.

69. **Karell Cure in Obesity.**—Strauss has applied this method about a dozen cases of obesity, with good results. He llows a glass of milk four or five times a day for three days s the only nourishment, and the patient is kept in bed. The atients lost from 5 to 10 pounds; and even a little more hen the diet was kept up a few days longer, but the prin- ipal result was attained in the first three days. It is evi- ently due, he says, to the lack of salt in the diet and the small mount of fluid, and he thinks that far more attention should e paid to the salt and water metabolism in treatment of besity than has been the case hitherto. This Karell diet, he dds, should be restricted to patients in whom the obesity oes not yield to the ordinary measures. Its success shows hat even when there is no evident dropsy there may yet be etention of fluids sufficient to explain part of the tendency to besity, and this retention is corrected by the restriction to mall amounts of a salt-poor fluid.

70. **Sex in Prognosis of Diabetes.**—Laache states that in his xperience with 122 cases of diabetes only 22 per cent. of the 7 male patients died, while 40 of the 45 cases in women erminated fatally. This greater mortality among the women nay be due, he remarks, to the fact that diabetes seems to ffect preferably young women, and it is well known that the isease runs a more malignant course in comparatively young ndividuals.

### Münchener medizinische Wochenschrift

*March 22, LVII, No. 12,* pp. *617-672*

76 *Arsenic in Treatment of Organic Nervous Disease. H. Willige.
77 *Surgical Sterilization with Iodin Vapor. (Hautdesinfektion und Wundbehandlung mit Joddampf.) Jungengel.
78 Gastric Digestion in Infants. (Ueber Magenverdauung im Säuglingsalter.) Engel.
79 Swelling of Lymph Glands during Incubation of Measles. (Lymphdrüsenschwellungen im Inkubationsstadium der Masern.) G. Forssner.
80 Biochemistry of the Tubercle Bacillus. G. Deycke.
81 *Germ Content of Normal Organs. E. Bierotte and S. Machida.
82 Celloidin Technic for Series of Sections. (Neue Methode der Herstellung von Zelloidinserienschnitten.) F. Maier.
83 Tumors in the Internal Iliac Fossa. K. Stern.
84 Change from Walking on Four to Two Legs as Factor in Certain Pathologic Conditions in Man. (Der Erwerb der aufrechten Körperhaltung und seine Bedeutung für die Entstehung orthogenetischer Erkrankungen.) R. Klapp. Commenced in No. 11.

76. **Arsenic in Treatment of Organic Nervous Disease.**—Willige says that his experience has confirmed the assumption that minute, long continued doses of arsenic exert a stimulating action on nerve tissue. The benefit was marked in 8 out of 12 cases of multiple sclerosis in his experience. He describes them in detail, as also the cases in which the arsenic did not give such good results. The improvement was at first mostly subjective, the patients gaining in weight and feeling better generally, and this was soon followed by better functioning of the legs, some patients even being able to take long walks, when before they could not even stand without assistance. The best results were obtained in cases of uncomplicated multiple sclerosis in which the optic nerve was still intact. No benefit was ever observed when the optic nerve was already involved, and special care is necessary in such cases although arsenic does not seem to affect the optic nerve particularly, he remarks, except in the form of atoxyl. In 5 cases of polyneuritis, the long course of minute doses of arsenic was followed by marked improvement as also in 12 cases of neuritis or paralysis of various origins. On the other hand, no benefit was apparent from the arsenic treatment in a case each of spastic spinal paralysis, paralysis agitans, Friedreich's ataxia, pseudobulbar paralysis, lead poisoning and hemiplegia, although one young man with right hemiparesis of unknown cause, coming on suddenly, recovered completely under the arsenic as also a youth with relics of an encephalomyelitis. The arsenic was given in the form of arsenic trioxid, better known, perhaps, as arsenous acid, in a 1 per cent. solution, in subcutaneous injections, beginning with 1 mg. and increasing by this amount to 7 or occasionally to 10 mg. a day, continuing the maximal dose for from 3 to 8 days and then diminishing in the same way, repeating the course after suspension for 14 days. Most of the various preparations of arsenic on the market were tried but given up as inferior to the old and tried arsenous acid.

77. **Sterilization of the Skin with Iodin Steam.**—Jungengel states that the untoward effects sometimes observed with the tincture of iodin method of surgical sterilization are due to the medium in which it is dissolved or to its spoiling. He applies the iodin in the form of steam for which he has devised a convenient little apparatus as he describes in detail. The iodin by this method simultaneously sterilizes, induces active hyperemia and stimulates the tissues to rapid repair.

81. **Germ Content of Normal Organs.**—Bierotte and Machida found 10 varieties of germs in 59.25 per cent. of 54 organs taken from 11 apparently entirely healthy animals at the slaughter house.

### Wiener klinische Wochenschrift, Vienna

*March 31, XXIII, No. 13, pp. 459-494*

85 Influence of Internal Secretions of Genital Glands on External Characteristics. (Einfluss der innersekretorischen Anteile der Geschlechtsdrüsen auf die äussere Erscheinung des Menschen.) J. Tandler.
86 Intracranial Removal of Hypophysis. M. Silbermark.
87 Bacteriologic Differentiation of Puerperal Streptococcus Infection. (Ueber die neueren Verfahren behufs bakteriologischer Differenzierung der puerperalen Streptomykose.) H. Thaler.
88 Metastasis in the Appendix with Mammary Carcinoma. R. Wagner.
89 Microscopic Research on Bullous Skin Diseases. (Ueber Zystokonien.) B. Lipschütz.

### Zentralblatt für Chirurgie, Leipsic

*April 2, XXXVII, No. 14, pp. 497-528*

90 *Extension Treatment of Fractured Leg. (Zur Extensionsbehandlung der Unterschenkelfrakturen.) K. Knoke.

90. **Extension in Treatment of Fracture of the Leg.**—Knoke applies a plaster shoe in treatment of fracture of the lower third of the leg, to insure extension with better effect than the Bardenheuer method permits in this region. Heavier weights can be attached than with any other technic.

### Zentralblatt für Gynäkologie, Leipsic

*April 2, XXXIV, No. 14, pp. 465-496*

91 Unfavorable Influence of Vaginal Lactic Acid Douches in Obstetric Cases. (Ueber Versuche mit Milchsäurespülungen während der Geburt und im Wochenbett.) O. Eisenreich.

92 *Excessive Transitory Hypertrichosis due to Pregnancy. C. F. Jellinghaus.

92. Practically the same article was published in the *Bulletin of the Lying-in Hospital City of New York*, March, 1909.

### Zentralblatt für innere Medizin, Leipsic

*April 2, XXXI, No. 14, pp. 345-368*

93 Modified Technic for Wassermann Reaction. (Verwendung autolysierter Lebern zu Organextrakten für die Wassermann'sche Reaktion.) A. Stühmer.

### Riforma Medica, Naples

*March 21, XXVI, No. 12, pp. 309-336*

94 *The Antimalaria Campaign. (La lotta contro la malaria.) G. Rummo.

95 Compression of the Spinal Cord by a Vertebral Neoplasm; Mechanism and Behavior of the Reflexes. (Compressione del midollo spinale da neoplasma vertebrale. Sulla conoscenza delle vie commissurali midollarie sulla fisio-patologia dei riflessi. Genesi dei reflessi superficiali.) G. Severino and R. Ciauri.

96 Infantile Splenic Anemia with Leishman Parasites. (Kala-azar?) R. Jemma. Concluded in No. 13.

*March 28, No. 13, pp. 337-364*

97 *Action on the Kidneys of Long-Continued Small Doses of Quinin. (Azione della chininizzazione lenta e protratta sullo stato anatomico e funzionale del rene.) L. Ferrannini.

98 *Quinin in Malaria. (La malaria si deve col chinino prevenire o curare?) A. Ceili.

94. **The Campaign Against Malaria in Italy.**—Rummo states that there is considerable discussion in Italy now as to whether quinin should be taken systematically as a preventive in malarial districts, some advocating compulsory prophylaxis by this means. In order to determine whether long-continued preventive doses were injurious, extensive experimental and clinical research has been under way in his clinic, some of which has already been mentioned in The Journal. The results seem to show, he says, that small doses of quinin can be kept up for six months at a time without harm, especially when given by the intermittent method, that is, 1 gm. (15 grains) twice a week; this allows time for recuperation between the doses, and it is also more convenient. This quinin prophylaxis, he declares, should be systematically applied in every hotbed of malaria. He regards persons with latent malaria as the most dangerous for the community and insists on the importance of thorough, persistent treatment in every case until the patient is absolutely cured. He adds that man and the mosquito are not the only elements in malaria; undrained land is the fixed and potent factor which renders all other measures comparatively futile. Until the marshes are drained, he says, the campaign against malaria in Italy will never prove a complete success, and to this end efforts should be mainly directed.

97. **Action of Long-Continued Quinin Doses on the Kidneys.**—Ferrannini reports experimental and chemical research which has demonstrated that quinin in small doses, even continued over months, does not injure the kidneys seriously, but after several months the kidneys seem to yield more readily to external influences, responding more rapidly with albuminuria, etc., to factors which would not affect the sound kidney. Microscopic examination of the organs after several months revealed further certain lesions in the secreting portion of the kidneys. His practical conclusions are that long-continued, small doses of quinin may be regarded as harmless unless administered longer than several months.

98. **Quinin Prophylaxis of Malaria.**—Celli presents various arguments based on clinical and experimental data to sustain his assumption that epidemic malaria is the result of the infected human being plus the anopheles, plus three unknown quantities, $x$, $y$ and $z$—$x$ representing the predisposing or immunizing biologic factors, $y$ the physical, and $z$ the social factors. The great lack at present, he declares, is a means to diagnose latent malaria; the apparently healthy hematozoon-carriers are a frequent source of contagion. He remarks in regard to the discouraging inefficacy of quinin in chronic malaria, that every effort should be made to prevent the disease from getting into this refractory chronic stage. Prophylactic doses of 0.3 gm. (5 grains) of quinin every day will ward off malaria, he says, and at much less expense than it can be cured. He lays great stress on the importance of drainage and cultivation of the land in the malarial districts, and also on the varying severity of malarial infection at different times and in various places, compelling individualization of the dosage. In localities where the malaria is mild, treatment of each patient may suffice, with preventive administration of quinin in the families attacked, but if the epidemic is severe, the quinin prophylaxis should be made general and supplemented by mechanical measures—screening, etc., especially when non-immunes are staying for a short time in malarial regions.

### Norsk Magazin for Lægevidenskaben, Christiania

*March, LXXI, No. 3, pp. 209-320*

99 Causes of Scorbutus. (Om aarsagerne til skjørbug. 1 Fortsatte undersøgelser om enkelte vegetabilske fødemidlers antiskorbutiske egenskaber.) A. Holst and T. Frølich. (II. Experimentelle undersøgelser over infantil skjørbug.) T. Frølich.

*April, No. 4, pp. 321-448*

100 *Conservative Treatment of Coxitis. (Den konservative behandling af koxit.) Sinding-Larsen.

101 Proposed Vaccination Law. (Forslag til ny lov om vakcination.) H. Scharffenberg.

102 Tests of Stomach Functioning. (Funktionel mavediagnostik.) O. Scheel.

103 Recovery after Resection of 10 Ribs in Chronic Tuberculous Pyopneumothorax. P. Bull.

100. **Conservative Treatment of Coxitis.**—Sinding-Larsen concludes his discussion of this subject with the statement that coxitis presents itself in such a variety of forms that no one method of treatment is applicable to all cases. Immobilization during the entire course of the affection is the sovereign measure against pain and also against destructive processes. With this he has been able to retain the functional use of the joint in 10 per cent. of his cases. He does not agree with Lorenz in several points, as he describes in detail; he punctures at the first sign of an abscess and then injects iodoform-glycerin emulsion. An incision may be necessary but resection should be avoided. It is not necessary, he says, to confine the patients to bed.

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## Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

A Text-Book of Pathology. For Practitioners and Students. By Joseph McFarland, M.D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia. Second Edition. Cloth. Price, $5 net. Pp. 856, with 437 illustrations. Philadelphia: W. B. Saunders Co., 1910.

The Diseases of Infancy and Childhood. Designed for the Use of Students and Practitioners of Medicine. By Henry Koplik, M.D., Attending Physician to the Mount Sinai Hospital. Third Edition. Cloth. Price, $5. Pp. 944, with 233 illustrations. Philadelphia: Lea & Febiger [1910].

Proceedings of the American Pharmaceutical Association at the Fifty-Seventh Annual Meeting. Held at Los Angeles, Cal., August, 1909. Also the Constitution, By-Laws and Roll of Members. Cloth. Pp. 1319. Baltimore: American Pharmaceutical Association, 1909.

A Practical Treatise on Fractures and Dislocations. By Lewis A. Stimson, M.D., Professor of Surgery in Cornell University Medical College, New York. Sixth Edition. Cloth. Price, $3. Pp. 876, with 426 illustrations. Philadelphia: Lea & Febiger, 1910

Prescription Writing and Formulary. By John M. Swan M.D., Associate Professor of Clinical Medicine in the Medico-Chirurgical College of Philadelphia. Flexible leather. Price, $1.25 net Pp. 185. Philadelphia: W. B. Saunders Co., 1910.

Twenty-Eighth Annual Report of the State Department o Health of New York. For the Year Ending Dec. 31, 1907. Volume II, Report of the Sanitary Engineering Division. Cloth. Pp 869, with illustrations. 1908.

Duodenal Ulcer. By B. G. A. Moynihan, M.S., Senior Assistan Surgeon at Leeds General Infirmary, Eng. Cloth. Price, $4 net Pp. 367, with 63 illustrations. Philadelphia: W. B. Saunders Co., 1910.

Thirty-Fourth Annual Report of the Managers and Officer of the New Jersey State Hospital at Morris Plains. For th Year Ending Oct. 31, 1909. Paper. Pp. 49.

Fortieth Annual Report of the State Board of Health o Massachusetts. Public Document No. 34. Cloth. Pp. 876. Boston. 1908.

My Personal Experience with Tuberculosis. By Will M Ross, Stevens Point, Wis. Paper. Price, 50 cents. Pp 64. 191

# The Journal of the American Medical Association

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## Original Articles

# ACUTE PERFORATIONS OF THE HOLLOW VISCERA*

BYRON B. DAVIS, M.D.
OMAHA

Probably no calamity which may befall calls for more promptness in treatment than the several perforative lesions which frequently involve the gastro-intestinal tract. Every man engaged in the practice of medicine should have clearly in mind the differential points in the diagnosis of these conditions as well as clear-cut ideas about treatment. Prompt diagnosis and prompt treatment are necessary if the life is to be saved.

Perforation from gastric and duodenal ulcers, perforations of the gall-bladder and of the appendix, and typhoid perforations are the type of all and will be the ones to be considered at this time.

### SYMPTOMS OF GASTRIC PERFORATIONS

Acute perforations of round ulcers of the stomach are practically always accompanied by serious and well-marked symptoms. First, there is usually sudden sharp intense pain in the epigastric region, so sudden and so intense that it is not a rare occurrence for the patient to fall to the floor in a faint. This very intense pain is usually short in duration, but well-marked shock is present for a variable length of time, ranging from an hour to several hours. The ordinary manifestations of shock are found, a cold clammy skin, paleness of the face and lips, restlessness, a thready pulse and a subnormal temperature.

Within a few hours tenderness over the abdomen becomes general, perhaps slightly greater over the epigastrium, and abdominal rigidity is marked and boardlike. When the rigidity is first manifest the abdomen is usually flat, but it soon becomes distended and tympanitic and vomiting is likely to occur, the typical vomitus of peritonitis. The pulse has now become fuller and more rapid and as the peritonitis progresses it becomes still more rapid and more feeble.

The symptoms given by Mayo Robson are as follows:

> A sudden sharp abdominal pain. . . . Almost immediately the expression of the face changes to one of anxiety and great distress; the extremities become cold and clammy and the face blanched; the respirations are usually shallow and quick, and the pulse rapid and almost imperceptible at the wrist; vomiting may occur. . . . As a rule the patient rallies and the initial symptoms of shock pass off to a certain extent. There is then a great complaint of thirst which cannot be satisfied and the urine is scanty and high-colored.

The recti are rigid, the whole abdomen is board-like, at first retracted, later distended with gas. Liver dullness usually absent. In about 90 per cent. of the cases a history of previous stomach trouble can be elicited.

### TREATMENT OF GASTRIC PERFORATION

Total abstinence from water should be prescribed, as water will only increase the peritoneal soiling. Cardiac stimulants should be used hypodermatically and if the shock is very severe all the usual methods to combat shock. Even on strong suspicion laparotomy should be performed since it has been shown that the earlier the operation after perforation the better the results. Mayo Robson and Moynihan have compiled a table of the mortality following operation in 133 cases.

| Operated. | Mortality Per Cent. |
|---|---|
| Under twelve hours | 28.5 |
| From twelve to twenty-four hours | 63.6 |
| From twenty-four to thirty-six hours | 87.5 |
| From thirty-six to forty-eight hours | 100.0 |
| Over forty-eight hours | 51.5 |

It is seen in this table that the mortality increases rapidly up to forty-eight hours when it becomes 100 per cent. Operations done later than this show less mortality, owing, no doubt, to the well-known fact that some of these cases have only a localized infection, becoming walled off and these occasional favorable cases are the ones in which the patient is most likely to be in a condition after two days to warrant an operation.

Sinclair Kirk, quoted by Robson, reports ideal results. He gives eleven cases in all of which the patient recovered. Eight of the patients were operated on within five hours, one seven, one ten and one twenty hours after perforation. It is now generally conceded by those with the best experience that the operation should be done with the greatest promptness possible compatible with good and thorough work regardless of the shock present at the time. Death is not as likely from shock as from peritonitis if operation waits on shock.

As regards technic, simple closure of the perforation by two or three superimposed purse-string sutures of linen thread is the best. The subject of drainage is important. If there is almost no peritoneal soiling it is sometimes advisable not to drain. As a rule pelvic drainage through a stab-wound above the pubes, by means of a rubber or glass tube, and with the patient in the exaggerated Fowler position is most likely to meet with good results. This should also be followed by the use of normal salt solution per rectum after the Murphy method, and ice over the abdomen, nutritive enemas and entire gastric abstinence for from three to seven days.

The question whether, after closure of a gastric perforation, it is advisable to perform gastro-enterostomy has been much in the foreground during the past few years. Often ulcers are multiple and secondary perforations may occur, as they have done in many instances. Robson, in Keen's "Surgery" gives the arguments in favor of gastro-enterostomy under such circumstances as follows:

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* Read before the Western Surgical and Gynecological Association, Omaha, Dec. 19, 1909.

1. Other ulcers will be cured by the operation.
2. If a second ulcer is on the point of perforation such perforation will probably be prevented, as tension of the stomach walls will be avoided.
3. After gastro-enterostomy more secure healing of the sutured ulcer is likely to occur, and there will be less likelihood of the stitches giving away.
4. It diminishes the risks of hematemesis occurring after operation.
5. It enables saline aperients to be given shortly after operation and so secures more efficient drainage of the peritoneal cavity.
6. It permits earlier feeding than would otherwise be the case.
7. If the ulcer is at the pylorus it prevents the danger of stenosis.

### OTHER PERFORATIONS

In perforating ulcer of the duodenum we have the same acuteness of the onset, but the sharp primary pain is a little more to the right. If a history of previous gastric symptoms is obtainable, the pain is found to have come on two and one-half hours to four hours after eating instead of one to two hours as in gastric ulcer. The course of the case, the need for prompt operation and in general the technic of the operation and the indications for or against gastro-enterostomy are essentially the same as have been outlined for perforating ulcers of the stomach.

Perforations of the gall-bladder are fortunately rare. The sudden pouring out of the contents of a distended gall-bladder into the unprepared peritoneal cavity brings about intense shock which may prove immediately fatal. Usually the inflammatory trouble has already produced pericystic adhesions so that the general peritoneum is protected against acute perforations. When they occur the operation should usually include removal of the gall-bladder.

Acute perforations of the appendix vermiformis are exceedingly frequent, more so, I am convinced, than is generally supposed. Here too the general peritoneal cavity is usually protected by adhesions before the perforation occurs resulting in a localized abscess. The omentum here serves a most useful purpose, surrounding and becoming adherent to the inflamed appendix.

Unfortunately the infection of the external peritoneal covering of the appendix does not precede perforation, at least not soon enough to induce life-saving adhesions. In these cases there is immediate shock of greater or less degree and a rapidly following general peritonitis. Operation before time for the onset of peritonitis gives the best results. If not soon enough for this, the newer the peritonitis the better. In general it may be said that the mortality increases rapidly with the development and progress of the peritonitis.

Every case of typhoid fever is liable at any moment, especially during the latter part of the second and during the third week, to become a very urgent emergency surgical case by the occurrence of a perforation. It is doubtful if we have even yet fully realized the importance of perforations as a mortality factor in typhoid fever, or the number of lives that might be saved by prompt diagnosis of this calamity and timely operation. Osler several years ago stated it as his opinion that one-third of all the deaths in typhoid fever were due to perforations. When we consider that upward of 50,000 die annually of typhoid fever in the United States and that over 16,000 of these deaths may reasonbly be attributed to perforations, it gives the discussion of this subject a dignity which merits the best thought and best effort of all engaged in practice.

I am convinced that every one treating a case of typhoid should have constantly before him the liability of the occurrence of perforation and that he should be on the alert to recognize it when it occurs and to act promptly should the emergency arise. The nurse should be instructed that the occurrence of sudden and unusual pain in the abdomen, especially in the right lower quadrant, is a danger-signal and calls for immediate notification of the attending physician. She should also be instructed to note the pulse and temperature of the patient at half-hourly intervals after the occurrence of the acute pain. She should also be on the alert for other manifestations of shock as pinched features, cold extremities, clammy skin, the characteristic restlessness, etc., and the physician should be informed of the results of these observations as soon as possible that he may have all the aids to diagnosis at hand. Often the subnormal temperature and other shock symptoms are very transitory and by the time the physician can reach the house they are gone. By this time it is usual for the abdominal muscles, especially over the site of perforations, to become somewhat more rigid than normally, the rigidity increasing in intensity with the advent of peritonitis.

It may be stated that the severer the type of the fever and the worse the physical and mental condition of the patient at the time of the perforation the more difficult will the diagnosis be and the more probable will the occurrence be overlooked. Definite symptoms such as have been sketched, even though the diagnosis appears to be in some doubt, call for immediate abdominal exploration. In cases of doubt, if operation is delayed until positive diagnosis of developing peritonitis is made, the mortality is more than doubled. Thus far I have found perforation in every case in which I have operated and must confess to have lost some patients because of fear of opening an abdomen needlessly.

The mortality following perforations of typhoid ulcers without operation is said to be from 95 per cent. up to 99 per cent. by different observers. The mortality of cases operated promptly after the occurrence of perforations has been given by several at less than 50 per cent. It must be acknowledged that at the period these operations are usually done the mortality is very high, many reporting 75 to even 100 per cent. This mortality is not necessary if operation is done before peritonitis begins to develop, and I expect to live to see the time when prompt operation is the rule and the mortality not more than 10 to 20 per cent.

In all the operations for perforations the time element of the operation itself is of the utmost importance. "Quick in and quick out" should be the maxim. Labored and prolonged technic will kill more than it will save. The aim should be to stop the leak by simple suture and establish peritoneal drainage by a large tube through a stab-wound over the pubes and its end resting in the cul-de-sac of Douglas in cases in general. In rare instances it may be found that the leakage has been so slight and the soiling so localized that drainage may be dispensed with. It is also my opinion that we should be guided always by the time-worn maxim, "When in doubt drain."

### CONCLUSIONS

The one or two important points it is desired to accentuate are the following:

1. In every acute abdominal pain, the possibility of perforation of some part of the alimentary canal should be considered, and the case should not be dismissed as trifling till perforation has been definitely excluded.

2. In every case of perforation there is an absolute indication for immediate operation.

3. If the symptoms point rather definitely to perforation, but the diagnosis is in some doubt, exploration is safer than delay.

4. Shock is no contraindication to operation.

5. The operation should be as expeditious as possible, only what is necessary being done and artistic ideals being left to less urgent cases.

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# NOTES ON THE PRESENT STATUS OF NITROUS OXID IN SURGERY

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In response to a request by Dr. Mumford, the Chairman of the Committee on Anesthesia of the American Medical Association, Dr. Charles A. Powers of the committee has asked me to give late data on the use of nitrous oxid in surgery. In doing this it is impossible to omit reference to the excellent papers presented to the Section on Surgery at its session of 1908.

In 1868 Andrews, of Chicago, first used a combination of nitrous oxid and oxygen. It is interesting to note that the French were the first to consider nitrous oxid as an anesthetic for long operations. In 1880 Paul Bert published an article[1] on the use of nitrous oxid in protracted surgical operations. In the same year Boddaert published the report of the commission on a mixture of nitrous oxid and oxygen.[2] In the last ten years it has tended to become more prominent as an anesthetic in long operations. Bevan and Haggard have done much to promote its general use.

Muller,[3] in 1905, investigated nitrous oxid in a very thorough manner. He states that death occurs by apnea in man in from two to four minutes by straight inhalations of nitrous oxid. He asserts that the gas is absorbed through the lungs into the blood, and that it is transported to the central nervous system. The ganglion cells take up some substances from the blood and there is a physical change in the cholesterin-lecithin mixture, resulting in paralysis of the ganglion and central nerve cells. It affects the colored races more rapidly than the white, and women are more easily affected than men. In the higher latitudes it is less deadly than near the equator.

## PATHOLOGY

During anesthesia there is a hyperemia of the internal organs and the work of the stomach, intestines and liver is hindered. Muller experimented on animals —dogs and guinea-pigs. He would anesthetize for about thirty minutes and wait twelve to twenty hours and repeat. This might be repeated once or twice more, so that every animal had from one to four narcoses. On examination he found drops of fat in the ganglion cells (this occurs after all anesthetics and soon disappears). Fat collections were found in the cells of the brain capillaries, extending to the larger vessels. These were found in the cells of the intima and media; between the cells masses of fat were found, which thicken the vessel walls. If they undergo involution through degeneration of the cells, however, a scar formation takes place, with rarefaction of the vessel wall, giving rise to aneurisms and brain hemorrhage. The heart was occasionally found dilated after long anesthesia and the heart muscle lost its transverse striation, the fibers were clouded and numerous fat droplets bipolar to the nucleus were found.

*Kidneys.*—The urine was found to contain albumin after narcosis. In the epithelium of the convoluted tubules fat was found in considerable quantities. There was fat metamorphosis also in the tubuli recti, but no fat was found in the glomeruli. There was marked hyperemia of the kidney vessels.

*Liver.*—Fat was observed in large and small droplets, mostly in the periphery of the acini; only slightly in the center; in the periphery there was degeneration and necrosis of the cells. There was marked hyperemia and some hemorrhage of the liver vessels and in the parenchyma.

*Lungs.*—Death occurs by apnea through paralysis of the respiratory center. In early narcosis there is stertorous breathing caused by the larynx. Muller thinks the cyanosis due more to a mechanical hindrance than to a lack of oxygen in the blood and over amount of carbon monoxid. Dilation of the pupils and swelling of the tongue occurred when the anesthesia was too deep. There was a stimulation of mucus and salivary secretions. Fat metamorphosis was observed in the epithelium cells of the bronchial tract, and fat droplets in the alveolar cells.

Holden believes that there is an increased tendency to bleeding in nitrous oxid anesthesia. He saw severe lung hyperemia, and he holds that all patients having any diseases of the lungs, or ill with a hemorrhagic diathesis, are unsuitable for nitrous oxid narcosis.

Hilliard,[4] in 1905, published an article entitled "Meteorological Conditions As Affecting Oxid Anesthesia." He stated:

> 1. When the barometer is high (30° or over) the induction of gas anesthesia is longer, there is less cyanosis and jactitation, the gas can be pushed to the abolition of the conjunctival reflex without undue cyanosis.
>
> 2. When the barometer is low it is useless to try to abolish the conjunctival reflex, because the patient becomes so deeply cyanosed and jactitates so excessively. With an increase in the time of induction anesthesia the duration of available anesthesia also increases, and with a pressure of 30 inches of mercury the anesthesia is quiet and lasts nearly as long again as when it falls below 29 inches. When one gives nitrous oxid during a fall in the barometric pressure cyanosis occurs early and in less than a minute jactitation will become a prominent feature while the pupils will only have begun to dilate; this, although the breathing is stertorous and the available anesthesia consequently short.

Bevan[5] has used nitrous oxid rather extensively in major operations. In his paper read at the fifty-eighth session of the American Medical Association in 1907, he discussed the use of this agent and gave a list of the operations in which he has employed it. In a recent communication he states that he is using it constantly in major operations. He says that it is contraindicated in lung conditions.

At the meeting of the surgical section of the American Medical Association last year, Hamburger and

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[1] De l'emploi du protoxide d'azote dans les operations chirurgicales de longue durée, Progrès méd., 1880.

[2] Rapport de la Commission chargée de l'examination du travail de M. Lehant conservant l'emploi comme agent anaesthétique d'un mélange de protoxide d'azote et d'oxygène sans pression, Bull. de l'Acad. Roy. de méd. de Belge, Brussels, 1880.

[3] Muller: Die Stickstoffoxydulnarkose. Berl. med. Wchnschr., vi, 178; Charter: Administration of Nitrous Oxid and Oxygen, Brit. Dent. Jour., xxvii, 443.

[4] Hilliard: Meteorological Conditions as Affecting Nitrous Oxid Anesthesia, Brit. Dent. Jour., xxvi, 598.

[5] Bevan, Arthur D.: Nitrous Oxid as an Anesthetic in Major Surgery, THE JOURNAL A. M. A., July 20, 1907, p. 197; Bevan and Favill: Acid Intoxication and Late Poisonous Effects of Anesthetics, THE JOURNAL A. M. A., Sept. 2, 1905, p. 691.

Ewing[6] reported their experiments on the effect of nitrous oxid on the blood. They examined the blood for hemoglobin before anesthesia, during anesthesia, immediately after consciousness returned, and twenty-four hours later. They found:

1. An increase of 13 per cent. of hemoglobin during anesthesia.
2. A fall of 6.5 per cent. immediately after the mask was removed.
3. The fall reduced to 1.6 per cent. twenty-four hours later.

They then experimented to find the relation of the erythrocytes to this change in hemoglobin. Their conclusions were the following:

1. There was little change in the relations of the red blood cells to the hemoglobin.
2. The fall in hemoglobin noted immediately after anesthesia was not followed closely by a corresponding fall in the erythrocyte count, but that there was a slight increase of erythrocytes which persisted.
3. There was a slight increase in the hemoglobin contents per cell and no demonstrable change in the number of red blood cells.

They concluded that this showed there was no oligocythemia due to hemolysis and no persisting oligochromia or anemia.

Summarizing the series, Hamburger and Ewing found:

1. The rise and fall of hemoglobin reading observed chemically holds true in experimented animals.
2. The return to normal occurs within two hours after anesthesia.
3. There is no accompanying rise and fall in erythrocytes.
4. This change does not correspond exactly to the hemoglobin change, as shown by the high blood decimal during anesthesia and the low quotient immediately afterward.
5. The percentage volume undergoes little or no change.
6. The specific gravity increases and decreases hand in hand with erythrocyte change.
7. There is a post-narcotic leucocytosis closely following the erythrocyte curve.

William D. Haggard,[7] in his excellent paper of last year, analyzes briefly the signs of nitrous oxid anesthesia as follows:

1. Quick, deep and stertorous respiration, slightly irregular.
2. Increased pulse rate.
3. Dilatation of the pupil.
4. Absence of eye reflexes.
5. Fixed eyeballs.

The symptoms due to asphyxia are:

1. Cyanosis in various degrees.
2. Jactitation.
3. Clonic movements of the extremities.

He states that when proportionately too much gas is given respiration is irregular, quick and stertorous; the eyeballs are turned upwards with the lids widely open and the pupil dilated. Cyanosis is then extreme, the pulse thready and rapid. Continuation of this, with exclusion of air, causes respiratory failure from muscular spasm, although the heart continues to beat.

Haggard classifies the advantages and disadvantages of nitrous oxid anesthesia as follows:

### ADVANTAGES

1. Quickness of action.
2. Absence of uncomfortable sensations to the patient.
3. Almost immediate recovery.
4. Absence of lung complications.
5. Absence of danger to the kidneys.
6. Absence of post-anesthetic vomiting.
7. Improbability of subsequent degeneration of the kidneys, liver and heart.

### DISADVANTAGES

1. It is not suitable for fat, plethoric and alcoholic patients.
2. Its zone of anesthesia is within narrow limits.
3. Lividity and occasional talking occur.
4. It needs an accomplished anesthetist; the apparatus is not always easy to obtain.
5. The cost is not always inconsiderable.

The contraindications for its use are:

1. It should not be used for patients with distended hearts or for those with extremely bad hearts, whether with valvular or myocardial disease.
2. It is not suitable for young children on account of their fear of the mask.
3. It should not be used in cases of narrow or abnormal air passages, enlarged lymph nodes, goiters, or enlarged tonsils and adenoids.
4. It is not useful in the lithotomy position, especially in cases of hemorrhoids, as the patients tend to straighten out their legs.

Buckler[8] uses the apparatus on the same principles as the Hewitt inhaler, with certain modifications suggested by Dr. Joseph Gwathmey.[9] He thinks that the sole objection to nitrous oxid and oxygen is that patients on regaining consciousness are more sensitive to pain than those who are partly dulled for hours as in ether anesthesia. This can usually be overcome by giving a quarter of a grain of morphin hypodermatically just before the gas is administered.

As a preliminary to ether Buckler believes that nitrous oxid has no equal; it prevents the coughing, holding of the breath, swallowing and later, the stage of preliminary excitement.

The contraindications for nitrous oxid anesthesia, according to Ream,[10] are atheromatous and arteriosclerotic conditions; although he thinks that with double diligence and oxygen these cases may be safely anesthetized. He found that sprouting seeds refused to grow when placed in nitrous oxid, but resumed their growth when pure oxygen was added. He is a firm believer in the use of nitrous oxid in obstetrical practice because one may obtain analgesia and even anesthesia without muscular relaxation or disturbance of the normal course of labor. Ream states that uterine contractions are not in the least interfered with when the agent is used in the following method:

On approach of labor pains the patient is permitted to inhale three or four breaths to place her in a state of analgesia; the inhaler is then removed and the process is repeated as often as is necessary. Should it be desired to retard labor a small percentage of chloroform may be added. Owing to the rapidity of the action of the gas and its rapid elimination it stands foremost as an obstetrical adjuvant.

Gwathmey uses the Hewitt inhaler as modified by himself. He gives morphin sulphate before operation and warms the gas. By experiments on animals he has demonstrated that nitrous oxid and oxygen are most valuable for weak, anemic men and the majority of women.

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[6] Hamburger and Ewing: The Blood Changes Incident to Surgical Anesthesia, The Journal A. M. A., Nov. 7, 1907, p. 1586.

[7] Haggard, W. D.: Nitrous Oxid Anesthesia, Report of the Anesthetic Committee, The Journal A. M. A., Nov. 7, 1908, p. 1576.

[8] Buckler, H. W.: The Use of Nitrous Oxid and Oxygen Alone, and in Combination with Ether as Anesthetics in General Surgery, Maryland Med. Jour., April, 1908.

[9] Gwathmey: Mixed Narcosis, The Journal A. M. A., March 28, 1908, p. 1022; Nitrous Oxid Gas and Oxygen as an Anesthetic Agent, with Notes on the Value of Warming the Vapors of Ether and Chloroform, read before the Academy of Medicine, New York, May 21, 1908.

[10] Ream: Nitrous Oxid and Oxygen in General Surgery, The Journal A. M. A, Sept. 12, 1908, p. 907.

# A STUDY OF ACID-FAST AND ACID-SEMIFAST TUBERCLE BACILLI (HUMAN)

## THEIR RELATION IN PURE CULTURES*

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In the examination of any sputum, observers have agreed that it is the greenish-yellow or caseous-looking masses that should be selected. When in such particles acid-fast bacilli can be demonstrated, after they have been spread, fixed and stained according to methods recommended in standard text-books, such bacilli are generally considered tubercle bacilli, and the sputum is said to come from a patient suffering from tuberculosis of the respiratory tract.

This, however, has been questioned by some observers, who assert that acid-fast bacilli demonstrable in the sputum are not always pathognomonic of tuberculosis of the respiratory tract. If so of what are they significant? Why the difficulty of demonstrating tubercle bacilli in the sputum of incipient, some moderately advanced, and very few advanced cases of clinical pulmonary tuberculosis?

Repeated careful examination of an average of twenty sputa daily for a period of about one year in the clinical laboratory of the Philadelphia Hospital, gave considerable difficulty in demonstrating tubercle bacilli in such cases.

In cases in which the clinical history was positive, the sputa were repeatedly examined by the spread method, and in many cases failed to demonstrate acid-fast bacilli. Such sputa were then treated with anti-formin, which destroyed all other bacteria. The sediment was then obtained by centrifugalizing, and repeatedly washed with sterile distilled water. The acid-fast bacilli, if present, were thereby obtained in greater concentration. Such sediments were spread on clean glass slides, dried and fixed by passing through the flame. New slides were always employed. These were kept in concentrated sulphuric acid, washed in distilled water, and kept in 95 per cent. alcohol, for a few hours before using. The staining methods were always uniform in time; the slides were fifteen minutes in carbol-fuchsin, and decolorized in Pappenheim solution for a similar length of time.

Variations in staining properties of the tubercle bacilli were noted and carefully studied. It was observed that the longer the slides were kept in the decolorizing fluid (Pappenheim), the more marked were the variations in the acid-fast properties? Such tinctorial change in tubercle baccilli have been observed by Dr. Rosenberger in his studies of acid-fast bacilli in the sputum, feces and in the blood, and have been reported by him on several occasions.

In several cases in which relation of acid-fast to acid-semifast bacilli was observed in the sputum, we had the opportunity of obtaining tissue from the lungs at autopsy. Small pieces of such tissue were crushed, and macerated in antiformin. Spreads were made from the sediment obtained from these tissues, and these showed a relationship in the number of acid-fast to acid-semifast similar to that found in the sputum.

Variations in morphology and in staining properties of tubercle bacilli in the sputum led to a study of the organisms with antiformin, pure culture being employed as a control. In this work, as in the previous study, carbolfuchsin and Pappenheim solution were used. Desiring to ascertain whether a similar relationship in the number of acid-fast to acid-semifast tubercle bacilli could be obtained by using decolorizing agents other than Pappenheim solution, we took such as were recommended by standard text-books and authors. Old and young cultures were obtained through the kind assistance of Dr. Rosenberger, from Mulford's Biologic Laboratory, from the Veterinary Department of the University of Pennsylvania and from growths obtained by inoculating glycerinated slants with the sediment obtained by treating tuberculous sputum with antiformin. The spreads from such cultures being left in the various decolorizing agents for definite but variable lengths of time, a relationship in the number of acid-fast to acid-semifast tubercle bacilli was noticed. This relationship varied with the age of the culture, the strength of the decolorizing agent and the length of time which it was employed.

Dissatisfied with conclusions reached because of the indefinite time for which the various decolorizing reagents used were recommended, we determined to take these decolorizing agents in definite strength, and to employ these for definite lengths of time. For this work, we obtained cultures from various reputable laboratories. Subcultures on glycerinated agar were made and these were studied when they attained an age varying from two to four weeks.

The following was the technic employed: New slides, as we have already stated, were used. A drop of sterile distilled water was placed on each slide by means of a sterilized platinum loop. Spreads were made with the utmost care to ensure as much uniformity of distribution as possible. These were fixed by passing three times through the flame, and placed in jars containing carbolfuchsin. These jars were rinsed with pure sulphuric acid and washed in distilled water before using. They were then placed in a water bath which was kept at a constant temperature of 120 F. for half an hour. The slides were removed and placed in their respective decolorizing reagents for definite lengths of time. The stains as well as the decolorizing agents were freshly prepared before using, and the time during which the slides were decolorized was carefully noted.

The technic of counting the bacilli was as follows: A circular cover glass was divided into squares, and etched by means of hydrofluoric acid. Twenty squares in which the bacilli were uniformly distributed were counted, and those squares where the bacilli showed clumps were discarded. On the average 100 bacilli were counted, and the results obtained by employing the various decolorizing agents for the varying but definite lengths of time were charted. Those bacilli that were distinctly red were called resistant; semiresistant those that were pink in color or almost decolorized; and those that were colorless or blue in color, were called decolorized. The blue color was due to the fact that the slides were counter-stained in Loeffler's methylene blue for five minutes, after they were removed from their respective decolorizing agents.

Five cultures were studied:

1. A sixteen-year-old culture (U. S. Department of Animal Industry).
2. A four-year-old culture (Parke, Davis & Co.).
3. A two-year-old culture (U. S. Department of Hygiene).
4. A three-months-old culture (Mulford's Biologic Laboratory).
5. An eleven-day subculture from four-year-old culture (Parke, Davis & Co.).

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* From the Clinical Laboratory of the Philadelphia General Hospital; read before the Pathological Society of Philadelphia, Feb. 24, 1910.

The following were the acids employed in their varying strength, and time:

1. Nitric acid 5 per cent. in alcohol 95 per cent. for 2, 5, 10, 15 minutes.
2. Nitric acid 10 per cent. in alcohol 95 per cent. for 2, 5, 10, 15 minutes.
3. Nitric acid 30 per cent. in alcohol 95 per cent. for 1, 2, 5 minutes.
4. Hydrochloric acid 3 per cent. in alcohol 95 per cent. for 2, 5, 10, 15 minutes.
5. Aqueous and alcoholic (95 per cent.) sulphuric acid 5 per cent. for 5, 10, 15 minutes.
6. Aqueous and alcoholic (95 per cent.) sulphuric 20 per cent. for 2, 5, 10, 15 minutes.
7. Pappenheim's solution for 5, 10, 15, 30 minutes.
8. Sweet spirits of niter for 1, 2, 5 minutes.
9. Glacial acetic acid for 1, 2, 5 minutes.

At the reading of this paper before the Philadelphia Pathological Society an objection was raised to the use of the strong nitric acid in the 95 per cent. alcohol. As we have already stated, the decolorizing fluids were freshly prepared before using, and the 30 per cent. nitric acid in alcohol was controlled by an aqueous solution of the same followed by alcohol and we found that in the fresh state they gave the same results.

A count of the number of the acid-fast, acid-semifast and decolorized forms in the eleven-day-old subculture from the four-year-old culture of Parke, Davis & Co., was not taken owing to the scarcity of the very resisting and the semiresisting forms.

TABLE SHOWING PROPORTION OF RESISTING, SEMIRESISTING AND DECOLORIZED FORMS *

| | | 16-Year Culture | | | 4-Year Culture | | | 2-Year Culture | | | 3-Month Culture | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Acid Used. | Per Cent. | Very Resisting. | Semi Resisting. | Decolorized. | Very Resisting. | Semi Resisting. | Decolorized. | Very Resisting. | Semi Resisting. | Decolorized. | Very Resisting. | Semi Resisting. | Decolorized. |
| Nitric | 5 | 74 | 22 | 4 | 49 | 41 | 10 | 13 | 33 | 54 | 32 | 15 | 53 |
| Nitric | 10 | 73 | 20 | 7 | 34 | 53 | 13 | 14 | 27 | 59 | 34 | 26 | 40 |
| Nitric | 30 | 31 | 45 | 24 | 25 | 51 | 24 | 13 | 35 | 52 | 19 | 4 | 77 |
| Hydrochloric | 3 | 50 | 34 | 16 | 14 | 53 | 33 | 34 | 32 | 34 | 40 | 24 | 36 |
| Aqueous Sulphuric | 5 | 73 | 13 | 14 | 29 | 27 | 44 | 27 | 28 | 45 | .. | .. | .. |
| Aqueous Sulphuric | 20 | 17 | 51 | 32 | 34 | 46 | 20 | 14 | 26 | 60 | .. | .. | .. |
| Alcoholic Sulphuric | 5 | 25 | 49 | 26 | 44 | 33 | 23 | 23 | 27 | 50 | 36 | 17 | 47 |
| Alcoholic Sulphuric | 20 | 23 | 50 | 27 | 19 | 33 | 48 | 27 | 21 | 52 | 28 | 27 | 45 |
| Pappenheim | .. | 42 | 36 | 22 | 30 | 42 | 28 | 24 | 30 | 46 | 61 | 27 | 12 |
| Sp. æth. nitrosi | .. | 33 | 32 | 35 | 19 | 27 | 54 | 13 | 23 | 64 | 40 | 28 | 32 |
| Glacial acetic | .. | 35 | 44 | 21 | 17 | 48 | 35 | 24 | 32 | 44 | 2 | 20 | 78 |

* This work was controlled by the various modifications of the Gram method, such as the Much, Michaelides and Nicolle methods; and these gave results similar to those obtained by the authors just mentioned.

In order to reduce the bulk of charts thus obtained, we combined the results obtained under each acid for the variable lengths of time, and obtained the approximate percentages of the numbers of bacilli decolorized, resistant, and semiresistant with a given decolorizing agent for an average length of time. The table gives the approximate results thus obtained.

About 2 c.c. of an emulsion of each culture were injected respectively into five guinea-pigs of about equal weight. At the end of five weeks, each of the pigs showed gross tuberculous lesions. Most marked however, was the contrast in the lesions presented by the pigs inoculated with the sixteen-year-old, and the eleven-day-old culture. In the former (sixteen-year-old) only a few mesenteric glands and the point of inoculation were tuberculous; while the latter (eleven-day-old) the peritoneum was studded with tubercles, the mesenteric, and the inguinal glands were of the size of a bird's egg, and the liver, spleen and uterus were riddled with tubercles. The tubercle bacilli were isolated in pure culture from each of the pigs.

Various observers, such as Marmorek, Michaelides, Ferran, Fontes and Terebinsky, employing the Ziehl-Neelson method, find acid-fast and acid-semifast tubercle bacilli. The latter they place in the same class as the acid-fast. Much[1], Michaelides[2] and Fontes[3] have devised certain modifications of the Gram stain in order to be able to bring out these acid-semifast forms. Even with these modifications acid-semifast tubercle bacilli are demonstable in pure culture, though they are comparatively much more reduced in numbers.

Much, in his studies of tuberculous pus which was sterile to ordinary culture media, finds forms of the tubercle bacilli not demonstrable by the Ziehl method, but these were demonstrable by cultural methods. Ferran, working independently, finds forms of tubercle bacilli similar to those found by Much. Terebinsky[4] states that at times in pure culture and in infectious pus, one can see tubercle bacilli not equally acid-resistant, and that it is not rare to find isolated ones that are not acid-resisting. He is of the opinion that not only are young cultures non-acid-resisting, but that old cultures may lose their acid resistance under varying conditions.

Marmorek states that in young cultures no acid-resisting bacilli are found. Unna asserts that these bacilli are dead. Marmorek, however, shows that not only are these acid-non-resisting forms living, but that they are virulent. This is entirely in accord with the researches of DeSchweinitz and Dorset.

The investigations carried out by the observers just quoted are entirely in accord with the chemical analysis of the tubercle bacillus. According to the analysis made by Hammerschlag,[5] DeSchweinitz and Dorset[6] and others, the staining property of the tubercle bacillus is due to a highly fatty substance, which in itself gives the acid-fast character to the bacillus. (Fontes) According to chemical analysis, this substance is in greater abundance in older than in younger cultures, and is very scanty in very young cultures. It is to this scarcity of the fatty substance that the lack of acid resistance is attributed.

### CONCLUSIONS

Considering the researches of these eminent men, and taking the results obtained in our work, employing old and young cultures, we consider the following points worthy of further investigation:

1. The acid-fast property of the tubercle bacillus increases with the age of the culture.

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[1] Much, Hans: Ueber die nicht saurefesten Formen des Koch'schen Tuberkelbazillus, Beitr. z. Klin. d. Tuberk., 1907, viii, 357, 368.

[2] Michaelides, N. A.: Ueber eine durch die Ziehl-Färbung nicht darstellbare Form des Tuberkelbazillus, Beitr. z. Klin. der Tuberk., 1907, viii, 79.

[3] Fontes: Untersuchungen über die chemische Natur der den Tuberkelbacillen eigenen Fett und Wachsarten und über das Phänomen der Saureresistenz, Centralbl. f. Bacteriol., Erste Abt., 1909, xlix, 317.

[4] Terebinsky, W. J.: Sur la signification des formes non acido-résistantes du bacille tuberculeux; leur rapport avec le bacille de la lèpre. Ann. de dermat. et de syph., 1908, Series 4, ix, 503.

[5] Hammerschlag: Chemische. Untersuchungen über Tuberkelbacillen, Centralbl. f. klin. Med., 1891, xli, 9.

[6] DeSchweinitz and Dorset: Composition of the Tubercle Bacilli Derived from Various Animals, Centralbl. f. Bakteriol, 1902, xxxii, 186.

2. In old cultures, isolated bacilli are found which are non-acid-resisting, and these bear a relationship to the acid-resisting forms.

3. The number of acid-non-resisting forms and the acid-semiresisting forms are relatively increased in young cultures.

4. In very young cultures, mostly acid-non-resisting, more semiresisting and very few acid-resisting forms are present.

5. The semiresisting forms when removed from the decolorizing fluid, and placed in a solution of methylene blue of definite strength, will gradually assume that color in proportion to the time that the slide was left in.

6. No single decolorizing agent at present employed will stain uniformly all bacilli that cause demonstrable tuberculous lesions.

7. No decolorizing agent at present employed in the examination of any tuberculous material is efficient enough to bring out the presence of acid-non-resisting forms. This is brought out by the work of Much, Terebinsky, Michaelides, Ferran, Duval and others.

8. Acid-non-resisting forms have been demonstrated in tuberculous lesions of the lymphatic system by Much, Terebinsky and Duval; also in cavities of the lung, and in sputum by eminent observers. Such forms were demonstrated by cultural methods when they were not demonstrated by staining methods.

In concluding, we wish to express our thanks to Dr. Rosenberger for the valuable suggestions that he had made, and for the deep interest that he had taken in the work throughout its entirety.

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# THE OBLITERATION OF THE CRAVING FOR NARCOTICS

## REVIEW OF THE ARTICLE OF DR. ALEXANDER LAMBERT

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An article with the title "The Obliteration of Craving for Narcotics" appeared in THE JOURNAL, Sept. 25, 1909, and at a later date in a number of other journals; and the same article was reviewed to some extent in the Department of Therapeutics in THE JOURNAL, March 5, but there is so much in Dr. Lambert's article which is calculated to lead those who attempt to follow his teachings into serious error that I deem still further comment pertinent.

His article seems to be based on the assumption that the essential nature of the narcotic drug addictions is an appetite or "craving" for narcotics, and that this appetite or craving can be obliterated or overcome by an antidote or "specific." For such a "specific" he proceeds to give a formula.

This assumption is erroneous and the remedy proposed is not a specific. The demand of the system of the drug habitué, his inclination to take it, his desire for repeated doses of his particular drug, spring from a physical condition and not from a mere appetite such as the word craving ordinarily would be understood to imply.

The habitual use of a narcotic drug brings about marked functional derangement of every organ in the body. The bowels are habitually constipated, the portal system is engorged, digestion is deranged, the heart is overworked, the motor function of the bowel is greatly impaired, the activity of all the secreting and excreting organs is diminished, the body is poorly nourished and the entire system is saturated with the products of tissue disintegration; in fact, an intense toxemia exists. The nervous system is made to tolerate the presence of this toxic matter by keeping it constantly benumbed by the primary effects of repeated doses of the narcotic.

The urgent demand for a repetition of doses of the narcotic, the so-called craving, is due mainly to the effects of toxic matter on the nervous system. If this toxic matter is removed from the system, and just in proportion as it is done, the demand for the narcotic ceases, the so-called craving disappears, without the intervention or aid of any "specific" remedy. That Dr. Lambert obtains the results he records I do not question, but I am sure that he gives more credit to the belladonna preparation which he terms a specific than it deserves. That a remedy of this class does meet one of the indications in the treatment of such cases I will show later, but that it is the principle curative agent, or even the principle factor in overcoming the so-called craving, I deny. In the treatment of any disease the removal of the cause is of first importance. It is easily capable of demonstration that the toxic matter in the system of a drug habitué is the source of the demand for repeated doses of the drug; in fact, is the essential pathology of the addiction. When this pathology is overcome, when the system is freed from toxic matter, the craving or demand for the drug disappears as soon as the secondary effects of the opiates are exhausted without further treatment of any kind.

Dr. Lambert well urges the necessity for free purgation, but the purgative compounds he recommends are extremely drastic and the extent to which they are administered places an unnecessary tax on the strength of the patient. Drug habitués as a rule are very anemic, their blood is thin, their tissues are poorly nourished, they have no strength to spare; therefore in preparing them for the withdrawal of their drug, or in treating them subsequent to it, the most scrupulous care should be exercised to preserve their strength. While the administration of purgatives is essential in any effort to free the system from toxic matter, these should be selected and compounded so as to act in the most conservative manner and to place the least tax on the resources of the system. No purgative compound which depends on reflex action to excite the motor function of the bowel, as does those recommended by Dr. Lambert, meets this requiremnt.

Dr. Lambert finds great difficulty in getting purgatives to act. This is true because, in drug habitués, the motor function of the bowel is more completely suspended than the secretory function of the glands. In order to secure evacuation of the intestinal contents it is equally as necessary to stimulate the motor function of the bowel as the secretary function of the intestinal glands. Notwithstanding this fundamental proposition, Dr. Lambert administers glandular stimulants and trusts to their irritating qualities, or to the irritating qualities of the secrétion they induce, to excite peristalis, the other essential condition to bowel movement. When the nerve centers are profoundly impressed with narcotics, as in the case of drug habitués, reflex action alone is not capable of exciting efficient peristalsis unless such reflex action is induced to an exaggerated degree. If glandular stimulants are given in such quantities and of such an irritating quality as to excite this exaggerated degree of reflex action they cause much distress, colic, griping, nausea, etc., and when they do finally act they act with undue severity and exhaust the strength of the patient. On the other hand, if the motor function of the bowel is induced by direct stimulation of the motor centers, then much less of the glandular stimulant is required; it acts more promptly and efficiently and with much less tax on the resources of the patient.

There is no question but that the emunctories should be thoroughly aroused and free purgation obtained, but any course of treatment which involved the giving of purgatives, equivalent to 30 or more compound cathartic pills in less than three days' time, as does the plan advocated by Dr. Lambert, is extremely drastic and in my opinion involves an unnecessary waste of the patient's strength. Better results can be obtained with far more conservative measures.

Strychnin, in sufficient quantities to overcome the semiparalyzed condition of the intestine and to excite active peristalsis, is an essential ingredient of any purgative compound intended to empty the intestinal canal of a drug habitué, if that is to be accomplished without undue waste of the patient's strength. The administration of glandular stimulants (chemical irritants) to a drug habitué in such large quantities as to bring about a storm of irritation in the upper part of the intestinal canal sufficient to excite efficient peristalsis by reflex action is as unreasonable as the effects are unpleasant and exhausting. The principles on which a physiologic purgative compound for a drug habitué may be made, as well as many other details of the treatment, were fully set out in my paper[1] published in 1901. Had Dr. Lambert been familiar with that paper he would not have found so much he considered new in the Towns method.

Morphin or other form of opiate profoundly blunts the sensibilities of the nerve centers and this results in immediate and total arrest of intestinal motion. If these remedies checked secretion as promptly and completely as they do peristalsis they would be far more deadly than they are. It may be accepted as established that the essential pathology of narcotic drug addiction is toxemia. These toxins are of drug, intestinal and systemic origin.

If the system is freed from toxic matter and the portal system disengorged, morphin or other narcotic can be at once withdrawn without shock, collapse, heart failure, diarrhea or other dangerous symptom, and the suffering incident to such withdrawal will subside in a few days' time without further treatment of any kind. The patient would suffer severely during these days, but if the system has been fully cleansed of toxic matter by thorough, persistent physiologic means, all desire for the drug, as well as all necessity for its use, disappear as soon as the secondary effects of the opiate have become exhausted, and this point is reached by or before the end of the fourth day from the withdrawal. The suffering during these days can be materially reduced if not entirely obviated by the judicial administration of belladonna or any one of the remedies of that series. It is much better to administer these remedies in the form of their alkaloids than to use the tincture or fluid extract, as these vary too much in strength and are unreliable. Then again, the patient's stomach is usually disordered and not in condition for prompt or uniform absorption of the medicinal agent; therefore, the stomach should not be depended on for the absorption of the remedies on which comfort depends when the individual can be promptly and certainly brought under the influence of the active principles of such remedies by hypodermatic administration.

Atropin, hyoscyamin, scopolamin, deboisin, or stramonium will serve the purpose if the patient is an opium habitué, and I have not been able to see any advantage in combining them. Any one of these alone seems to keep the patient in as comfortable a condition as do two or more of them combined. If a patient is brought to the same degree under the influence of any one of these alkaloids I do not believe that any clinician is expert enough by examining the patient or from his expression or conduct to tell which of them has been given. The office of a remedy of this class is not to cure the patient, not to act as a specific or antidote, but to serve as an anodyne or anesthetic and keep the patient in comfort while the elimination—the real curative measure—is being carried out or completed and while the secondary effects of the opiate die out. The painful reactionary symptoms which appear on the withdrawal of the opiate from an habitué are due mainly, as above stated, to the effects of the toxic matter on the nerve centers, but they are also in part due to the secondary effects of the opiate. So long as the opiate is given in regularly repeated doses the patient is kept under the primary, anodyne or anesthetic effects of the drug, but when it is discontinued the primary effects cease and the secondary effects appear. The anesthesia caused by the primary effects of an opiate when taken by an habitué is, on its withdrawal, succeeded by hyperesthesia equally marked and of greater duration. This hyperesthesia has a natural limit and terminates when the secondary effects of the opiate have become exhausted and the patient reaches a state of placidity and comfort because this hyperesthetic state has reached its limit and terminated, and not because he has had "a liquid green stool composed of mucus and bile." An important part of the office of the belladonna group is to obtund the sensibilities of the nervous system to this hyperesthetic state and thus protect the individual from suffering. It should be used with this idea in view and not with any thought of it as a "specific" cure for the drug addiction.

I do not believe that the prickley ash in the Towns formula has any value whatever. All that this combination will do can be accomplished by either of the other remedies alone or by the two combined without any aid from the prickley ash.

With the hope of making the principles of treatment herein suggested of practical value, I will give in detail an outline of treatment suitable to an uncomplicated case of morphinism in which the patient is taking not more than 10 grains of morphin a day.

Thorough elimination of toxic matter from the system is the primary and most essential step in the treatment. The principal obstacle to securing action of purgatives in drug habitués arises from the suspension of peristalsis by the primary effects of the opiate. During a period varying from 4 to 8 hours from the time of taking a dose of morphin intestinal motion is almost if not entirely absent, but as the early effects of the dose subside peristalsis is again gradually reestablished. Drug users as a rule take their drug only during the day or from the time of rising in the morning till bed time, say from 8 a. m. to 10 p. m. During these hours the system is kept constantly under the primary effects of the opiate and intestinal motion is very much restricted, but between 10 p. m. and 8 a. m. the effects of the day's dosing wear away and peristalsis becomes fairly active, and it is during the latter part of this period that the excretory organs do the principal part of their work.

In order to secure sufficient action of purgatives, advantage must be taken of this state of affairs and the medies so compounded and given at such time as to ave the acme of their effects, both as motor and secre-ry stimulants, occur during the latter part of this eriod, when the system is least under the restraining fluence of the opiate. To do this, begin at 2 p. m. and ive, on an empty stomach, a capsule containing the fol-wing:

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[1] Therap. Gaz., October, 1901.

| | | | |
|---|---|---|---|
| alomel | | | |
| owdered extract cascara, ãã | 13 | | gr. ii |
| owdered ipecac | 016 | | gr. 1/4 |
| henolphthalein | 06 | or | gr. i |
| tropin sulphate | 0002 | | gr. 1/200 |
| trychnin nitrate | 002 | | gr. 1/30 |

Repeat a capsule of this size and strength at intervals f 2 hours up to 10 p. m., making 5 such doses. The atient is given his drug in the usual sized doses up to or 10 p. m., but none is to be given from that time ntil after the bowels have been thoroughly emptied on e following morning. Nothing in the way of nourish-ent should be allowed to go into his stomach during a eriod beginning as much as 6 hours before the time of iving the first purgative capsule and ending after the urgation is completed. Then the patient may be given ourishment.

With a patient of average size and weight, taking not ver 10 grains of morphin a day, the strychnin and tropin in these capsules will excite a fair degree of eristalsis notwithstanding the restraining effects of the piate, and this will enable the glandular stimulants iven with them to induce free evacuation from the owel in from 8 to 10 hours from the time the last urgative capsule was given, thus securing bowel move-ents before the time for the usual morning dose of orphin; but, more certainly to secure this result, 6 ours from the time the last purgative capsule was given /20 gr. strychnin should be given hypodermatically and ollowed half an hour later with 2 ounces of castor oil r a bottle of citrate of magnesia; both the strychnin nd the oil or saline should be repeated at intervals of 2 ours until the intestinal canal has been thoroughly mptied. No morphin or other narcotic is to be given uring this time. If the bowels begin to act before the ime for taking the usual morning dose of morphin the atient will experience no discomfort, but, on the con-rary, the relief afforded by the active elimination will e such as to enable the individual to go several hours eyond the time for the morning dose without feeling he need of it, and this should be done, thus allowing as uch time for elimination as possible. When the patient as gone as long as he can without discomfort and be-ins to feel the need of the drug it should be given, but n reduced doses. It will be found that after the bowel has een thoroughly emptied and the patient has gone with-ut the drug several hours beyond the usual time for aking it, not more than half the morphin he had been aking will be required to meet the demands of the sys-em. This reduced quantity should be given at the same ntervals at which the individual had been taking doses f morphin and a liberal diet should be allowed.

Forty-eight hours from the time the first purgative ourse was begun, another, in 5 capsules of the same ize and strength, should be given, preceded by 6 hours' asting.

The patient should be given the morphin in as small doses as will keep him comfortable up to the time of his evening or bedtime dose on this day, and this should be the last opiate given in the case. Six hours from the time of giving the last capsule of the second purgative course, the strychnin and oil or saline should be given as before and repeated if necessary until free bowel movements have been obtained. During this time the patient should be given a bath and put to bed.

The action of this course of purgation will carry out of the system a residue of extremely toxic matter and the patient will experience such relief from it as to enable him to go even longer beyond the time for his accustomed dose than he did after the first course, especially if he remain in bed, which he should do. In the course of from six to eight hours after the time for his morning dose, however, he will begin to feel uncomfortable and require something for relief; then, instead of giving the opiate as before, scopolamin, 1/200 gr., should be given hypodermatically and the same dose repeated in 30 minutes.

The patient will usually fall asleep within half an hour from the time of giving the second dose of scopolamin, but if not, and if he is at all uncomfortable, a third dose of the same size may be given. If the patient is not uncomfortable, let him go until the lapse of an hour from the time of giving the second dose. If at the end of that time he has not fallen asleep a third dose should be given. This dose may be of the same size of the other two or it may be increased to double that size, depending on the degree of impression made by the preceding doses. If the patient has no unusual tolerance for the drug, these doses will bring him under the influence of the remedy to such a degree as either to induce sleep or to establish a slight belladonna intoxication, in either of which conditions he is free from suffering. If he goes to sleep he should be allowed to sleep until he wakes, even if that be 6 or 8 hours, but when he does wake, no matter how comfortable he may feel, an additional dose of scopolamin should be given; usually 1/200 gr. is sufficient, but that must be regulated by the susceptibility of the patient. These doses must be repeated at such intervals as may be required to keep up a mild belladonna intoxication and keep the patient free from pain. He may sleep more or he may not, but that does not matter so long as he is kept in a comfortable condition. He should be impressed to this degree with scopolamin for a period of 36 hours from the time of beginning this remedy, and then all narcotic medication should be discontiued.

During the time the patient is kept under the influence of scopolamin it is usually well to give 20 grains of sodium hyposulphite every 2 hours, and these doses should be continued for 24 hours or more after the scopolamin period has passed. These small, frequently repeated doses of hyposulphite supplement the effects of the calomel purge and after they have been kept up for from 24 to 36 hours the patient will begin to have small, billious stools, unattended by colic, griping or other distress, and these will more fully cleanse the system from toxic matter and prepare the patient for a rapid and successful convalescence. This period is reached by the end of the fourth or fifth day from the beginning of treatment, after which no medication is indicated, so far as the addiction itself is concerned. The patient will have no desire for his drug nor will he suffer because of abstinence from it. It is true he will feel weak and miss the support of the artificial stimulant to which he has been accustomed, but the unbearable nervousness, hot flashes, aching of the limbs, labored heart action, sweating, diarrhea, restlessness and insomnia so marked under most other plans of treatment will be absent and the patient will be able to lie quietly on the bed, pass his time in comfort, and not only will he enjoy taking nourishment, but he will digest and assimilate it in liberal quantities. So marked is this feature that it is not at all unusual for patients thus treated to gain a pound a day until they have fully regained their normal weight.

If the heart action is at all deficient either during or after treatment, spartein sulphate in doses of 2 grains at intervals of from 4 to 6 hours will give it reliable and uniform support, and this without detriment to the patient; but it is rarely necessary to use anything for this purpose. The relief afforded the heart by cleansing the system from toxic matter and unloading the portal system is more than enough to compensate for any support it had been receiving from the opiate and the circulation is better than it was under the opiate.

The after-treatment does not consist in the administration of medicine. Certainly strychnin, alcohol and all other stimulants should be avoided. The patient should be given a reasonable quantity of light digestible food and encouraged to take out-door exercise and to spend his time in lively company, with games, music and other diversions of an innocent character. The period of convalescence, from one to two months, should be spent under the direct supervision of his medical advisor and preferably in an institution devoted entirely to the treatment of this class of patients. It is a mistake to undertake the treatment of such patients at their homes or in a general hospital. Such environment does not give the physician that degree of control of the patient and his surroundings as to enable him to give the patient the protection he requires; neither do they afford the accessories which may be used to the great advantage of the patient. In a properly equipped institution, hydropathy, electricity, massage and other such rational means are at hand and can be employed to meet any slight complications from which the patient may suffer, and thereby avoid the administration of medicine and more perfectly wean him from dependence on drugs.

The active therapeutic measures required in the treatment of these cases are completed in a few days' time, but the patient must not be considered cured simply because he has been taken off the drug and brought to a condition in which he no longer wants or requires it. Discreet supervision during the period of convalescence is as essential to the permanency of the cure as the therapeutic measures were to its beginning. The patient must be given every aid possible to regain his self-control and must not be thrown on his own resources until he has fully reached that point.

The above outline is as complete as space will admit of its being made, but much is left out which might prove helpful in some cases. No two cases of morphinism are exactly alike and no routine treatment can be devised which will meet the requirements of every case; however, only two of the remedies suggested will, ordinarily, need to be varied in quantity or time of administration. These are the strychnin and scopolamin. The more opiate that is being used the more strychnin will be required to overcome its paralyzing effects on the motor function of the bowel. The age, weight and physique of the patient must also be considered in determining the quantity of strychnin required. The difference in the susceptibility of different persons to scopolamin is very great and the range of dosage is wide; therefore the only correct rule is to begin with small doses and repeat at short intervals until the impression desired is made and then regulate the size and frequency of the succeeding doses by the effects obtained from those which have preceded it.

In a work which I am preparing for the press I am devoting more than 100 pages to the discussion of these and other details of the treatment of this class of cases and I hope to make this work so complete that one seeking specific information on these points will not be disappointed.

Before closing this paper I think I should say a word as to the mental attitude of the physician who essays to treat patients of this class. To succeed, he must divest his mind of the notion which most physicians have that these cases are shrouded in some mystery, that there exists some obscure nerve lesion or other undefinable pathology which renders the patient distinctively different from other sick people. If such conditions exists, they vanish under the application of remedies according to the general principles of medicine and the exercise of a little common sense.

958 South Fourth Street.

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# THE TREATMENT OF TUBERCULOUS CERVICAL ADENITIS BY THE ROENTGEN RAYS

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The permanent cures which are effected by the Roentgen rays without the production of scarring or disfigurement have rendered this method of treatment particularly adaptable to those lesions which are situated on the face and neck. The cosmetic result is particularly valuable in the treatment of enlargements of the lymphatic glands in the neck, but is also advantageous in epithelioma, rodent ulcer, lupus, acne, particularly the indurated form, and the severer forms of eczema.

In these conditions excision, curettement, freezing and other corrosive applications are employed in rebellious cases, and are necessarily the cause of scarring which produces marked disfigurement. This is entirely avoided by the Roentgen treatment, under which, even where there has been a marked destruction of tissue, a normal condition, or only a very slight amount of scar tissue, is produced. In cases in which there has been no deep erosion the restoration to the normal is perfect and no scar is visible.

In the treatment of tuberculous cervical adenitis, the avoidance of scars is complete, unless the case has progressed so far that suppuration is present. There is, however, a factor of much greater value in this method of treatment. The results are permanent, even in cases in which recurrence has followed repeated operations. This results from the complete conversion of the lymphatic glands, and particularly the lymph channels into purely fibrous tissue, thus eliminating entirely the possibility of the spread of the disease.

The reason for this is that the Roentgen rays have a selective action, destroying first the tissues of lowest vitality and development by converting them, as has been demonstrated by operation and pathological examination, into fibrous tissue. The early destruction of the lymphatics has the advantage of isolating the disease in the lymph-nodes, which are finally absorbed. Patients sent early, therefore, can be cured without scarring or the breaking down of a single gland.

This is a consideration of special importance, as the disease occurs most frequently in young women and girls, and since the treatment is harmless, painless and produces no scarring, the consent of the parents can be obtained when the disease is in its incipiency and treatment is most effective. It can also be carried out in njunction with medical treatment under the super-ision of the family physician.

The systemic effect of the Roentgen treatment of berculous adenitis has been studied by its effect on e opsonic index. It has been shown that the opsonic dex of the patient rises as treatment progresses, but at it will fall into the negative phase, and the progress f the patient will be greatly retarded, if treatment is o severe.

To be effective, this treatment must be adapted to e individual patient. If the dose is too weak there ill be no progress; if pushed too far, improvement ases, and a favorable termination can be secured only judicious treatment of the negative phase on which e patient has entered. To be effective, this treatment ust be employed by a capable clinician, who can ap-reciate the effect of the remedy as employed. The ilure to secure permanent results can also be ex-lained with this knowledge as a basis.

The variations of the opsonic index of these patients nder Roentgen treatment leads to a plausible explana-on of the effect produced on lesions at a distance, by eatments applied locally to the enlarged glands in the eck. The evidence of these changes makes it probable at an autogenous vaccine or antibodies are produced hich pass through the patient's system, as the result f the destruction of the tuberculous tissues in the in-olved glands, and that they affect tuberculous foci at distance from the lesions under treatment.

The Roentgen diagnosis of pulmonary tuberculosis as shown that the lungs become infected directly, that , in the congested pulmonary tissue, or that this is receded by an earlier infection and enlargement of e peribronchial lymph-glands. This has been shown y cases in which the symptom-complex, with or with-ut the presence of the tubercle bacillus, pointed to a berculous lesion which could not be demonstrated by ethods of physical diagnosis, and in which notwith-anding, the Roentgen examination showed enlarged eribronchial glands, and repeated examination of the utum afterwards discovered the tubercle bacillus.

In one of the cases here reported, a Roentgen exami-ation showed that in addition to the cervical glands e peribronchial glands were also enlarged. A second xamination a year later, when the cervical glands were early gone, showed that the peribronchial glands had een entirely absorbed although they had not been in e field under treatment. This was also true of the ost-cervical glands, which on account of the hair had ot been treated. Thus there is evidence of a systemic ffect which can reasonably be explained as the result f autogenous antitoxins or antibodies produced in the atient's system by the destruction of the tuberculous lands during the Roentgen treatment. In any patient aving tuberculous cervical glands it is therefore prob-ble that efficient treatment will produce an autogenous accination which will destroy other foci and confer me degree of immunity.

The Roentgen treatment of cervical adenitis is not onfined to the earlier forms, although it is in these ases that the best cosmetic results can be obtained. atients who have had repeated recurrences after opera-ion, or in whom ulcerations and sinuses still persist, an be successfully treated by this method.

In the earlier cases medical treatment should not be ersisted in too long, as there is danger of softening, uppuration and scarring. The medical measures can e continued in conjunction with the Roentgen treat-ent, since they are directed towards the increase of bodily vigor. This group is composed of the cases of children and young adults, who when seen early can be cured by a short course of treatment.

The second group of cases is composed of those in which recurrence has followed a complete operation with entire healing of the skin.

Case 1.—Miss C. M. H., aged 20, who has been referred to above, will represent these cases. She had had two radical operations within the four years previous to coming for treatment, and besides, numerous suppurating glands had been opened. A mass of glands filled the left side of the neck between the clavicle and the inferior maxilla, extending laterly beyond the line of the jaw. There were numerous glands on the right side and in both posterior cervical lymph chains. A Roentgen examination showed the peribronchial glands to be enlarged. Under irradiation of the anterior cervical glands alone, all the glands disappeared, including the peribronchial, which a second examination failed to reveal. In addition, the wide scars resulting from the previous operation, and a disfiguring mass of scar tissue where a drainage tube had been inserted, have been rendered white, soft and less noticeable.

The third group of cases comprises those in which after surgical operations sinuses persist and the scars refuse to heal after prolonged antiseptic treatment. In these cases Roentgen treatment in addition to antiseptic precautions produces permanent healing with a decrease in the amount of scar tissue.

Case 2.—Mrs. C. M. S., aged 57, had had for over six years persistent sinuses and open scars that refused to yield to careful surgical dressings. In addition there were enlarged glands. All of these lesions yielded to Roentgen treatment and the patient has remained well for the past four years.

It is therefore evident that Roentgen treatment is the most effective method of treating tuberculous cervical adenitis in all its varieties, and that the best cosmetic, and equally permanent results can be obtained in the early stages of the disease without operation, and at a time when the consent of patient and parents can be readily obtained.

112 South Twentieth Street.

# THE SPIROCHÆTA PALLIDA

## ITS RELATION TO THE TONSIL

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In an earlier communication,[1] dealing with the diagnostic significance of the *Spirochæta pallida* in various syphilitic lesions, we had occasion to refer to the fact that it was possible to obtain this micro-organism from the tonsils of individuals suffering from syphilis. It is to amplify that reference that this short contribution is made. The observation *per se* is not new and is referred to in Hoffmann's latest review dealing with the spirochete.

I was led to examine the following series of tonsils for two reasons: (1) in the routine examination for *Spirochæta pallida* I found that gland puncture was of very little practical value; negative findings were all too frequent even in cases with marked secondary signs. This seemed to be due to the large number of cellular elements which obscured the field. As I found no method of avoiding these to be satisfactory, it occurred to me that I might more easily obtain serum from the tonsil. (2) in the examination of various mouth lesions I had already found that the enlarged tonsils often found in secondary syphilis yielded large numbers of the *Spirochæta pallida,* and this quite apart from any ulceration or patchy condition of their surfaces.

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[1] The Journal A. M. A., March 19, 1910.

These two facts then led me to examine the tonsil in all its forms in primary, secondary and tertiary syphilis. By far the greater number of the patients were in the secondary stage, although not a few examinations occurred before definite secondary signs had been observed. In brief, the findings are as follows:

When the tonsils are patchy, or show superficial ulceration, the *Spirochæta pallida* is found with the same frequency as from a mucous patch elsewhere, *i. e.* almost invariably.

When the tonsil presents no superficial lesion, but is enlarged and hyperemic, spirochetes are found invariably, in my experience.

When the tonsil presents no lesion and no hyperemia but is slightly enlarged, and perhaps shows a tendency to bleed easily on scraping the surface, spirochetes are to be found with a large degree of certainty.

When the tonsil presents an absolutely normal appearance, it is possible in most cases of secondary syphilis to find the spirochetes.

When syphilis is not present I have never found the *Spirochæta pallida.*

The method of examination is as follows: After anesthetizing the pillars of the fauces and soft palate by means of a swab moistened in a 10 per cent cocain solution, the surface of the tonsil is cleaned by rubbing with a cotton swab or by curetting away any surface débris. One then continues gently to curette the surface until blood-stained serum appears. This is caught on the clean curette, transferred to a perfectly clean slide, immediately covered with a cover glass and allowed to make as thin a film of serum as possible.

The search is carried out on the dark field illuminator. It is also possible to make use of stained smears, in which instance the following modification in staining has been found useful:

Fix the thin fresh smear over osmic acid (1 per cent.) vapor for 30 seconds; flood with Giemsa's one solution stain, 1 part to 10 or 15 parts distilled water (the water should be rendered very faintly alkaline by means of a drop of potassium carbonate solution). The slide is gently heated for from 3 to 5 minutes, avoiding precipitation and renewing the stain if necessary. The spirochetes stain more darkly by this than by any other method known to us.

In order to avoid self-deception in dealing with the spirochetes of the tonsil it has been necessary, in my experience, to observe the following safeguards:

1. One should recognize as *Spirochæta pallida* only such forms as conform in all particulars, such as length, number of spirals, delicacy, staining peculiarities, or, in the living state, the even rotation of the spirochete about its long axis. This even rotation is almost peculiar to the *Spirochæta pallida* and is due to the regularity of its spirals and to the fact that its extremities end as a regular continuation of the spiral.

2. One should take care to avoid surface contamination and to obtain the serum from the deeper parts.

It thus follows that when we find typical spirochetes in a field of clear serum, with a few red and white blood cells, and unaccompanied by other types of spirochete, we can diagnose syphilis with certainty. On the other hand, when surface epithelium is present, with little true serum and several varieties of spirochetes, it is hazardous to diagnose syphilis.

The principal spirochetes which demand differentiation, are: 1. A delicate spirochete with spirals of about the same size as those of the *Spirochæta pallida,* but not more than 7 or 8 in number; it is always found in the neighborhood of epithelial débris and never in the pure serum. 2. A spirochete of about the same length as the *Spirochæta pallida* and possessing 8 or 9 spirals. It is however somewhat coarser and its spirals and movements more uneven. When at rest it is scarcely distinguishable from the dead *Spirochæta pallida,* but on staining takes a deeper stain. It, too, is a surface organism.

Both these organisms occur in normal throats but are more plentiful when the tonsil is enlarged or inflamed. Both deserve the name of pseudo-pallida.

Analysis of these findings permits of the following grouping: In all 68 tonsils were examined: Fourteen cases were normal or abnormal, but not syphilitic; none of these tonsils showed the *Spirochæta pallida;* ten cases occurred in primary, secondary and tertiary syphilis, with negative findings. Forty-four cases occurred in secondary syphilis; all of these yielded the *Spirochæta pallida* from the tonsil.

These various groups require a word *in extenso*:

1. Of these 14 cases, 8 occurred in normal throats, and in 6 patients the tonsils were abnormal either from acute tonsillitis or from hypertrophy. Other spirochetes were most numerous in the abnormal throats, though present in almost every instance in the superficial tissue. 2. This group consisted in part of patients with tertiary syphilis without throat lesion, or of latent secondary syphilis, the patient having been under treatment for varying lengths of time. One was a case of primary syphilis before general glandular enlargement, and five were patients in whom a diagnosis of secondary syphilis was certain, or suspected on sound grounds. No *Spirochæta pallida* were found in any of these cases. 3. This group is composed of 44 cases of secondary syphilis, in all of which the *Spirochæta pallida* was found. That these were cases of genuine syphilis is vouched for in a few cases by the effect of treatment, but in the majority of instances by the presence or sequence of other syphilitic lesions, often with the finding of the *Spirochæta pallida.*

As I have already noted, the number of spirochetes is likely to bear a direct ratio to the size, hyperemia and superficial lesion of the tonsil. Keeping this in mind we may divide the group as follows:

*a* Tonsils enlarged and patchy, 17; all with positive findings. In 7 instances the diagnosis of syphilis was at first only to be made on the appearance of the throat and the positive findings.

*b* Tonsils enlarged, not patchy or ulcerated, but often hyperemic, 7 cases. In the majority of these cases diagnosis was made on the throat finding alone.

*c* Tonsils, normal in size and appearance, 20 cases. In 9 of these the diagnosis of syphilis was made at first instance on the positive spirochete finding alone.

To draw absolute conclusions from such a series of cases would not be justifiable. Certain cases, however point out certain possible deductions.

Case 149, in which the primary lesion had first appeared 13 days previous to examination, showed no general glandular involvement, and gave negative results from the tonsils. In the majority of those cases which showed general glandular involvement *Spirochæta pal-*

*la* were recovered from the tonsil. It is probable, erefore, that generalization of the virus affects both nsil and glands about the same period, and it is possible to diagnose this stage definitely by obtaining the *pirochæta pallida* from the tonsil.

Case 146 would support the diagnostic value of such amination. This patient was a young girl, underzed, whose age was stated as 13 years. She came to e nose and throat department of the hospital for hat was looked on as hypertrophied tonsils. As she oke little English, the history was uncertain. We d occasion to make use of her as one of the controls d were considerably astonished to find the *Spiroæta pallida.* The question of syphilis had never been ooted but on careful investigation the patient was und to be 16 years of age, the mother of a child, and bsequently developed mucous patches.

Those patients who have been well treated have ways failed to show the *Spirochæta pallida* as have e tertiary cases, with the possible exception of a sinle badly ulcerated tonsil with indefinite history, and the tertiary type.

In conclusion, it would appear possible to obtain the *pirochæta pallida* from the serum of the tonsil in om 80 to 90 per cent of patients suffering from uneated secondary syphilis (44 out of 49 cases in this ries). This is possible from the period of general landular enlargement until the end of active secondary gns, or until the effect of treatment has been manisted. This fact has proved of diagnostic importance a number of cases of early secondary syphilis.

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# THE TRUTH ABOUT TONSILS AND ADENOIDS*

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The common appearance of highly complex tonsillar ssue occurs only in the highest types of animal development. Its noticeable presence occurs in a large majory of persons. It is fair to assume, accepting Darwin's eory of the origin of species, that the development of e tonsils is a detail of highly civilized type-variation hich is becoming, if indeed it has not already become, characteristic. If the presence of this development ere detrimental—if the tonsils were the bugaboo they re often pictured—they would long ago have disapeared with their owners under the law of survival, instead of appearing now in their most complex form lmost universally in the highest types of human kind, s the sturdy guardians of the dangerously exposed inroitus of the two great systems, digestion and respiraion. I say "highest types of human kind" advisedly, nd it is interesting to note, for perhaps it adds a little eight to the argument, that the embarrassing presence tonsillar tissue in the negro, for instance, is not comon, and I have never once seen it that I can recall, in he pure black. It is occasionally seen in the mulatto, nd oftener as the mixed type approaches nearer to the ure white stock. At all events it has been shown Packard] that the tonsil is not a vestigial remnant, for s appearance has been demonstrated from its simplest orm in the lowest of the vertebrates, to its most complex orm in man.

Systematic inspection of the throats of hundreds of school children convinces me that the noticeable presence of tonsillar tissue is normal, at least up to the age of puberty, and probably later. Furthermore I have been unable to observe that there is any fixed, or even approximate, period of life at which tonsillar atrophy occurs. It may take place at any age according as artificial or natural influences bear on the condition.

In a large number of cases the swollen tonsils are, in my opinion, a purely compensatory hypertrophy—a line of defense thrown out by Nature to protect the mouth-breather—taking up in a measure the functions of the nasal turbinals, and when proper nasal breathing is reestablished in these cases the hypertrophied tonsils shrivel and withdraw. These are essentially the lymphatic type of hypertrophy; but even the evidently fibrous type often exhibits an astonishing tendency to shrink. Such compensation is not unique. It occurs variously in the human economy; and, indeed, all Nature is full of such automatic manifestations.

Another point, which seems to have escaped attention is this: Modern research has made us familiar with certain principles of immunization. We know that we are constantly exposed to the deposition of pathogenic bacteria on the surfaces of the upper respiratory and alimentary tracts. We know that comparatively few of us develop systemic infection. Furthermore, we know that imprisoned colonies of these bacteria are very frequently, if not constantly, found in the tonsillar structure. In the light of our present knowledge it is then apparently certain that the absorption of toxins from the imprisoned colonies must effect a certain systemic immunization. There appears to be no alternative to the deduction. This theory is in no sense controverted, nor is its force weakened, by the fact that there are times when, owing to weak resistance or to an excessive amount or excessive virulence of the infection, the tonsillar barrier is broken down and the lymph structures are overwhelmed by the poison. There are two theories extant regarding the possible tonsillar obstruction, one being that this tissue presents a mechanical barrier to the entrance of the bacteria, and the other that the bacteria are destroyed in the tonsil by some process of phagocytosis. Granting the partial truth of these theories, it must be admitted that they contain certain weaknesses, and they differ essentially from the theory of the tonsil as an agency for immunization which is offered here for serious consideration.

The hypertrophied tonsil often cannot be distinguished by the naked eye, or by palpation, as being of the fibrous or the lymphatic type. It may combine the features of both forms. The fibrous tonsil, as we know, is usually seen in the adult. Ten years ago, whenever I saw one I urged operation. Not strangely, many adults decline operations on themselves, unless some immediate and dire danger is presenting. As a result, I have seen many a protruding member in the fauces of adults which never had caused and I believe never would cause, serious trouble of any sort—provided, as I have said, nasal breathing is free and unobstructed, the preservation of which latter function, it is my conviction, is the real crux of a very large proportion of this vastly important tonsil problem.

The majority of the cases of recurrent quinsy which have come under my observation have been associated with the so-called submerged and ragged tonsils, or the roughly flat formations, densely adherent to the pillars. These are the cases which merit prompt and thorough surgical attention, but on account of the difficulties involved, and with which we are familiar, these are also the cases in which too much careless and incomplete work is done on the tonsils. And, *per contra,* on account of the comparative ease with which the firm protruding type is handled, there is, I believe, entirely too much radical work done on them.

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* Read before the Southern Section of the American Laryngological, Rhinological and Otological Society, Washington, D. C., Feb. 2, 1910.

So, too, in the case of the adenoid. A relatively small adenoid formation in Rosenmüller's fossa can do much more mischief—to the ears, throat and entire economy—than a much larger hypertrophy in the vault or on the posterior pharyngeal wall, which does not cause obstructive or irritant symptoms. In the absence of the latter I never remove an adenoid from the vault or the posterior wall, but I always see to it that the fossæ are clear. Even slight obstruction of these tracts is fraught with far-reaching consequences. So then, if these premises be true, even in an adult a tonsil or an adenoid, just because it is a tonsil or an adenoid, should not appear to the surgeon as a red rag to a bull.

I doubt if there is a surgeon who will not admit having seen many excellent and permanent results following tonsillotomy; yet, many plead for tonsillectomy as a routine procedure. Do they practice what they preach? If they do they are wrong, for they admit the frequent efficacy of the simpler measure; and if they don't they are wrong again, for then they are misleading those whom they should teach aright. That, at least, is a seemingly reasonable conclusion.

That the tonsil sometimes transmits infection—being the familiar "portal of infection"—we cannot doubt, but that its presence in the highest type of life is undesigned in Nature's scheme of type variation, and its elimination from the complex organism of man immaterial, is at least open to very serious question.

# CEREBELLO-PONTILE TUMOR DIAGNOSED FOR SIX YEARS AS TIC DOULOUREUX

## THE SYMPTOMS OF IRRITATION OF THE NINTH AND TWELFTH CRANIAL NERVES [*]

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The diagnosis of tumors in the cerebello-pontile angle or of tic douloureux, as a rule, does not offer much difficulty, but that a tumor of the cerebello-pontile angle should be diagnosed as tic douloureux for six years is somewhat remarkable. In spite of numerous operations, including removal of the ganglion and cutting of the sensory root, the pains persisted and were considered functional. The mistake in the diagnosis was due to the failure of recognition that the pains were the result of irritation of the roots of the glossopharyngeus. The case offered opportunity for physiologic study of the functions of the ninth and twelfth cranial nerves.

### REPORT OF CASE

### CLINICAL HISTORY

The patient, T., aged 35, a man with negative family and personal history, in 1903 first began to have pain in the right upper teeth, for which he consulted a dentist. A tooth was extracted, but the pain continued, and in a short time every tooth in the right upper jaw was removed. The patient soon complained of pain in the right upper jaw, teeth, nose, eye and forehead, and was admitted to a hospital where five peripheral operations were done in the infra-orbital foramen, but with no beneficial results. In 1907 he first came under my observation having then had pain for four years and with the above history.

When examined the patient had pain of a sharp shooting character in the right side of the face which began at the angle of the nose, spread to the eye, temple and forehead and also involved the upper jaw; he described the onset as a wave of hot water to the eye and teeth. At that time the pain would come on about every three to five minutes and in his best period every hour. The whole upper jaw was tender and touch on any of the teeth or the roof of the mouth by the patient's tongue, in fact, any irritation over the oral and nasal membrane or over the jaw would produce a spasm of pain. Further examination at this time showed that there was a small area of anesthesia at the site of the old operations underneath the right eye, the patient having a leathery feeling over the rest of his face Sensation in the mucous membrane of the right nostril was slightly obtunded, but there was no disturbance in the sensation of the tongue, and taste and smell were normal. The motor fifth was intact, the facial nerve showed no disturbance and the tongue was normal. There was, however, palsy of the external and superior rectus and inferior oblique muscles of the right eye, this being supposedly due to the previous operations

The patient was then again operated on, the inferior denta branch being removed. After this operation for the first time the pain began to run down the right side of the tongue and an attempt was made to remove the Gasserian ganglion. This was done in two stages. The ganglion was exposed and the third division cut, but when traction was made preparatory to its removal the patient suddenly collapsed.

The patient recovered from this operation but the pain persisted and in addition he complained of pain in the eye as of a foreign body and as if his tongue was being burned. After this operation he also had loss of sensation over the inferior maxillary distribution and for a larger area over the infra-orbita region, and loss of taste over the right side of the tongue; he could not close the right eye or wrinkle his brow. The lower part of the face seemed intact. Subsequent to this operation injections of alcohol were made repeatedly over the distribution of the fifth nerve, but while the patient had some benefi for a half hour or an hour, the pain would return.

He was then admitted to another hospital, Feb. 13, 1907 where examination showed a paralysis of the right superior rectus and superior oblique. The form fields, fundus and vision were normal. Smell was normal but taste was lost on the entire right side of the tongue. Sensation to touch and pain was lost in the distribution of the infra-orbital and inferior maxillary divisions of the right side. There was no sensation on the right side of the tongue above and below, or on the ora surface of the right cheek. Deep palpation, however, over the molar prominence and the angle of the jaw elicited pain.

A Gasserian ganglion operation was again attempted and the foramen ovale and rotundum reached and the dura over th ganglion reflected by a small incision. The dura, including the sensory and motor roots, was divided. The ganglion was lifted forward and the third division was found divided at its foramen. The second division was intact and divided. The ganglion was cut away with scissors as nearly entirely as possible, and as was found post mortem, that part remained which wa attached to the ophthalmic division, this branch being intact

The patient made an excellent surgical recovery and anesthesia was found in the distribution of the right fifth nerve. For two days after the operation the patient did no feel any pain; then he began to complain of pain under the righ jaw and right side of throat, which was considered functional From this time on the pain in the throat and lower jaw wa never absent. In a few days the right cornea became injected and beginning ulceration was present. From this time on eithe the eye was kept closed or he wore a shield, but the momen it was exposed it became red and injected and a keratiti gradually developed. At no time was sight impaired or wer there any fundus changes. The patient subsequently becam somewhat careless and two years after the ganglion operation in 1909, the eye was removed.

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[*] From the Laboratory of Neuropathology, Medico-Chirurgical College; read before the Philadelphia Neurological Society, February, 1910.

Because of the fact that the patient complained of pain in a oth in the lower jaw it was bored and pulled without pain; so an incision about three inches in length was made along e posterior border of the sternocleidomastoid muscle, and the sterior auricular nerve was isolated and a part of it removed. he lesser occipital nerve was also isolated and injected with cohol. The patient made a good recovery and for a few days d no pain; then he again began to complain of an unpleasant ckling sensation in the right side of the face near the nose, t his complaints were considered altogether as functional and was discharged from this hospital.

In a few months he was again admitted to a hospital, then mplaining of pain in the face, throat and tongue and a form paresthesia in the mouth, a sensation as if roaches were mbing through the oral cavity. The right lingual nerve was moved by Thiersch's method, but the identical symptoms were mplained of after the operation as before and just as severely. rom this time on many alcoholic injections were made into e second and third branches, and also into the seventh nerve, t as before the patient would feel well for a few minutes, the in then returning just as severely.

About a year after the removal of the ganglion the pain was uch worse than it was before the operation; he now comained of sharp stinging pains which started in the back of the ght side of the tongue and extended to the right ear and down e right side of the throat, the pain being so severe at times to extend to the shoulder and cause him to turn his head and ck to the right. These would last for a few minutes and were ually succeeded by a burning sensation in the same parts. He d besides a constant burning feeling in his tongue and throat d sensations as if roaches were crawling over these parts and s throat was constantly dry. Repeated nose and throat examations never demonstrated any weakness in the action of the late, pharynx or larynx, but these parts as well as the tongue ere excessively tender and touch would always bring on an tack of pain. He could not eat a meal without pain and the t of swallowing always brought it on. Examination for nsation at this time, a year after the ganglion operation, owed typical anesthesia over the face, tongue and inner cheek.

About a year before his death the patient first complained of voluntary movements of his tongue, stating that it would go a spasm and he had no power to control it. When they came he had no control over his tongue and he often would open s mouth and watch them in a mirror. They lasted for varyg lengths of time but he could always bring them on by a rcible action. They consisted principally in an up-and-down ovement; the tip of the tongue would be deviated to the right gainst the teeth or cheek, would rise up, bend in the middle d then roll over to the right, the movement on the right side the tongue being much more forcible than that on the left. e tongue was never projected beyond the teeth.

The patient never complained of pain elsewhere or of nausea, miting or dizziness; and examination of his left (remaining e) never showed ophthalmoscopic changes. At times, accordg to his wife, he did complain of an odd sensation as if he was ing to fall and at one time he staggered as if drunk. He ver complained of noises in his ear but said that his right r felt numb. There never were disturbances of hearing. For out a year before his death he also had twitchings in the wer part of his face, the upper part being permanently weak. e had also some weakness of the external rectus muscle but d no diplopia.

He was all this time under treatment, alcohol being injected most daily into the second and third divisions of the fifth rve. His pain would cease sometimes as long as twenty-four urs and the twitching in his tongue would also stop. He was erated on again in another hospital but with no results. inally about a month before his death he left this institution d wandered about the city until he was picked up by the lice at 2 o'clock in the morning not knowing where he was. e then became stupid and was unable to tell his name or recogze the members of his family. He walked with an uncertain it, leaning to the right, and would take no interest in anying but when sitting would stare before him, his body gradlly inclining to the right. He could not feed himself, though he would attempt to swallow.

Examination showed no evidence of motor weakness. The reflexes in both legs were present and equal. He did not complain of pain anywhere for the first time in six years, but this was because of his stupidity. From this time until his death in about a month he became progressively more stupid and developed incontinence of urine and feces. His head became slowly rigid, his arms flexed and legs extended, Kernig's sign was present and he showed all the symptoms of a meningitis. It was thought that this was probably purulent and that his whole condition was the result of a purulent infection, inasmuch as the cavity of the right eye was full of pus. Lumbar puncture was negative. He finally died six years after the beginning of his pain.

### AUTOPSY

The necropsy was performed by Dr. Joseph McFarland, who found part of the Gasserian ganglion remaining; attached to it was the ophthalmic division. A tumor was found in the right cerebello-pontile angle, lying directly on the sensory and motor root of the fifth nerve. It was round, hard to touch and measured 1⅛ inch in its transverse diameter, ⅞ inch antero-posteriorly and in depth ¾ inch. In its growth it separated the seventh and eighth nerve, the former being flattened out and attached to the anterior basal surface, while the eighth was adherent posteriorly. The sixth nerve grew across the basal part of the tumor. The growth was directly in the cerebello-pontile angle, and compressed the middle cerebellar peduncle, the flocculus and anterior part of the cerebellum and the anterior right side of the pons, making a distinct groove for itself in these structures. In its growth it evidently separated the pons and medulla from the cerebellum, thereby stretching the ninth and tenth roots, which were very prominent. It was, of course, impossible to tell at the necropsy whether the twelfth nerve was stretched. When the brain was removed the right fifth nerve was attached similarly to its fellow. An area of softening was found in the apex and basal portion of the right temporal lobe, which evidently was the result of injury in one of the Gasserian operations. The spinal cord was normal and there was no meningitis.

*Microscopic Examination.*—The tumor on microscopic examination was found to be very hemorrhagic, its center being composed entirely of blood-cells and pigment. The outside of the tumor was composed of fibrous tissue and cells whose nuclei were round, oval or spindle-shaped and appeared granular by the acid stains, occupying most of the cell, there being very little protoplasm. The growth was probably sarcomatous.

For the sake of preserving the specimen, no attempt was made to cut the pons below the entrance of the fifth root. Sections of the pons and medulla above the entrance of the fifth root showed no secondary degeneration by the Marchi or Weigert methods. The cells of the mesencephalic root of the fifth nerve were normal. The pia covering the right side of the pons and peduncle, the side of the tumor, and to a less extent anteriorly, was considerably thickened and infiltrated with cells similar in appearance to those of the tumor.

*Cranial Nerves.*—The left cranial nerves were normal. Of the right, the optic nerve was normal, but the third, fourth, sixth, seventh, eighth and twelfth were slightly degenerated. There was a slight pial infiltration within the pial covering of these nerves, the cells having the appearance of those found within the tumor. The ninth root (for this the anterior fasciculus of the root was taken), was normal. The eleventh nerve was also normal.

The right fifth nerve was cut in various parts. First, that part was taken which was farthest away from the tumor. In this section, both the motor and sensory roots could be seen. In the motor there were found distinct evidences of regeneration, while in the sensory here and there, there were well-defined myelin sheaths and axis cylinders, although most of the sensory root was degenerated. Further sections of the motor and sensory roots showed a similar condition to that already described. It is my intention to discuss the question of regeneration in the sensory root of the fifth nerve in a subsequent communication.

Sections of the spinal cord of all portions stained by the Marchi and Weigert methods showed no secondary degeneration. There was no meningitis.

### COMMENT

In the discussion the various factors which render this case important will be taken up in order. First, the question of diagnosis:

It is remarkable that a tumor in the cerebello-pontile angle should for almost six years remain undiagnosed. In the present instance, the tumor, a sarcoma, apparently grew very slowly and seemed to press first on the sensory fifth nerve root, causing the symptoms of tic douloureux. This was the patient's only complaint, at least for the first few years, and when he first came under my observation the case seemed to be a well-marked one of this kind. The patient did present some implication of the sixth and third nerves, but this was thought to be the result of the numerous peripheral operations to which he had been submitted, and no suspicion was entertained of a tumor. After several attempts part of the Gasserian ganglion was removed and the sensory roots cut and the patient seemed to have cessation of pain for two days; then he again complained of pain in the face and in the neck and lower jaw. For this the posterior auricular nerve was isolated and a part removed and the lesser occipital nerve injected with alcohol. Subsequently the right lingual nerve was removed and the patient had innumerable alcoholic injections in the distribution of the fifth, seventh and upper cervical nerves, but with no result. In spite of all these measures the pains persisted, and although they were regarded as functional, after the second ganglion operation I suggested the diagnosis of a cerebello-pontile angle tumor pressing on the fifth nerve; although the pains, which in view of the necropsy, were found to be referable to irritation of the ninth nerve, were never properly diagnosed.

There was perhaps some ground for the thought that the pains were of functional origin. First of all, after the second ganglion operation in which the sensory root was cut and until his death, the patient had the typical disturbances of sensation in the fifth nerve distribution, and in spite of this he complained of pain in these parts. Of the many physicians who saw him—and he was studied in every teaching institution and in most of the hospitals in the city—no one thought that the pains might be due to irritation of the ninth nerve, for it is not generally recognized that the sensory distribution of the fifth and ninth nerves intermingle; and this is the important fact that this case teaches. It is therefore presumable that irritation of either cranial nerve will cause pain to some extent in the distribution of the other.

The symptoms of irritation of the glossopharyngeus or ninth nerve, which were due to the fact that the tumor in its growth pushed outward the right lateral lobe of the cerebellum, in this way stretching the ninth and tenth roots, as can be seen in the illustration (Fig. 1) have not been recorded so far as I am aware, although from my experience in this case I am inclined to believe that they have been overlooked, for this patient had for at least two years the symptoms of such irritation. While both the ninth and tenth nerves were stretched, it is probable that the ninth suffered more, especially as the tumor was in direct contact with the anterior ninth roots and pressed on them to some degree. Because of the possible implication of the vagus, the symptoms referable to the ninth cannot be differentiated as clearly as they might be, although it is justifiable to exclude the tenth nerve, for there never were symptoms present referable to its distribution with the exception of possible implication of the auricular branch which supplies the posterior and inferior part of the external auditory meatus and possibly a portion of the concha and the postero-medial surface of the auricle; and the posterior segment of the tympanic membrane, although this is supposed by some to be in the distribution of the glossopharyngeal. The patient never had difficulty in swallowing or in phonation and repeated throat examinations never demonstrated lesions either in the pharynx or larynx. No disturbances were noticed in the viscera, heart or lungs

It is important to differentiate the sensory disturbances resulting from lesions of the trigeminus because they intermingle with the sensory disturbances of the ninth As has been stated, the patient at first had pains only in the parts usually irritated by the fifth. After the firs ganglion operation, in which the third or inferior division was cut, there was loss of taste in both the anterior and posterior parts of the tongue. Apparently, then, in this case the glossopharyngeus had no relation to the sense of taste.

After the second ganglion operation in which the posterior roots were also cut the patient had typical loss of sensation in the distribution of the fifth nerve. Figure 2 from a photograph which was made one month after this operation and several days after the excision of the posterior auricular nerve and alcoholic injection into the lesser occipital, shows a typical disturbance of sensation The inner line of the same photograph shows the area of disturbed sensation one year afterward, displaying the typical regression of sensation which is usually found in such cases; this leaves no doubt at all that the sensory root was cut. The patient had besides loss of taste and of all forms of sensation over the anterior and posterio part of the right side of the tongue and over the ora surface of the right cheek. The assumption, then, i justifiable that all the pains which the patient complained of subsequent to the removal of most of the ganglion were the result of irritation of the ninth nerve

Whatever doubt there might have been that the pain were the result of irritation of the so-called sensory roo of the seventh nerve or the nerve of Wrisberg were removed by the fact that on a number of occasions alcoholic injections were made into the seventh nerve bu with no alleviation of pain. Again Mills[1] has proved that the seventh nerve is purely motor and has no sensory functions, contrary to the views of Hunt.[2]

According to Oppenheim[3] the sensory fibers of th ninth nerve go to the pharynx, tonsils and posterior par of the palate, tympanic cavity, Eustachian tube and th posterior part of the tongue, but it is impossible to differentiate the distribution of the ninth because some o the same structures are innervated also by the trigeminus; there is no question, however, that the pharynx i innervated by the ninth nerve. He is in doubt as t whether the taste fibers in the posterior part of the tongue have any relation to the ninth nerve. The moto part supplies part of the muscles of the pharynx withou it being definitely established which. Réthi believes tha it supplies only the stylopharyngeus; and Kreidl think that the esophagus is partially supplied by it. It is als possible that secretory fibers are present which go to th parotid gland. Oppenheim cites an excellent case o paralysis in the distribution of the ninth nerve. Th patient, a woman, had loss of taste in the pharynx an posterior part of the tongue and incorrect temperatur appreciation in these parts. Especially was it notice that in breathing and swallowing she had no appreciation of the temperature of the air and water. Objectiv xamination showed a paresis of the palate and pharyneal muscles, with diminished reflex excitation of these arts, loss of taste in the soft palate, pharynx and poserior part of the tongue, as well as loss of temperature ensation, whereas touch was normal.

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[1] Mills, C. K.: Sensory Functions Attributed to the Sevent Nerve, Jour. Nerv. and Ment. Dis., May, 1910.

[2] Hunt, J. R.: Jour. Nerv. and Ment. Dis., February, 1907.

[3] Oppenheim: Lehrbuch. der Nervenkrankheiten, Ed. 5.

Mills also describes a patient of 24 who one month fter she had diptheria began to have difficulty in swalowing with regurgitation of liquids through the nose nd an indefinite feeling of numbness on the affected ide of the face. She had besides a superficial right acial palsy with a loss of sensation over the chorda ympani area of the tongue and diminished sensation round the Eustachian tube opening. There was also elaxation of the faucial arch and diminution of sensaion over the right pillars and right pharyngeal wall. he muscles of adduction were weak in their action and uring quiet respiration the right side of the larynx as more relaxed than the left. He attributed the ss of sensation to involvement of the ninth with a ossible implication of the tenth and fifth nerves.

In my patient the pains were always on the right side nd in the whole course of the disease he never comlained of them on the left. They were chiefly localized o the back of the tongue or, as he expressed it, to the root" and ran down his throat and to his ear. He lways complained of a burning feeling in his throat nd occasionally of sensations which he likened to the rawling of roaches or flies, of a constant dryness and f a feeling like hot or ice-cold water. He had, besides, harp, shooting, stinging pains which started in the ack of the right side of the tongue and ran to the right ar and down the right side of his throat and, when they ere exceptionally severe, to the shoulder. These lasted nly for a few minutes, were sometimes agonizing, and early always caused him to turn his head and neck to he right. Eating, especially in the last year of his illess, would always cause him pain, and his wife does not emember a single meal that he ate during this time in hich he did not have attacks of pain. He did not have ifficulty in swallowing and he never choked. The pains hile eating were brought on not so much by the chewng as by the contact of the food with the posterior part f his mouth and by swallowing. Occasionally the atient would wake up at night, the pain in the throat eing so severe that he felt as if he would choke to eath; he felt at times as if the throat were closed. hese pains and paresthesias continued to the end.

At no time had he weakness in the motor distribution f the glossopharyngeus. The floor of the mouth was xtremely tender, especially in the region of the lingual erve. The nose, throat and ear were constantly examned and his throat was always found to be excessively ender to touch and there was never loss of the pharyneal reflexes.

One of the most interesting features of the case were he involuntary movements of the tongue. These ppeared about a year before his death and became gradally more severe. They would come on independently, ut could be brought on by forcible movement of his ongue. During the spasm he could open or shut his outh, but could not talk or stop the movement. The ovements were principally up and down, or the tip of he tongue would be pushed to the right against the heek or teeth, or there would be a rising up of the hole tongue with a sort of a rolling, curling movement o the right. In these spasms, while both sides of the ongue acted, the impression was always given to the nlooker that the right side of the tongue was responible for the movement.

These movements were unquestionably the result of irritation of the roots of the twelfth nerve, and conform somewhat with the results obtained by A. T. Mussen,[4] who found that when he stimulated experimentally the left twelfth root in the medulla the tongue would curl upward and to the right or opposite canine tooth, while stimulation of other fibers caused the tongue to protrude from the angle of the mouth on the same side. He does not state, however, whether he irritated the twelfth root outside the medulla. On stimulation of the left twelfth nerve in the neck there was a strong protrusion of the tongue out of the mouth on the same side. The other reactions were: protrusion of the tip of the tongue strongly to the right or opposite side and curling up of the tip, now to the right, at other times to the left. In the present case the movements were always to the side of the irritation and not to the opposite side, and there never was protrusion of the tongue beyond the teeth.

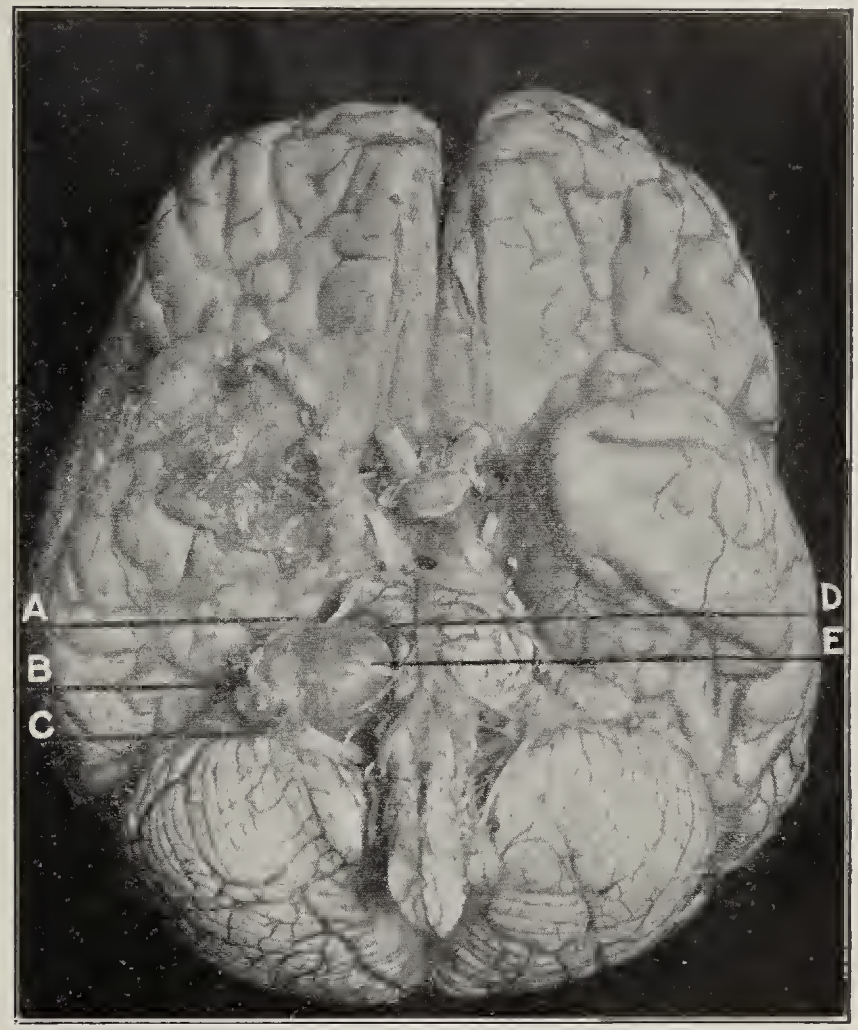

Fig. 1.—Tumor in right cerebello-pontile angle, showing positions of cranial nerves. A, fifth nerve; B, eighth nerve; C, ninth and tenth nerves; D, seventh nerve; E, sixth nerve. Note especially the stretching of the ninth and tenth cranial nerves and pressure on the pons; also, area of softening in apex of right temporal lobe resulting from ganglion operations.

An additional reason that the diagnosis of tumor was not made was the uniform absence of all pressure manifestations while cranial nerve symptoms were not at all commensurate with the pathologic involvement.

The absence of so-called general pressure symptoms of tumor is not, in my experience, unusual and in view of this I have long regarded headache and choked disc as the only reliable pressure symptoms, and even their absence, as this and other cases show, only prove that in the recognition of brain tumor the important factors of diagnosis depend on the specific motor, sensory or special symptoms the result of direct involvement of structures.

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[4] Mussen, A. T.: Brain, 1909, xxxii, 206.

One of the remarkable features of the case was that the tumor, as can be seen in the illustration, pressed on the right anterior part of the pons and made a distinct groove for itself, and yet weakness was never present in the limbs of the opposite side. Microscopically there was no degeneration in the motor fibers either by the Marchi or Weigert methods. It is evident from this that the tumor must have been of slow growth and that the fibers in the pons accommodated themselves to the gradual pressure.

When the patient first came under my observation some of the ocular muscles innervated by the third nerve were paralyzed, which was regarded as the result of some of the previous operations. Microscopic examination, however, demonstrated that there was a cellular infiltration in the pial covering of the right side of the pons and peduncle; this implicated also the third and fourth cranial nerves and no doubt caused the paralysis. A similar condition was found within the fifth, sixth, seventh, eighth and twelfth cranial nerves. Such a condition is very unusual, for in most cases of tumor in the cerebello-pontile angle an accompanying pial infiltration is not present; it further emphasizes the unusual character of this case.

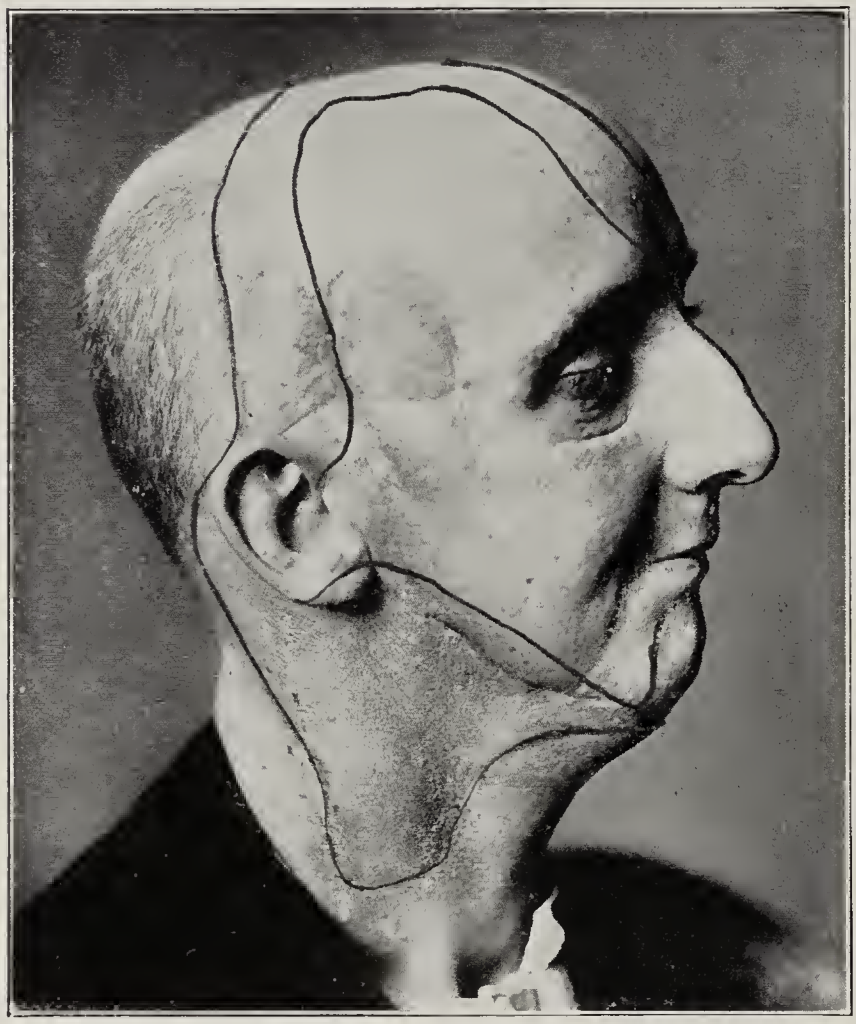

Fig. 2.—Outer line shows area of loss of sensation one month after cutting of sensory root and excision of part of the posterior auricular nerve. Inner line shows area of loss of sensation one year afterward.

The sixth nerve was attached to the growth and must have been pressed on, but diplopia was not present until about five years after the onset of the symptoms, and then only at times. The nerve was partially degenerated.

When the patient first came under my observation, five years after the beginning of the symptoms, there was no paralysis in the facial distribution. After the first ganglion operation the superior branch was cut and for some time he was unable to wrinkle his brow or to close his eyelid. There was some recovery of power, however, but he was never thereafter fully able to close the eye. In the last year of his illness he had involuntary twitching in the middle and lower facial distribution; these were sometimes fibrillary, then again coarse and spasmodic, and were no doubt due to pressure on the seventh nerve, which was attached to the anterior part of the growth and was partially degenerated. Spasm in the distribution of the facial nerve because of pressure is not at all unusual; I have discussed it previously elsewhere.[3]

The eighth nerve was attached to the tumor and was considerably degenerated. Sections showed numerous tumor cells within the nerve, and yet the patient never had loss of hearing and only occasionally complained of some crackling noises in the ear and never had vertigo or disturbance of equilibration. This is unusual, for in tumors of the cerebello-pontile angle one of the first symptoms of pressure on the eighth nerve consists of some forms of tinnitus, later, disturbance of hearing, and, as in nearly all cases the vestibular part of the eighth nerve is also pressed on, vertigo and disturbance of equilibration.

The development of the trophic ulcer in the eye conforms with the generally accepted view that it is only in those forms in which there is an irritation of the ganglion that a trophic condition of the eye appears. It is also interesting that so long as the eye was covered and protected from the air it remained in good condition and that exposure of the cornea brought on a keratitis. This also is in agreement with the conclusion of others.

It was not until about one month before his death that the patient presented cerebellar symptoms. He was then seen by Dr. Ingham, who noticed that when the patient walked there was a drooping of the head to the right, a distinct drooping of the right shoulder and a tendency to reel toward the right. This also agrees with the usual finding in such cases.

## CONCLUSIONS

The important points which this case teaches are the following:

1. Tic douloureux may sometimes be the result of pressure on the sensory root of the fifth nerve by tumor.

2. If after removal of most of the ganglion and cutting of the sensory root and evidences of typical disturbance of sensation in the fifth nerve distribution, pains persist, they are not necessarily functional but may be the result of irritation of the ninth nerve.

3. The sensory distribution of the fifth and ninth cranial nerves intermingle and it is possible that in irritation of one the pains be referred to the distribution of the other.

4. The case demonstrates the physiologic symptoms of irritation of the ninth and twelfth cranial nerves.

5. Tumors in the cerebello-pontile angle, or, in fact, in any portion of the brain, may exist without causing any of the so-called general pressure symptoms.

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**Etiology of Epiphyseal Separation.**—Separation of the upper epiphysis of the humerus is usually caused by direct violence, such as a fall on the shoulder. It has also been reported as a birth injury caused by traction on the arm.—J. M. Berry, in *Albany Medical Annals*.

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[3] Weisenburg, T. H.: Diagnosis of Tumors and Other Lesions in the Cerebello-Pontile Angle, The Journal A. M. A., April 18, 1908, l. 1251.

# A NEW OPERATION FOR PROLAPSE OF THE UTERUS

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This is a preliminary report for the purpose of plac- g on record a new operation for the cure of prolapsus teri.

The essential factor in the production of prolapse of e uterus is the recession of the cervix from the hollow the sacrum. The uterus in its normally anteverted osition rests with its anterior surface on the bladder d the vagina, which, in turn, are supported by the uscular floor of the pelvis. The broad ligaments pread out laterally like the wings of an aeroplane hile the more or less anteverted position of the uterus maintained by the round ligaments passing latero- nteriorly from the fundus and the uterosacral liga- ents passing from the cervix posteriorly.

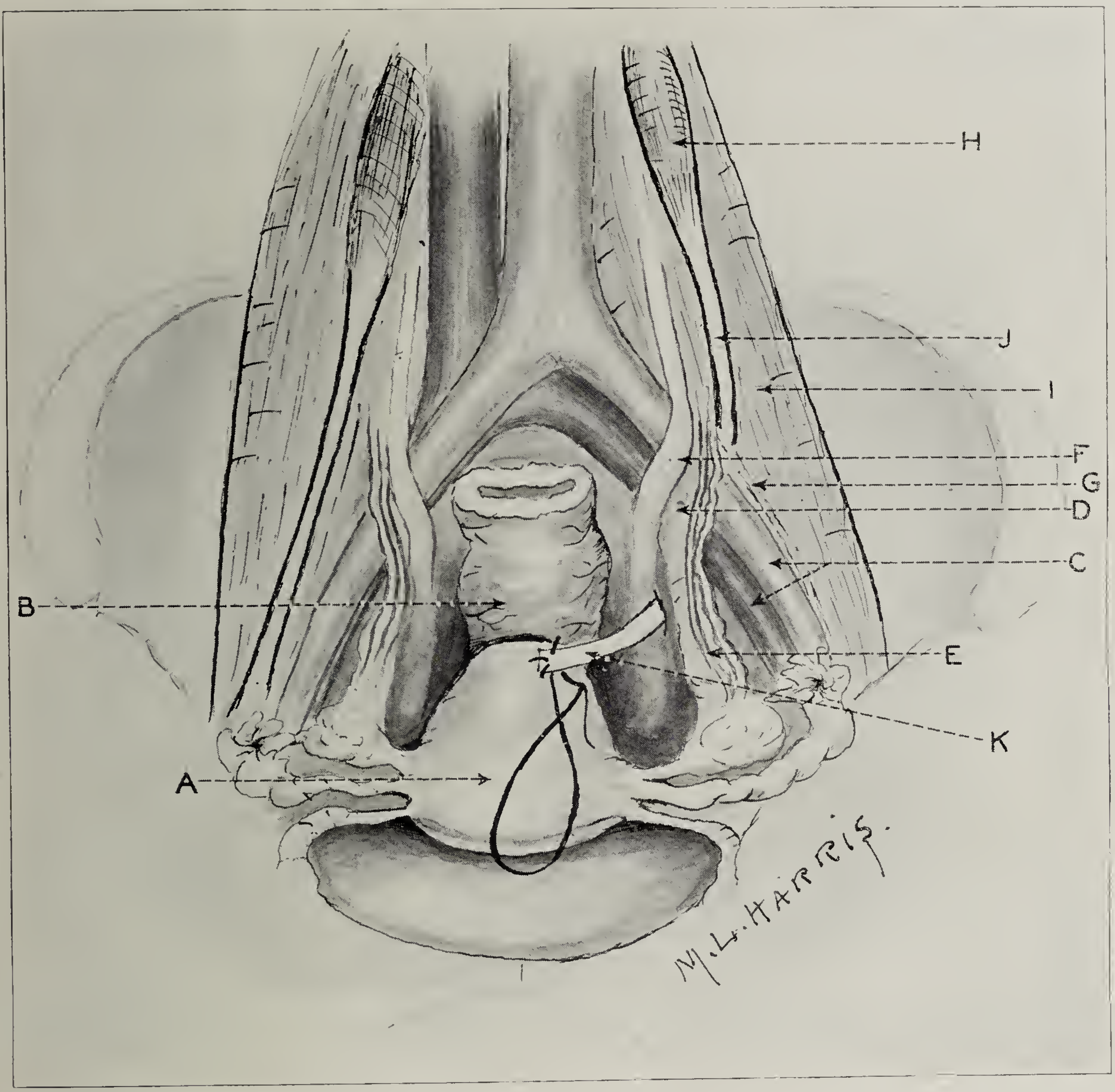
So long as the uterus is maintained in this position rolapse cannot occur. The perineum and pelvic oor may be torn to almost any degree, allowing all e pelvic organs to sag, but so long as the cervix is eld upward and backward in its normal position the terus will not prolapse. On the other hand, if the uterosacral supports are destroyed, allowing the cervix to descend along the vaginal canal, prolapse may occur even in the presence of a good pelvic floor and perineum.

In the usual case of prolapse of any degree from the first to complete procidentia it is found that practically all of the supports of the uterus are more or less altered and hence no single procedure will suffice to effect a cure.

In this brief report no attempt will be made to describe the various operations for the repair of the pelvic floor, or for shortening the round ligaments, etc., but attention will be directed to a new operation for holding the cervix upward and backward in the hollow of the sacrum where it normally belongs. Shortening of the uterosacral ligaments is rather unsatisfactory for the reason that in such cases these ligaments have been so elongated and torn as practically to have disappeared, leaving nothing remaining but loose peritoneum.

It occurred to me that the long tendon of the psoas parvus, a muscle of little use in the human subject, might be made to act as a substitute for the uterosacral ligaments and experiments on the cadaver demonstrated the feasibility of the idea.

The operation is performed as follows: The pelvic cavity is exposed from above in the usual manner by



New operation for prolapse of uterus. A, uterus drawn sharply forward. B. rectum. C, external iliac artery and vein. D, internal iliac artery. E, infundibulopelvic ligament. F, ureter. G, genitocrural nerve. H, psoas parvus. I, psoas magnus. J, tendon of psoas parvus before passing beneath the genitocrural nerve and the iliac vessels. K, psoas parvus tendon sutured to posterior surface of cervix.

a median longitudinal or a Pfannenstiel incision with the patient in the Trendelenburg position.

After packing the intestines well out of the way an incision is made through the peritoneum along the course of the tendon of the psoas parvus, which is readily seen as a distinct white band lying on the psoas magnus. The tendon is followed downward and divided at its point of insertion into the pectineal eminence.

Running along almost parallel with the tendon, but well over to the inner border of the psoas magnus, is seen the genitocrural nerve which should be avoided. The finger is inserted through the incision in the peritoneum and passing subperitoneally raises, by blunt dissection, the external iliac artery and vein from the inner border of the psoas magnus and from the brim of the pelvis so that the finger passes along the lateral wall of the pelvis beneath the external iliac vessels and beneath the infundibulo-pelvic ligament until the end of the finger is felt just beneath the peritoneum in a small free triangular space anterior to the internal iliac vessels and anterior and external to the ureter.

The peritoneum is perforated at this point and a curved forceps followed along with the finger as it is withdrawn.

The end of the tendon is caught with the forceps and drawn down into the pelvis.

The same procedure is repeated on the opposite side.

The ends of the two tendons are now firmly sutured to the posterior surface of the cervix well down, as shown in the illustration, and the incision in the peritoneum closed. The tendon, as will be seen, passes beneath the genitocrural nerve, beneath the external iliac vessels, beneath the infundibulo-pelvic ligament and hence beneath the ovarian vessels and nerves, anterior to the internal iliac vessels and into the pelvic cavity above and to the outer side of the ureter; it is thus impossible for it to exert pressure on any of these structures, however, much it may be drawn on.

As is well known, the psoas parvus is not constantly present in the human subject. Should this muscle be absent the operation may be modified by the use of a portion of the psoas magnus.

This muscle begins to become tendinous along its inner border well up to the bifurcation of the common iliac artery. The incision through the peritoneum is made a little nearer the iliac artery and the vessels are raised from the muscle down to the point where the muscle passes over the pubic bone.

A portion of the aponeurotic or semitendinous inner border of the muscle is then cut across at its lower part and raised up as a ribbon-like band about 1.5 to 2 cm. in width and extending upward to about opposite the bifurcation of the common iliac artery. This band is utilized in the same manner as the tendon of the psoas parvus and the operation completed as described above.

The effect of this operation is to suspend the uterus firmly high up in the pelvis with the cervix held well back where it belongs. The uterus is held by an active muscular support possessing all the natural elasticity and resilience of such structures.

I have performed this operation twice on the living subject.

Case 1.—Mrs. P., aged 29, had a bilateral laceration of the cervix, a unilateral laceration of the puborectalis muscle with a prolapse to the degree that cervix just presented at the vulva with the patient standing. Operation performed April 8, 1910. Cervix and perineum repaired below as usual. On opening the abdomen above the psoas parvus was found absent. The operation was done therefore by using a portion of the psoas magnus as described above. There was no difficulty experienced in carrying out the technic. The round ligaments were then shortened. The patient recovered nicely with the uterus held in normal position.

Case 2.—Mrs. B., aged 48, mother of 12 children, just passing through menopause, had complete prolapse, the everted vagina and the uterus protruding between the thighs on standing. Operation April 27, 1910. The pelvic floor was repaired in the manner I have described previously in The Journal, Dec. 9, 1899. On opening the abdomen a good psoas parvus was found and utilized as described above. The round ligaments were then shortened. Anterior colporrhaphy was not done, as it was found that when the cervix was drawn upward and backward where it belonged the cystocele disappeared.

With this operation it is believed that anterior colporrhaphy will be unnecessary in the majority of the cases.

Of course it is too early to show final results in these two cases, but the immediate result of the operation was so satisfactory and the method seems so promising that the operation is described at this time in order that others may try it and its ultimate value thus be determined more quickly.

100 State Street.

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# TRANSURETHRAL OPERATIONS IN WOMEN

HOWARD A. KELLY, M.D.
BALTIMORE

I believe that the field of transurethral operations through my open cystoscopes is destined in time to become a large one. Given the necessary instruments and a certain amount of skill and precision in using them, there is no reason why a variety of operations should not be done in a simpler manner through the open tube of the cystoscope instead of through a bloody suprapubic or transvaginal incision. It has been my custom from the very first discovery and use of my open-air cystoscope early in the nineties to employ this method in the routine of every-day practice for the treatment of ulcerated areas in the bladder by making repeated direct topical applications to the exposed diseased surfaces just as one would treat an ulcerated sore throat. Of this practice I have both spoken and written on numerous occasions. I have also used the open cystoscope to lift small foreign bodies out of the bladder through its lumen with the aid of suitable forceps. One

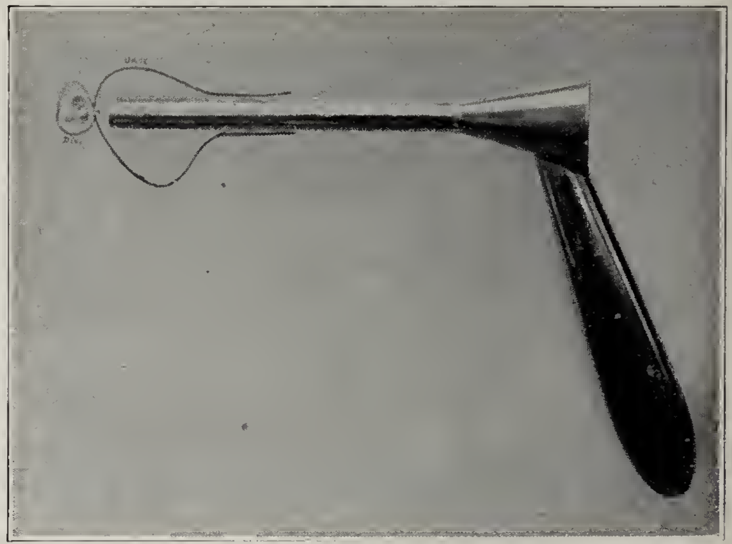

Fig. 1.—Shows the position of the speculum exposing the minute orifice leading into the diverticulum in the posterior wall. A vesical speculum (the actual instrument) reduced to about half natural size rests in a diagrammatic outline representing the urethra and the bladder. The base of the bladder is above, as the patient is presumed to be in the knee-chest posture. Back of the bladder is an outline representing the diverticulum in which the three stones extracted have been inserted.

an also in this way treat papillomata which are not oo extensive.

I recently removed several calculi transurethrally y this method from a diverticulum in the bladder and o saved my patient from a cutting operation in the nterior vaginal wall, which she especially dreaded. The xtraction of the small stones was effected without any ain whatever, and without using any other anesthetic han a cocain solution injected into the bladder wall, hrough the speculum as a preliminary.

The operation was done in this wise: the patient, vho had suffered from the repeated formation of calculi n the bladder and an accompanying cystitis was being xamined in the knee-breast position through my open ystoscope (Fig. 2, No. 1) through the air distended ladder when I remarked the presence of a minute rounded spot on the left posterior (sacral) wall of the ladder, not more than 2 mm. in diameter, with a yellowish center. I had seen this before and had noted a little fluid escaping from it, but took it to be nothing more than a small pocket in the bladder wall, one of the common crypts between somewhat exaggerated trabeculæ. Being intent on making a more careful search on this occasion, however, I was struck by the somewhat peculiar chalky appearance of the center of the opening; a long searcher being introduced (Fig. 2, No. 2) it impinged on something hard and I realized at once that I had to deal with a calculus embedded in a diverticulum, which had been overlooked at every previous examination, both by myself and by others. This interesting find at once offered a full and satisfactory explanation of the recurring calculi and a lingering infection which never would wholly disappear under treatment. An additional aid in the diagnosis would have been found in a wax-tipped searcher or catheter pushed into a hole which must of necessity have been gouged on one side by contact with the stone. At the operation (extraction) I used a No. 10½ cystoscope, though I would ordinarily recommend the use of sizes up to No. 11 or No. 12 or even much larger as giving more room without including any risk of a consecutive incontinence. The first step, after exposing the little opening through the tube of the cystoscope was to thrust a short needle on a long shank (Fig. 2, No. 3), attached to a syringe into the bladder wall by a sudden stabbing movement, penetrating about 2 mm. Through this I injected a few drops of a 1 per cent solution of cocain on three sides of the opening and about 5 or 6 mm. distant from it. The injection needle was then laid aside and a long-handled electrocautery knife (Fig. 2, No. 4) introduced with a handle bent at an angle so that I could perfectly see just what I was doing all the time it was in the bladder, when it was heated. The narrow blade was carried into the opening and the current turned on and the margin of the opening burned through in a few seconds in about three places to a depth of from 3 to 5 mm. There was no hemorrhage. This discission opened the pocket sufficiently to expose the calculus and to enable me to grasp it with a pair of toothed alligator forceps (Fig. 2, No. 5). The calculus was soft and broke and was picked out in fragments, when another small calculus was seen looking like a shot about 4 mm. in diameter, which was picked up whole with the alligator forceps and removed. A careful search now revealed the presence of a third calculus embedded in the right wall of the diverticulum; I could just see a limited part of the surface but could not grasp this one with the forceps; so I introduced a blunt, long-handled needle (Fig. 2, No. 6) and worked it around the calculus and peeled back the tissues, until I pried it up out of its bed. I was then able to grasp it too with the forceps and to remove it. The size of the entire diverticulum was now large enough to receive the end of the index finger, not over 1.5 cm. in diameter.

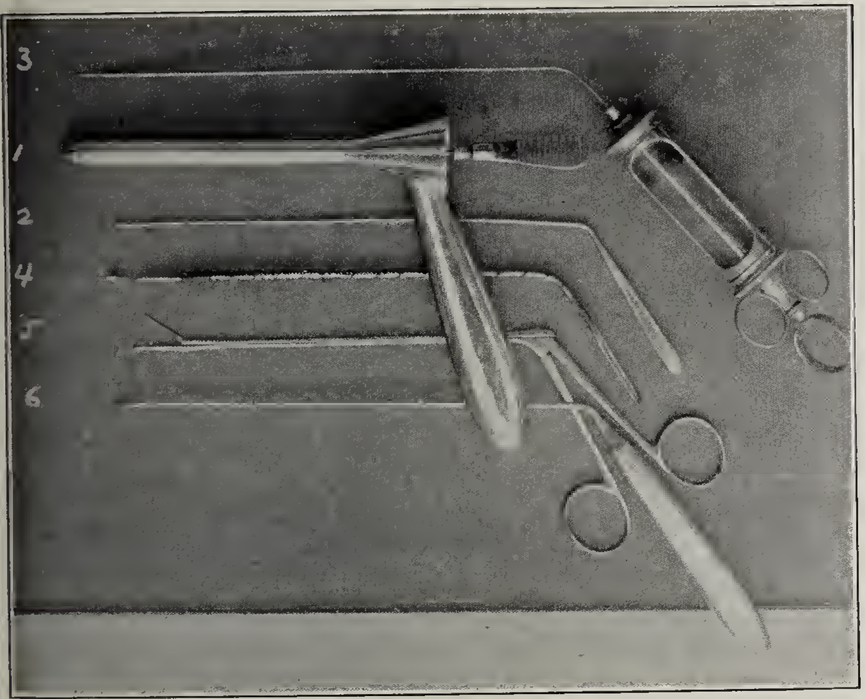

Fig. 2.—Instruments used in transurethral operation. 1. Open cystoscope; (2) long searcher; (3) short needle on a long shank attached to a syringe; (4) long-handled electrocautery knife with bent handle; (5) toothed alligator forceps; (6) blunt, long-handled needle.

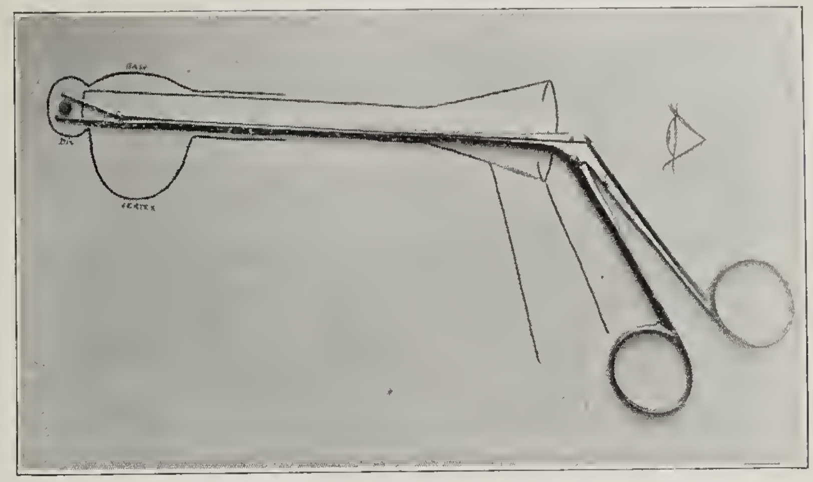

Fig. 3.—The surgeon's eye, the speculum, the urethra, the bladder and the now dilated diverticulum are represented in outline, while the actual alligator forceps used is shown grasping an actual calculus in the act of removing it.

The patient was at once able to move about after the operation and suffered no inconvenience.

I feel sure that it will be possible in the future to treat almost all calculi found in diverticula in this way, that is (1), by exposing the diverticular orifice through an open speculum (2), by cutting the sides so as to open the cul-de-sac with an electro-cautery (3), by extracting the calculi with forceps (4) by examining thoroughly the interior of the cavity through the cystoscope.

This method is applicable to the male as well as to the female bladder.

1418 Eutaw Place.

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**Roentgen-Ray Treatment.**—Some failures to benefit patients suffering with diseases usually amenable to *x*-radiations may be due to too vigorous treatment, thereby inducing too severe negative phases.—A. F. Holding, in *Albany Medical Annals*.

# RADICAL OPERATION FOR CANCER OF THE PYLORIC END OF THE STOMACH

## REVIEW OF 266 PARTIAL GASTRECTOMIES

WILLIAM J. MAYO, M.D.
Surgeon to St. Mary's Hospital
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The operation of partial gastrectomy and pylorectomy has been performed in St. Mary's Hospital, Rochester, Minn., 266 times (C. H. and W. J. Mayo, April 21, 1897 to Jan. 27, 1910) with thirty-four deaths, an average mortality of 12.4 per cent. During the year 1909 there were forty-six operations with four deaths, an average mortality of 8.6 per cent. Forty-two of the 266 operations were performed for benign tumors, or ulcers, or the diagnosis was not microscopically established; they have, therefore been excluded from the statistics.

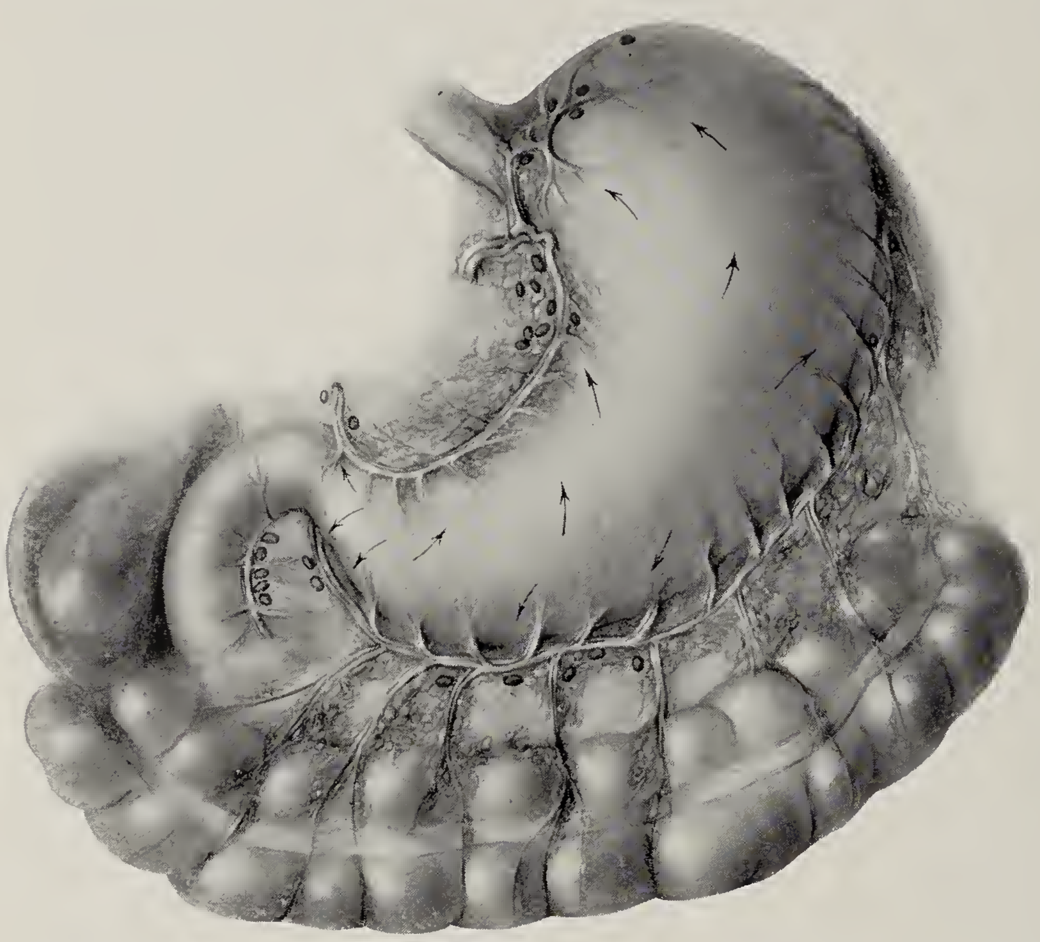

Fig. 1.—Anatomy of the stomach with especial reference to the blood-vessels and lymphatics. The arrows indicate the direction of the lymphatic flow.

The drawings are by Dorothy Peters.

TABLE 1.—OPERATIONS FOR CARCINOMA INVOLVING THE PYLORIC END OF THE STOMACH

| | |
|---|---|
| Total number | 224 |
| Males | 163 |
| Females | 61 |
| Age of oldest | 81 |
| Age of youngest | 30 |
| Average age | 53 |
| PATIENTS OPERATED ON OVER FIVE YEARS AGO | |
| Total number | 50 |
| Present condition known | 39 |
| Alive and well (one 8 years 2½ months; one 8 years; *one 7 years, 2 months; one 6 years; one 6 years, 11 months; one 5 years, 3½ months; one 5 years | 8 |
| PATIENTS OPERATED ON OVER FOUR YEARS AGO | |
| Total number | 85 |
| Present condition known | 64 |
| Alive and well | 13 |
| PATIENTS OPERATED ON OVER THREE YEARS AGO | |
| Total number | 117 |
| Present condition known | 88 |
| Alive and well | 18 |
| PATIENTS OPERATED ON LESS THAN THREE YEARS AGO | |
| Total number | 107 |

* Has since died of recurrence.

Cases in the last group (operations less than three years ago) are too recent to be of any statistical value as to the question of cure.

Partial gastrectomy for the cure of malignant disease of the stomach has never been favorably accepted, and, considering that this organ is more frequently the seat of cancer than any other in the human body, the percentage of operations has been exceedingly small. The reluctance of practitioners to advise and of surgeons to practice partial gastrectomy is based on several considerations: First, in the greater number of cases the disease cannot be diagnosticated in time to affect a radical cure. Second the operation itself has an immediate mortality which is high in proportion to the ultimate prospect of cure. I do not believe this pessimism to be justified by the facts.

It is my intention, not to go into the details of the diagnosis of gastric cancer, but to call attention to two important indications for operation, which, if observed early, will be the means of securing a number of patients in time to benefit them. 1. Food remnants found repeatedly in the stomach after twelve hours, when taken in connection with the clinical history, should indicate a surgical consultation and, in the large majority of cases, this special investigation will lead to an exploratory operation. 2. The finding of a movable tumor in the pyloric end of the stomach has a surgical significance which cannot be overestimated. It is a great mistake to suppose that the presence of a movable tumor, palpable through the abdominal wall, is indicative of a hopeless condition. While it is true that ulcer and its results often give rise to gastric retention and occasionally to tumor, other things being equal, surgical relief is quite necessary in these cases.

Without in any way minimizing the value of laboratory examinations of the stomach contents etc., I am more and more convinced that gastric cancer itself does not give rise to diagnostic symptoms during the curable stage. In the later stages the clinical picture and laboratory findings are characteristic; by this time, unfortunately, the prognosis is equally as plain as the diagnosis, but, if the disease is situated in the pyloric end of the stomach, it early introduces mechanical conditions which furnish the most valuable information.

Heretofore we have asked for a diagnosis in carcinoma of the stomach and have shifted the burden of responsibility to the internist. In the future let us ask, rather, for surgical consultation in all cases showing evidences of mechanical obstruction or tumor.

So much can be said concerning the doubtful group of cancers from which we obtain our cases in which cure is possible; but what shall be said as to the desirability of operation in advanced cases? Partial gastrectomy offers a number of months of apparent cure, even when it is impossible to remove all of the involved lymphatics, and with a mortality but slightly above that of gastrojejunostomy which, at best, gives only a few months of more or less uncomfortable existence.

Mikulicz has called special attention to the marked palliation which is produced by removal of the sloughing mass, as contrasted with methods which look only to overcoming the obstruction.

In a high percentage of cases, cancer of the stomach is, at the first examination, plainly inoperable, and without exploration, other cases are doubtful.

Palmer studied the histories of 335 patients suffering from cancer of the digestive tract, who presented themselves at our clinic between Jan. 1, 1908 and Sept. 1, 1909, and found the following definite signs of metastasis: (1) implantation carcinoma of the sigmoid, "the rectal shelf of Blumer"; (2) supraclavicular metastasis; (3) carcinomatous involvement of the umbilicus (buttonlike umbilicus); (4) free fluid in the peritoneum. These various conditions, by reason of the metastasis alone, eliminated about 12 per cent. of the total number as hopeless at the time of the primary examination.

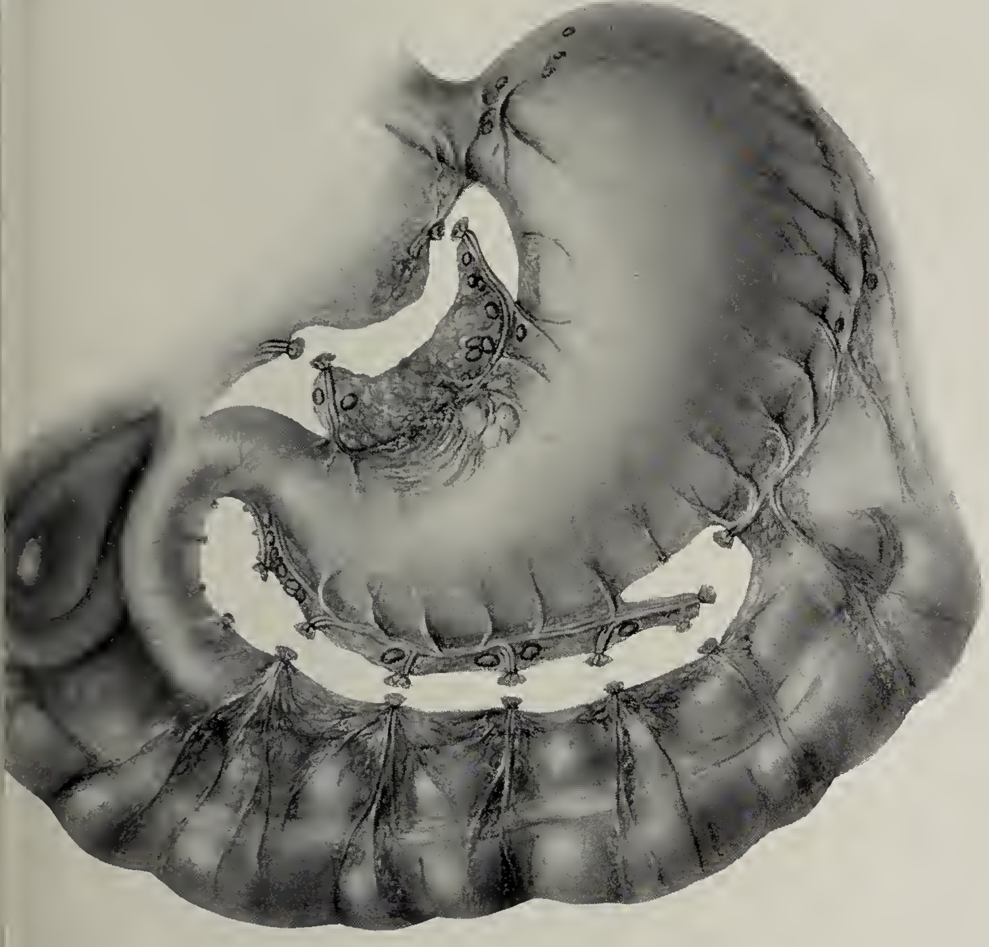

Fig. 2.—Vessels ligated and lymphatic dissection completed.

TABLE 2.—CASES OF CANCER OF THE STOMACH EXAMINED IN THE CLINIC BETWEEN JAN. 1, 1908, AND SEPT. 1, 1909

| | |
|---|---|
| Total number | 335 |
| Hopeless and not admitted to the hospital | 146 |
| Resections | 78 |
| Gastrojejunostomies | 39 |
| Excision malignant ulcer | 2 |
| Exploration inoperable disease | 70 |
| | 335 |

### TECHNIC OF OPERATION

As regards the technic of pylorectomy and partial gastrectomy, I have little to present that is new. An effort should always be made to remove the lymphatic area whether it is diseased or not. The general rule holds good, in the earlier stages at least, that the glandular involvement follows the regular lymphatic routes to the four primary groups of lymphatic glands into which the pyloric end of the stomach drains. We have observed, both in cancer and in ulcer, that when there was glandular involvement of only moderate degree, the evident adenopathy was usually confined to the glandular groups which accompany the four arteries, the superior pyloric, the gastric, the gastroduodenal and gastroepiploic. The lymphatics in this region eventually drain into the celiac and pre-aortic glands but by routes that are far from regular. Wilson and MacCarty, in a study of the lymphatics in a large number of cases in which we had made partial gastrectomy, have found a curious tendency of the disease to pass by certain glands, and have demonstrated that carcinomatous emboli in the early stages do not necessarily involve glands one after another, but may primarily pass into glands at a considerable distance.

Explorations and palliative gastrectomies have given me opportunities to note the glandular involvement in the late stages of the disease. In such cases, due either to unsuspected primary lymphatic connections or obstruction to the regular lymphatic channels causing extension along bypaths, I have seen involvement of the glands in the transverse mesocolon, the glands about the common duct, those along the upper border of the pancreas, and in other situations It is evident, therefore, that removal of the lymphatic area in gastric cancer is not a simple proposition and it indicates only too clearly that to secure the best results, the disease must be removed before the lymphatics are infected.

Prophylaxis of gastric cancer can be aided by the excision of calloused ulcers of the stomach. In the 266 cases in which we have performed resection, Wilson and MacCarty examined histologically 218, and were able to show that 71 per cent. of the cancers had their origin in chronic gastric ulcer.

We have seen primary cancer of the duodenum in but five cases, and in only one of these did it appear that the cancer might have its origin in previous ulcer of the duodenum. This justifies the belief that gastrojejunostomy is the operation of choice for duodenal ulcer. In two instances, however, we found a gastric cancer which apparently had its origin on the gastric side of a duodenal ulcer which involved the pylorus. For gastric ulcer, the removal of the ulcer itself would seem to be the only safe procedure. We have practiced this for several years wherever it seemed possible and in a number of instances have unexpectedly found cancer on ulcer in the early stage.

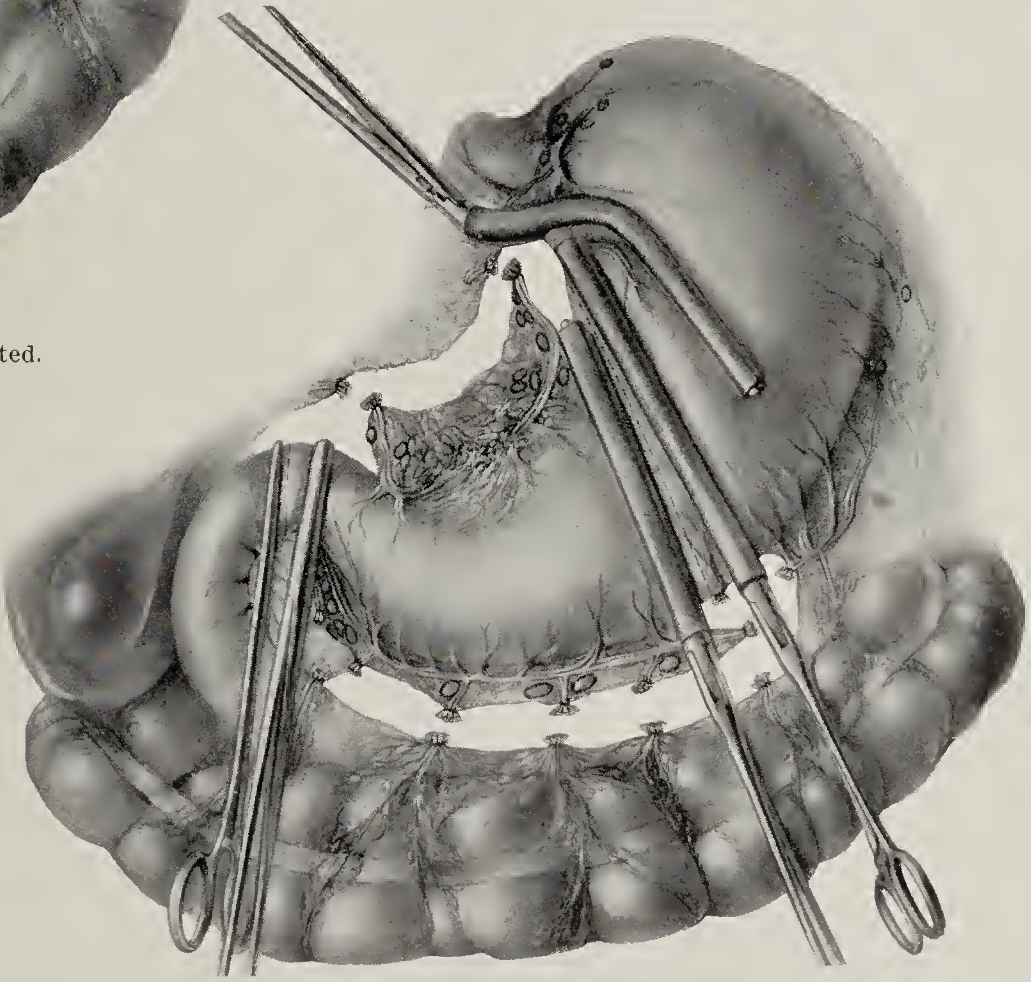

Fig. 3.—Clamps placed on the stomach and duodenum, isolating the pyloric end and lesser curvature.

The fundus of the stomach, like the fundus of other organs as contrasted with the neck, is not largely supplied with lymphatics, and those present lie, to a large extent, in the vicinity of the cardiac orifice. The fundus, from a line about opposite the cardia, passes its lymph-streams upward into the lymphatic glands about the cardia and to the left to the glands lying in the vicinity of the spleen, making a rather sharp lymphatic demarcation between the fundus and the pyloric end of the stomach. This indicates the amount of stomach necessary to be removed in pyloric cancer and makes pylorectomy and partial gastrectomy a fairly definite procedure. (Fig. 1).

A typical resection necessitates the removal of all of that part of the stomach lying to the right of a line dropped vertically from the cardiac orifice, although in some cases more of the fundus must be removed on account of direct extension of the disease. It sometimes happens that either the anterior or the posterior wall is more extensively diseased than the other. In this event we have not found it difficult to remove more of the diseased wall of one than the other, and to throw the suture line anterior or posterior as the necessity may indicate.

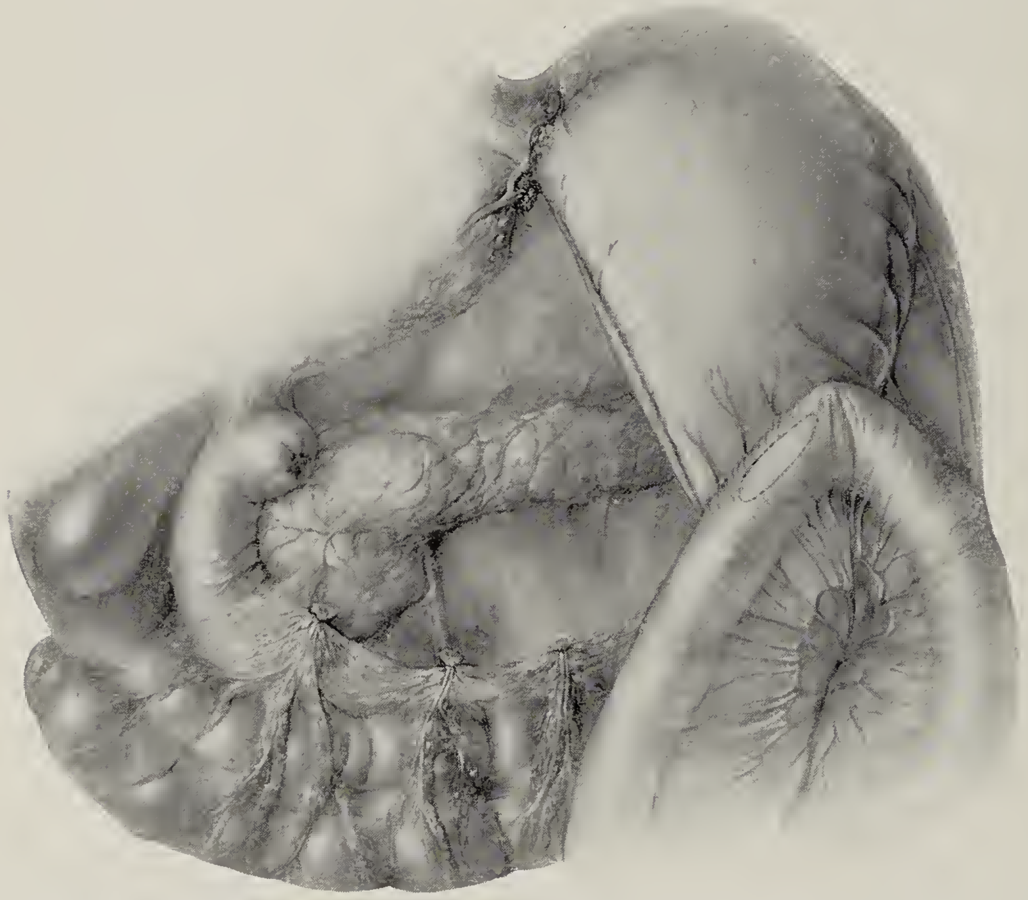

Fig. 4.—Restoration of gastro-intestinal continuity by an anterior gastro-enterostomy, which may be used in place of the posterior operation when the remaining stomach pouch is very small.

Billroth, to whose far-sighted pioneer work in gastric surgery we owe so much, had to contend with shock from loss of blood, which is now obviated by primary ligation of the blood-vessels. From a technical standpoint, the glands and gland-bearing fascia can best be removed at the time the blood-vessels are ligated, and the early ligation of these vessels not only makes the part of the stomach to be removed avascular, but also separates it from its connections so that the succeeding steps in the operation are greatly facilitated.

The blood-vessels are four in number, each accompanied by definite lymphatic channels and glands. These blood-vessels have their origin from the celiac axis, the gastric artery directly from the celiac axis, the superior pyloric and gastroduodenal by way of the hepatic artery, and the left gastro-epiploic from the splenic artery. As a general rule it will be most convenient to make the separation of the superior border of the stomach first, beginning the operation by (a) ligation of the superior pyloric vessel, (b) the gastric, (c) the left gastro-epiploic, (d) the gastro-duodenal vessels. As each vessel is secured, the glandular separation is effected. The procedure is as follows: (Fig. 2).

*Step 1.*—An opening is made through the gastrohepatic omentum into the lesser cavity of the peritoneum. The superior pyloric artery is isolated at as great a distance as possible from the duodenum and is double-tied and divided between. The terminal branches are dissected upward from the duodenum so that they hang with the glands and fat attached about the pyloric ring. This frees the superior border of the duodenum for an inch and a half or two inches. The glands accompanying the superior pyloric artery are very often involved, and it should be remembered in separating them that the common duct lies in close proximity and may be exposed to injury. In one case I accidentally cut the common duct through three-fourths of its circumference transversely. It was sutured with catgut and a separate drain through a stab wound employed through which there was a biliary discharge for nearly three weeks. On two occasions I found the gall-bladder attached by the fundus to a pyloric growth and it was removed without difficulty as it lay attached. Adhesions to the liver, if present, are separated at this stage of the operation.

*Step 2.*—The stomach is drawn downward and to the right and the gastric artery is caught at the highest possible point. In thin subjects it may be ligated close to the celiac axis, but in the average case it will be most easily isolated just distal to the large branch which leads up to the esophagus and cardia.

This ligation is usually made from a needle with two independent ties of catgut, as the tissues are liable to retract—and if the ligature slips it is difficult to catch the artery, as I have reason to know. The anterior and posterior gastric branches are caught and tied in such a manner that the fat and glands, and distal part of the vessel can be dissected free from the upper part of the lesser curvature and a space an inch and a half in extent next to the cardiac orifice is exposed. This dissection should be very carefully made, because, as pointed out by Hartman and Mikulicz, it is essential that the whole of the lesser curvature to a point close to the cardiac orifice shall be removed. To a considerable extent the lymphatics lie in the wall of the stomach, and as demonstrated by Cunio, a large majority of pyloric cancers spread upward along the lesser curvature, and the failure to remove involved stomach is most apt to occur in this situation.

*Step 3.*—Careful examination is now made on the greater curvature for the glands which begin at a point about opposite the cardia. These glands are usually visible even when not diseased. The left gastro-epiploic vessels are caught and double-tied to the left of these glands, and the anterior and posterior gastric vessels caught and tied as they come from the stomach, and the greater curvature cleared for a space of at least an inch and a half. The transverse colon is drawn well into view so that the middle colic artery can be examined at frequent intervals to avoid injury, and the gastro-epiploic vessels tied with the gastrocolic omentum in sections from left to right sufficiently close to the transverse colon to leave the glands lying on the vessels of the greater curvature by a good margin. As this dissection proceeds it will sometimes be found that the avascular area which lies in the circle of the middle colic vessel and the posterior layer of the mesocolic peritoneum is attached to the growth. If this is the case the attached peritoneum can be cut out and removed with the growth. The opening thus made in the transverse mesocolon can be used later through which to make the gastrojejunostomy. As the dissection proceeds to the right the middle colic artery is careully exposed and traced to its origin in the superior mesen-eric artery just at the lower edge of the pancreas, otherwise may be accidentally injured. Kronlein has shown that in hree out of four cases obliteration of the middle colic vessel ill lead to gangrene of a portion of the transverse colon and ecessitate a coincident resection.

*Step 4.*—Removal of the inferior gastroduodenal glands hich lie below and to the right of the pylorus about the head f the pancreas and in the curve of the duodenum, is the next tep in the operation. The gastrocolic omentum is tied in sec-ions rather close to the transverse colon, the fat and glands re lifted up from over the head of the pancreas, and the lood-vessels anastomosing with the branches of the superior ancreatoduodenal artery, are caught and tied. Separation is ontinued upward, clearing the inferior border of the duodenum or at least two inches until the gastroduodenal artery is eached in the groove between the pancreas head and the uodenum behind the pylorus. Division of these vessels allows aising in one piece all this important group of glands.

*Step 5.*—The posterior surface of the upper duodenum is eparated from the pancreas, and if the pancreas is adherent o the gastric growth, a piece is shaved off, allowing it to emain attached to the growth by adhesions. In other cases t becomes necessary to remove more or less of the pancreatic tructure. If the involvement is extensive it is better to leave his part of the operation until the stomach is either cut cross and separated from the duodenum, or the line of stom-ch section on the cardiac side is finished and the stomach urned over in order that this portion of the dissection may e completed under inspection. If such injuries to the pan-reas are properly cared for, we have not found that they give ise to serious consequences. Haberkant found that a mor-ality of 76 per cent., and Mikulicz that a mortality of 74 per ent. followed the removal of such pancreatic involvement. It s the rule that these operations are more serious because more xtensive but we have not found any special mortality due to perable pancreatic complication. The best manner of treat-ng such an injury to the pancreas is to cover it as far as racticable with the sheath and posterior peritoneum, and fter completely closing the end of the duodenum, if possible, he stump of the duodenum should be buried in the injured urface of the pancreas.

*Step 6.*—As a rule the duodenum beyond the pylorus is not nvolved to any considerable extent, but to make sure it is best o remove about an inch of it. A firm compression forceps is placed next to the pylorus and a half inch below this pair of light holding clamps on the duodenum above and elow to prevent this holding clamp from slipping off. The uodenum is divided between and both raw surfaces cauterized with the actual cautery. The pyloric end of the stomach is turned completely over on the left side of the patient. The stump of the duodenum is sutured with a continuous atgut suture passed through the duodenum and around the forceps as in the Pilcher operation for the removal of internal hemorrhoids. The holding clamp is slipped off, the atgut sutures drawn tight and tied. Three-fourths of an nch below this a purse-string suture of medium-sized linen is laced about the duodenum, the ends of the catgut strands are ut short and the duodenal stump invaginated in a manner imilar to the stump of an appendix in appendectomy. A econd linen purse-string suture is now placed about the duo-lenum; behind it catches the pancreatic sheath so that the tump may be buried against the head of the pancreas, as recommended by Willy Meyer. Finally the stump of the adjacent tied gastrocolic and gastrohepatic omenta are so adjusted by fine linen sutures as to make further protection. In our experience this technic has been adequate and we have had no cases of duodenal leakage. The field of operation is now searched for any bleeding points and protected with gauze.

*Step 7.*—The stomach is drawn to the right and holding clamps placed from the space cleared on the greater curvature in Step 3 to the space cleared on the lesser curvature in Step 2. When the stomach is cut across, these clamps sometimes slip near the cardia and the stomach retracts. To prevent this a pair of bayonet holding clamps are placed on the proximal side from above down, grasping the upper part of the stomach half-way across. A clamp is now placed distally to prevent leakage from the end to be amputated and the stomach divided between. The divided proximal gastric surface is cauterized with the actual cautery and the stomach turned in by a continuous chromic catgut suture beginning on the greater curvature. This suture is applied quite tight and is the one we have described on several occasions. It starts on the mucous surface, passes through all the coats to the peritoneum and back on the opposite side through all the coats to the mucous membrane, is then tied and the end cut short. The suture now passes through all the coats from the mucous to the peritoneal coat and begins on the opposite side by passing through all the coats from the peritoneum to the mucous and back on the same side from the mucous to the peritoneum. This is repeated on alternate sides until one-half to two-thirds of the stomach is closed. The cut margins now approach the transverse holding clamp so closely that inversion cannot be accomplished; this clamp is removed and the bayonet clamp, which grasps the upper part of the stomach to the left of the cardia, is depended on during the completion of the suture. A half dozen mattress tension sutures of medium sized linen are now placed, turning in the catgut row, and over this a continuous Cushing suture of fine linen makes all secure (Fig. 3).

*Step 8.*—Restoration of gastro-intestinal continuity is best made by a posterior suture gastrojejunostomy with the jejunum passing to the left and as short as will permit the intestine to reach the stomach pouch without tension. In some cases the remaining pouch of the stomach is so small that anterior gastrojejunostomy on an 18-inch loop, the jejunum running to the right, can be done more easily and quickly, and has given equally good results (Fig. 4).

In doing the anterior gastrojejunostomy we have usually followed the method of Hartmann, i. e. the two-row suture method but in addition, as Hartmann recommended stitching the intestine to the stomach pouch an inch above the proximal side with a mattress suture. A second mattress suture is placed three fourths of an inch on the distal side attaching the jejunum to the tip of the stomach pouch. This prevents the jejunum from kinking on the gastrojejunal opening. Some operators make the gastrojejunostomy as the first step of the resection. We have done so on a few occasions. It is the rule, generally, that cancerous disease should be removed regardless of consequences and the repair made to fit the individual case. The gastrojejunostomy, if made primarily, may not always be at just the right point after the eradication of the disease. In selected cases the Kocher method of joining the duodenum to the stomach, can be used, inserting the cut end of the duodenum into the posterior wall of the closed pouch of the stomach. We have used the Kocher method but generally speaking, it is not as satisfactory as the Billroth No. 2 method, i. e. closing both the end of the duodenum and stomach and making an independent gastrojejunostomy. The Billroth No. 1 method, direct union between the cut end of the duodenum and gastric pouch, cannot often be used in malignant disease, although for benign disease, especially hour-glass ulcer, transverse resection in continuity and direct suture, give excellent results.

Some eminent surgeons believe that in serious cases we should do the gastrojejunostomy at one time, and after the patient has had an opportunity to pick up as the result of better feeding, to resect the stomach. We have followed this plan on two occasions, making the resection about two weeks after the gastrojejunostomy. In advanced disease gastrojejunostomy seems to be nearly as dangerous an operation as complete resection and because of the sloughing masses in the stomach, gastrojejunostomy does not furnish the rapid relief which is desired. Again, when the patient has recovered from his first operation he is inclined to procrastinate, or to refuse a second operation.

In regard to the question of shock in these debilitated individuals: The patient is given a moderate dose of morphin preliminary to anesthesia, which should be maintained to the very lightest degree during the visceral stage of the operation, as no pain is experienced at that time. As a rule the operation can be completed in from forty-five minutes to an hour and ten minutes, unless some complication arises. After operation the patient is kept warm and is put in the semi-sitting posture. If much debilitated he is given ten to fifteen minims of camphorated oil hypodermatically every four hours for several days. From four to six quarts of saline solution are given the first twenty-four hours by the Murphy method of rectal infusion. Two nutrient enemas are given in twenty-four hours for the first three or four days, by which time the patient will be able to take a sufficient amount of liquid nourishment by mouth. A moderate amount of hot water is allowed in the stomach from the start if borne well; after the first twenty-four hours, tea, broths, etc. may be given. Occasionally some blood and gastric secretion will accumulate in the stomach pouch in the first two days. This should be gently removed with a tube and the stomach irrigated with hot water.

### OPERATIVE MORTALITY OF PYLORECTOMY AND PARTIAL GASTRECTOMY

In the 266 resections up to Jan. 27, 1910, there were thirty-four deaths or 12.4 per cent. During the year 1909 there were forty-six resections with four deaths, 8.6 per cent. mortality. This includes every case dying in the hospital without regard to the length of time following operation, and it includes all the early cases in which the mortality was high. In a way this is hardly fair to the statistics as many of the patients were in wretched physical condition at the time of operation, and some of these lingered along for weeks, dying eventually from exhaustion. The post-mortem showed the operative field to be in good condition. Yet this method of estimating the operative mortality seems to be the only way in which unprejudiced statistics can be compiled. If one begins to eliminate certain cases it is difficult to tell just where the line may be drawn fairly. While the operation is one of considerable magnitude if the patient is in good condition, the mortality is certainly under 5 per cent. and to a great extent the deaths are due to the patient's condition rather than to the operation itself. This brings up the question whether resection in advanced cases is worth the risk. I think it is. It should be borne in mind that these patients are usually admitted to the hospital with obstruction of such degree that the possibility of life is reduced to a few days or weeks. Gastrojejunostomy, with nearly the same mortality as resection in cancer, does not give great relief in these advanced cases owing to the discharges from the sloughing mass which pass downward into the intestinal tract and cause serious changes in metabolism, as contrasted with the patient's condition after resection of the cancerous stomach.

TABLE 3.—OPERATIONS FOR CANCER OF THE STOMACH FROM APRIL 21, 1897, to JAN. 27, 1910

ST. MARY'S HOSPITAL RECORDS

| | |
|---|---|
| Total number | 627 |
| Explorations—Hopeless condition | 206 |
| Gastrojejunostomies | 169 |
| Gastrostomies | 26 |
| Exclsion of ulcer (with cancerous change) | 2 |
| Resection for cancer | 224 |
| | 627 |

I am greatly indebted to Dr. J. F. Robinson for his painstaking care in ascertaining the present condition of patients, and for his aid in compiling the statistics.

# STRYCHNIN POISONING

JOHN V. SHOEMAKER, M.D., LL.D.
Professor of Materia Medica, Therapeutic Clinical Medicine and Diseases of the Skin in the Medico-Chirurgical College and Hospital
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The patient in question is a young student of pharmacy, aged 21. For a few days previous to taking the drug in mistake he had felt tired and unable to pursue his studies with comfort, which led him to take strychnine sulphate gr. 1/60 three times daily. That very evening he felt what he diagnosed as an attack of coryza coming on, for which he decided to take a coryza pill coated with chocolate. By mistake he took from 2 bottles a number of chocolate-coated pills, each containing grains 1/30 of strychnin sulphate, and took them singly at short intervals until he had taken sixteen in less than three hours. He came to the hospital to consult a physician concerning his peculiar twitching of the muscles around the mouth. While talking with one of the physicians, who noticed the peculiar spasms and who suspected strychnin poisoning, he said, "I have been taking a number of coryza pills." It was then found that the pills taken contained strychnin sulphate grains 1/30.

The patient was at once given two cups of hot black coffee and before lavage could be resorted to he developed severe spasms and almost complete locking of the respiratory muscles. He became cyanosed, opisthotonos followed and there was no time to be lost in saving his life. Chloroform was administered by inhalation until he was completely relaxed, after which a stomach-tube was passed and the stomach washed out with strong coffee. After the effects of chloroform had passed off, it was soon noticed that his face was drawn in the characteristic sardonic grin. The lower jaw became immovable, the neck rigid, the pupils dilated, the reflexes heightened so that the muscles contracted spasmodically. The patient was conscious and complained of pain, especially of the extensor muscles of the body. The administration of chloroform by inhalation again gave him relief. Also a suppository containing the following:

| | gm. | |
|---|---|---|
| Extracti cannabis indicæ | | |
| Extracti hyoscyami, āā | 015 | gr. ¼ |
| Camphoræ monobromatæ | 30 | gr. v |

At the end of three hours he remained thoroughly relaxed and voided 8 ounces of urine. He drank water freely; 30 grains of potassium bromid were given by mouth and a pint of strong coffee injected into the bowel.

The patient in twenty-four hours later had entire suppression of urine. He was catheterized and not half an ounce of urine could be obtained.

The diuretic employed was hot water. The patient was requested to drink constantly all the hot water possible. He drank two quarts and a pint in three hours' time and at the end of four hours he had voided at intervals 16 ounces of urine. The first urine showed albumin and hyaline casts. The albumin and casts, however, disappeared in two days' time. At the end of four days the patient left the hospital in a very good condition.

Acute strychnin poisoning often results in albuminuria and nephritis. The use of strychnin in curing the alcoholic habit is bad therapeutics. In many institutions for the cure of inebriates strychnin is employed too freely. It is true that it suppresses the desire for alcohol but in most alcoholics there is a chronic nephritis and the ingestion of the constant and large amount of strychnin produces an irritant effect on the kidneys, thus increasing the nephritis.

The diagnosis of strychnin poisoning is not always quite as easy as it was in this case. A patient from whom it would be impossible to ascertain any information may be found in convulsions and a careful differential diagnosis must be made in order to treat the patient successfully. The convulsions do not resemble those occurring during the epileptic paroxysm, because they are always tonic and never clonic in character.

They may be distinguished from those of tetanus by the history of the case and by the symptoms. In tetanus the muscles of the lower jaw are first attacked; locked jaw exists for some time before the other muscles are involved. Moreover, in tetanus the muscles do not entirely relax; some remain rigid, whereas in strychnin poisoning all the muscles are affected almost simultaneously, the body being thrown into opisthotonos with each paroxysm. In what is known as tetany, the muscles about the neck usually are not affected, but there is persistent rigidity of other muscles. In hysterical convulsions the muscular contractions are not painful, and the patient does not retain full sensation or full consciousness, but is in a dreamy or stupid condition. In convulsions of hydrophobia the patient is semidelirious there are no tonic spasms of the muscles or cramps and there is a history of a wound from an animal.

1805 Walnut Street.

# TRANSFUSION AS A CURE FOR MELENA NEONATORUM

### WITH REPORT OF A CASE

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NEW YORK

The following case is the third one of its kind to be reported. The results of transfusion in this instance were as gratifying and as completely successful in bringing about a prompt and entire cessation of the hitherto uncontrollable hemorrhages of melena neonatorum as in the patients of Samuel W. Lambert[1] and of Swain, Jackson and Murphy.[2]

Until the present time all the therapeutic measures tried in the treatment of melena neonatorum have had one characteristic in common, that is, their futility. Whether we have drawn on our scanty physiologic knowledge of the factors influencing the clotting of the blood and have supplied calcium salts, various serums, etc., or whether we have acted on the theory that the disease is an inherited taint from the parents and have resorted to antiluetic drugs, or whether symptomatic treatment has been employed—saline infusions, styptics, lavage, rectal irrigation, etc.—the result has in the majority of cases been fatal. The procedure of transfusion of blood certainly puts a new aspect on the prognosis of this disease.

In this, the third, trial of transfusion an immediate and permanent cessation of hemorrhages was brought about and no harm resulted either to the donor or to the recipient of the transfused blood. In all three cases the growth of the babies subsequently proceeded in a normal way and except for a scar they seemed none the worse for their experience.

The inadequacy of all other measures as compared with transfusion is a strong argument in favor of its more extensive trial whenever recourse may be had to the skilled surgery necessary to perform this delicate operation. With three cures along similar lines on record, the contention that the disease ceased spontaneously could hardly be made and we cannot doubt that the cures were directly due to transfusion. If the future should show that transfusion is not efficacious in curing every case of melena neonatorum, the value of the procedure need therefore not be disputed, for this might simply point to a multiple etiology for this disease. In the instances thus far reported the cause of the persistent hemorrhages evidently lay in the abnormal clotting quality of the blood, which, on being replaced by normal blood, at once clotted normally and a cure resulted. It is, however, not beyond the range of possibility that the cause of some cases of melena neonatorum must be sought elsewhere than in the blood; for instance in abnormally pervious capillaries and blood-vessels. Just so not every glycosuria is a sign of insufficient internal secretion of the pancreas, but some may be the result of brain tumor, excessive ingestion of carbohydrates, etc. Hence if in some case the expedient of transfusion should fail, its value should not be underestimated but its suitability admitted when applied as a definite remedy to cure a definite condition: inability of the blood to clot in a normal manner. All instances of melena neonatorum may fall in this category. If this be true—and the cases thus far reported certainly point that way—we have in transfusion an absolutely certain cure for this otherwise generally fatal malady. At present therefore transfusion is indicated in every instance of the disease, as it is the only method of cure known.

In the case reported here the operation involved was a peculiarly difficult one, as the patient was very small, weighing but 5 pounds and 2 ounces on the third day after birth. Dr. Alexis Carrel of the Rockefeller Institute, assisted by Dr. Adrian Lambert and Dr. R. D. McClure, performed transfusion by end-to-end anastomosis of the baby's femoral vein to the radial artery of the child's father, according to the method devised by Dr. Carrel himself. A great difficulty presented itself in the small caliber of the vein of such a diminutive infant; at first this obstacle seemed insurmountable, but as the urgency of the operation became every minute more apparent, the attempt was made, and at the very first trial the blood flowed freely from father to child, so that the color of the latter changed within a few minutes from a waxy pallor to a marked blood-red. Transfusion by any of the cannula methods was out of the question with vessels of this size.

The history of the case is as follows: Both parents are healthy and there is no record of melena neonatorum, hemophilia or other blood disease in the family and no history of lues or its results. The child, a boy, was born after an uneventful, normal, eight-hour labor on Jan. 14, 1909. Judging from the date of the last menstrual period, labor occurred about two weeks ahead of time, as was also indicated by the small size of the child, which weighed only 5 pounds and 2 ounces on the third day after birth. Primary respirations were spontaneous; the cord was not about the neck; there were no abnormalities. Until the third day the child took the breast at intervals without trouble; urine and stools were normal. On the third day, five hours after nursing, the child vomited blood and a few minutes later passed a bloody stool; the vomiting was not repeated but the bloody stools continued until eight hours later when the infant was almost exsanguinated, as shown by its very marked pallor; the pulse was weak, beating 180 to the minute; the only other signs of bleeding were found in a hemorrhagic area covering the left half of the hard palate, and punctate hemorrhages in the remainder of the hard and soft palate. Transfusion was performed; the child's color changed to normal and except for one additional bloody stool, which evidently was contained within the intestine at the time of the transfusion, there was no further occurrence of hemorrhage; the baby nursed well and gained weight rapidly; up to the present time, one year since the birth of the child, there has been no recurrence of the bleeding.

327 Amsterdam Avenue.

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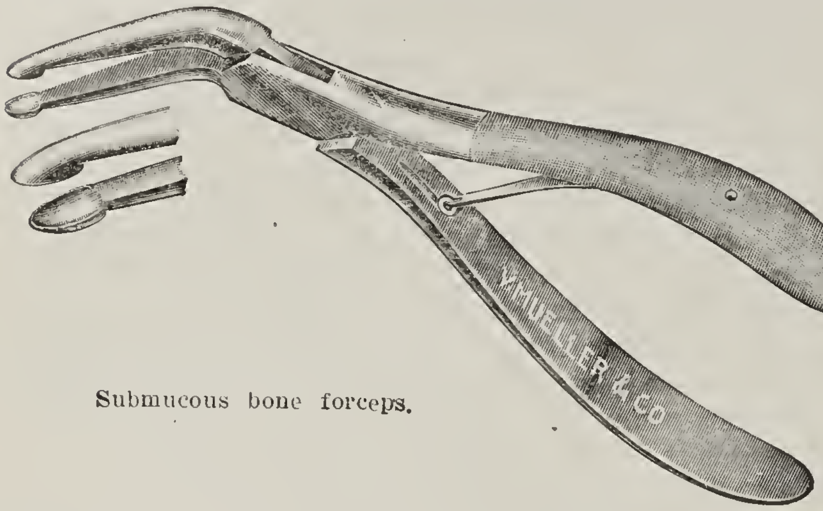
[1] Lambert: Medical Rec., 1908, lxxiii, 885.

[2] Swain, Jackson, and Murphy: Boston Med. and Surg. Jour., 1909, clxi, 407.

## ANTERIOR SUBMUCOUS BONE FORCEPS

W. SOHIER BRYANT, M.D.
NEW YORK

The most important use of this convenient-sized rongeur, and the use for which it was especially designed, is the removal of the maxillary ridge in the submucous septal operation. The blades are small enough to allow their easy guidance in the operation, and, at the same time, strong enough to cut the hardest bone. The rongeur is most efficient also for removing the bridge between the cavum tympani and the mastoid antrum in the tympano-mastoid exenteration. In cleaning up the operative field in a mastoid exenteration the instrument is useful, as it will readily cut any bony tubercule or irregularity.



Submucous bone forceps.

41 East Thirty-third Street.

## A RAPID STAIN FOR FROZEN SECTIONS*

S. STROUSE, M.D.
CHICAGO

The use of frozen sections as an aid to surgical diagnosis has a well-defined field of usefulness. At the present time the method is employed mainly in selected cases in which a rapid microscopic diagnosis is needed to determine the extent of operative procedure. With the introduction of simple freezing apparatus, however, frozen sections may well enter a field of more general usefulness. Very little apparatus is required, and carbon-dioxid tanks can be procured at almost any crossroads, facts which should appeal to those surgeons who desire to see the results of their operations and yet have not the facilities required for histologic technic.

The staining methods in use at present are numerous. Perhaps the most satisfactory are the hematoxylin-eosin method and the polychrome methylene-blue method of Wilson.[1] Hematoxylin-eosin gives the clearest-cut histologic picture, but the time consumed is too long when one considers that the patient is under anesthesia while the tissue is being studied. The Wilson method also gives a good differential stain, is simple, and cuts down the time considerably. The staining method offered below is simpler than either of these, requires no solutions other than the stain and takes less time. The histologic pictures are clear and well differentiated, and so far in no case in which the tissue has taken the hematoxylin-eosin has our stain failed.

The stain is easily made. A saturated solution of pure thionin (Grübler) in water is allowed to stand a few hours and then filtered. Equal parts of the filtrate and 2 per cent. phenol are mixed, and the stain is ready for use. The addition of the phenol is not necessary, but by its use the stain is preserved, and its power of differentiating improves with age. The polychrome is made evident by the nuclei taking on a definite blue color, while the cytoplasm and all connective tissue has a distinct red or purplish tint. In a long series of cases of varied nature studied by this stain the diagnosis made of the frozen section has been verified by more detailed celloidin or paraffin sections.

The general method for frozen sections now employed in this laboratory is as follows: The specimen is put into 10 per cent. formalin in the operating-room and immediately sent to the laboratory. Formalin is not necessary to the success of the stain but is used in preference to other solutions because even this short sojourn considerably facilitates the cutting of thin sections. A selected piece of the tissue about 5 to 10 mm. square by 2 to 4 mm. thick is placed directly from the formalin into water on the freezing microtome and frozen by means of carbon-dioxid spray. The cut sections are spread from the knife-edge into the dish of water and immediately lifted to a slide, a drop of the stain added and the cover-slip put on. The excess water may be removed by gentle pressure over the cover-slip with a piece of filter-paper, and the slide is ready for study.

# Therapeutics

## ERGOT

Belief and disbelief still run hand in hand as to the value of ergot for any therapeutic use, except as a uterine contractor. Those who have faithfully tried without prejudice, and many of those who have faithfully tried with prejudices, ergot in proper solution, intramuscularly, have become convinced of its value as a vasocontractor and as a circulatory bracer. Also, those who have thus properly tried ergot in cerebral and spinal congestions, have become convinced of its ability to better the condition. Many men who have tried ergot for these purposes in absolutely hopeless, fatal cases, as a last resort, and I am sorry to say many even then by the mouth, have condemned it as inefficient and futile medication.

Why ergot should have been so grossly misused for so many years as a proper medicament in internal and hidden hemorrhage, one cannot understand, while at the same time it is so completely condemned without proper trial by some practitioners as a circulatory aid and as a remover of cerebral congestion. While digitalis, strychnin, atropin, suprarenal and ergot may occasionally, by strengthening the general circulation, stop an internal hemorrhage, theoretically, they would generally do harm by raising the blood pressure, and practically their success is doubtless generally *post hoc* and not *propter hoc*. In other words, the hemorrhage had ceased or was about to cease by normal clotting before the drug had had time to act. Lowering of the blood pressure by nitroglycerin or some other method is the only logical way of stopping internal hemorrhage, unless such hemorrhage is venous and is due to a dilated heart.

Dr. Alfred T. Livingston (*Medical Record,* Jan. 29, 1910) says: "Of all the organs of the body the heart is probably the most irrationally and outrageously treated by the profession to-day." This is absolutely and positively true. It is not a question, in the various kinds of heart failure, acute or subacute, sudden or gradual, occurring in acute or in chronic disease, of what has been done for this heart by the physician in charge, but what has not been done. Too many drugs, too large doses and too frequent would generally be the verdict of anyone who calmly noted what the failing circulation of the patient had suffered. Often, in the same patient, vasoconstrictors and vasodilators are intermingled in a most unique and heterogeneous manner. The vasoconstrictors, which are the stronger, always prevail. This is sometimes fortunate and sometimes unfortunate for the individual. It is rare that the physician notes the character of the heart's action, the force of the apex beat, the force of the valvular closures, especially the aortic, counts the heart beat and the pulse rate at the wrist to see if they agree (recently a symptom chart was found recording a pulse of about 70 on repeated examinations, while the stethoscope disclosed a beat, at one and the same time, of 140), or carefully notes the blood-pressure, even with his finger, to say nothing of the valuable knowledge furnished by a pocket blood-pressure instrument.

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* From the Laboratory of Pathology, Michael Reese Hospital.

[1] Wilson, L. B.: A Method for the Rapid Preparation of Fresh Tissues for the Microscope, The Journal, Dec. 2, 1905, xlv, 1737.

There is no question that the frequency of cardiac disturbance is on the increase. There is also no question that the heart requires the most thoughtful care during acute illness, especially in patients over thirty. It is not the province of this article to discuss the reasons for this, but it is a fact. Sad to relate, it is impossible to decide dogmatically or even theoretically, with a given heart, arteries, disease, and signs and symptoms, exactly what, in a particular individual, it is best to do to improve this particular circulation. It can be positively declared that alcohol is not a stimulant when the circulation is failing. It can be equally positively declared that alcohol often, by dilating the peripheral blood vessels, modifies and improves the circulation. It can be positively declared that, with a high tension and throbbing pulse, nitroglycerin is more valuable than alcohol. It can be positively declared that too much strychnin is used in circulatory failure. The dose should rarely be more than 1/40 of a grain hypodermatically, and this not too frequent, and ordinarily 1/30 once in six hours, hypodermatically, ought to be the outside strychnin limit. Under its excessive stimulation the heart cannot dilate properly, does not get its proper nutrition from its normal diastole, and it soon is worn out by its abnormal activity. Again, digitalis will rarely slow a rapid heart during illness, and probably should never be used if there has been a prolonged fever, as the probability of some myocarditis may be assumed.

When there are passive congestions of the lungs or edema of the lungs, or when there is sudden acute congestion (not pneumonia) in valvular disease of the heart, or in failing heart during pneumonia, ergot given intramuscularly is valuable usually, and even occasionally life saving. Ergot by the mouth does not seem to have the ability to strengthen the circulation. The blood-pressure may be raised, in young people, from depression to a tension that may require nitroglycerin in considerable doses. On the other hand, as certified to by Livingston, ergot does not always raise the blood pressure, and especially does not seem to in older individuals. A high, bounding pulse, due to cerebral irritation, as in delirium tremens, will many times become soft, from the quieting effect that ergot has on the brain. Frequently cerebral edema or "wet brain" is strikingly improved and life often saved by the proper administration of ergot.

It is not claimed that ergot will cure cerebrospinal meningitis, or that ergot can render the need of an antitoxin less, or that ergot can prevent the necessity of lumbar puncture, but ergot may postpone the necessity for lumbar puncture, may prevent the repeated necessity for lumbar puncture, and may aid a cerebrospinal patient to recover. Often ergot has been used in cerebral inflammation due to the pneumococcus which is almost hopeless, or in that due to tuberculosis which is also hopeless, or when there is abscess of some portion of the brain, and the negative results obtained have caused ergot not to be used in diseases of better prognosis.

To repeat, ergot is of value in the meningitis of typhoid fever, pneumonia, rheumatism, cerebrospinal fever, and la grippe. It is also of value in delirium tremens and the cerebral excitation of a post alcoholic debauch. Some kinds of congestive headaches are markedly helped by ergot.

The dose of an aseptic ergot is from 1 to 2 c.c. (15 to 30 minims), given deeply into the deltoid muscle, in acute heart failure, once in 3 hours for 2 to 3 times, and then once in 6 hours. By such administration apparently moribund patients with valvular disease have revived and lived, and are still alive, and this after all the ordinary cardiac and circulatory tonics had been administered without causing improvement. In cardiac weakness it seems to be unwise to continue the administration of ergot longer than through the emergency; other drugs then become more valuable, *i. e.*, after the symptoms as above described are ameliorated the ergot should be stopped. In acute inflammation like cerebrospinal meningitis the ergot should be administered once in 6 hours or once in 12 hours, depending on the amount of cerebral congestion, the coma, and the condition of the circulation.

The value of ergot after operation to promote peristalis when the intestines are apparently paralyzed is doubtful; sometimes it is wonderfully successful in correcting this condition, and at other times it fails. It certainly can never do any harm, and should be tried.

This is also attested by Dr. Livingston in the above mentioned article, viz.: "I desire to put on record the statement that I cannot conscientiously say that I have recognized any ill effects from my use of this drug given hypodermatically and most certainly have seen nothing suggestive of the so greatly apprehended and dreaded ergotism."

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**Protection Against Claims for Malpractice.**—The Netherlands national medical association has recently organized a special committee with consultant legal authority to study means to protect physicians against unjustified suits for malpractice. The committee has also the task of watching over proposed legislation so that the interests of the medical profession can be regarded in the new bills. The occurrence which led to the organization of the committee was a suit brought against a physician because he had insufflated into a patient's eye a powder which he supposed was calomel, as his order called for chloretum hydrargyrosum, while in reality the druggist had dispensed mercuric chlorid, chloretum hydrargyricum. The sight of the eye was lost and, as the druggist had no means, the physician was sued and compelled to pay damages, although the highest authorities testified that he was in no way to blame. The plaintiff claimed that he should have tested the powder received from the druggist.

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[*For other information see second page following reading matter*]

SATURDAY, MAY 14, 1910

## THE PATHOLOGY OF RABIES

Rabies presents many puzzling problems besides that of its specific cause, for the entire behavior of the infection is in many ways quite different from that of other infectious diseases. The incubation period is unique both in its extremes of variability, from 14 days to as many months, and in the great length usually exhibited, from 8 to 12 weeks; the excessively long incubation periods reported in some cases with good authority, of from 12 to 38 months, are entirely without parallel in any other acute infectious disorder.

Another striking peculiarity recently emphasized by Paltauf[1] is that whereas only a relatively small proportion of persons bitten by rabid animals develop the disease, yet once the disease does fully develop the termination is inevitably death, for there is no satisfactorily authenticated report of a recovery from fully developed rabies in man, although recovery has been observed in dogs.

According to the most reliable figures it would seem that rabies develops in less than 10 per cent. of all persons bitten by rabid dogs and not receiving prophylactic treatment, Paltauf placing the figures at 6 to 9 per cent. When we consider that such highly contagious diseases as smallpox, plague, etc., have a considerable proportion of recoveries, it is indeed strange that the incidence of rabies is so low when its mortality is 100 per cent. If less than one-tenth of those inoculated with the virus develop the disease at all, why should not many of the infected tenth recover from it? Even in laboratory and domestic animals infection follows natural inoculation in only about one-half of the cases, with a mortality of practically 100 per cent.

Also in the process of protective inoculation is a remarkable condition in that a living virus is injected without infection ever having been known to occur, although the Pasteur treatment has been applied in over 100,000 cases. Evidently the rabbit-passage virus is altogether incapable of infecting man, although it can certainly infect other animals.

Paltauf has made an important observation concerning the pathology of this mysterious disease, through his rare opportunity of securing autopsies on four persons who died during the period of treatment, from some intercurrent disease (one cerebral apoplexy, one pulmonary embolism, two delirium tremens). In all four cases it was found that the medulla, when emulsionized and injected subdurally, infected rabbits with rabies, showing the presence of active virus in the patients' nervous tissue; but apparently this virus was in an attenuated condition, since the incubation period in the inoculated rabbits was unusually long and the symptomatology that of the chronic or "consumptive" rabies.

As but one person in about ten of those bitten develops rabies, Paltauf assumes that his four consecutive positive findings do not represent latent infection which would have manifested itself had the patients lived longer. He believes that these observations indicate that persons bitten by rabid animals commonly have the virus reach the central nervous system, but that nine times in ten it is there destroyed, without causing symptoms, by the natural defensive mechanism which may be made more effective by the immunizing process of the Pasteur treatment; in other words, rabies-inoculated men usually develop a latent infection which is overcome without the symptoms of rabies appearing. The medulla of three persons who died without rabies shortly after the completion of a course of Pasteur treatment, was found to be non-infectious for rabbits, indicating that the virus is destroyed under the influence of the immunization.

Presumably the virulence of the virus with which the individual is inoculated is a chief factor in deciding whether it will be overcome or not, for we find that the bites of rabid wolves cause rabies in about 60 per cent. of those bitten, as against from 6 to 9 per cent. of fatalities from dog bites, and none from subcutaneous inoculation of attenuated rabbit virus. Possibly the failure of destruction of the virus may depend in other cases on individual lack of immunizing power, and sometimes on local disturbances in the central nervous system, since the literature abounds with records of cases in which either physical or psychic shock seemed to determine the development of rabies. In any case, the observations of Paltauf throw a new light on rabies pathology, by indicating that even those who do not show evidences of rabies after being bitten by a mad dog may harbor the virus in their brain tissue for some time, and gradually attenuate and finally destroy it.

The *"virus fixe"* of rabbits is probably a form of rabies virus which is especially readily destroyed by man, and the rabicidal substances developed in reaction to it may help in the destruction of the more virulent virus which entered the body with the bite. This power of the human organism to destroy rabies virus is similar to that exhibited by animals that are not highly susceptible to rabies, such as monkeys and fowls; but the rabicidal power is higher in man than in these animals, since they can destroy the virus only after several passages.

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[1] Paltauf, R.: Wien. klin. Wchnschr., 1909, xxii, 1023

## BEING SUPPLANTED

Life has tests of all kinds, and no one can tell in what way one may be tried out next. A physician often finds himself in a position demanding great skill and resourcefulness in professional ability; and again, in other circumstances, it is not his knowledge and skill but his character that is put to the test, as, for instance, when he is superseded by another physician. Perhaps he has made a most thorough examination of the patient and study of the history, has decided on a diagnosis and has instituted treatment which is just beginning to have its effect. The obscure ailment of long standing is about to yield to the skilful treatment, when the patient, grown weary of the necessary delay, abandons his first attendant and consults another physician who thus happens to have the case in hand when the symptoms clear up, and the first physician receives no credit, but, on the contrary, blame.

In another case, perhaps, the disease is one which does not yield to treatment. The patient is not content to be told that palliation is the only hope, and the physician who has done his best, or even the best that science can do, is thrust aside for someone else. The implied disparagement may be the harder to endure because of the patient's turning to one of the quacks who fatten on incurables or to some "patent medicine" or to one of the sects of mind-healing. It is no light task for a physician to accept the matter in a cheerful frame of mind and to refrain from bitter words that he may afterward regret.

When Abraham Lincoln was named for the presidency he supplanted another statesman, who, by training and experience, was qualified for the position. Similarly, Garfield entered the presidential ranks as a dark horse, stepping ahead of Sherman, whose attainments and valuable services seemed to point him out for the nomination.

It is worth while to compare the different attitudes assumed by these two men. Sherman became a disappointed man who seemed unable to forget having been pushed aside, while William H. Seward cheerfully entered the service of the great Lincoln who had supplanted him, and by faithful service as secretary of state made for himself a name honored by his nation and untarnished by any personal grudge.

The physician who can accept an undeserved slight without angry words and without hasty slurs on a brother physician has in him the spirit which will win the love of a community, and which will reward him in the long run. Not only this, but he has discarded unprofitable and bitter brooding over trouble that cannot be prevented, and has left his mind free for the joys of life and the pursuit of his profession with cheerfulness and satisfaction. As has been well said, we cannot prevent the evil birds of discontent and resentment from flying past our doors, but we can prevent them from building their nests in our homes.

## BORIC ACID AS A FOOD PRESERVATIVE

For some years past a strenuous campaign has been conducted by the concern which practically controls the borax supply in this country, with the object of removing the very natural objection which the public has to the use of borax and boron compounds as food preservatives. The arguments for and against the use of these chemicals in foodstuffs have invariably centered about the question of their effect on the human system. That boron compounds would inhibit the growth of bacteria in meat has been tacitly assumed by both their champions and opponents, the point of dispute being the harmfulness of the chemicals *per se*. It now seems that it is by no means certain that boric acid, in the proportions usually used, will inhibit the growth of the most dangerous bacteria.

In view of the light which it throws on this question, an article on "A New Aspect of the Effects of Boric Acid as a Food Preservative," in a recent issue of the *British Medical Journal* and abstracted in this issue,[1] will prove of interest. In this article, Julius Bernstein, pathologist to the city of Westminster, details the results of a series of experiments which he carried out to determine the effect of boric acid as a preservative of meat. Summed up, the results demonstrated that while boric acid, used in the strength of three-tenths of one per cent., inhibits to some extent the growth of *all* organisms, the inhibition is most marked in the case of the yeasts and harmless saprophytes. On the other hand, it had much less effect on the growth of the *Bacillus typhosus* and the *Bacillus enteritidis* (Gaertner's bacillus). In other words, while the objective putrefactive changes which are checked, are such as would by their odors give warning against the growth of bacteria, the organisms which are of the greatest danger to human beings, the bacillus of typhoid and the bacillus of "meat poisoning," are affected but little, if at all. From a practical standpoint these results mean much. As Bernstein's experiments indicate, the addition of boric acid to stale meat, or even to meat that has begun to decompose, makes it possible to market such meat by preventing and to some extent removing the warning signs of decomposition, i. e., offensive odor and taste; in a word, the chemical masks the symptoms of putrefaction. The growth of dangerous bacteria, however, not only is not inhibited by boric acid—except to a very slight degree—but, as the prolific and rapidly growing harmless bacteria are prevented from growing, the amount of soil (meat) left for the nourishment of the former is proportionately much greater. Meat that has not been treated with boron compounds or other chemicals, will, before it becomes a serious menace to health, give warning by the odor and taste developed by the growth of the bacteria of putrefaction; with meat that has been "preserved" with boric acid the development of such warning signs is prevented.

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[1] Page 1654, abstract 21.

### DR. HODENPYL—A TRUE SCIENTIST

In the death of Dr. Eugene Hodenpyl, the medical profession has lost a great man and a rare spirit. To die at the age of forty-six, when ready to enter the door which one has opened to a great discovery, is one of the tragedies of life. To have succumbed to pneumonia, because he was too worn with work to rally, places Dr. Hodenpyl in the ranks of the martyrs of science.

Until a few years previous to his death, Dr. Hodenpyl had been associated with Columbia College as pathologist, but during the last few years his work was done at Roosevelt Hospital. The laboratory of the latter institution may gain no little credit from having been the scene of Dr. Hodenpyl's successful experiments on the relief and possibly the cure of cancer.

His one modest preliminary communication[1] on "Treatment of Carcinoma with the Body Fluids of a Recovered Case," was all that the medical world at large knew of his experiments. So determined was he that his work should not be heralded as the discovery of a new cure for cancer and nothing published until amply proved, that few know how much has really been accomplished. Judging from analogy and from his success in the cases on which he has been working, the few who were permitted to know the result of his experiments felt that he had the key to the solution of the problem in his hands, and that his conception and experiments placed him in the rank of the leaders of medical thought.

A biologic laboratory is perhaps the sternest school of integrity and honor. The fame that comes to a devotee of pure science is unsought, and cannot even be expressed in eulogies. It is expressed in the belief and following of the whole medical profession, and of the intelligent of all nations. Possessing the quality of the true scientist, Dr. Hodenpyl disregarded what might seem to many to be his duty to himself, his patients, and his family, to use the precious limited quantity of ascitic fluid he had obtained to relieve as many as possible of the patients brought to him, and, incidentally to achieve sufficient wealth to enable him to pursue his researches with as much freedom as though he were in an endowed laboratory. His higher conception of his duty as a scientist, and of the possibilities of his discovery made him throw his very life into the testing and proving of every step of his methods, and into the search for a possible source of general supply of this fluid, which is at present limited to the tappings of his one patient. It demanded more than fortitude for Dr. Hodenpyl to resist the importunate pleadings of sufferers in every part of the land, and to reserve the fluid for those patients whose treatment could contribute to knowledge on the subject, and for trusted experimenters, who could carry on the various correlated series of chemical and biologic investigations that were under way when he died.

Not only for his ability and for the untimely interruption of his work is he mourned, but for his character and lofty ideals, for such men are the inspiration of those who, desiring to search after truth, are tempted to bow low to Mammon.

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[1] Medical Record, Feb. 26, 1910.

# Medical News

## ALABAMA

**Commencements.**—The commencement exercises of the Medical Department of the University of Alabama, Mobile, were held April 18, when a class of 39 received diplomas. Irwin Craighead, LL.D., delivered the oration to the graduates on "Civic Duty of the Medical Man from the Layman's Point of View." The degrees were conferred by President John W. Abercrombie.——At the fifteenth annual commencement exercises of Birmingham Medical College, held April 28, a class of 28 was graduated. The commencement address was delivered by President A. P. Montague of Howard College, and Dr. Russell M. Cunningham, Ensley, delivered the charge to the graduates. The diplomas were presented by Dr. Benjamin L. Wyman, dean of the college.

## CALIFORNIA

**Personal.**—Dr. Julius Rosenstirn, San Francisco, has returned from Europe.——Drs. Fitch C. E. Mattison, Pasadena, and Charles C. Browning, Monrovia, have been appointed members of the executive committee of the California Public Health League.——Dr. Joseph E. Artigues has been appointed physician and Drs. Michael H. Etcheverry and Paul Campicke have been elected visiting physicians of the French Hospital, San Francisco.——Drs. E. W. Parsons, Lewis C. Jacobs and Thomas H. O'Connor have been appointed assistant emergency service physicians of San Francisco.——Dr. Frank E. Blaisdell, San Francisco, has been appointed assistant professor of anatomy in Stanford University.——Dr. Attilio S. Musante, Sacramento, has been reelected president of the Alumni Association of the University of California College of Pharmacy.

## ILLINOIS

**Policy of New Hospital Superintendent.**—Dr. Sidney D. Wilgus assumed charge of the Elgin State Hospital May 1. He announces his policy of segregating acute and chronic cases of patients, and the extension of the plan of inmate labor as fast as possible.

**Diploma Mill Unearthed.**—The State Board of Health reports that it has unearthed a rank "diploma mill" in Chicago, and has succeeded, through a physician in another state, in purchasing three diplomas. Prompt action will be taken to cause the revocation of the charter and also to summon those implicated, two of whom are recent licentiates of the board, to show reason why their certificates should not be revoked for unprofessional and unlawful conduct.

**State Bacteriologic Laboratory at Danville.**—The Illinois State Board of Health will have a bacteriologic laboratory on North street, Danville, directly opposite the place of meeting of the Illinois State Medical Society, May 17-19, for the purpose of affording information to physicians who desire to ascertain what is being done at the laboratory at Springfield. The routine examinations of the board will be conducted in this laboratory during the days of the meeting, and those wishing specimens examined are requested to bring them to Danville.

**Personal.**—Dr. Frank P. Norbury has severed his relations with Maplewood Sanatorium, Jacksonville.——Dr. William H. C. Smith, Godfrey, while en route to Springfield, May 2, was struck in the cheek by a hatpin and received a very painful wound, narrowly escaping injuring the eye.——At the annual meeting of the medical staff of Proctor Hospital, Peoria, May 2, the following officers were elected: Dr. Robert A. Kerr, president; Dr. Robert A. Hanna, vice-president; and secretary, Dr. William R. Allison.——Dr. Eugen Cohn has reported for duty as assistant superintendent of South Bartonville State Hospital.——Dr. Everett H. Bradway has been elected a member of the board of health of Abingdon.——Dr. Henry B. Hemenway, Evanston, has the sympathy of his friends on account of the recent death of his wife.

### Chicago

**Personal.**—Dr. and Mrs. George S. Isham and son have started for Europe.——Dr. Buell S. Rogers has returned from an extensive tour of the gulf states and Cuba greatly improved in health.

**Hospital Items.**—The new wings of the Wesley Hospital, recently completed at a cost of $136,000, was formally opened May 7. The new wing is six stories in height and will increase the capacity of the hospital one-fourth.——The plan to convert the Mary Thompson Hospital for Women and Children into a contagious disease hospital is said to have caused a controversy among the officials. A majority of the board of rustees is believed to favor the change, while women physicians on the board of managers protest against any deviation from the plan of the endowers of the hospital.——An emergency room for the care of the sick and injured has been installed in the cell-room of the South Chicago Police Station. ——Dr. Albert J. Ochsner has sold the Chicago Fresh Air Hospital for Tuberculosis 20 acres of land in West Ridge on Western avenue, north of Kenilworth, for $5,000, with the assumption of $15,000 incumbrance. The ground will be used mostly for park purposes, but also as the site for additional buildings as needed.

### IOWA

**Personal.**—Dr. Frank E. Boyd, Colfax, has been elected local surgeon for the Rock Island System; also for the Colfax, Northern and Spring City Railroad.——Dr. Charles M. Linean has been appointed city physician of Dubuque.——Dr. Thomas J. Williams has been reelected health officer of Hiteman.——Dr. Elijah W. Jay, Marshalltown, coroner of Marshall county, underwent operation for hernia, April 25.——Dr. Edward J. Wehman has been appointed city physician, health officer and bacteriologist of Burlington.——Dr. Benjamin E. Eversmeyer has been reelected health officer of Muscatine.——Dr. George S. Roepke, Aurelia, is reported to be seriously ill. ——Dr. George W. May has been appointed health officer of Cascade.——Dr. Charles A. Katherman has succeeded Dr. Milton Daily as police surgeon of Sioux City.

### KENTUCKY

**Antituberculosis Societies.**—The Paducah Association for the Study and Cure and Prevention of Tuberculosis has been incorporated without capital stock by H. C. Rhodes, R. Rudy, Dr. Harry P. Sights and A. R. Meyers.——The Kentucky Association for the Study and Prevention of Tuberculosis has engaged as field secretary Eugene Kerner of New York City. His duty will be to gather information with regard to the tuberculosis situation in Kentucky, to prepare a state tuberculosis exhibit, and to organize local antituberculosis associations wherever possible.

**Personal.**—Dr. J. Thomas Wallingford has been elected health officer and Dr. Hugo W. Aufenwasser a member of the board of health of Covington.——Dr. Eugene C. Roemele, Frankfort, has started for Germany.——Dr. George W. Armes, Leitchfield, has succeeded Dr. Daniel J. Healey as superintendent of the Institute for the Feeble-Minded, Frankfort.——Dr. William F. Gardner, Dycusburg, who was seriously injured in the machinery in an accident in a motor boat, is reported to be in a serious condition at Riverside Hospital, Paducah. ——Dr. John W. Pendley, Paducah, has been elected physician of McCracken county.

### LOUISIANA

**Students' Research Club.**—The student body of Tulane University has organized a research society to be known as the Undergraduate Medical Research Club of Tulane University, Louisiana, with the prime object of individual investigation into the history and treatment of those diseases which now occupy the attention of medical science.

**Personal.**—Dr. Oscar Dowling, Shreveport, has been elected surgeon in charge of the ear, nose and throat department of the Eye, Ear, Nose and Throat Hospital, New Orleans, vice Dr. Gordon King, deceased. Dr. Dowling will move to New Orleans.——Dr. W. F. Waide has been appointed resident surgeon of the Eye, Ear, Nose and Throat Hospital, New Orleans. ——A store owned by Dr. John W. Lambert, Tangipahoa, was burned April 14.——Dr. Emil Regard, Mansura, has been elected president of the Louisiana School Boards' Association. ——Drs. J. Hope Lamb and Henry A. Veazie, New Orleans, have been appointed acting assistant surgeons, U. S. P. H. and M.-H. Service, for duty in the sanitary inspection office.——Dr. Joseph A. Estopinal, medical inspector of the State Board of Health, has resigned, and will return to St. Bernard and engage in general practice.——Dr. Luther Sexton, New Orleans, has donated $10,000 to the Methodist Orphanage, Wesson, Miss.

### MARYLAND

**Personal.**—Dr. Jephtha E. Pitsnogle, Hagerstown, has been reappointed health officer of Washington county.——Dr. Aleck P. Harrison, Baltimore, assistant physician and pathologist at Springfield Hospital for the Insane, Saxeville, has resigned.

#### Baltimore

**Personal.**—Dr. Mary Sherwood has been elected president, and Dr. Florence R. Sabin, corresponding secretary, of the ...nst Government League.——Dr. William Hans Browne has resigned as professor of English literature in Johns Hopkins University on account of advancing age. Dr. Browne was librarian of the university from 1879-1891.——Dr. Howard A. Kelly has been elected treasurer of the Maryland Auxiliary of the Mission to Lepers.——Dr. Clemens Von Pirquet has been granted a year's leave of absence and left for Europe April 30.

**Johns Hopkins Alumni Meet.**—The annual meeting of Johns Hopkins Medical School Alumni Association was held May 6 and 7. Addresses of welcome were made by Drs. Henry M. Hurd, William H. Howell and William H. Welch. Clinics and demonstrations followed, and a banquet was held on the evening of the second day. Dr. Lewellys F. Barker entertained the alumni at a garden party, and class organizations held separate meetings. Dr. Thomas R. Brown, Baltimore, was elected president, and Dr. Walter R. Steiner, Hartford, Conn., secretary-treasurer, of the association. It was decided to hold a reunion every three years. Dr. William H. Welch addressed the association on "The Historical Significance of Johns Hopkins."

### MASSACHUSETTS

**Personal.**—Dr. L. J. Henderson has been made assistant professor of biologic chemistry, Dr. W. R. Brinckerhoff, assistant professor of pathology, and Dr. L. B. Wolbach, assistant professor of bacteriology in Harvard Medical School.——Edward S. Cowles, Boston, is said to have pleaded guilty, April 27, to one count of an indictment charging him with practicing medicine without due registration, and asked that the minimum fine of $100 be imposed.——Dr. Walter R. Mansfield, Boston, has been elected chairman of the Municipal Board of Bath Commissioners.

**Society Meetings.**—The annual meeting of the Essex North District Medical Society was held in Lawrence May 4, and the following officers were elected: President, Dr. Warren W. Pillsbury, Newburyport; vice-president and auditor, Dr. William H. Merrill, Lawrence; secretary-treasurer, Dr. J. Forrest Burnham, Lawrence (reelected); corresponding secretary, Dr. Roy V. Baketel, Methuen; censors, Dr. Frank B. Pierce (supervisor), Haverhill; Drs. Robert M. Birmingham and John A. Magee, Lawrence; John A. Fitzhugh, Amesbury, and Arthur C. Nason, Newburyport; councilors, Drs. Frank B. Flanders, Charles G. Carleton, and J. Forrest Burnham, Lawrence; Israel J. Clark, Haverhill; Frank W. Snow and Ernest H. Noyes, Newburyport, and John A. Douglass and Frank E. Sweetsir, Amesbury; commissioner of trials, Dr. John F. Croston, Haverhill; nominating councilor, Dr. Israel J. Clarke, Haverhill, and alternate, Dr. Charles G. Carleton, Lawrence. Resolutions were adopted condemning contract lodge practice. The president of the Massachusetts Medical Society was present as a guest and urged the united support for a bill for a national department of health, and a resolution was adopted "that the principles of Senator Owen's bill for the establishment of a National Health Department under the supervision of a secretary of public health, who shall be a member of the cabinet, are in this society's judgment correct and should be enacted in law."

### MICHIGAN

**Clinic Week.**—The annual clinic week of the Alumni Association of the Detroit College of Medicine will be held May 18-26.

**Personal.**—Dr. C. Ward Ellis has been elected health officer of Eaton Rapids.——Dr. Emily Summers Stark has been appointed physician to the State Industrial Home for Girls, Adrian.——Dr. Ernest W. Haass has succeeded Dr. Johnson B. Kennedy as president of the Detroit Board of Health.——Dr. Edward J. Kirkwan has been appointed city physician of Ludington.——Dr. Clyde C. Slemons, formerly city bacteriologist of Grand Rapids, has been elected health officer, Dr. Alden H. Williams has been elected bacteriologist, and Dr. Leland H. Gilleland, medical inspector of schools.——Dr. Alvin H. Rockwell has been appointed health officer of Kalamazoo. ——The medical friends of Dr. William F. Metcalfe, Detroit, gave a dinner in his honor April 27, at which addresses were made by Dr. Charles G. Jennings and Henry O. Walker. Dr. Metcalfe told of the trip through Europe, taken by himself and Dr. Homer E. Safford, and ideas they had obtained there for the new hospital.——Dr. Charles H. McLean has been appointed health officer of Caro.——At the annual meeting of the Hastings Antituberculosis Society, Dr. Charles H. Russell was elected president.

### MINNESOTA

**New Medical Buildings.**—The work on the three new buildings for the University of Minnesota, the Elliot Memorial Hospital, Millard Hall, and the Institute of Anatomy, has been begun. These three buildings will cost $600,000. The Elliot Memorial Hospital will contain the office of the dean, faculty rooms, record rooms, an amphitheater, and laboratories for the departments of physiology and pharmacology. The Institute of Anatomy will be devoted chiefly to laboratories.

**Personal.**—Dr. Thomas G. Lee, director of the Institute of Anatomy of the University of Minnesota, has sailed for Europe as delegate to the International Anatomic Congress at Brussels, and the International Zoologic Congress at Graz, Austria.——Dr. George T. Ayres, Ely, who has been ill at Shipman Hospital with scarlet fever, is convalescent and has left the hospital.——Dr. Henry M. Bracken, secretary of the State Board of Health, has been selected to represent that body at the International Congress on School Hygiene in Paris in August.——Dr. Harry A. Tomlinson, superintendent of the State Hospital, St. Peter, has been appointed superintendent of the State Farm for Inebriates near Wilmar.——Dr. Albert F. Groves, Brainerd, who has been ill several weeks, has recovered and resumed practice.——Dr. and Mrs. Christopher Graham, Rochester, have returned from a trip to Italy.

## MISSISSIPPI

**Personal.**—Dr. William W. Reynolds, Meridian, has been appointed surgeon for the Queen and Crescent System with headquarters in New Orleans, as temporary successor to Dr. Oliver H. Harrison, for many years local surgeon of the system in Meridian.——Dr. James McQ. Buchanan has been appointed his own successor as superintendent of the East Mississippi Insane Hospital, Meridian.

**Graduating Exercises.**—The fourth annual graduating exercises of the Mississippi Medical College, Meridian, were held April 30. Diplomas were presented to a class of 16 by Dr. R. A. Venable. The address to the graduates was delivered by R. E. Williams, and the annual oration by Rev. W. P. Witsell. At a meeting of the faculty of the college, it was unanimously decided to erect a new college building with hospital attached, at a cost of from $20,000 to $30,000.

## MISSOURI

**Commencement Exercises.**—The thirty-third annual commencement exercises of the Ensworth-Central Medical College, St. Joseph, were held May 7, when a class of 17 received diplomas from the hand of Dr. James J. Heddens, president of the board of trustees of the college.

**Personal.**—Dr. G. Bruce Lemmon has been appointed health commissioner of Springfield.——Dr. Charles E. Krimminger, Independence, has been appointed secretary of the Jackson County Board of Health and physician to the county jail and McCune Home for Boys, and Dr. William G. Rowe, Blue Springs, has been appointed physician to the county farm.——Dr. James T. Stamey has been appointed assistant city physician of St. Joseph.

**State Association Meeting.**—At the fifty-third annual meeting of the Missouri State Medical Association, held in Hannibal, May 3-5, the following officers were elected: President, Dr. Herman E. Pearse, Kansas City; vice-presidents, Drs. George Homan, St. Louis; Joel Y. Hume, Armstrong; Walter A. Camp, Springfield, and John Ashley, Bloomfield; councilors—second district, Dr. Luther A. Todd, St. Joseph; third district, Dr. G. W. Whiteley, Albany; fourth district, Dr. Samuel Sheldon, Trenton; fifth district, Dr. Edward E. Parrish, Memphis; sixth district, Dr. James Hanks, Brashear; seventh district, Dr. Jacob D. Smith, Shelbina; eleventh district, Dr. Jefferson D. Brummall, Salisbury; twelfth district, Dr. Clarence M. McConkey, Lathrop; seventeenth district, Dr. Samuel G. Kelly, Sedalia; secretary, and editor of the *Journal of the Missouri State Medical Association*, Dr. Edward J. Goodwin, St. Louis; treasurer, Dr. J. Franklin Welch, Salisbury; orator on medicine, Dr. Enoch H. Miller, Liberty; orator on surgery, Dr. Robert M. Funkhouser, St. Louis. Dr. Joseph Grindon, St. Louis, was elected chairman, Dr. William L. Brosius, Gallatin, vice-chairman, and Dr. Charles H. Dixon, Holliday, secretary of the medical section; and Dr. Arthur E. Hertzler, Kansas City, chairman; Dr. W. T. Lindsey, vice-chairman, and Dr. Ernest G. Marks, Kansas City, secretary of the surgical section.

### St. Louis

**Personal.**—Dr. George C. Crandall has succeeded Dr. Ralph L. Thompson as a member of the new board of health.——Dr. Walter C. G. Kirchner, superintendent of the city hospital, and Dr. Cleveland H. Shutt, assistant superintendent, have resigned.

**Endowment for University.**—Messrs. William K. Bixby, Adolphus Busch, Edward Mallinckrodt and Robert S. Brookings have donated more than $2,000,000 for the medical department of Washington University, and construction of new buildings to cost more than $1,000,000 will begin at once. The following additions to the faculty have been announced: Dr. George Dock, from Tulane University, to direct the department o medicine; Dr. John Howland, from the University and Bellevue Hospital Medical College, professor of pediatrics; Dr Eugene L. Opie, from Rockefeller Institute for Medical Research, professor of pathology; and Dr. Joseph Erlanger, from the University of Wisconsin, professor of physiology.

## NEW YORK

**Personal.**—Among those nominated as members of the board of managers of the new Mohansic State Hospital by Governor Hughes were Helen M. Gould and Dr. William D. Granger of Bronxville.——Dr. Charles F. Howard of Buffalo recently resigned the presidency of the State Prison Commission and Henry W. Solomon of New York City has been elected in his place.

**Urologists Meet.**—At the annual meeting of the New York Society of the American Urological Association, April 27, a symposium on "Movable Kidney" was held, which was participated in by members of the society and invited guests from the New England Urological Society. The following officers were elected: Dr. Edward L. Keyes, Jr., New York City president; Dr. Terry M. Townsend, New York City, vice-president; Dr. G. A. De Santos Saxe, New York City, secretary; Dr. Walter B. Bronner, New York City, treasurer (re-elected), and executive committee, Drs. Clarence R. O'Crowley Newark, N. J., Victor C. Pedersen, New York City, and Terry M. Townsend, New York City.

### New York City

**Lecture on Malignant Disease.**—Dr. William Seaman Bainbridge gave his annual lecture on Malignant Disease at the out-patient hall of the New York Skin and Cancer Hospital April 20.

**Gifts to Columbia University.**—It was announced at the last meeting of the trustees of Columbia University that gifts amounting to more than $60,000 had been received recently Among these gifts was one of $18,000 from the children of Dr Abraham DuBois, who was graduated from the College of Physicians and Surgeons in 1835, to be used to establish a research fellowship in the medical department in memory of their father.

**Personal.**—The council of the New York Academy of Medicine has recommended the election of Dr. Abraham Jacobi to honorary fellowship.——Dr. and Mrs. William Dillon of Brooklyn have sailed for Europe.——Dr. Hans Zinsser, instructor in bacteriology in Columbia University, has been made associate professor of bacteriology in Stanford University, California.——Fire in the residence of Dr. Anthony Bassler, Manhattan caused damage to the extent of $5,000.——Dr. Russell-Burton Opitz has been appointed associate professor of physiology in Columbia University.

### Buffalo

**Personal.**—The latest reports regarding the condition of Dr. Roswell Park, Buffalo, who is ill in the New York Hospital with pneumonia, are favorable.——Dr. George J. Haller, Buffalo, was injured recently while cranking his automobile.

**Hospital Notes.**—The commission recently appointed by the mayor of Buffalo to inquire into the hospital conditions of the city, severely criticizes the administration of the Erie County Hospital and recommends that it be purged of politics, and that instead of being administered by the superintendent of the almshouse under the direction of a board of supervisors, a commission be appointed by the mayor, two members being named by the county judge.——A joint committee has been appointed consisting of three members each of the Buffalo Board of Aldermen and the Board of Councilmen with the idea of breaking the deadlock as to the selection for a site for a municipal hospital for contagious diseases.——The German Hospital, Buffalo, has acquired two additional lots.——The German Deaconess Hospital, Buffalo, is raising $100,000 for an addition to the institution.

## PENNSYLVANIA

**Employment for Cured Consumptives.**—The Philadelphia Jewish Sanatorium for Consumptives, Eaglesville, has solved the problem of finding suitable and lucrative employment for the cured consumptive. The managers offer to assist discharged patients in finding work and suggest that they move to the country, telling them that if they will start truck farms, poultry farms or dairy farms, the sanatorium will buy all of their products.

**Jefferson Alumni at St. Louis.**—The arrangements for the meeting of Jefferson Medical College alumni during the session of the American Medical Association at St. Louis have been placed in the hands of Dr. August P. Munsch, Bright Building, Kingshighway and Page Avenue, who calls attention to the fact of the meeting and requests that each one intending to be present at the gathering send name and two dollars to him, that he may be able to estimate the number to be present and make suitable arrangements for them. Cards of admission, stating the time and place of the meeting, will be addressed to all those who respond, in care of the postoffice of the American Medical Association at General Headquarters.

### Philadelphia

**Retiring Professor Honored.**—Three hundred physicians of this and other cities gave a banquet on May 5 in honor of Dr. James Tyson, on his retirement from the professorship of medicine in the University of Pennsylvania and presented him with a large silver loving cup. Dr. W. W. Keen presided and among the speakers were Dr. Frank Billings, Chicago; Dr. Reginald H. Fitz, Harvard University; Dr. George A. Piersol, University of Pennsylvania medical faculty, and John Wanamaker.

**Smallpox Liner in Port.**—The North German Lloyd steamship *Main* from Bremen passed the inspection of quarantine and immigrant officials, arrived in this city and the immigrant passengers were on their way to Baltimore when the discovery was made that two immigrants, who had been landed at the government quarantine at Reedy Island, supposed to have chickenpox, had in reality smallpox. A telegraph message stopped the train near Baltimore and brought it back to Philadelphia for vaccination of the passengers. The *Main* brought 2,410 passengers into port, 45 of whom were cabin passengers.

**Personal.**—Dr. Leo Loeb has resigned as assistant professor of experimental pathology in the University of Pennsylvania to become director of the pathologic department of the St. Louis Skin and Cancer Hospital, on September 1, this year. Dr. Moyer S. Fleisher, Overbrook, accompanies Dr. Loeb as his assistant.——Dr. John M. Swan, associate professor of clinical medicine in the Medico-Chirurgical College, has resigned and will become medical director of Glen Springs Sanatorium, Seneca Lake, N. Y.——Drs. John Sibbald, Fox Chase, James Sibbald and George Holland have sailed for Europe.——The trustees of the University of Pennsylvania have elected the following members of the teaching staff of the medical department: Dr. Richard M. Pearce, professor of experimental medicine; Dr. Alonzo E. Taylor, professor of physiologic chemistry, and Dr. Paul A. Lewis, assistant professor of pathology.

**Phipps Institute Plans Work.**—Plans have been adopted for the conduct of the Phipps Institute, now a department of the University of Pennsylvania, and a most comprehensive campaign for the prevention and cure of tuberculosis will be undertaken. The scope of the work to be performed was evolved after weeks of labor by a committee of physicians, comprising John H. Musser, David L. Edsall, Alexander C. Abbott and Charles H. Frazier. As soon as possible the new building will be erected at Seventh and Lombard Streets, the site first bought by Henry Phipps, and architects are now at work on the plans and specifications. In accordance with the desire of Mr. Phipps, it will be the most complete hospital for the treatment of consumptive patients in the United States. The trustees have elected the following men to direct the work of the institution: Director of the laboratory, Dr. Paul Lewis; director of the clinical department, Dr. Henry R. M. Landis; and director of the sociologic department, Alexander Wilson, who will be superintendent of the institute and with the director of the laboratory will devote all his time to the work. The laboratory is to be fitted for the most exacting scientific research and included in the program of the sociologic department mapped out by Mr. Wilson and adopted by the committee and trustees are the following:

Make an effort to get in touch with every case.
Use existing city, State and private hospitals and sanatoria for all patients who can be admit
Cultivate open-air sleping and living on the part of the outpatients, providing sleeping balconies if necessary.
Organize as many classes as possible in the churches, clubs, unions and societies.
Obtain volunteer visitors to work under direction of nurses in the classes and follow up "arrested" cases.
Work in conjunction with school physicians and nurses in having suspected cases examined.
Teach the preparation of simple, palatable dishes.
Investigate ventilation and sanitary conditions in the schools, factories and other places of employment.
Obtain information of all the bad housing conditions in every section of the city.
Work with the Health Department, the house owner and tenant in making each house a fit habitation.

It has been decided to appropriate $5,000 for the maintenance in the laboratory work the first year and $1,800 for the clinical department. As the sociologic department will have many ramifications, the first appropriations to conduct this labor will include $500 for an assistant to the superintendent; $2,300 for out-patient nurses; $1,200 for educational work; and $3,900 for emergency and special expenses. The institute will be governed by a board of directors composed of eight members, of which Provost C. C. Harrison of the University will be president ex-officio. The other members included the three heads of the institute and the following: Dr. John H. Musser, for medical council; Dr. Robert G. LeConte, of the board of trustees; George E. Gordon, representing the donor; and Dr. Charles J. Hatfield of the Pennsylvania Society for the Prevention of Tuberculosis. Members of the advisory council, who will hold a meeting once a year, are as follows:

Pathologic Department—Dr. William H. Welch, Baltimore; Dr. Theobald Smith, Boston; Dr. H. Gideon Wells, Chicago; Dr. Simon Flexner, Rockefeller Institute, New York. Clinical Department—Dr. James A. Miller, New York; Dr. Lawrason Brown, Saranac Lake, N. Y.; Dr. Joseph Pratt, Boston; Henry Baird Favill, Chicago. Sociologic Department—Dr. Samuel McC. Lindsay, New York; William H. Baldwin, Washington; Dr. Herman M. Biggs, New York; Dr. Samuel G. Dixon, Harrisburg, Pa.

## GENERAL NEWS AND COMMENT

**Insurance Examiners to Meet.**—The American Association of Medical Examiners will meet in St. Louis, June 6 to 7, and will have headquarters at the Planter's Hotel. The secretary is J. C. Monihan, 134 N. Broad street, Philadelphia.

**Ophthalmologists Meet.**—At the annual meeting of the American Ophthalmological Society, held in Washington, May 3, Dr. Emil Gruening, New York City, was elected president; Dr. Edward Jackson, Denver, vice-president, and Dr. William M. Sweet, Philadelphia, secretary-treasurer (reelected).

**Surgical Society Election.**—The American Surgical Association, at its recent meeting in Washington, elected the following officers: President, Dr. Richard H. Harte, Philadelphia; vice-president, Dr. George A. Armstrong, Montreal; secretary, Dr. Robert G. LeConte, Philadelphia; treasurer, Dr. Charles A. Powers, Denver, and recorder, Dr. Archibald MacLaren, St. Paul.

**Dermatologists Meet.**—At the thirty-fourth annual meeting of the American Dermatological Association, held in Washington May 3-5, the following officers were elected: President, Dr. Douglass W. Montgomery, San Francisco; vice-president, Dr. Martin F. Engman, St. Louis; secretary-treasurer, Dr. James McF. Winfield, Brooklyn, and councilor at large, Dr. Charles J. White, Boston. Boston was selected as the next place of meeting.

**Session of Throat, Nose and Ear Specialists.**—The American Laryngological, Rhinological and Otological Society held its sixteenth annual meeting in Washington April 30, and elected the following officers: President, Dr. Chevalier Jackson, Pittsburg, Pa.; vice-presidents, Drs. Harris P. Mosher, Boston; Lafayette Page, Indianapolis; James L. Kent, Lynchburg, Va., and William F. Dudley, Brooklyn; secretary, Dr. Thomas J. Harris, New York City; treasurer, Dr. Ewing W. Day, Pittsburg, and councilors, Drs. James F. McKernon, New York City; Joseph A. White, Richmond, Va., and Norton L. Wilson, Elizabeth, N. J.

**National Antituberculosis Association Meeting.**—At the sixth annual meeting of the National Association for the Study and Prevention of Tuberculosis, held in Washington last week, the enforcement of the anti-spitting law was an important topic for discussion before the sociologic section. In forty-three cities the police are supposed to enforce this law; in sixteen cities health officers have this duty; and in eleven cities both police and health officers are responsible. Resolutions were adopted favoring the establishment of a national public health department, and opposing the action of the Oklahoma State Board of Medical Examiners in excluding from practice physicians who have had tuberculosis, and the Nebraska law which requires indigent tuberculosis patients to take the serum course of treatment. The following officers were elected: President, Dr. William H. Welch, Baltimore; vice-presidents, Drs. Victor C. Vaughan, Ann Arbor, and George Dock, New Orleans; secretary, Dr. Henry Barton Jacobs, Baltimore; and treasurer, Brigadier-General George M. Sternberg, U. S. Army, retired, Washington, D. C.

## RECEPTION TO DR. ABRAHAM JACOBI

The Medical Society of the State of New York honored Dr. Jacobi by a reception at the New York Academy of Medicine on his eightieth birthday, May 6. The reception was very informal and the addresses brief.

Dr. Joseph D. Bryant, who presided, said: "It is hardly necessary for me to say that we are here to express in the simplest and most democratic manner possible our appreciation and affection for Abraham Jacobi. It is proper that you should understand this unpretentious plan of greeting is in accordance with the modest notions of Dr. Jacobi himself—in fact, a plan of welcome which Dr. Jacobi had hoped to extend to the members of his profession on his eightieth birthday, had not the opportunity been forestalled by the action of the Medical Society of the State of New York. The important fact should not be overlooked that we are honoring our profession and ourselves in thus honoring one to whom the full measure of honor is due, especially in professional and civic paths of thought and action. As our friend older in time than but few of us; younger in activity than most of us; larger in experience than any of us; how fitting, therefore, it is that we, on his eightieth birthday transmit to enduring substance the likeness of Dr. Abraham Jacobi."

Dr. Charles Jewett, president of the Medical Society of the State of New York, made the presentation in these words: "We are mindful, Dr. Jacobi, of the distinct service that you have rendered to the medical society of the state by your many helpful councils as well as by your scientific work. You have left us for an example a high professional standard and a high standard of good citizenship. We are keenly sensible of the extent to which your achievements have added to American medicine. The society wishes to show you the respect and affection in which it holds you, and as a token of that regard present you with a likeness of one of the world's most eminent citizens and most venerable men." The bronze portrait relief, the work of Miss Harriet W. Frishmuth, was unveiled by Dr. Jacobi's little granddaughter. It is mounted in an oak frame and is about two by three feet in dimension. It is a hip-length, three-quarters view, about three-fourths life-size likeness of Dr. Jacobi, in the attitude so familiar to all those who know him. He holds a paper in his right hand, while the left is in his coat pocket, and he seems to be about to begin reading. It is quite generally agreed that the bronze is a very accurate likeness of Dr. Jacobi and a credit to the artist. It bears the inscription, "Abraham Jacobi, aet. LXXX," and in the background the date, "MCMX."

Dr. Jacobi, in accepting the portrait, said: "This conspiracy of friends began in the house of delegates of the Medical Society of the State. Here I am, the beneficiary of their goodwill and old and young friendships, with nothing left me except an old heart full of gratitude and no words sufficient to express it. It is a source of gratification, however, that occasions are becoming more frequent for practitioners and scientists, who mostly lead hermit lives, to meet for a handshake and a cordial talk. I wish that I could sign my name to all the eulogies that have been pronounced on me lately. I am going to collect a number of them so as to learn what I shall have to live up to, in order not to disappoint my friends, in coming days, or months, or years. Preferably years, for I am not anxious to descend from the heights on which you have condescended to place me, or to give up the solution of common problems. The poet tells us the gods require many brave men in their service on this wide globe. My happiness is to have lived long enough for you to say that I was one of the brave men wanted for the tasks to be undertaken.

"Ancient medicine down to the Homeric age was revered for its service to the individual sufferer. Sacred was the man who relieved a pain or extracted an arrow. Wise men of antiquity and of the middle ages obtained for medicine the front seat in the council chamber of justice and of statesmanship and of human affairs generally. This was not appreciated, however, for centuries. It was but little over a century ago that J. P. Frank wrote his great work on forensic medicine, thus connecting the science and art of healing as it was then with the most sacred interests of civilized mankind. The middle of the past century established sound foundations on biological methods of experimentation and general research; individual disease came to be recognized as a normal process influenced by untoward, mostly preventable, circumstances; epidemics were studied in their connection with microbic germs and rendered amenable to prevention; and the salvation of the individual and of the commonwealth pinned its hope more on sanitation than on medication. With improving knowledge and philosophic insight the morals of the profession have improved. The physician who is in daily contact with suffering which speaks to his heart, and with the cares of worrying and distracted families and the human problems connected with all ages from infancy to senility, cannot help becoming more warmhearted with years, decades, generations. It takes malice and insufficient information to believe they can make the world believe that the unselfish workers at the bedside and in the laboratory, with a financial pittance or no reward at all, have become brutal and fiendish, and anxious to cover the trails of criminal cruelties committed against helpless animals. That charge might be dismissed as ludicrous; but being in its results dangerous to the public interest, to the health and life of all that is living, and to the confidence bestowed by the stricken people in their healers, it is high treason. So it has come to pass that they heap infamy on men in the profession, who, while making a scanty living out of their daily labor, are indeed undermining their own existence, digging their own graves by altruistic work for the extermination of disease. Why? They follow their flag. That flag has the inscription: 'Ignorance is a crime.' Under that flag this New York Academy of Medicine and the profession of the county, state and country have always cooperated. Under it this academy began twenty years ago its agitation for the creation of a central health bureau with a seat in the cabinet of our President. The American Medical Association and lately Senator Owen are active in the same interest which is the cause of eighty millions of people, who should not be born or not immigrate merely to be immolated on the altar of ignorance and neglect. Under it medicine and the doctor will be recognized as the guardian of yourself, your children and your neighbors, and the protector of social progress. Under it future generations of doctors will participate in the activities of political and social life, not forgetting their responsibilities to their personal duties and to their profession. Our political and social, and to a great extent, our scientific standing has been worked out in our democratic associations extending over a century. Our county and state societies have been the cradle of our existence, as they have fought for our rights and those of the people when jeopardized by ignorance or egotism. Our first allegiance, your first allegiance, belongs to the medical societies of the county and state. I do not believe in the good citizenship of an American physician whose honorable craving is satisfied without membership in his county and state societies. I wish to send out everybody here as an apostle of that conviction. The touching demonstration of the evening means nothing else originating as it does in the State Society, but the recognition of my loyalty to the Medical Society of the State of New York. I wish that I might have been able to say something that might find its way to the hearts and minds of the public and of my professional friends. Such occasions as this have always made a lasting impression on me. They have solidified interests, warmed affections, enhanced mutual respect, guaranteed generous support. I once more have the honor to greet you to thank you for your presence, and, Mr. Chairman and President, for your precious gift and the opportunity to see so many friends. I thank you a thousand times."

## LONDON LETTER

*(From Our Regular Correspondent)*

### The Cause of the Death of King Edward

The *British Medical Journal* states that for years King Edward suffered from emphysema and a tendency, more or less acute, to bronchitis with the usual symptoms of a distressing ineffective cough and a difficulty of breathing. There was a crepitation at the bases of both lungs, indicating a chronic impediment to the free passage of air into the smaller bronchial tubes. He was subject to attacks of laryngitis, but except for some inflammatory thickening at the posterior part of the glottis and chronic catarrh of the throat, there was no trace of disease in the upper air passages. The king had what is known as a smoker's throat.

This, with the accompanying congestion and thickening combined with the loss of elasticity in the lungs, made it increasingly difficult for him to clear his chest. The strain thrown on the heart by the obstruction to the passage of blood through the lungs, caused by the collection of secretion in the bronchial tubes, in turn caused dilatation of the right ventricle. The actual cause of death was heart failure due to increasing difficulty in pulmonary circulation.

It was a case of a type to be seen every day in thousands of elderly persons. Could the king have been induced to spare himself more he might have lived many years longer. He had suffered from glycosuria of a varying degree for a long time but so far as can be judged this did not shorten his life.

Another condition which must have caused considerable dis-omfort at times was a certain weakness in the abdominal vall at the site of the operation for appendicitis which was erformed in 1902.

The hurried journey from Biarritz, says the *British Medical ournal*, would have taxed his strength even had he been in erfect health. Suffering as he was from the effects of a ecent illness, he might fairly have been excused from facing he risk of returning from the south to the cloudy skies, cold inds, and showers of the treacherous English spring.

### Death from Hydrophobia After the Pasteur Treatment

The passing of a very wise act some years ago making the uzzling of dogs compulsory has exterminated rabies from reat Britain, and hydrophobia is never contracted there now. soldier, aged 24, of splendid physique, died in London under istressing circumstances from hydrophobia contracted at ibraltar. In that place both he and another man were bitten the street by a mad dog and were sent to the Pasteur nstitute last September. There was some delay in sending hem as the North German Lloyd Steamship Company refused o take them and they had to wait for a P. and O. boat. One an died within a month, but the other came home to London nd displayed symptoms of hydrophobia only a fortnight ago. e was taken to hospital in a desperate condition, unable to wallow, very violent, and saying he was going mad. He uffered from thirst but when he attempted to drink a severe pasm of the muscles of respiration occurred. During all his uffering he was sensible and he prayed the physician to cut is throat so that he could inspire.

## PARIS LETTER

(*From Our Regular Correspondent*)

PARIS, April 29, 1910.

### The Vomiting of Pregnancy

On April 26 Dr. Pinard, professor of clinical obstetrics, read n interesting paper before the Académie de Médecine on the omiting of pregnancy, in which he drew attention, especially, the modifications of the pulse which accompany this vomit-ng. According to Dr. Pinard, the acceleration of the heart-eats is the first manifestation of the toxemia which brings n a vomiting in pregnant women, the toxemia being appar-ntly due to a poison secreted by the ovary or by the ovum. t is necessary to take the pulse at least every four hours in a regnant woman who is vomiting and presenting an accelera-on of the heart-beats, in order to be informed in regard to er real situation, which is essential for the sake of progno-s and treatment. As soon as the pulse permanently exceeds ne hundred pulsations the dehydration of the body seems to e accomplished rapidly. The skin, which has an earthy ppearance, often presents a subicteric tint, the urine becomes anty, thick and mahogany-colored; the respiration becomes ccelerated; the tongue becomes red and has a varnished ppearance; and with or without hallucinations and a tend-ncy to syncope, coma appears and the woman dies. For very pregnant woman attacked with vomiting, Dr. Pinard dvises, in the first place, a diet of milk and vegetables, and, the vomiting persists, a purely milk diet. When this ther-peutic régime is ineffective or when it has not been advised r followed and the vomiting persists, accompanied by the ymptomatic picture previously mentioned, the number of ulsations per minute being above 100, it is necessary to terrupt the pregnancy at once. If there is any delay this tervention will become useless, for death will occur not-ithstanding, caused by the poisoning of the nervous system.

### odification of the Properties of Leucocytes During Surgical Anesthesia

During the same session of the Académie de Médecine, Dr. . Achard, professor of general pathology at the Paris col-ge of medicine, read a paper from which it appears that in atients who undergo anesthesia, there is a temporary weak-ing of the two essential properties of the white corpuscles, amely, resistance and activity, which, though it disappears t the end of twenty-four hours, continues for a certain time fter the awakening of the patients. This effect may be ppreciated from the relative slowness with which, in spite of e rapidity of its action, the anesthetic is eliminated. Thus her, in spite of its extreme volatility at the temperature of e body, is for a long time to be found in the expired air y which it is chiefly eliminated. The weakening of the assive and active properties of the leucocytes during surgical nesthesia shows that anesthetics exercise their action on the hole organism and even on the cells which are isolated from all direct influence of the nervous system. The intensity of these effects, their persistence for several hours and the consequences to the defense of the organism against poisoning and microbes—these considerations may aid in the comprehension of the cause of certain post-operative accidents, such as infections of respiratory or digestive origin.

### Modification of the Law on the Practice of Medicine

A law modifying, as I indicated in my letter (THE JOURNAL, Aug. 7, 1909, liii, p. 468), the law of Nov. 30, 1892, on the practice of medicine has just been promulgated. While up to the present physicians, surgeons, dentists and midwives have been required to register their diplomas within a month after their establishment, according to the new law they must have their diplomas registered as soon as they have established and before beginning the practice of their profession.

### The Châteauvillard Prize

This prize, amounting to 2,000 francs ($400) is awarded each year by the Paris college of medicine to the best work on medical science in French, printed between January 1 and December 31 of the previous year. This year the college has awarded this prize to Dr. A. Sézary of Paris, for his thesis entitled "Anatomic-Pathologic, Clinical and Experimental Researches on Sclerous Inflammations of the Adrenal Glands."

### Prize in Naval Medicine

The prize in naval medicine for 1909 has been awarded to Dr. A. V. Michel for his report of general inspection in regard to the fishermen and the hospitals of Iceland.

### Commission for the Revision of the Codex

A special permanent commission has been just organized at the Ministry of Public Instruction to prepare the next edition of the French pharmacopeia (Codex medicamentarius). This commission is charged, moreover, with the preparing for publication the supplements for the pharmacopeia of 1908, if any are required.

## BERLIN LETTER

(*From Our Regular Correspondent*)

BERLIN, April 21, 1910.

### International Committee for Postgraduate Medical Education

At the Budapest international medical congress an international committee for the furtherance of postgraduate instruction was established under the initiative of the German central committee. The purposes of this committee were indicated as follows: The advancement of medical postgraduate instruction in various countries, a description of the arrangements with a view to mutual stimulation and instruction, information regarding the relation of academic instruction to postgraduate teaching in various countries, communications regarding methods of teaching, dissemination of information regarding the opportunities for postgraduate instruction in various countries, exchange of noted scientists for the purpose of instructing physicians in regard to important improvements, etc. The committee is now instituting a collective investigation and is sending out circulars for this purpose. Information is required regarding : A. The academic university instruction and the technic of preparatory instruction, of the teaching of pathologic anatomy, bacteriology and hygiene and in social medicine, and also regarding the legal requirements for the entrance of students and for the examinations, as also the organization of university instruction for military surgeons. B. Medical postgraduate work, its general organization and special institutions. C. Method of medical teaching, the auxiliary material for demonstrations and the institutions for teaching material, collections, etc. A second question blank enquires concerning the medical postgraduate courses that will take place in the period from September 1 to April 1, 1911, their place and time, whether foreigners may participate, what subjects will be taken up and what fees will be required. On the occasion of the hundredth anniversary of the Berlin University, an extraordinary session of the committee in Berlin is proposed to discuss the organization of the collective investigation and changes in the question circular; provision for an international distribution of information in regard to medical and postgraduate instruction, and also the fees for membership to be paid by individual states to the international committee.

### Social Legislation

The data furnished to justify the new bill for social insurance throughout the empire contain statistical material of general interest because it shows in figures the extent of social legislation in Germany in many directions. The empire contributes for pensions for disability, disease and old age $12 (50 marks) per capita per annum. For the proposed insurance of survivors, according to the new bill, an imperial contribution must be made to every widower or widow of a pension of $12 and to every widow's settlement $12, and to every orphan pension $6, and to the dower of every orphan $4. Up to 1908 (since 1891) there has been paid altogether for disability pensions about $375,000,000 (1,500,000,000 marks); the empire has contributed to this about $130,000,000 (535,000,000 marks). For the contemplated disability insurance the contributions of the empire would have to amount to about $700,000,000 (2,815,000,000 marks). If the amounts contributed for the purposes of the social legislation by the employers, the workmen and the government are compared with each other, it is found that the government bears about a third of the expense of disability and inheritance insurance, and a third each is borne by the employers and by the workingmen. In the illness insurance, the expenditures for the years from 1904 to 1907 were as follows: For medical treatment about $25,000,000; for medicines and other material for treatment about $17,000,000; for payments to the sick about $50,000,000; for expense of care and treatment in hospitals about $17,000,000. The total insured were about 13,000,000 people. According to the new bill, the number of persons to be insured will be increased by about 8,000,000, so that hereafter the entire number of those entitled to insurance will amount to about 21,000,000. This extension of the illness insurance will increase the total expense by about $15,000,000. From the time that the social legislation went into force till the end of 1907, about $2,000,000,000 (8,095,386,971 marks) were expended by the employers, the workingmen and the government for the insurance of workingmen in the German empire, of which about $900,000,000 were applied to sickness insurance, $450,000,000 to accident insurance and about $650,000,000 to disability insurance.

### Inebriety Statistics

Statistics of the persons addicted to alcohol in the general sanatoriums of Prussia from 1877 to 1907 have been published by the Prussian statistical bureau. The tables show a considerable and with some exceptions a steady increase in the number of inebriates cared for, in the sanatoriums; for 1877, 3,052 (2,854 men and 198 women); for 1887, 10,410 (9,775 men and 635 women); for 1897, 12,256, and for 1907, 17,302 (16,343 men and 969 women). This marked increase (about six-fold in thirty years) does not reflect accurately the increase in inebriety, as sanatorium treatment may be more extensively applied at the present time than thirty years ago, and the number of institutions has increased, while neuropathic inebriates permit themselves to be sent to sanatoria more readily than formerly.

The fact that the consumption of alcohol in Germany is very large is shown by an article in the *Reichsarbeitsblatt*, the imperial labor journal, according to which Germany stands second among the various countries in the use of spirits. The highest consumption of spirits is in Denmark. But as a whole, consumption of spirits is decreasing, except in America, and very markedly of late in Germany—a fact which is probably to be attributed to the boycott on spirits by the social democrats of which I have previously informed you. England takes first place in consumption of beer, Germany second. In the average for the years 1904 to 1908 there was a yearly consumption in Germany per capita of the population of 3.86 liters of 100 per cent. alcohol as spirits, and of 116.66 liters of beer. Assuming the average price per liter of 100 per cent. spirits as 24 cents (1 mark) and of a liter of beer as 8 cents (0.3 mark), the population thus spends annually per capita for brandy, 93 cents (3.86 marks) and for beer $8.40 (35 marks). With a total population of 64,000,000, this represents an expenditure of $596,880,000 (2,487,000,000 marks) alone for beer and spirits. If the use of wine is estimated according to previous figures at 5.82 liters per capita and the price is taken as 1 mark per liter, the amount stated would be increased by about $93,122,000 (372,500,000 marks). The entire yearly expense for alcoholic drinks would approach $750,000,000 (3,000,000,000 marks), more than twice as much as the expense for the army and navy, more than four times as much as the appropriations for the entire industrial insurance, and about five times as much as the expenditures for the public schools. The rôle which alcohol plays in the economy of workingmen is shown by an investigation of the imperial statistical bureau among a limited number of families of workingmen, officials and teachers; the entire expenditures in 155 workingmen families for the whole year were $430 (1,789.35 marks), of which 4.8 per cent. was spent for alcoholic drinks; 50 families of government employees had an entire expense of $685 (2,850.89 marks), including 2.5 per cent. for drink. Among the families of workingmen, the expenditure for alcohol is not only relatively but absolutely higher. The relation of the expenditures for alcohol to those for food of workingmen is 8.02 per cent.; among government employees, 3.12 per cent. Other calculations show that German workingmen consume more alcohol than the American.

## VIENNA LETTER

*(From Our Regular Correspondent)*

Vienna, April 28, 1910.

### Fourth Meeting of the Society for Experimental Psychology

The Society for Experimental Psychology held its fourth regular meeting in Innsbruck, the capital of the Austrian Alpine district, and devoted four days to its work. There were present all leading investigators of this branch from Austria, Germany and Switzerland, while England and America were also represented. Professor Mueller of Göttingen was chairman of the meeting.

Professor Monakow of Zürich gave a report on the localization of various kinds of bodily movements in the higher brain centers. Pick of Prague dealt with results obtained by him in examinations of the visual fields by means of his improved perimeter. His observations confirmed the advisability of the general use of a perimeter in all cases of nervous disease. Spearman of London read a paper on the coefficients of correlation in the study of psychic disease, which he recommends very warmly, in spite of the skepticism of numerous psychologists. Lipmann of Berlin gave a synopsis of his very interesting experiments on the various types of visual perception. The same objects were perceived differently by different persons according to the fact that some persons regard more the color, others more the size, others more the shape of the things. S. Exner's paper on the hereditary transmission of psychic qualities was much discussed. He, like Kammerer, has found that instinctive actions in animals, when the latter have been forced to perform them, are inherited even in the second generation. Therefore, it is only just to assume that a higher psyche is also influenced by inherited psychic qualities. Guttmann's observations on color-blind dichromatic persons and on persons with anomalies of the color-sense show that these two types of persons are in near relations to each other, having in common the observation of differences of light, of saturation with color, and quick fatigue of the color-sense.

The third day was devoted to the study of physiology of the auditory organ. Alexander and Bárány of Vienna reported on the present state of the knowledge of the vestibular organ, while Kohler of Berlin read a paper on the perception of simple tones. He could demonstrate that each simple tone has a special pitch, which is constant. The series of the tones with the clearest pitch corresponds with the series of the vowels (as they are pronounced in German), u (oo), o, a (ah), e (ay), i (ee). The number of vibrations which corresponds with u is 263 vibrations; the next vowel, o, is distant nearly an octave (515 or double the number), a (German a or ah) has 1,046 vibrations (again an octave or double the number). The last day brought several papers by German and Swiss professors, but dealing with special subjects of minor importance for the practitioner.

### Pregnancy and Labor of One of the Siamese Twins

There live in Prague twin sisters, known as the "Siamese twins," who are united to each other by a solid bridge of tissue, with some cartilage and bone enclosed, in the region of the hip-joint and the brim of the iliac bone. Several attempts at separation have been suggested, but refused by the twins because they desired to exhibit themselves for money. One of the twins suffered a few years ago from cholelithiasis, and had to be operated on in the surgical clinic of Prague, where examination revealed that apart from the malformation of the connecting iliac bone, the two persons have separate and independent bodies and independent bodily functions. A few days ago the twins, now 36 years of age, again came to the clinic as the former patient again suffered from colicky pains. The surgeon made a diagnosis of advanced pregnancy or rather incipient labor. Although that possibility was absolutely denied by the girls, the patient soon gave birth to a healthy boy and later, after repeated questioning, confessed. The other sister felt nothing at all of the pain of the mother so closely united to her, and when the next day the temperature of the mother went up two degrees the temperature of the other twin remained normal, showing the absolute separation of the two organisms as regards function and metabolism.

# Pharmacology

## MORE MISBRANDED NOSTRUMS*

### The Food and Drugs Act Continues to Make Lying on the Label Unprofitable

When the Food and Drugs Act was passed in 1906, many nakers of sophisticated food-stuffs as well as nostrum manu'acturers, took the attitude that the law was more or less a oke. They looked on it as merely the outward and visible ign of the fruits of the campaign that had been carried on in ay and medical publications against "patent medicines" and ood adulteration. As such these same manufacturers magined that it would be but a few short months before the asily-forgetting public would cease to be interested in the ubject, and the law would lapse into a state of innocuous lesuetude. In the latter prophecy they have shown their owers of divination to be poor. Thanks to a virile and fearess official at the head of the Bureau of Chemistry, aided by wide-awake medical profession and supported by many of he better class of lay publications, the "Pure Food Law" is an ver-present reality. What has been accomplished may be ealized when it is known that in over 260 prosecutions the overnment has secured conviction in all but 3 cases. The najority of these violations of the law have been by food nanufacturers rather than by nostrum makers, but a number f them have been by the latter. The following are the latest onvictions of nostrum makers, with the facts as given in the overnment's official "Notices of Judgment:"

### "DR. PARKER'S UNIVERSAL HEADACHE CURE"

This product was marketed by the W. R. Plank Drug Co., 'ond du Lac, Wis., and was found to contain:

Acetanilid
Sodium bicarbonate
Caffein
Gummy material

The presence of acetanilid in the preparation was not stated n the label, though there was a reference to phenylacetamid, synonym for acetanilid not recognized by the Food and rugs Act for labelling purposes. The product was deemed nisbranded and a fine of $25 imposed.

### "O. K. HEADACHE CURE"

This nostrum was manufactured by the Houston Drug Co., louston, Texas, and was labelled as follows:

"Cures any Kind of Headache, Perfectly Harmless."

A sample of the nostrum having been seized by the Federal uthorities was analyzed and found to contain:

Acetanilid
Alcohol

Inasmuch as acetanilid is not a sure cure for headache, is ot "perfectly harmless" and as, further, the law requires the resence of both acetanilid and alcohol to be stated on the abel—which was not done—the product was declared misranded. A fine of $50 was the result.

### "HUTHWELKER'S HEADACHE TABLETS"

Adam C. Huthwelker of Baltimore puts out this preparation, vhich was claimed to be "A Positive Cure for Every Form of leadache and Neuralgia," and was further represented as eing "harmless." Analyzed in the Bureau of Chemistry it vas found to contain acetanilid. As the label failed to conain a statement of the quantity or proportion of the drug and s, in any case, acetanilid is neither "harmless" nor a "positive ure." the tablets were declared misbranded and Huthwelker vas fined $10.

### "PRESTON'S HED-AKE"

The label attached to the container in which this drug came, nd which was sold by the Parker-Blake Company, Ltd., New rleans, bore such statements as these:

"Perfectly Harmless."
"Will prevent headache."
"It cures while you wait."
"A remedy for any kind of headache."

It was analyzed by the government chemists and according to their reports was found to be another of the acetanilid headache "cures." In view of the false and misleading statements quoted above the preparation was declared misbranded and the defendant, who pleaded guilty, was fined $10.

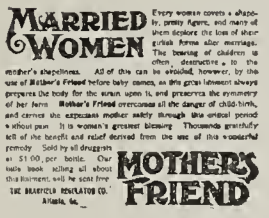
### "U-RE-KA HEADACHE POWDERS"

Still another acetanilid mixture was found to be misbranded; this was the "U-re-ka Headache Powders" manufactured at Perlitch's Prescription Pharmacy, Brooklyn. The cause for action in the case lay in the fact that the proportion and quantity of acetanilid present was not stated.

### "MOTHER'S FRIEND"

This widely advertised fake is put out by the Bradfield Regulator Company, Atlanta, Ga. Some of the claims made for it were:

"Shortens the duration of labor."
"Will assist in the safe and quick delivery."
"Prescribed by many of our best physicians."
"Causes an unusually easy and quick delivery."
"For relief of the suffering incident to child-birth."



MARRIED WOMEN

Every woman covets a shapely, pretty figure, and many of them deplore the loss of their girlish forms after marriage. The bearing of children is often destructive to the mother's shapeliness. All of this can be avoided, however, by the use of **Mother's Friend** before baby comes, as this great liniment always prepares the body for the strain upon it, and preserves the symmetry of her form. **Mother's Friend** overcomes all the danger of child-birth, and carries the expectant mother safely through this critical period without pain. It is woman's greatest blessing. Thousands gratefully tell of the benefit and relief derived from the use of this wonderful remedy. Sold by all druggists at $1.00 per bottle. Our little book telling all about this liniment will be sent free.

THE BRADFIELD REGULATOR CO.
Atlanta, Ga.

MOTHER'S FRIEND

Samples taken from the consignment seized were analyzed by the Bureau of Chemistry of the United States Department of Agriculture and found to consist of:

Oil
Soap (small quantity)

The United States judge naturally declared the stuff misbranded.

### "MAKE-MAN TABLETS"

This nostrum, the product of the Make-Man Tablet Company, Chicago, was sold under the following claims:

"Contains no poison."
"A brain, blood and nerve food."
"Make-man tablets make blood."
"Sold under an absolute guaranty to restore lost vitality."

The government seized 360 packages of this product and on analyzing a specimen the "Make-Man Tablets" were found to consist essentially of:

Strychnin
Aloes
Iron Carbonate
Arsenic
Potassium Sulphate
Iron oxid

Strychnin and arsenic being poisons and many of the therapeutic claims made for the tablets being false, the court declared the nostrum misbranded.

### ACETON

Horace N. Wheeler, Mystic, Conn., doing business under the name of the "Aceton Medical Company," puts out Aceton. This preparation, he claimed, was a sure cure and an infallible remedy for influenza, a preventive of pneumonia, and a sure cure for headache and neuralgia. On analysis Aceton was found to contain:

Acetanilid
Caffein
Sodium Bicarbonate

This misbranding resulted in Mr. Wheeler being fined $75.

### "DR. JONES' BEAVER AND OIL COMPOUND"

This nostrum, manufactured by Morris Spiegel, Albany, N. Y., was sold "for the treatment of rheumatism, neuralgia, sore throat and quinsy, headache, toothache, backache, bruises, sprains" and numerous other conditions. Though beaver and oil compound was "warranted as represented" there was found no beaver oil, nor, in fact, any animal oil, but essentially:

Gasolin
Oleoresin of capsicum
Oil of Sassafrass

The product was declared misbranded.

DR. JONES'

(TRADE MARK)

BEAVER
AND
OIL
COMPOUND
FOR THE TREATMENT OF
*Rheumatism,*
*Neuralgia,*
*Sore Throat*
*and Quinsy,*
*Headache,*
*Toothache,*
*Backache,*
*Bruises,*

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* These abstracts, based on the "Notices of Judgment" issued by he government, together with all others that have appeared in THE OURNAL, have been reprinted in pamphlet form (illustrated); rice four cents.

### "SURE THING TONIC"

"Sure Thing Tonic" was sold by Furst Brothers of Cincinnati and, according to the government analysis, contained alcohol, sugar and water and was flavored with juniper. Some of the claims made for it were:

> "Renews Vital Force."
> "The Wonder Stimulant."
> "Restores Nerve Energy."
> "Invigorator and Exhilarant."
> "Distilled by Modern Methods evolved from half a century of practical experience."
> "Should be taken by every person, male or female, whether in need or not of a Tonic of its kind."

As the quantity or proportion of alcohol in the preparation was not given on the label, as the "booze" was not a "distilled product" as claimed and, further, as sweetened alcohol and water, flavored with juniper, will neither "restore nerve energy" nor "renew vital force," the product was deemed misbranded. The defendants pleading guilty were fined $10 and costs.

### "PILSBURY'S COKE EXTRACT"

This product, which was manufactured by A. L. Pilsbury, Jr., New Orleans, La., was found on analysis to contain among other ingredients, cocain. As the label failed to contain a statement of the quantity or proportion of the drug, as required by the Food and Drugs Act, the preparation was declared misbranded and the manufacturer fined.

### "CAFE-COCA COMPOUND"

This was a syrup manufactured by C. C. and F. H. Bowden, Athens, Ga., under the name of the Athens Bottling Works. On analysis it was found to contain cocain and not being labelled to that effect was declared misbranded and a fine imposed.

### "LAMBERT'S WINE OF COCA"

The full name of this product was "Lambert's Wine of Coca with Peptonate Iron and Extract of Cod-Liver Oil" and according to the label it contained 22 per cent. alcohol together with "morrhuin, butylamin, iodin, bromin and phosphorus." It was manufactured by the Lambert Pharmacal and Chemical Co., Detroit. On analysis it was found to contain cocain, the presence of which was not given on the label, and it was further found to be free from iodin and bromin, said on the label to be present. Two shipments were seized and misbranding was proved in each case and two fines of $10 each imposed.

### "KOCA NOLA"

This was a syrup for flavoring soda water and similar "soft drinks" put up by a company of the same name at Atlanta, Ga. This "Delicious Dopeless Koca Nola"—as the label had it—was found to contain cocain. Cocain being deleterious to health, was declared an adulteration under the act so that the Koca Nola Company was found guilty on two points: (1) failing to declare the presence of cocain and (2) adulteration. The Government made two seizures and the company was found guilty in each case and a fine of $25 on each count was imposed, making the total $100.

### "RADAM'S MICROBE KILLER"

This hoary fake, which seems to have been revived lately, was shown up by Mr. Adams in the "Great American Fraud" and was at that time said to consist of:

> Hydrochloric acid
> Sulphuric acid
> Red wine.

According to the government report the nostrum was represented as a cure for cancer, consumption, diabetes, diphtheria, yellow fever, paralysis and numerous other conditions. From recent advertising circulars obtained for The Journal files we find this fake recommended—in separate leaflets—as "The Sure and Safe Remedy for Men's Diseases" and also as "The Greatest Boon for Womanhood." Directions are given in the former pamphlet for the cure, by means of this stuff, of "gonorrhea," "gleet," "stricture" and "syphilis," while in the latter the cure of "leucorrhea," "falling of the womb," and numerous other "female complaints" is dealt with.

Twelve cases of the "microbe killer" were seized by the government and notice was served on Dean, Swift & Co., Washington, D. C., in whose possession this nostrum was found. No claimant having appeared to make answer to the charges the court decreed that the twelve cases of "Radam's Microbe Killer" should be destroyed and that Dean, Swift & Co. should pay all the costs of the proceedings.

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[Contribution from the Chemical Laboratory of the American Medical Association.]

## ZEMACOL

**W. A. Puckner and W. S. Hilpert**

Attention has been called to the vague and mysterious statements regarding a preparation called zemacol, manufactured by the Norwich Pharmacal Co., Norwich, N. Y. Because of the unsatisfactory statements regarding the composition of the preparation, it was considered of sufficient interest to make an analysis and determine its chemical constituents. Accordingly specimens of the preparation were obtained and examined.

The preparation zemacol (Norwich Pharmacal Co.), as found on the market, is a thick, pink, mucilaginous liquid, highly perfumed and having besides, a suggestion of a phenolic odor. The bottle bears a label on which appear the following statements:

> "A colloidal emollient containing extract of the rete mucosum of the healthy yearling lamb, combined with glycerin, salicylic acid and other antiseptic and aromatic oils. Useful in eczema and diseases of the integument where cell destruction is a prominent factor."

In the advertising matter the following claims are made:

> "An advance in animal therapy. . . ."
> " . . . increases the nutritive activity of the cell tissue of the skin through the absorbable extract of the rete mucosum."
> " . . . clinical tests show its efficacy in both the so-called moist and dry eczematous conditions of all parts of the cutaneous surfaces."
> " . . . rich in animal cells."

Since nothing could be found in the literature regarding the therapeutic action of an extract of the rete mucosum of the sheep it was thought possible that the statements on the label were given simply as a vague and mysterious means of indicating the presence of wool-fat (lanolin), and tests were made to determine the presence or absence of the latter substance. A substance was isolated from zemacol which had the physical properties of, and responded to some of the chemical tests for, wool-fat—but it was found in such small quantities as to indicate that it was not present as an active constituent. Since there are no definite tests for the detection of serums or animal extracts the presence or absence of these could not be demonstrated. Further examination indicated the presence of salicylic acid, a gummy material, having the properties of tragacanth, and glycerin. It is practically free from inorganic matter. By distillation a small quantity of oil was isolated, which possesses the characteristic odor of the preparation.

Quantitative estimations[1] indicated the presence of the above-mentioned constituents in approximately the following quantities:

| | Per Cent |
|---|---|
| Gummy matter having the properties of tragacanth.. | 2.02 |
| Salicylic acid ............................ | 0.67 |
| Matter having the general properties of wool-fat (lanolin) | 0.20 |
| Glycerin ............................ | 5.50 |
| Volatile matter (water and alcohol)................ | 91.00 |
| Aromatic oils and phenol-like bodies.................. | Trace |

The results of the above analysis, together with advertising matter regarding zemacol, were submitted to Dr. William Allen Pusey, professor of dermatology and clinical dermatology, College of Physicians and Surgeons, Chicago, and past chairman of the Section on Dermatology of the American Medical Association, with the inquiry whether or not there was any record of investigations regarding the therapeutic value of an extract of the rete mucosum of the sheep and whether in his opinion the claims made for zemacol would be warranted. The following reply was received:

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[1] The details of analysis will be published in the annual report of the laboratory, or they may be had by sending a stamped addressed envelope.

> "So far as I know, nobody has ever thought of or proposed the use of an extract of rete mucosum as a therapeutic agent and if a serious suggestion of that sort had ever been made I believe I would know it. I can conceive of no service which such an extract could render and I think the suggestion of it is a highly fantastic idea. From the analysis which you furnish I should say that the mixture described is substantially the ordinary 2 per cent. solution of tragacanth in glycerin and water with a little antiseptic added to keep it from decomposing. That is a commonly known lotion, modifications of which are used in practically every hospital as a hand lotion, and has no magical virtues whatever. Incidentally, I should think it cost, aside from the labor, about twenty cents a gallon to make it."

### Beecham's Pills and Other Things

In a recent letter Dr. R. A. Allen of Carbonado, Wash., asks the following questions: (1) What is the composition of Beecham's Pills? (2) What is the best excipient for tincture of cannabis indica? (3) Should the compound tincture of cinchona cause a precipitate when mixed with tincture of nux vomica? (4) Is potassium chlorate of any therapeutic value?

(1) According to "Secret Remedies," a book published by the British Medical Association and in which is given the analyses of many of the most widely advertised nostrums, an analysis of Beecham's Pills gave the following results:

The pills had an average weight of 1¼ grains, and analysis showed them to consist of aloes, ginger and soap; no other medicinal ingredient was found. The quantities were approximately as follows:

| | |
|---|---|
| Aloes | 0.5 grain |
| Powdered ginger | 0.55 grain |
| Powdered soap | 0.18 grain |

In one pill.

(2) While in pharmacy the term excipient is ordinarily used to designate the more or less inert substances employed to give consistency or form to pills or tablets, in this case it is probable that a method of using the tincture in a liquid mixture is what is wanted. If the intention is to prescribe cannabis indica in pill form the proper amount of the drug should be substituted for the tincture. Owing to the character of the drug the tincture is made by the use of strong alcohol. If this tincture is added to an aqueous liquid an unsightly precipitate of resinous materials forms. This precipitation is successfully overcome by employing acacia (gum arabic) as an emulsifying agent. The following prescription will give a satisfactory mixture:

| ℞. | gm. or c.c. | | |
|---|---|---|---|
| Acacia | 3 | or | gr. xlv |
| Tincture of cannabis indica | 10 | | fl. ʒ ii ss |
| Water, to make | 60 | | fl. ℥ ii |

Triturate the acacia with 20 c.c. (fl.ʒii ss) water. Gradually add the tincture of cannabis indica and then sufficient water to make 60 c.c. (fl. ℥ ii).

The quantity of tincture may be changed so long as the acacia constitutes about 5 per cent. of the entire mixture.

(3) Tincture of nux vomica is quite commonly prescribed in combination with compound tincture of cinchona. As an experiment 15 c.c. tincture of nux vomica was mixed with sufficient compound tincture of cinchona to make 120 c.c. After standing for several days only a very slight precipitation had occurred.

(4) The internal use of potassium chlorate is no longer recommended by authorities on therapeutics and it is recognized as one of the most toxic of the potassium salts, causing methemoglobinemia, depression of the nervous system and degeneration of the kidneys if given in any but moderate doses. Its use by the laity should be discouraged and if prescribed at all for internal use great caution should be observed on account of its toxic character. As a local application in stomatitis and sore throat potassium chlorate is sometimes used although it is a very feeble antiseptic. It has also been recommended in chronic dysentery and in hemorrhoids applied by injections or enemata.

## *Correspondence*

### Mexico Honors Ricketts

*To the Editor:*—Believing that the numerous readers of THE JOURNAL will receive with satisfaction some news about the honors granted to the late Dr. H. T. Ricketts by the Mexican Government and the principal medical institutions of this city, in attention to the very important work done by that heroic investigator who gave his life for humanity and science, I have the honor to send you this letter.

In the first place, I must tell you that the Department of Public Instruction and Fine Arts of this republic, appreciating in all its value the work of Dr. Ricketts, put at his disposal the laboratories of the Bacteriological Institution, where that eminent doctor made the very remarkable investigations well-known to the readers of THE JOURNAL.

Unfortunately for science and humanity, Dr. Ricketts, who had gained the heart of all who have known him, contracted typhus in the course of his investigations (probably by the lice contaminated with the germs of the disease) and succumbed May 3, his death producing general consternation and sorrow in this city, especially in the Department of Public Instruction and Fine Arts and in the medical corps.

The President of the Republic resolved that the following honors should be shown the memory of the heroic investigator: (1) The laboratory in which Dr. Ricketts made his investigations will be named in the future "Dr. Howard T. Ricketts Laboratory;" (2) the National School of Medicine, the bacteriologic, the medical and the pathologic institutions will be put in mourning for three days; (3) a special commission of those institutions accompanied the body to the national railway station, where it was placed in the special car to Chicago; (4) the Department of Public Instruction and Fine Arts sent a special delegate to present to Mrs. Ricketts the expression of the Mexican government's sorrow for the death of her eminent husband; (5) the same department sent a flower crown with this inscription: "To the heroic investigator Dr. H. T. Ricketts. Homage of the Department of Public Instruction and Fine Arts, Mexico, May 3, 1910." Besides this, the department sent two telegrams to the Chicago and Pennsylvania universities, presenting them its condolence in the terrible loss suffered by these institutions with the death of their distinguished professor.

Finally, the National Academy of Medicine stopped its weekly session, and the president made a public panegyric on the courageous and unfortunate Dr. Ricketts.

As you have known, Mexico, appreciating duly the importance of the work made by Dr. Ricketts, and regretting truly the great loss suffered by science and humanity, has made the best homage to the remarkable scientist who gave his life, intending to save the lives of many people.

Hoping that this news will be interesting to you and to the numerous readers of my loved JOURNAL (allow me these words), I remain

ALFONSO PRUNEDA.

### The University School of Medicine

*To the Editor:*—The modern trend of medical education in this country is bringing the medical school into close relation with the university, from which it receives not only financial aid but, what is even more important, the inspiration of university ideals. It is to be hoped that this movement means not only the passing of the proprietary medical school but the abandonment of that conception of the medical college which makes it an institution intended solely for drilling the student in the established facts in medicine, and the substituting for it the spirit of university teaching whereby the student is led to approach these facts with the open, unbiased mind of the investigator. This is the sort of training that best prepares the student for solving the problems encountered in the routine practice of medicine.

The desirability of coming into closer contact with the university has resulted in many instances in the voting into the university as its department of medicine, a proprietary medical college, body and soul, as if the act of voting it in could make it a real department of the university. Mr. Pritchett in his recent address before the Council on Medical Education of the American Medical Association in THE JOURNAL, April 2, 1910, p. 1109, has pointed out how in many instances the university or college in taking in the proprietary medical school has not only failed to give any financial support to its so-called medical department, but has not even made itself responsible for the standards of admission, much less extended its influence and ideals to the betterment of the medical school. The only apparent object to be gained by association of this sort is the supposed prestige to the medical school in being known as the medical department of the university and to the university in thus being able to claim a medical department.

To vote into a university a medical school organized as are the proprietary medical colleges, where neither the facilities nor the ideals are on the university basis, cannot make such a medical school a *bona fide* department of the university. It can only become an actual university department of medicine when it has been organized on exactly the same basis as any other scientific department of the university.

It is common knowledge that a great many institutions parade under the name of college which are only doing the work of a preparatory school or of a high school. In the same way the term "university" has been appropriated by institutions which are scarcely doing the grade of work recognized as the minimum standard for a *bona fide* college. A university is not distinguished from a college by the number of its students or even by the number of its departments, as is sometimes assumed. A college is essentially a teaching institution, whereas a university implies primarily an institution where, in addition to the teaching, research is fostered. Instruction is the chief aim of the college. Investigation is fundamental in the idea of the university. A *bona fide* department of a real university must therefore be a department in which the fundamental conception of a university is carried out in its organization, a department in other words in which the idea of investigation is made prominent. The medical department of a university should be a department in which the university idea is carried out. It is this ideal in medical education for which we should be working, and it is to this that the trend of modern medical education is surely leading. To recognize a school of medicine organized on the basis and with the ideals of the proprietary medical school as the medical department of a university not only hurts the reputation of the university but such a recognition is an aspersion on the ideals of the medical profession. To quote from the address of President Schurman delivered before the Council of Medical Education of the American Medical Association, which appeared in THE JOURNAL, April 16, 1910, p. 1281: "Have done with this sham in medical education, . . . let this new institution be not an attachment (or detachment) to the university, but an organic and vital member like other departments of the university, and like them, animated by its spirit and controlled by its standards."

GEORGE E. SHAMBAUGH, Chicago.

### Reducing Infant Mortality in Large Cities

*To the Editor:*—In connection with an interesting paper which appeared in THE JOURNAL, April 16, by Dr. H. Schwarz, on "A Plan by which Infant Mortality Can Be Reduced in Large Cities," I should like to state that the following up of infants born in a maternity service is also being done in some other institutions in this country. In the *Archives of Pediatrics*, July, 1907, I wrote: "Maternity hospitals could do much by giving mothers detailed instruction in the care and feeding of infants; and to those mothers who cannot give the breast, demonstrations in the preparation of the food could be given during the last two or three days of their stay at the hospital. By explaining to them the great importance and value of regular supervision a certain number could be induced to report regularly at stated intervals during the first year in order to have the infant weighed and to receive instruction in care and feeding."

This method was inaugurated by Budin at the Paris Maternity Hospital many years ago. For over a year I have carried it out in the maternity service of the Lebanon Hospital, and have no doubt that it is being done in other institutions in this country. It will probably be a long time before it will be possible to establish 50 such clinics at an annual expenditure of $150,000, as Dr. Schwarz suggests. At present all that such a clinic can do is to demonstrate the fact that in a certain series of cases the infant mortality can be considerably diminished. Others may then be induced to carry out the work on a larger scale.

This method does not touch the 50,000 or more babies annually born in New York City in the service of midwives. In this class the mortality is very high. These can only be reached by a plan which I proposed in the paper above cited, and again discussed in a paper in *Pediatrics*, August, 1909. A nurse attached to the department of health visits the mother as soon as the birth certificate is received by the department from the midwife. This is now being done in this city. The plan has the great advantage that there is no interference with regular practitioners of medicine; its greatest value lies in the fact that the vast majority of infants can be kept at the breast.

In this way I believe it is possible to reduce the infant mortality in New York City by at least 5 per cent. in this class of patients, which would mean a saving of more than 2,500 lives annually. CHARLES HERRMAN, M.D., New York.

## Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

### QUININ AND UREA AS LOCAL ANESTHETICS

*To the Editor:*—Please give me information and literature in regard to the chemistry and history of the use of quinin and quinin and urea hydrochlorid as local anesthetics. C. B.

*To the Editor:*—I have been particularly interested in the results of the combination of quinin and urea hydrochlorid with the prolonged exemption from pain, especially in neuritis, which recently has been more often recognized than formerly. Not only am I interested in the combination of these two drugs, but my investigation has lead me to inquire which produces the salutary results. While I do not wish to detract from the credit due the physician first suggesting this addition to our surgical resources, I wish to say that I have been using quinin alone for more than fifteen years as a local anesthetic. I am not the originator of this method of using quinin, as more than seven years prior to my adoption of it for this purpose, Dr. William Sylvester, an old and able army surgeon of Ohio, and a resident of this city, had been using it for a number of years and first taught me its use in pleurisy (neuritis), pneumonia and advanced tuberculosis cases.

I feel safe in saying that Dr. Sylvester was beyond doubt the originator of the idea. He did not to my personal knowledge use this drug hypodermically. His results with quinin on a denuded surface were so pleasingly satisfactory that up to the day of his death he used this method of treatment for the alleviation of pain and the production of anesthesia. W. S. HOY, Wellston, Ohio.

ANSWER.—Quinin and urea hydrochlorid is a double salt of quinin and urea made by dissolving quinin hydrochlorid in hydrochloric acid, adding pure urea, filtering the mixture through glass wool and allowing it to crystallize. It is soluble in its own weight of water and in alcohol. It has the actions of quinin, is nonirritating when injected hypodermically, and produces local anesthesia, lasting in some instances several days, depending on the strength of the solution.

Dr. Hoy asserts that he has used quinin for fifteen years by external application on denuded surfaces (not hypodermically), and believes that Dr. Sylvester, of Ohio, from whom he obtained the suggestion, is entitled to credit for priority.

Helmholtz used it unsuccessfully in watery solution as a spray in hay fever. Fulton (THE JOURNAL, July 30, 1904, p. 1393) attributed this failure to the fact that watery solutions are transient in their effect in relieving the coryza and the other symptoms, and he therefore followed the spray with an ointment of quinin in white petrolatum, 30 grains to the ounce. This, he asserted, gave continued relief from the symptoms while it was employed. Thibault (*Jour. Ark. Med. Soc.*, September, 1907: abstr. in THE JOURNAL, Nov. 16, 1907, p. 1719) also reports its efficiency for anesthesia when used locally on cotton or gauze on mucous membranes or denuded surfaces in strength of 15 or 20 per cent. In a case of strangulated hernia in an aged woman, reported later (THE JOURNAL, April 23, 1910, p. 1375), he used the infiltration anesthesia in 0.25 per cent. solution. On manipulating the viscera and peritoneum pain was caused. Some of the same solution was poured on these structures and the operation completed without pain. He suggests that it might be used in more extensive abdominal operations, involving manipulation of the viscera and peritoneum.

Quinin has been used hypodermically for a number of years in the treatment of malaria, but its hypodermic use as a local anesthetic is more recent. In the communication mentioned above H. Thibault reported on its hypodermic use both experimentally on himself and practically in the amputation of a finger, in the removal of a large fatty tumor and in the divulsion of the sphincter ani for the removal of a foreign body. He first used quinin and urea hydrochlorid, but stated that any of the salts of quinin could be used for this purpose, in 1 to 2 per cent. solution, which might be boiled any number of times without destroying its efficiency. He said: "It is safe, and the anesthesia lasts from one to six hours." In August, 1908, E. J. Brown (THE JOURNAL, Aug. 8, 1908, p. 496) reported the use of 3 per cent. solution by hypodermic injection in the removal of the tonsils, giving perfect anesthesia for a prolonged period after the operation and limiting the bleeding during the operation. Dr. V. M. Griswold, of Fredonia, N. Y., then called attention (THE JOURNAL, Aug. 22, 1908) to the fact that he reported on the hypodermic use of quinin as an efficient local anesthetic and much safer than cocain, in July, 1896, before the Chautauqua County (New York) Medical Society (*Buffalo Med. Jour.*, August, 1896, p. 32). Dr. Griswold claims that his use of quinin as a local anesthetic was the result of experiments with various substances in the endeavor to find one equally efficient, but less dangerous than cocain.

Dr. John A. Wyeth (*New York Policlinic Journal*, January, 1908) reports on the use of quinin and urea for this purpose in an article entitled "A New Local Anesthetic of Great Value." On account of two cases of severe sloughing after deep infiltration Wyeth has abandoned its use, and is now trying a different formula which he will report on later.

The first attempt to explain the anesthetic effect of the solution is found in a paper by E. F. McCampbell (THE JOURNAL, March 16, 1907, p. 919), who found that quinin hydrochlorid had the power of causing temporary paralysis in experimental animals, which he believed to be due to its coagulating action on the protoplasm of the peripheral nerves. He found that atrophy of the extremities resulted after large doses.

Hertzler, Brewster and Rogers (THE JOURNAL, Oct. 23, 1909, p. 1393) confirmed Thibault's statements, but found that in hernia operations healing of the external wound was somewhat delayed on account of the thickening of its edges, which proved to be due to an excessive fibrinous exudate produced by the 1 per cent. solution. When 0.25 per cent. instead of 1 per cent. solutions were used the fibrinous exudate was reduced and healing was not perceptibly delayed. Solutions of the 0.25 per cent. strength produced perfect though less prompt and lasting anesthesia. Hertzler, Brewster and Rogers agreed with Thibault that a 10 or 20 per cent. solution should be used externally or on mucous membranes, and with Brown that in tonsillectomy a 3 per cent. solution is best. They recommend this form of anesthesia especially in operations about the anus, as in hemorrhoids and fistulas, in which prolonged anesthesia from seven to ten days is particularly desirable. They have found that it is preferable to dissolve the quinin and urea hydrochlorid in sterile water instead of salt solution; the former gives a more lasting anesthesia, and the latter has no advantage. They recommend it as being harmless in almost any amount. There are, however, many reports of untoward effects from the hypodermic use of quinin in malaria and other affections in which it has been used. But in the weak solutions of 0.25 to 1 or even 3 per cent. recommended, unpleasant effects are unlikely to occur, unless there is an idiosyncrasy to quinin in any amount. Quinin and urea hydrochlorid, therefore, seems to be a valuable addition to the list of local anesthetics, on account of its cheapness, its simplicity of preparation and use, its safety, its hemostatic effect and the prolonged anesthesia produced.

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**Chondroendothelioma or Mixed Tumor of the Submaxillary Gland.**—Martland (*Proceedings New York Pathological Society*) removed at autopsy a mass, which included the tongue, larynx and trachea, from a man aged 37 who had died of pulmonary tuberculosis. At the age of 22 the patient had noticed a small lump in the neck which grew for two years and then for thirteen years remained quiescent. It never had caused pain or discomfort. A diagnosis of calcified tuberculous glands had been made. At the right of the median line there was an oval, more or less nodular firm tumor, which was encapsulated and which on section had a spongy appearance, was not vascular and was light gray in color throughout. A diagnosis of perithelioma of the carotid was made, but on further study by the society it was corrected to the above diagnosis.

# The Public Service

## Medical Department, U. S. Army

Changes for the week ended May 7, 1910:

Hansell, H. S., capt., April 29, leave of absence extended until such time as it will be necessary for him to start under his orders to take transport to sail for the Philippine Islands, June 6, 1910.

Miller, Reuben B., capt., April 30, relieved from duty at Ft. Meade, S. D., and ordered to Army and Navy General Hospital, Hot Springs, Arkansas, for duty.

Pinkston, O. W., capt., April 30, relieved from duty at Army and Navy General Hospital, Hot Springs, Arkansas, and ordered to Ft. Meade, S. D., for duty.

Jenkins, F. C., 1st lieut., M. R. C., April 30, on expiration of his official leave of absence will proceed to Ft. Leavenworth, Kansas, for duty at that station.

Pinquard, Joseph, 1st. lieut., M. R. C., April 30, relieved from duty at Ft. Leavenworth, Kansas, and ordered to Ft. Moultrie, S. C., for duty at that station.

Delacroix, A. C., 1st. lieut., M. R. C. April 30, upon arrival at San Francisco, will proceed to Boise Barracks, Idaho, for duty at that station.

Smith, Lloyd L., captain, April 30, granted four months leave of absence.

Rhoads, Thomas L., major, May 2, left Walter Reed General Hospital, Takoma Park, D. C., on ten days leave of absence.

Mason, George L., dental surgeon, left station on May 2 on 10 days leave of absence.

La Garde, Louis A., colonel, May 2, ordered to proceed to St. Louis, for the purpose of reading a paper on "Gunshot Wounds in Recent Wars," before the Section on Surgery of the American Medical Association, June 7-10, 1910.

Craig, Charles F., captain, May 2, detailed to represent the Medical Department of the Army at the seventh annual meeting of the American Society of Tropical Medicine to be held at St. Louis, June 11, 1910.

Howard, Deane C., major, May 2, ordered to proceed to Columbus Barracks, Ohio, for temporary duty, and on completion thereof will proceed not later than May 2, 1910, to Jefferson Barracks, Missouri, as heretofore ordered.

Scott, Minot E., dental surgeon, April 21, ordered to proceed to several posts in the Department of the Columbia, for temporary duty.

Taylor, Blair D., colonel, April 26, detailed as chief surgeon, for the Camp of Instruction to be held at Chickamauga Park, Georgia, in July, 1910.

## Medical Corps, U. S. Navy

Changes for the week ending May 7, 1910:

Turner, W. B., asst.-surgeon, ordered to duty at the Naval Hospital, Yokohama, Japan.

Downey, J. O., asst.-surgeon, ordered to duty at the Naval Hospital, Norfolk, Va.

Jacoby, A. L., acting asst.-surgeon, appointed acting asst.-surgeon from April 27, 1910.

Angeny, G. L., surgeon, detached from the *Indiana* and ordered to continue other duties.

Langhorne, C. D., surgeon, ordered to duty at the Naval Hospital Naval Home, Philadelphia.

Valz, E. V., P. A. surgeon commissioned P. A. surgeon from March 5, 1910.

Ledbetter, R. E., surgeon, detached from the *Relief* and ordered to continue other duties.

## U. S. Public Health and Marine-Hospital Service

Changes for the week ended May 4, 1910:

Pettus, W. J., asst.-surgeon general, directed to proceed to Galveston, El Paso, Texas, and Fort Stanton, N. M., on special temporary duty.

Austin, H. W., surgeon, directed to proceed to Boston on special temporary duty.

Brooks, S. D., surgeon, and McCoy, George W., P. A. surgeon, detailed to attend the meeting of the Southern California Medical Society at Redlands, Cal., May 4, 1910.

Nydegger, J. A., surgeon, granted 5 days' leave of absence from May 2, 1910.

Francis, Edward, P. A. surgeon, detailed to represent the Service at the meeting of the International Association of Medical Museums, to be held in Washington, D. C., May 3-4, 1910.

Kolb, L., asst.-surgeon, granted 1 day's leave of absence in April, 1910, under paragraph 191, Service Regulations.

Stiles, C. W., professor, Hygienic Laboratory, detailed to represent the Service at the annual meeting of the Texas State Medical Association, to be held in Dallas, May 10-12, 1910.

Bailey, C. A., acting asst.-surgeon, granted 3 days' leave of absence from April 28, 1910.

Diaz, Jose A., acting asst.-surgeon, granted 30 days' leave of absence from Feb. 4, 1910, and leave, without pay, to include May 14, 1910.

Deerhake, W. A., acting asst.-surgeon, granted 7 days' leave of absence in April, 1910, under paragraph 210, Service Regulations.

Goldsborough, B. W., acting asst.-surgeon, granted 3 days' leave of absence, without pay, from April 26, 1910.

Gustetter, A. L., acting asst.-surgeon, granted 4 days' leave of absence from April 25, 1910.

Hollman, H. T., acting asst.-surgeon, granted 4 days' leave of absence from April 2, 1910, under paragraph 210, Service Regulations.

Stewart, W. J. S., acting asst.-surgeon, granted 30 days' leave of absence, without pay, from April 23, 1910.

Watson, H. J., acting asst.-surgeon, granted 19 days' leave of absence from May 30, 1910.

# *Society Proceedings*

## COMING MEETINGS

American Medical Association, St. Louis, June 7-10.

American Academy of Medicine, St. Louis, June 4-6.
American Assn. of Medical Milk Commissions, St. Louis, June 6.
American Association of Medical Examiners, St. Louis, June 5-6.
American Gastro-Enterological Association, St. Louis, June 6-7.
American Proctologic Society, St. Louis, June 6.
American Society of Tropical Medicine, St. Louis, June 11.
American Urological Society, St. Louis, June 6-7.
Assn. of Amer. Teachers of Diseases of Children, St. Louis, June 6.
Connecticut State Medical Society, New Haven, May 25-26.
Illinois State Medical Society, Danville, May 17-19.
Iowa State Medical Society, Des Moines, May 18-20.
Maine Medical Association, Bar Harbor, June 29-30.
Massachusetts Medical Society, Boston, June 7-8.
Nat. Con. State Med. Exam. and Licensing Bds., St. Louis, June 6.
New Jersey Medical Society, Atlantic City, June 28-30.
North Carolina, Med. Soc. of State of, Wrightsville Beach, June 21.
Rhode Island Medical Society, Providence, May 31.
Wisconsin, State Medical Soc. of, Milwaukee, June 22-24.

## AMERICAN GYNECOLOGICAL SOCIETY

*Thirty-fifth Annual Meeting, held in Washington, D. C., May 3-5, 1910*

The President, Dr. Edward P. Davis, Philadelphia, in the Chair

An address of welcome was delivered by Dr. I. S. Stone, Washington, D. C., which was responded to by Dr. Seth C. Gordon, Portland, Me.

### Bilateral Tubal Pregnancy; Coincident Development

Dr. Palmer Findley, Omaha: Review of the literature on the simultaneous development of a fetus in either tube revealed 28 cases reported as examples of bilateral tubal pregnancy, but only 8 are unquestioned as being of simultaneous development. Of 20 cases of doubtful identity, the clinical diagnosis was not supported by the macroscopic and microscopic findings of fetal structure in the 2 tubes. To these 8 cases I add a ninth in which there was a probable simultaneous development of a fetus in each tube, with rupture of the right tube and the escape of the ovum through the fimbriated end of the left tube. The escape of the 2 ova was probably simultaneous. The pelvis was full of blood and there was a general peritonitis. Decidual tissue and chorionic villi were found in both tubes, but neither fetus was discernible. Both ovaries were cystic and adherent. In the right ovary was a fresh corpus luteum. An abdominal section was peformed with the removal of both tubes and escaped blood. The abdomen was drained. Death ensued from general peritonitis.

### Reimplantation of Kidney

Dr. Dougal Bissell, New York, reported a case of successful reimplantation of a pelvic kidney in the female, and made some remarks on the surgical treatment of kidney misplacements in the true pelvis.

### The Chief Cause and Prevention of Postoperative Cystitis

Dr. Joseph Taber Johnson, Washington, D. C.: I desire to emphasize the necessity for more strict prophylaxis and, when cystitis is diagnosed, a more active and continuous treatment, not only to bring about an early cure, but to prevent the transition from an acute to a chronic condition. Cystitis occurs in woman more frequently after abdominal than other operations. When patients are catheterized several times daily for a week or even longer, the conditions are present which easily result in the production of a cystitis unless great care is practiced to prevent trauma or infection.

#### DISCUSSION

Dr. Henry T. Byford, Chicago: At the Woman's Hospital, Chicago, in the earlier days, women were catheterized before all operations because of the fear of a distended bladder. As the result cystitis developed occasionally. This practice was stopped. I do not know whether it is the general custom or not among practitioners, but I induce my patients to pass urine before operation, and there are few patients who cannot do this. By so doing, the danger of cystitis from the use of the catheter is eliminated. Some nurses in using the catheter allow the labia minora to drop over the urethra, in this way germs are deposited on the end of the urethra and are carried in with the catheter. The nurse should irrigate the urethra so that it is clean, and great care should be taken to prevent anything from being carried into the urethra with the catheter.

Dr. C. C. Frederick, Buffalo: In order to prevent chronic cystitis, chronic trigonitis, it is necessary to abstain from catheterization, if possible, but if catheterization is resorted to, it should be done under the most favorable conditions, and every precaution taken to prevent infection of the bladder.

Dr. Philander A. Harris, Paterson, N. J.: In taking the history one should be exceedingly careful to have a record of patients as to whether they have pain in urinating or a history of cystitis prior to operation. An important point is to require every patient admitted to the hospital for operation to urinate in the dorsal position.

Dr. Frederick J. Taussig: If we can get patients to void urine spontaneously, we will eliminate very largely postoperative cystitis. A few cases of so-called spontaneous infection, or infection from surrounding infected tissues have been reported, but they are questionable.

Dr. Edward Reynolds, Boston: Infection of the bladder comes not so much from the introduction of the point of the catheter into the urethra as from the fact that in the subsequent passage of the instrument the nurse allows the labia to fall against the catheter and material is carried in in that way.

Dr. J. M. Baldy, Philadelphia: If nurses are taught how to use the catheter properly, and do not allow the labia to come together from the time they have disinfected the parts, the danger of cystitis would be materially reduced.

(*To be continued*)

## FLORIDA MEDICAL ASSOCIATION

*Thirty-seventh Annual Session, held at Jacksonville, April 6-8, 1910*

The President, Dr. H. E. Palmer, of Tallahassee, presiding

### President's Address: The Duties of the Profession to the Association and the Public

Dr. H. E. Palmer, Tallahassee, reviewed the history and early difficulties of the Association, enjoined an earnest effort on the part of each member to increase the membership, commended the work of the State Board of Health in its labora tory and field divisions, especially in its campaign against hookworm disease, a careful education of the public to combating fallacies widely entertained concerning vivisection and vaccination, the regulation of the practice of medicine and a deeper interest in public affairs of the state.

### Election of Officers

Officers for the year 1910 were elected as follows: President, Dr. J. D. Love, of Jacksonville; first vice-president, Dr. A. H. Freeman, of Starke; second vice-president, Dr. L. A. Peck, of Melbourne; third vice-president, Dr. F. C. Moor, of Tallahassee; councilor first district, Dr. J. H. Pierpont, of Pensacola; councilor second district, Dr. H. E. Palmer, of Tallahassee; councilor third district, Dr. L. M. Anderson, of Lake City; librarian, Dr. C. E. Terry, of Jacksonville.

Chairman of committees for 1910: Legislation and public policy, Dr. H. E. Palmer, Tallahassee; publication, Dr. J. D. Fernandez, Jacksonville; scientific work, Dr. G. R. Holden, Jacksonville; education, Dr. J. H. Hodges, Gainesville; arrangements, Dr. F. C. Moor, Tallahassee.

Tallahassee was selected as the place of meeting in 1911.

A special committee was appointed, with Dr. Graham E. Henson of Crescent City, chairman, to conduct an active campaign for the control and prevention of malaria in Florida, as suggested in a paper read on this subject by Dr. Hanson.

Dr. R. P. Daniel of Jacksonville, the only member remaining alive of those who organized, in 1853, the Duval County Medical Society, and of those who, in 1874, organized the Florida Medical Association, delivered an address of welcome on behalf of the Duval County Medical Society, in which he gave an interesting account of the organization and history of the two bodies.

The report of Dr. J. H. Pierpont, delegate to the A. M. A. in 1909, urged the importance of every member becoming a member of the A. M. A. and supporting its efforts to solve the problems coming before it and endorsing the work of the national body in its various activities for the elevation of the profession and the science of medicine.

### Oration on Pasteur

Dr. Hiram Byrd, Jacksonville, orator, selected as his subject, "An Appreciation of Louis Pasteur." The address dwelt in detail on the interesting and valuable work of Pasteur in chemistry, mollecular physics, fermentation and serotherapy.

### A Case of Uncinariasis with Post-mortem

Dr. William E. Ross, Jacksonville, reported a case of uncinariasis with autopsy report by Dr. H. Hanson:

There was no albuminuria nor were there casts in the urine; nor had there been for two weeks. The child had previously been treated for hookworm. I began the treatment on betanaphthol without noting acute Bright's disease; later, when I changed to thymol the acute nephritis appeared. I think that death was due to the toxins of the disease and not to the thymol as eight grains was the largest dose given at one time; two such doses were given in one day.

I have under treatment now a brother of the patient cited in my paper. Hemoglobin is 15 per cent. He has had thymol three or four times, and on January 25 I began with betanaphthol, discarding the thymol in this case. The hookworm eggs are still present.

#### DISCUSSION

Dr. F. C. Moor, Tallahassee: I have seen a great many cases of hookworm disease and have frequently obtained specimens for examination. In one case the eggs were found and three successive treatments, ten days apart, with betanaphthol, were given; the examination after the third course showed no eggs. But that was the only case in which I have successfully used betanaphthol.

Dr. A. H. Freeman, Starke: There are several interesting points about Dr. Ross' case. Those of you who were present at Tampa in 1907 will recall that I reported some twelve cases that had been treated with thymol and some others with betanaphthol. My records show that I used the microscope in the diagnosis of the disease, and after the several treatments I always examined for the eggs to determine just how many courses of the several medicines were required in the cases to rid the patients of the parasites. You will recall that in these cases treated with thymol ten weeks was required, one treatment each week. The point occurs to me that the one case reported by Dr. Ross, if there were no others like it, refutes the statement made lately in public that 25 cents' worth of thymol would cure any case of hookworms. That is a great mistake. I recall the state health officer telling me three years ago of the work done by Dr. Bailey K. Ashford in Porto Rico, and that he had discarded betanaphthol from his list of treatments for hookworms for the reason that the continued use of betanaphthol was injurious to the kidneys. I saw no bad effects, however, from either of the drugs. One thing is sure: hookworm disease is not so easily cured, and this is proven by Dr. Ross' case and by cases in which I have used the microscope and repeatedly found the eggs.

Dr. E. P. Webb, Ponce de Leon: My experience with thymol has been entirely successful and I have had no occasion to use anything else. There have been several cases in my practice with remarkable results. In one a specimen was sent to the State Board of Health laboratory for examination; the report stated that hookworm eggs were not found, but that the ova of the tapeworm were present. The patient was a boy, hemoglobin 15 per cent. In another case thymol brought not only the hookworms, but also two dozen worms twelve inches or more in length. Of course, in the case of the tapeworm thymol was not given. The State Board of Health in this way finds sometimes more than one parasite present.

Dr. E. E. Lindeman, Tampa, recommended that thymol be administered in cachets triturated with equal parts of milk and sugar; before using, the cachets should be well softened in water.

Dr. E. P. Webb: I would like to know more about the toxic effects of thymol. I have given perhaps more than a hundred doses and have never observed any weakness from it. If the thymol will cause nephritis we ought to know it.

Dr. Ross: It seems to me that is no theory. Thymol is the treatment the State Board of Health gives and recommends, and this boy has been treated by a member of the staff. He came to the hospital with acute nephritis. He was there six weeks. After I got rid of the nephritis I started him on betanaphthol. After two weeks he was cleared of albumin and casts and I gave two doses of thymol, eight grains each, one at 6 a. m. and one at 7. He had no oil for three days, but was given salts before thymol was given, and I think twenty-four hours after the thymol, with practically no toxic effects and no change of pulse, but had albumin and casts at the end of the third day. In about four weeks it had apparently cleared up. I did not feel justified in giving any more thymol after the toxic effects noted. I then gave betanaphthol until the end came. I would not in the routine cases expect this effect on the kidneys, however.

Dr. W. P. Adamson, Tampa: The question appears to me to resolve itself into one which considers the means of administering thymol and getting it into and through the intestinal tract without its being absorbed. Only in so doing, I think, can we feel authorized in proceeding, and I think we can further conclude that when we get the toxic effect there has been some degree of absorption, and it should be the next step to inquire whether or not, on account of some abnormality in the intestinal tract, something has not remained in the nature of oil for several days which possibly might account for the absorption of the thymol.

In regard to the conclusion that the hookworm enters first through the mouth and second through the hair follicles, I would like to mention a case which to me appeared to be a little unusual and a little irregular. A man, aged 48, came to me with a history of having been sick three years. He had been strong and robust. While fishing he fell into the water, sustaining a fracture of one of his lower limbs. He got along very well after a month, but almost immediately after falling into the water he began to complain of very distressing burning of one leg, which began in the foot and the leg and in the course of a few days extended up to the waist line on one side. This was controlled after a few days' treatment with iodin. He got along very well until about five weeks later, when he began to suffer from an extreme type of diarrhea. This continued in spite of treatment for eight months. In the meantime he had grown exceedingly anemic. This occurred when he was living in Southern Alabama and his physicians did not suspect hookworm disease. The man came to Florida and consulted me. He was in an emaciated condition, hemoglobin 20 per cent., constipated—symptoms of advanced anemia. After an examination I gave him 60 grains of thymol, securing only 20 or 30 worms. I waited a week and gave him 90 grains thymol, with better results. After a week I gave 90 grains more, and after another week I repeated the same dose. At the end of about six weeks he was practically well. He regained his strength and vitality. The point to be impressed is in connection with the infection: It appeared to me to be an acute infection of hookworms. From the time of his injury and to the date of infection, which probably took place when he fell into the water, and up until the date of the diarrhea, was probably sufficient time to allow the parasites to find their way into the intestinal tract with the consequent extreme diarrhea and anemia. I would like to know whether other physicians have observed patients suffering from hookworms with a similar sudden onset.

Dr. E. W. Warren, Palatka: I had an experience last summer which showed the frequency with which hookworm anemia and malaria are complicated. From June to September, 1909, in Palatka, we had a marked epidemic of malarial fever. Many of the cases became chronic, continuing throughout the summer and into the fall. Many yielded to malarial treatment, but a certain percentage of patients every week or two had chills. They could not work and their earning capacity was seriously affected. Finally, in November, one man who I suppose had suffered more than anyone else in my experience there, came to my office. He was very anemic, had had a chill that day, and it occurred to me that he might have hookworms. I secured a specimen of his feces and found it full of the ova. I immediately began to give him thymol, sixty grains once a week. I also gave him malarial treatment. He never had another chill after the first dose of thymol, which was administered the next morning after he called. He at once went to work and has not lost another day since that time. That was a new idea. Every chronic case of malarial fever which came into my office was examined for hookworms, and in practically every one I found the ova, and in every case as soon as I administered thymol the chills ceased. Of course, anti-malarial treatment was given too. In the case which Dr. Ross has reported an examination for malarial complication has impressed itself upon me as being a wise procedure.

*(To be continued)*

## MISSISSIPPI STATE MEDICAL ASSOCIATION

*Annual Meeting, held at Oxford, April 12, 1910*

*(Concluded from page 1569)*

### The Benefit to the Public Health by Report of all Specific Contagious Diseases to the State Board of Health

Dr. G. C. Phillips, Lexington: The government is spending large sums of money to teach improved systems of farming, improving waterways and other things, and it is of equal importance for it to look after the health of the people. With all other improvements, there can be no happiness without health. Each citizen cannot make laws for his own benefit and enforce them on his neighbor, no matter how negligent his neighbor may be about such things. Therefore, it is necessary that the government should make laws for all the people and have officers to enforce them. Yellow fever in Havana and the bubonic plague in San Francisco showed the inability of physicians to stamp out these diseases unaided by the United States Government. I advocate a department of health and a minister of health in the cabinet.

Our State Board of Health should have more money and authority to stamp out preventable diseases and to teach the people hygiene. A monthly report on vital statistics and prevailing diseases of the state should be issued by the secretary of the State Board of Health to show true conditions; if this were done it would encourage emigration, induce capital to come here and lower rates of life insurance. Outside people know these things only through newspapers. No official report can be obtained except from physicians all over the state. Each physician should report births, deaths and all preventable diseases in his practice—and be fined if he does not—on first of each week or month, to the county health officer and not to the secretary of the State Board of Health, and the county health officer should report to the secretary of the State Board of Health. The secretary of the state board should compile these reports and send them to the Marine-Hospital Service. If these rules were carried out the good accomplished in the preservation of lives and the time and money spent for sickness, would far exceed the cost of stamping out preventable diseases.

### Prophylaxis of Venereal Disease

Dr. J. W. Young, Grenada, entered a plea for simple living and training in morals and modesty as a means of safeguarding the health of future wives and mothers.

Dr. H. C. Buck, Friar's Point, argued for education as the only true prophylaxis of venereal diseases.

DISCUSSION

Dr. M. J. Alexander, Tunica: Education has not been very successful along this line; young people do not appreciate the seriousness of venereal diseases. Gonorrhea is deemed by many men and women to be no worse than a cold. Even syphilis is not considered seriously by young men—they treat it as nothing. These youths suppose that their family physician can cure them in a few days when they are afflicted with gonorrhea, and that Hot Springs will cure them of syphilis. What can we do to relieve the situation? We speak of medical legislation; I think the effort in this direction should be made toward venereal diseases. If we would force health officers to publish the name of the disease and the names of those afflicted and put flags on the houses of those afflicted, in ten years there would be a big change.

Dr. H. L. Sutherland, Rosedale: This is a very difficult matter to get at with boys in a practical way without doing more harm than good. Many people have come to me asking that I speak to their boys on subjects of this nature, but I do not know how to do it without doing a great deal of harm. For several years past I have been giving literature to the boy instead. Whenever I want any literature on the prevention of venereal disease I write to the Indiana State Board of Health. Among these tracts that I have so obtained there is one that I am especially interested in. The title of the pamphlet, as I remember, is "Sexual Hygiene versus The Social Plagues." It is a splendid pamphlet on the subject and any boy can understand it. That is my way of educating the boy. The legislature of Mississippi ought to provide for literature of that sort intended for the people and not for physicians.

Dr. H. C. Buck, Friar's Point: I do not agree entirely with Dr. Sutherland in regard to not saying anything to boys; they must be reached in some manner; they are willing to learn and to follow advice. The seriousness of the matter must be impressed on them; they can be taught modesty; they should be taught the whole subject. It can be done.

### The Nervous Manifestations of Pellagra

Dr. H. Boswell, Laurel, emphasized the importance of a study of the nervous manifestations in this disease as the only means of making an early diagnosis. Only patients in the late stages are seen in the hospitals but the man in practice who keeps his eyes open can often do much towards preventing the severe, late symptoms.

DISCUSSION

Dr. J. M. Buchanan, Meridian: I have seen cases in which there was practically nothing that pointed to pellagra except the nervous mental manifestations. We are told by the London school that we can make a diagnosis of pellagra without regard to the skin manifestations. That may probably be done by people who have been in contact with the disease longer than we have. The nervous manifestations result largely from the fact that the spinal cord is more or less involved. Different parts of the cord may be involved and the nervous manifestations would therefore show in different parts. We cannot say that there are any particular mental manifestations peculiar to pellagra. The most common, I would say, is depression—a form of melancholy in which the patients sit with heads bowed and take no interest in anything around them. It is more than probable that the physicians practicing throughout the state see more of the first stages of the disease than those who are in the hospitals because the physician usually treats the patient at home as long as he can before sending him to the hospital for treatment.

Dr. G. W. Stephens, Meridian: I have noticed the depression spoken of by Dr. Buchanan; in the later stages of the disease it is remarkably manifested. In one case, however, a woman died of the disease in a very happy state of mind. One of my first cases was a man whose skin was marked, a pronounced case. To-day he is cured.

### The Uterus: A Knowledge of its Anatomy and Physiology Essential to Successful Gynecologic Effort

Dr. T. M. Jones, Hernando, emphasized the necessity of a thorough knowledge of the anatomy and physiology of the uterus as a *sine qua non* to the would-be gynecologist and described in detail those points of most importance.

### The Physician's Duty in Prophylactic Gynecology

Dr. S. E. Eason, New Albany, laid stress on the importance of the obstetrician doing his full duty in the way of preventing sepsis and lacerations and the necessity for prompt repair of the latter. He also paid his respects to the physician who turns loose the uncured male gonorrheic to commit matrimony and increase the practice of the gynecologist.

### Obstacles in the Surgical Treatment of Gynecologic Patients

Dr. H. N. Page, University, discussed the dissatisfaction with the results of gyencologic operations prevalent throughout the country. The physician and the surgeon both share the responsibility. Many of the conditions that call for surgery are of a chronic type—these cannot be cured all in a moment, other tissues than those cut are apt to be involved and it may take time to cure them. Preparatory and after-treatment are both too often neglected. Bad sexual hygiene, after operation, is responsible for much trouble. Operations are frequently delayed too long. The operator may be lacking in surgical judgment, which is one of the rarest qualities in a surgeon. The surgeon and the physician should consult frequently during the after-care of the patient.

#### DISCUSSION

Dr. J. A. Crisler, Memphis: Dr. Page's paper goes to the bottom of the matter in calling attention to the fact that there should be a strong bond of union between the physician and the gynecologist in the treatment of these cases. Surgery is sometimes credited with things it cannot do. The curette is a most dangerous instrument. I have seen many bad results arising from its use. There is a great difference between the surgeon and the operator. Surgical judgment is a thing that must be cultivated.

## SYMPOSIUM ON MICROSCOPY

### Use of the Microscope by the General Practitioner

Dr. J. G. Gaither, Oxford, contended that the microscope is as essential for daily work as the stethoscope or the thermometer. He considered some diseases and methods of examination for their correct diagnosis.

Dr. J. M. Furr, Aberdeen, described the blood picture in several conditions encountered in general practice.

Dr. T. M. Jones, Hernando, discussed various theories of life and the dangers into which we may be led by following these so far that we may forget our Creator.

### Discussion on Microscopy in General Practice

Dr. G. W. Stephens, Meridian: I believe that the majority of general practitioners lack the time necessary for this work. The microscopy of blood would take too much time for the general practitioner.

Dr. E. L. Green, Carpenter: These examinations take too much time from the general practitioner, and it is better to send the specimens to specialists. On the other hand, it is a very good thing for the physican who has time to do such work.

Dr. B. H. Durley, Aberdeen: I do not find that it takes much time to do the work, and in any event time should not be considered. Every physican should use the microscope. If the physician does not know how to use it he should take a course in microscopy and learn how.

Dr. E. L. Robertson, Sunflower: The physician should take time. It takes only a few minutes to make an ordinary microscopic examination.

Dr. J. G. Gaither, Oxford: I am a country doctor and do not claim to do the work of a specialist. I leave special work to the specialist, but I can make a slide of any case mentioned in my paper, except for hookworm infection, in from 5 to 12 minutes. Those slides can be examined at leisure. If I am in doubt, as I frequently am, I call on a specialist to help me out.

### Vital Statistics

Dr. J. W. Gray, Clarksdale, gave some reasons for keeping vital statistics accurately. In any court in Mississippi it would be far easier to make legal proof of the birth and death of Farmer Smith's well-bred jackass than of the birth and death of our illustrious and beloved Lamar. Under our present laws the pure blood of a registered bull can be more readily proved than a man's legitimacy.

Dr. E. L. Green, Carpenter, considered the relation of vital statistics to sanitary measures.

Dr. C. L. Wilbur, of the U. S. Bureau of the Census, Washington, D. C., told of work done along these lines in other states and described the methods that have given best results.

#### DISCUSSION

Dr. H. L. Sutherland, Rosedale: I have applied to some of the large and pretentious cities of the state, but they were unable to supply statistics of this nature. The health officer should require such data. I have found that these statistics had much to do with immigration. It is to be regretted that the vital statistics bill failed to pass in the legislature, but we can do a great deal of educational work along these lines and when the legislature meets again we ought to get a satisfactory bill of this sort passed. If we keep up an educational campaign of this nature we will eventually convince people of the importance of the measure.

Dr. J. J. Haralson, Forest, by way of discussion, read the following resolution:

*Resolved*, That the achievement of the registration of all deaths, with their causes, immediately after their occurrence, and the prompt return of certificates of death from local registrars directly to the central bureau of vital statistics which shall constitute a part of the organization of the State Board of Health, thereby giving the sanitary authorities of the state timely information of the exact prevalence and distribution of disease, is the most important of all sanitary measures and should be unremittingly urged until successfully carried out in this state.

### The State's Care of the Tuberculous Poor

Dr. J. R. Tackett, Meridian, urged the importance of the state providing for the care of indigent consumptives. Mississippi is generous to her established eleemosynary institutions and an effort should be made in this direction also.

### Uncinariasis

Dr. C. W. Stiles, Washington, D. C., gave a lecture on hookworm; its method of infection, prophylaxis, etc.

### Sources of Hookworm Infection and the Manner in Which the Infection Takes Place

Dr. C. C. Bass, New Orleans: Different species of hookworms have been found parasitic in different animals. Only two species infect man—*Ankylostoma duodenale* and *Uncinaria americana*. The sources and manner of infection is the same in each. The worms live in the small intestine where they lay eggs which pass out mixed with feces. Under favorable circumstances of moisture, temperature, and shade the eggs hatch out larvæ in 24 hours. Hatching does not occur in the intestinal canal. In about 2 days the larvæ shed their skin somewhat as snakes do, and anatomic changes occur. In 4 or 5 days another such change occurs and the animal becomes capable of infecting man. The organisms may live in this stage many months without food, requiring only moisture. Freezing kills them. In 1898 Loass accidentally soiled his hands with culture of encysted larvæ, and finding ova in his stools concluded that he had been infected through the skin. Later he proved conclusively the correctness of his theory by placing larvæ on the arm of a man not then infected. After a few hours an itching papular eruption, later becoming vesicular, and still later pustular. These skin lesions that were exactly like ground-itch got well in 10 or 12 days. He also infected dogs with larvæ of the dog hookworm and demonstrated the larvæ in the skin, blood vessels, lymphatics, heart, lungs, trachea, and intestinal canal. Bentley (1902) found a larva which he took to be hookworm in a water sore or ground itch. He then infected a man and found ova in the stools in 7 or 8 weeks. These experiments with *Ankylostoma duodenale* have been paralelled and found to hold good for *Uncinaria americana* by Claude A. Smith of Atlanta, Ga., and others in this country.

I wish to put on record the following experiment: A culture of encysted *Uncinaria americana* in a mixture of charcoal and feces was applied to one side of the arm part of a lady's kid glove which had previously been thoroughly soaked in sterile water. A part was selected free from seams or apparent holes. On the other side a small lump of mud of sterile soil and sterile water. Three hours afterward this was removed—and after long search four living larvæ and two dead ones were found. If larvæ pass through leather experimentally, it is probable that they do this practically; and this infection may occur from getting infected mud on wet shoes. This would explain the cases of hookworm disease in those who have not had typical ground-itch. The course of the worms through the skin is as follows: The larvæ enter the skin chiefly through the hair follicles and sweat pores, enter the capillary blood vessels and the blood stream, pass through the right heart to the lungs, into the bronchi, thence to the mouth, and may be swallowed, pass through the stomach to the small intestine, where they attach themselves to the mucous membrane and develop to adult life. They may live several years, laying enormous numbers of eggs which pass out with the feces of the patient.

### Vasectomy: The Surgeon's Part in the Treatment and Prevention of Criminals and Defectives

Dr. M. O. Shivers, Greenville: No condition of so grave import has received so little consideration at the hands of the general practitioner as degeneracy and criminology, and their treatment. It will be through the education of the medical profession as a whole that this important advance in the control of crime and degeneration will be made. The surgical aspect of vasectomy presents little for consideration other than that it is easy of performance and has no serious consequence. The operation in the female is more difficult, but the oviducts may be reached and ligated through a median incision, or anterior colpotomy, the former being the easier, the latter the less dangerous. That criminals and degenerates are on the increase is evidenced by the enormous increase in the expense of state institutions and the multiplicity of the occupants. It is not uncommon for men and women to return to the asylums after a few years stay at home, during which time children were born to them. The three measures whereby procreation may be prevented are segregation, sterilization and prohibitive marriage. Sterilization by vasectomy is easiest, safest and most practicable with no restrictions or punishment attached thereto. Vasectomy is a rational measure in that it does in a few minutes what Nature accomplishes in generations with idiots and imbeciles, namely sterilization.

DISCUSSION

Dr. P. M. Kimbrough, Morgan City: The State Board of Health ought to have supervision of this matter.

Dr. H. R. Shands, Jackson: What is the legal status of this matter? I consider it an advance in the care of criminals and insane, and the members of the Mississippi Medical Association should do what they can to look into the matter.

Dr. C. Kendrick, Kendrick: Every physician knows that something ought to be done along the lines suggested. I am sure there is nothing in the constitution of the state that will conflict with it and am of the opinion that the matter should be brought before the legislature at the next session. Every physician knows parents who ought not beget children. I know of cases in which patients returned from the asylum apparently cured and begot children who of course inherited the infirmity. I believe that those afflicted with insanity, confirmed drunkards, and habitual criminals should be compelled to undergo the operation. I have always favored a law of this sort and in my graduating thesis in 1873 I advocated a measure of this kind, although I then knew nothing about this method of doing it. What effect would there be 8 or 10 years after the operation; has the operation been tried long enough?

Dr. John Y. Murry, Ripley: Something of this sort should have been done long before now. The method is in use in the State of Indiana. Physicans should tell the press about such matters and it would take the subject up and educate the people.

Dr. H. H. Haralson, Vicksburg: Dr. Shivers' paper should be referred to the standing legislative committee.

Dr. M. O. Shivers, Greenville: The public seems to think that castration and ovariotomy are too severe to be used in the prevention of insanity, but it is really what the people need. It would not be a very difficult matter to have a law along these lines passed by the Mississippi legislature, especially since other states have adopted it. I think it best to begin with the insane and habitual criminals and to carry it further later. There have been no bad results from the operation performed 10 years ago.

### Case of Ruptured Pyosalpinx Causing Diffuse Peritonitis

Dr. H. R. Shands, Jackson, gave the reasons for the rarity of this accident and reported the case of a patient who recovered after two operations: one for drainage, the other for the removal of the uterine adnexa.

DISCUSSION

Dr. J. W. Barksdale, Vaiden: It is not long since progressive peritonitis was considered beyond relief, but now we no longer feel that we are going up against a hopeless proposition. In many of these cases we owe the saving of the life to the character of the pus contained in the tube. Careful attention to every detail in these cases will insure success.

Dr. J. G. Gaither, Oxford: I advise the introduction of normal salt solution in the rectum. The Fowler position will prevent much postoperative nausea which is dangerous.

Dr. M. O. Shivers, Greenville: There is too much peritonitis; it reflects on the surgeon and on the physician who failed to recognize the condition. This is another instance of the necessity of a strong and close connection between the physician and the surgeon.

Dr. H. R. Shands, Jackson: In some of my cases I was very much surprised to see recovery ensue. I think it best to drain through the vagina when that is possible. I have looked on this as a life-saving operation.

### Perineal Prostatectomy

Dr. J. W. Barksdale, Vaiden, described the anatomy of the field, the operation, the after-treatment and the effect of the operation on the sexual function. Until the past year he has preferred the suprapubic route, but now considers the perineal preferable from simplicity of operative procedure, dependent drainage and freedom from complications.

DISCUSSION

Dr. J. Darrington, Yazoo City: I know of no operation that adds more to the relief of human suffering than this operation performed on old men. Life is a misery and any operation that gives relief is worthy of consideration. Nearly all of the bladders are septic, and we must get them in good condition. We should get the patient out of bed as soon as possible.

Dr. J. W. Barksdale: The operation ought to be uniformly successful in selected cases, but, unfortunately, we cannot always select our cases.

### Non-Operative Treatment of Fractured Femur

Dr. J. P. Wall, Jackson, described the method of treating fractures of the femur used in Bellevue Hospital, New York.

DISCUSSION

Dr. J. W. Barksdale, Vaiden: How is the patient put in a sitting posture in these cases?

Dr. J. C. Gaither, Oxford, said that the general practitioner should have plenty of bandages on hand in these cases, no less than 35 or 40 2½-inch bandages, and should be sure to have bandages thick enough. He said that it was very tiresome to the assistant who holds the leg, while someone else performs the operation, and described a mechanical arrangement which he had seen used for this purpose, which facilitated the work considerably.

Dr. H. R. Shands, Jackson: Fracture of the femur is most difficult to deal with. I have had considerable trouble with this sort of fracture. There is rarely an anatomic reduction.

Dr. J. P. Wall: In Bellevue Hospital two strong men hold the leg during the operation. If the patient cannot sit up straight, put him in a semirecumbent position. I advise against putting on a very thick cast; 35 bandanges are too many. The cast should be made snug without being too tight. That is the Bellevue Hospital treatment and it gives excellent results.

### Defects in Our School System

Dr. H. Flowers, Brookhaven: The idea expressed in the phrase *mens sana in corpore sano* should be the basic principle in all educational methods. Defective vision, diseased tonsils and adenoids play no mean parts as causative factors of idleness and dulness. Infectious diseases are considered too lightly. Sufficient play-grounds are rare.

## CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS

*Eighth Triennial Session, held in Washington, D. C., May 3-4, 1910*

The President, DR. EDWARD L. TRUDEAU, Saranac Lake, New York, in the Chair

### ARTIFICIAL IMMUNIZATION

#### Formation of Antibodies

DR. LUDWIG HEKTOEN, Chicago, who was to have read a paper on this subject, was unavoidably absent, but his paper was read by DR. WILLIAM H. CARMALT, secretary of the congress.

Any substance capable of inciting the formation of antibodies is an antigen. Microbes and various microbic derivatives, toxins, red blood corpuscles and other cells, as well as serum, constitute or contain the most important antigens, which appear to be colloid proteins, and the antibodies which concern us most are antitoxins, lysins, agglutinins and opsonins. The paper then took up the simple-body curve; gave illustrations of the antibody curve; referred to the significance of the antibody curve, the effect of quantity and mode of introduction of antigen on the production of antibodies, and the formation of different antibodies for the same cell.

The paper then discussed multiple immunization, referring to the influence of wholly distinct antigens on the production of the corresponding antibodies. In regard to the antibody formation in infectious diseases it was stated that in acute bacterial diseases the course of the antibodies in the typical attack resembles altogether that of the antibody curve after a single injection of antigen in a normal animal. This has been found to hold good for the pneumococco-opsonin in pneumonia, for the streptococco-opsonin in erysipelas, for diphtherio-opsonin in diphtheria, and also for the diplococcus of Laveran in mumps. In acute articular rheumatism the opsonin for micrococcus rheumaticus and streptococcus describe the same course; as new joints become involved the index sinks below normal, and on improvement it rises above normal. In forms of acute otitis in which pseudo-diphtheria bacilli are dominant the opsonic index for these bacilli may cover a wide range, the changes often corresponding to changes in the clinical symptoms. In these diseases the opsonin is the only antibody for the bacteria in question that under present circumstances permits of ready measurement. During the early stages there is a fall in the specific opsonin in the blood; as the symptoms begin to subside the curve rises, suggesting that more antibody is being liberated than is neutralized by the pathogenic substance. The curve usually reaches the highest point a day or two after the acme of the symptoms and then in many cases it falls rather abruptly. The curve is readily ffected by complications, at the onset of which it usually falls. In rapidly fatal cases, *e. g.*, pneumonia, the curve may not eturn from the primary fall but sink lower and lower. The characteristic course of the streptococco-opsonin in scarlet fever indicates that the streptococcus plays an important part in this disease whether it be regarded as the primary cause or not. Most of the measurements on the basis of which the foregoing statements are ventured have been made by means of Wright's method. In reply to objections to the reliability of his method it may be pointed out that the results obtained in different diseases and in different cases of the same disease appear consistent; that in scarlet fever, diphtheria and pneumonia, independent observers have reported similar results; and, finally, that the dilution method, whenever used, has given results that compare closely with those given by determinations of the index. The conditions appear more complicated in cholera, dysentery and typhoid fever in which it is possible to follow the course of at least three antibodies. The agglutinin formation in typhoid in most cases begins in the first or the early part of the second week of the disease and the maximum is usually reached in the third week.

#### Relation of Anaphylaxis to Immunization

DR. FREDERICK P. GAY, Boston: The great interest in anaphylaxis lies in its close association to phenomena of increased resistance or immunity, and the question of greatest ultimate interest is the exact relation between anaphylaxis and immunity. The greatest advance in recent years in immunity has been due to the study of conditions of resistance which occur following the injection of harmless protein substances like red blood cells, rather than the studies in immunity to bacteria. It is found also that the greatest advances in knowledge of anaphylaxis have been obtained by studying anaphylaxis to non-toxic proteins. The study of anaphylaxis to non-toxic proteins, such as blood serum and egg-white, has shown us that the processes vary markedly in accordance with the animal species chosen for treatment. In the guinea-pig, anaphylactic shock, which is produced on the second injection of a given protein substance, would seem to depend on an intracellular reaction between the antigenic serum and sessile precipitins which have been formed in the cells following the first injection. This reaction is accompanied by a disappearance of the reactivating alexin (complement) from the blood. In rabbits the intensity of the anaphylactic shock would also seem to run parallel to the formation of precipitins in the circulation. The shock itself is due to separation of some toxic substance from this precipitin reaction as it occurs in the circulating blood, and the effect on the cells is secondary rather than primary, as is the case in guinea-pigs. Although the first accurate description of anaphylaxis was given by Richet while working with certain toxins from shell-fish, there is no absolute proof from his experiments that the anaphylaxis was produced to the toxins as such. More recent work, both with animal toxins and with the soluble toxins of bacteria, would lead us to think that the rare conditions of anaphylaxis which occur following injections of these substances are due rather to anaphylaxis to the protein substances which accompany the toxins than to the toxins themselves. Thus, in the tuberculin reaction, we may assume that the reaction is due to anaphylaxis to the products of the bacterial bodies of the tubercle bacillus rather than to anaphylaxis to the toxin of the tubercle bacillus. The phenomena of anaphylactic shock in animals sensitized to bacteria would seem to be due to a rapid liberation of the endotoxins of the bacteria brought about, probably, by the lysins which are formed following the sensitizing injection. In considering the data as to the relation of anaphylaxis to active immunity, two questions of importance arise: First, of what value is the condition of anaphylaxis to the host? The condition is of obvious disadvantage if fatal intoxication occurs on anaphylactic shock, but although such conditions occur experimentally, it is not certain how frequently they are brought about under natural conditions. Other disadvantages have been indicated. Thus non-specific sensitivity of sensitized animals to intoxication by salt solution has been noted and similar conditions may be evidenced in ways of which we are not aware at present. The supposed advantage of anaphylactic shock is attributed to rapid formation of solid immunity following such violent reaction. In addition, certain disadvantages follow even non-fatal anaphylactic shock. The animal is found to be more subject to other infections due possibly to disappearance of alexin which accompanies the shock. The sudden disappearance of the lysins, the action of which causes the shock itself, may also be of extreme, although temporary, disadvantage in protecting the animal against the virus which has been introduced in causing shock. The conclusion then is drawn that not only is it unproved that a condition of anaphylaxis is of value to the individual, but that there is strong evidence for believing that the condition as such is of distinct disadvantage to the host.

This leads to the second question: Are the conditions of immunity and anaphylaxis inseparable? The possibility of such a separation has been suggested. It has been shown repeatedly that the condition of anaphylaxis may be transferred from a sensitive animal to a normal animal by means of the blood serum. The transfer of this condition requires a definite period of incubation which seems to indicate that the mechanism of transfer is not exactly the same as in the transfer of immune properties of serum. In transferring immunity to bacteria by antibacterial sera we may also transfer a sensitization to the bacteria themselves, and the same questions arise in relation to the passive transfer of anaphylaxis which confront us in considering the condition of active anaphylaxis. The disadvantage to the recipient of serum, if there is a disadvantage, will be the same as the advantage in the originally sensitized animal. The suggestion is offered that the notorious inefficiency of the majority of the antibacterial sera, both for prophylactic and curative purposes, may be due in some way to the transfer to the patients of anaphylaxis or lytic bodies rather than immunity or coagulating antibodies, and the possibility of producing pure coagulating antibacterial sera is worthy of investigation. In addition, we have to consider the possible danger of producing anaphylaxis to the serum itself which contains the bacterial antibodies. In treatment by serum of an immunized animal of an alien species, which is obviously necessary in the treatment of human beings, the possibility of sensitizing to the proteins of the alien serum is of importance. This danger has been emphasized by v. Pirquet and Schick, who have described the generalized, accelerated reaction which may follow repeated doses of antitoxin in human beings. The symptoms produced on second injection of horse serum in human beings may be similar. The local reaction with serum such as the one which occurs on repeated injections of horse serum in a rabbit (Arthus' phenomenon) occurs more frequently in human beings than the generalized guinea-pig reaction, as has been shown by Lucas and Gay.

### Artificial Immunization in Non-Bacterial Diseases

**Dr. S. P. Beebe**, New York: In recent investigations respecting anaphylaxis, the reactions of the organism to proteins of non-bacterial origin have been studied and the conclusions reached afford a sounder theoretical basis for our understanding of infections. At present we have investigations on malignant tumors in mice, rats, dogs and rabbits, all of which agree in what appear to be certain fundamental principles in cancer immunity. The first of these principles is that a varying percentage of animals is normally immune to the tumor. For what reason we do not know. In some instances apparently it is related to the external physiologic surroundings, such as climate, food and water supply, and in other instances to the inherent character of the tissues in which the tumor is planted. The second principle is that a varying percentage of successfully planted animals recover spontaneously, the number depending on the virulence of the tumor and the resistance of the animal. We have found means to increase the virulence of the tumor, the most successful of which are as follows: (1) growing the tumor in particularly susceptible animals; (2) selecting carefully those tumors which give the highest percentage of takes; (3) preliminary heating of the tumor in an optimum temperature; (4) selecting the most suitable location for the implantation—the axilla has been found better than the dorsal region; (5) selecting the older tumors in preference to the young; (6) implantation from the metastases instead of the original tumor. The resistance of the animal, likewise, may be modified by various procedures, the most important of which are: 1. Making the first plants from avirulent tumors and using the immunity thus awakened to combat the more virulent strains later. 2. Subjecting the grafts before implantation to the effect of recovered immune serum. 3. Implantation of small amounts of tumors; animals may resist a small dose and the immune forces thereby be stimulated to the resistance of a larger amount. 4. Preliminary infection of embryonic tissue, various organ tissue or even the blood of the homologous species. The third principle is that the recovered animal is immune for a long time to further implantation of tumors of like virulence, and as a consequence of this principle the highest degree of immunity with which we are familiar occurs in those animals which have grown a virulent tumor and have spontaneously recovered therefrom aided, perhaps, by some one of the various methods under our control.

Immunity to tumors is not to any considerable extent a serum immunity, inasmuch as the usual methods of demonstrating immune factors by serum reactions have in most instances been negative. Clowes, however, found that serum from a recovered animal had a deleterious effect on tumor cells, preventing their growth in a considerable percentage of cases on subsequent transplantation. In a paper published by Crile and myself it was shown that transfusion of large quantities o recovered blood to an animal with actively growing tumor would cause complete absorption of the latter with the usua subsequent immunity to further implantation. More recently I have carried out a further series of transfusion experiment in which I found unmistakable evidence that the regression o the tumor is an essential factor for the future immunization of the animal, and that transfusion of immune blood into an animal susceptible to the tumor but free of tumors at the time of the transfusion does not confer immunity for subsequent implantation. There apparently must be some interaction between the serum and tumor by which the regression is started, the immune forces of the animal thereby awakened and future protection assured. It is not necessary for the animal to have large tumors at the time of the transfusion o that time should be allowed for their complete absorption in order to show immunity.

At present the method which appears to be available fo immunizing an animal with already growing tumors is by repeated subsequent implantations of tumors. Gay has modified this procedure by obtaining complete absorption of the first tumor by the subsequent transplantation of only one graft, provided it was done before the development of metastases. Similar observations have been made by Van Dungern and Coca working with the transplantable sarcoma of hares. It would seem from the results of these experiments that a method of vaccination is a logical procedure in the treatment of malignant tumors, but it must be observed that efforts to accomplish the same results with tumor extracts, or with tumor cells killed by heat or chloroform, or other physical means, have not served to stimulate the development of the immunity. Nothing short of the living tumor cells is capable of having such an effect.

The interest which all cancer investigators have had in these experiments on cancer immunity has been greatly stimulated by the recent observations of Hodenpyl. He was fortunate in having under his observation a human patient with carcinoma who showed remarkable spontaneous regression of a far-advanced tumor, the tumor being primary in the breast, with extensive metastases in the liver. The regressive processes were accompanied by the production of chylous ascitic fluid, an observation quite in harmony with that published by Mackay (*Brit. Med. Journal*, July 20, 1907). The difference is that in this latter instance the recovery was ushered in by the production and absorption of a pleural exudate. The chylous ascitic fluid obtained by Hodenpyl has been injected subcutaneously and intravenously in a number of patients with favorable therapeutic effects in many instances.

### Discussion on Anaphylaxis and Immunity

**Dr. J. George Adami**, Montreal: With regard to immunization against disease, let us take the ordinary cases of malignant streptococcus endocarditis. In that condition there is a bacteriemia. The fact that the cusps of the heart valves are involved shows that streptococci have been circulating in the blood and have affected this particular organ. One knows also from clinical experience that in these cases he can make cultures from the blood and get fairly frequent growths of streptococci out of the blood taken from the body during the course of the disease. The spleen is an organ peculiarly situated so as to filter off bacteria circulating in the blood. The nature of the splenic anatomy is such that the bacteria must be arrested. The bacteria are in the blood, but it is rare that one gets an abscess or a severe suppurative condition of the spleen. It is frequent enough to get an infarct, or simple necrotic processes, and one finds that the spleen has been or is the point of election for these. There is natural destruction of bacteria going on in the spleen. It affects various bacteria which one may choose for the purpose of inoculation. The same is true with regard to the muscles. How rarely, with any form of bacterium, do we find abscesses occurring in the muscles? In all organs that are highly developed and have a fine capillary circulation the bacteria must be arrested in the blood, and we find no signs of infection. The ordinary habit of the endothelium lining the vessels of these tissues is to destroy bacteria. In other words, there is a definite, non-specific immunity on the part of these cells.

**Dr. Alfred Stengel**, Philadelphia: The question arises vhether in all our attempts at bacterial immunity we are lways following logical lines. Particularly am I impressed vith the fact that the newer method of vaccination immunizaion is being pushed very actively in certain directions which nay be surrounded by grave dangers. From my experience in ases of chronic endocarditis I can say that not only has accination done no good, but in the cases I have seen, it has one positive harm, and that is the experience of Dr. Billings nd Dr. Rosenau, of Chicago, in other general bacteriemias, as neumonia, etc., in which other results might be expected. As ractical clinicians, we should take to heart in the use of hese treatments the most cautious dosage before we proceed vith any ambitious attempt at obtaining quick results. From he view of the clinician, I feel that we can express a high ense of satisfaction at the work that has been done by some f our men in this country along the lines indicated.

**Dr. Leo. Loeb**, Buffalo, N. Y.: It seems to me that Dr. Beebe has proved beyond doubt that the different cell contituents of different organs are specific, and previous observaions with cytolysis point to the same conclusion. Dr. Beebe's xperience regarding the action of nucleoproteins is of great mportance not only in regard to immunity, but for the interretation of ferment action. He shows that the heating of ucleoproteins entirely destroys the characteristic of ferment ction, and that seems an hypothesis frequently given expresion, namely, that ferments are nucleoproteins. Another fact vhich coincides with the conclusions of Dr. Beebe is this: we now that the characteristics of the father are transmitted to he children by the spermatozoa, and that the spermatozoa onsist mainly of nucleoproteins and allied substances. It grees with Dr. Beebe's results that the nucleoproteins are the arriers of the specific characteristics. I am not inclined to elieve that only nucleoproteins have that character, but that ther proteins may have it to a less extent.

Regarding tumor growth, it is possible in mice to produce mmunity against tumor growth, whether it be liver or spleen, y the introduction of red blood corpuscles. They do not grow fter injection. On the other hand, we can immunize with eated tumor material which is of decreased virulence on ccount of the condition that the tumor material is grown for ome time. These facts seem to be contradictory. Again, here is no doubt that pregnancy favors the growth of tumors nder certain conditions. Clinicians have made that observaion and experimental observers have had the same experience. n the other hand, in certain conditions pregnancy inhibits he growth of tumors. In accordance with relatively light changes a great difference in results may be obtained. Ve have never been able to produce experimentally by inocuation of tumor material active sera with which we can cure ancer. Under certain conditions antibodies are produced in he case of tumor growth. Why is it not possible for us to show xperimentally in most cases the presence of such antibodies? believe the condition is similar to that prevailing in certain ases of internal secretion. In certain cases we can prove the resence of internal secretions by the injection of extracts of rgans producing that internal secretion or by injecting blood erum. Probably certain antibodies are produced continuously n small quantities and rapidly removed from the body, and hus give no tumor growth, and we cannot make use of passive mmunity. But we have much better prospects for using ctive immunization in cancer growth in the near future, and feel that marked progress will be made by that means of mmunization.

### Value of Optimism in Medicine

**Dr. Edward L. Trudeau**, Saranac Lake, N. Y.: Optimism s a product of a man's heart rather than of his head; of his motions rather than of his reason; and on that account is ather frowned on by physicians whose scientific training natrally leads them to depend entirely on the qualities of the ntellect and look with suspicion on any product of the emoions. Optimism is a prominent factor in anything a man nay achieve in life. It is a mixture of faith and imagination, nd from it springs the vision which leads him from the eaten paths, urges him to effort when obstacles block the vay, and carries him finally to achievement, where pessimism can only see failure ahead. Optimism means energy, hardships and achievement; pessimism, apathy, ease and inaction. Optimism may and often does point to a road that is hard to travel, or to one that leads nowhere; but pessimism points to no road at all. The doctor, whether he be a scientist and his life wholly given to scientific investigation in a laboratory, where reason and intellect reign supreme, or whether he be wholly a practicing physician and surgeon in daily contact with suffering humanity in its struggle with disease, will need all the optimism he can cultivate if his life is to be as fruitful in results as it can be made. The practicing physician must have optimism if he is to develop a full degree of efficiency in meeting the terrible emergencies of acute illnesses and accidents or the long-drawn-out struggle with lingering and hopeless disease and at the same time inspire his patients with a degree of optimism which means everything to them in the ordeals they have to pass through. Ian Maclaren's optimism was of this kind, and Dr. Grenfell's optimism is every day helping him to heal, not only the sick bodies, but the broken spirits of men as well. This is the highest type of optimism the doctor may attain to, as its influence may reach not only to the physical, the intellectual and the psychical, but even to that dim ethereal region of the spiritual, from which springs man's most sacred and cherished aspirations. Perhaps the most brilliant and striking examples in our time of the value of optimism, each representing one of the two extremes of the medical profession, that is, experimental science, and practical medicine and surgery, are Pasteur and Grenfell. Optimism is the one thing that is within the reach of us all, no matter how meager our intellectual equipment, how unpromising our outlook at the start, or how obscure and limited our careers may be. In a long life which has been lived daily in contact with patients beyond the reach of human skill, who through months and years of hopeless illness looked to me for help, I have indeed had need for all the optimism I could cling to. It has ever been a precious asset to me, and I hope to those about me as well, and has never entirely failed me. Let us not, therefore, quench the faith nor turn from the vision which, whether we own it or not, we carry, as Stevenson's lantern bearers their lanterns, hidden from the outer world, and thus inspired many will reach the goal; and if for most of us our achievements inevitably must fall far short of our ideals; if when age and infirmity overtake us "we come not within sight of the castles of our dreams," nevertheless all will be well with us, for, as Stevenson tells us rightly, "to travel hopefully is better than to arrive, and the true success is in labor."

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## MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND

*One Hundred and Twelfth Annual Meeting, held at Baltimore, April 26-28, 1910*

The President, Dr. G. Milton Linthicum, in the Chair

### Officers Elected

The officers elected were given in The Journal, May 7, p. 1551.

The House of Delegates adopted resolutions endorsing Senator Owen's bill for the creation of a national department of health.

### President's Address: Some Public Health Problems

This will appear in full in The Journal.

### Prevention of Racial Deterioration and Degeneracy, Especially by Denying the Privilege of Parenthood to the Manifestly Unfit

**Dr. Lewellys F. Barker**, Baltimore: The class of people to which I refer includes the insane, the imbecile and feeble-minded, the chronic inebriates, the criminal classes, the habitual vagrants, the permanent pauper class, the congenital deaf and dumb and the sexual perverts. In every state there is a relatively large number of people who come under some one of these headings. Many, fortunately, are segregated, but many are outside of institutions, and even those who spend some time in institutional life have periods of liberty. There are no less than 3,700 insane persons under care in Maryland at the present time. In the Maryland Asylum and Training School for the Feeble-Minded there are 305 idiotic, imbecile, feeble-minded and epileptic children, and there is a waiting list of 200. To these, 48 families have contributed from 2 to 4 individuals each. It is safe to assume that there are at least 2,000 defective children in the state, not including the so-called backward or exceptional children. In the Maryland Penitentiary 1,102 persons are incarcerated, in the House of Correction 570, and in the City Jail 579. A large proportion of the children who are arrested and brought into the Juvenile Court came from homes in which the parents are abnormal. During 1909, no less than 2,562 children under 16 years of age were so arrested in this city. The large number of paupers in the state is indicated by the fact that there are on the average between 1,300 and 1,400 people constantly at the Bay View Almshouse, some tuberculous, some insane, but mostly inefficient, intemperate ne'er-do-weels. According to Dr. Dana, the cost of the care of the insane and feeble-minded in this country is $85,000,000 and is increasing absolutely at the rate of 4 per cent. As to the causes of this dreadful burden of degeneracy, two main sets of influences are at work; first, those of environment; second, those of heredity. Most attention has been paid to the first of these. Very little attention is paid to the important matter of parenthood. Of the various methods which have been suggested for limiting the procreation of the unfit, the only ones likely to receive any large public endorsement in the present state of society are (1) permanent segregation, or (2) some form of surgical sterilization. Permanent segregation of all members of the class we are considering is practically impossible, and if it were possible it would cost an enormous sum. Surgical sterilization in the form of castration will probably never meet with widespread approval. Whether or not surgical sterilization in the form of Rentoul's operation of vasectomy in the male and salpingectomy in the female will become popular remains to be seen. Belfield of Chicago, writing of vasectomy, says: "It is an office operation—it is less serious than the extraction of a tooth." The Indiana legislature in March, 1907, passed a bill authorizing the sterilization of "confirmed criminals, idiots, imbeciles, and rapists" in the state institutions of Indiana; since then more than 800 convicts have been sterilized; in more than 200 of these the operation was done at their own request. At the present, I prefer not to make any specific recommendations; the important thing for us to do, it seems to me, is to take the whole matter of race improvement under consideration, to inform ourselves and the citizens of Maryland of the conditions which prevail and to try to find out the best methods of improving them. "A good tree cannot bring forth evil fruit; neither can a corrupt tree bring forth good fruit."

### General Professional Responsibilities for Preventing Blindness

Dr. Hiram Woods, Baltimore: Two bills were passed by the Maryland legislature, just adjourned, which have important bearings on the prevention of blindness and the preservation of eye health. One, the Midwifery Bill, received executive approval. The other, the Optometry Bill, did not. The enactment of the first puts on the profession certain duties; the veto of the second saves it from dangerous encroachment on the medical practice law. Having proved to the legislature and the governor the ignorance of the midwife, we are now confronted with the duty of providing means for her training. In this training must be included instruction in the prevention of ophthalmia neonatorum. An appalling loss of sight persists from a disease both preventable and curable. Credé's prophylaxis, modified to the extent of substituting a 1 per cent. for a 2 per cent. solution of silver nitrate, is in general use in the maternities, and the disease is all but abolished in these institutions. The conclusion seems irresistible that midwives are responsible for most cases of this form of blindness and physicians for the remainder. As for the Optometry Bill, there is abundant evidence that many members of our profession did not know what it meant. On its face, it looks like an advance in protecting the public; but certain things led the oculists to study the bill closely. We know, in the first place, that many serious eye troubles often manifest themselves through discomfort in work, or apparent changes in refraction, and that correction of the apparent error does not reach the real trouble. The bill required the governor to appoint a board of five examiners, from persons previously engaged in the practice o optometry. This board was given absolute freedom in selecting the subjects in which future business rivals were to stand examination. The optometrist was not to use drugs, even though the diagnosis of serious eye lesions is frequently impossible without mydriasis. Oculists are teaching internists many early signs of systemic disease, some of which are functional. On the other hand, oculists are learning from general pathology much hiterto unknown about the causation of eye lesions. If the optician, with his new name, has his way, ophthalmology will be given a more "popular" name, and all save what the tradesman thinks essential will be eliminated from the course of instruction.

### Intestinal Perforation in Typhoid Fever

Dr. Charles Bagley, Jr., Baltimore: This lesion has not received the attention and study which it deserves. In 1903, Harte and Ashhurst were able to collect only 362 cases of typhoid perforation in which operation had been performed, with a mortality of 74.03 per cent. I have made a similar search of the literature from Oct. 1, 1903, to Dec. 31, 1909, a period of 6 years and 3 months, and have found only 265 cases reported in which operation was done, with a mortality of 55.09 per cent. In attempting to arrive at an early diagnosis, I am convinced that we must make greater use of the preperforative stage, as it is certainly less dangerous to operate on a patient one hour before rather than 8 hours after perforation occurs. The principal symptoms are sudden pain, tenderness, and rigidity. The most important step has been taken when an early and correct diagnosis has been made. After the patient reaches the operating room, the table should be placed in the reverse Trendelenburg position. The abdomen should be carefully and rapidly prepared, and a right rectus incision made under cocain, using Schleich's solution, until the peritoneum is reached, this being anesthetized by the application of 10 per cent. cocain on cotton pledgets. The perforation, when found, should be closed with purse-string or Lembert suture if not too friable. Prolonged searching is inadvisable. Drainage is to be recommended, as among other things it provides for a possible second perforation. Flushing the abdominal cavity should be condemned.

#### DISCUSSION

Dr. Gordon Wilson, Baltimore: In spite of its frequency and importance, this condition is often unrecognized. The cardinal symptoms are pain, tenderness, and rigidity. Unfortunately, many text-books do not differentiate between the symptoms of perforation and those of the resulting peritonitis.

Dr. J. H. Branham, Baltimore: When resection is necessary, end-to-end anastomosis is often followed by sloughing; lateral anastomosis gives much better results.

Dr. Randolph Winslow, Baltimore: Operation must be done promptly, and therefore usually by the house surgeon, for if delayed until the arrival of the visiting surgeon, it is apt to be unsuccessful.

Dr. Joseph C. Bloodgood, Baltimore: I agree with Dr. Winslow as to the urgent need of prompt operation. Not only the physicians, but also the nurses, in attendance in a case of typhoid, should be constantly on the watch for symptoms of perforation, the most important of which are pain and localized tenderness. In some cases exploration will be negative, but in such cases at the Johns Hopkins Hospital there has been no mortality. I am inclined to believe that nitrous-oxid anesthesia may perhaps supplant cocain anesthesia in such cases. If there is any doubt as to the integrity of the suture the bowel should be sutured to the parietal wall.

Dr. L. K. Hirshberg, Baltimore: Why do those patients operated on about 8 hours after perforation show a lower mortality rate than those operated on even sooner?

Dr. Clotworthy Birnie, Taneytown: In one case the sudden onset of pain and tenderness was followed by the appearance of a mass in the right iliac fossa. The patient recovered in spite of the fact that operation was not permitted, so that I am inclined to think it was a case of typhoid appendicitis.

Dr. **Emil Novak**, Baltimore: The researches of Buxton showed that the entrance of a large number of typhoid bacilli into the circulation may produce death either within a few hours or after several days, and not so frequently in the intermediate period. Death at the early period is due to the setting free of an overwhelming amount of the typhoid endotoxin as the result of the extensive destruction of the bacilli. Hence the frequency of death by "shock," especially after the old practice of irrigating the abdomen. In the diagnosis of perforation. some lay much stress on the disappearance of liver dulness, but this is misleading.

Dr. **R. B. Norment**, Baltimore: Inasmuch as mere drainage has been employed to care for a possible second perforation. it might be justifiable for the general practitioner, in case of emergency, especially in the country, to resort to this measure in the treatment of the original perforation.

Dr. **A. F. Van Bibber**, Belair: There is difficulty in bringing the patient to early operation in country practice. I believe, therefore, that the point brought up by Dr. Norment is a practical one.

Dr. **Charles Bagley, Jr.**, Baltimore: While it is true that lateral anastomosis is less dangerous than the end-to-end, it is rare that either is justified: Dr. Birnie's case, I believe, may have been one of perforation, for some recover even without operation.

### A Rational Basis for the Study of Uterine Hemorrhage

Dr. **Emil Novak**, Baltimore: Hemorrhage is commonly looked on as a distinctly pathologic phenomenon, and hence the fact that there is such a thing as physiologic uterine bleeding lends a special interest to the study of uterine hemorrhage of the pathologic type. Not many years ago the cause of uterine bleeding was always sought in the endometrium, while now there is a tendency to explain many cases as a result of changes in the myometrium. That the endometrium is at fault in some cases admits of no doubt, as after abortion, in polypoid conditions, carcinoma, etc. At the same time, there is nothing characteristic in the appearance of the endometrium from bleeding uteri, as shown by the personal microscopic study of 50 cases, many of which showed an entirely normal mucosa, some a true endometritis, some a glandular hyperplasia irrespective of that occurring normally in the premenstrual period, etc. Muscular insufficiency (Theilhaber), disturbances in the elastic tissue (Anspach), or disease of the blood-vessels may explain certain cases. But the fact remains that there is a large group of so-called idiopathic cases in which no anatomic lesion whatsoever can be found. In these cases much can be learned by bearing in mind the entire mechanism of normal menstruation, which at bottom is a periodic vasomotor phenomenon affecting the pelvic vessels, the changes in the endometrium being probably only secondary. The underlying cause of menstruation is probably an internal secretion or hormone from the ovary, as shown by the effects of removal of the latter. Other hormones, however, also closely related to the process, as shown by the amenorrhea of pituitary deficiency and of thyroid hypersecretion, and the menorrhagia so frequently seen in myxedema. Many other facts show that the cause of at least a certain number of the many cases of idiopathic uterine hemorrhage is disturbance of one or other of the hormones of the body.

#### DISCUSSION

Dr. **J. H. Branham**, Baltimore: There is no doubt of the influence of the ductless glands in causing certain cases of uterine hemorrhage. The curette offers a valuable means of diagnosis when an anatomic cause exists. Not a few cases of bleeding are due to varicocele of the broad ligament, and many to displacement of the uterus.

Dr. **T. S. Cullen**, Baltimore: In a majority of cases there is some anatomic cause for the bleeding, but in a certain number the explanation must be sought along other lines, as Dr. Novak has pointed out. Our principal concern in such cases is the possibility of cancer, which usually, however, can be eliminated by the examination of curettings or of a clipping from the cervix.

### Case of Mediastinal Tumor Arising from the Thymus

Drs. **J. C. Bloodgood and J. A. Chatard**, Baltimore: The patient was a man of 22, unmarried, who had never been very ill. He used a moderate amount of alcohol, and denied any venereal disease. Three weeks before admission to hospital he noticed a cough, and thought he had caught cold, as there was fever and a chill at the outset. In a few days he noticed that the neck was larger on the left side, while the left arm was somewhat swollen. The cough became decidedly worse and he had difficulty in breathing, getting relief only in an upright position. Appetite was good; bowels were regular. Physical examination showed a well-developed and well-nourished man, with slight cyanosis of the face and finger-tips, and some dyspnea. The left pupil was larger than the right, both reacting normally. There was some dilatation of veins over the left upper chest and shoulder. Above the left clavicle was a rather firm, nodular mass, not painful to pressure; no bruit. Above right clavicle was a large gland the size of a pigeon-egg; glands elsewhere over the body were somewhat enlarged. Expansion of the left side of the chest was distinctly less than of the right, and the circumference was greater. The lower left back and axilla, on percussion, gave a dull almost flat note; the line of dulness moving with position of patient. Breath sounds were suppressed; no râles; no tracheal tug. Abdomen was normal except for enlargement of superficial veins. Leucocytes 10,000, differential count not made. In the week or ten days the patient was under observation, temperature and pulse were normal. Cough and dyspnea became steadily worse, and on two occasions the patient was tapped, 300 and 400 c.c. bloody fluid being drawn off, with only very slight relief of symptoms. Adenitis and syphilis were excluded, the diagnosis resting between Hodgkin's disease and mediastinal tumor. in favor of the latter. On account of the urgency of the symptoms, an exploratory operation was performed by Dr. Bloodgood. The tumor proved to be a sarcoma arising probably from the thymus.

### The Country Hospital

Dr. **Laura E. Reading**, Centerville: Nothing is more needed at this time in the counties of our state than the establishment of rural hospitals for the treatment of patients at home. More ground can be given in the country, with fresh air and sunshine for disinfectants. Quick relief is salvation, and our farmers cannot afford to lose time from their farms, for with them time is money. There are three reasons for the establishment of country hospitals: to train students; to compel the country physician to be up to date; above all, to give people in the country every facility for prevention of unnecessary suffering.

### Infections of the Endometrium

Dr. **W. S. Gardner**, Baltimore: This paper is based on the study of a number of cases which are known to have been infected. Microscopic examination of the curettings from such cases shows that the reaction of the endometrium to infection is essentially similar to that of other tissues, and that easily recognizable structural changes are often left as a result.

### A National Department of Health

Dr. **J. N. McCormack**, Bowling Green, Ky.: At present there is no opposition to the plan of creating a department of health from the head of any existing department except perhaps one. The president is in favor of the plan, and has even promised to send a special message to Congress if necessary. It is questionable whether this legislation will be obtained at this session, in an unchanged form at least. It may be advisable to yield on some points for the present. The project is receiving the support of many lay bodies throughout the country, and it is to be hoped that Maryland will be well represented at the coming hearing on Senator Owen's bill.

*(To be continued)*

# *Deaths*

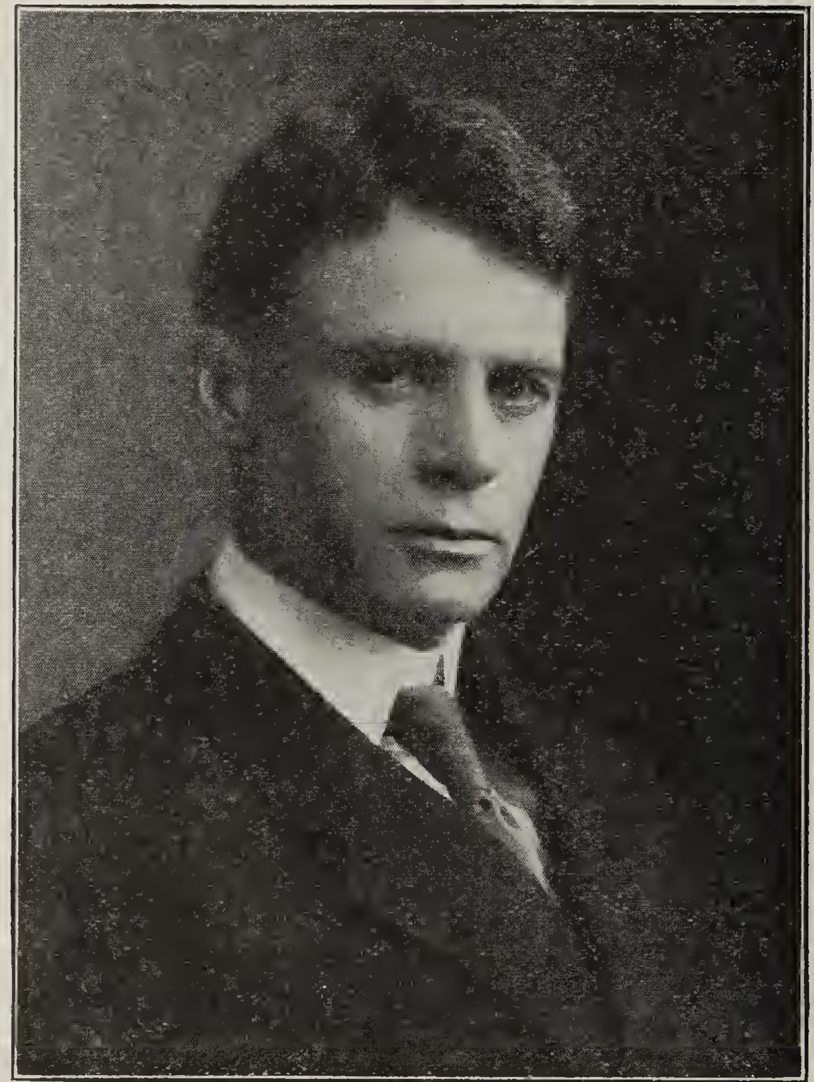
Howard Taylor Ricketts, one of the most notable young workers in the field of medical research, died in the American Hospital in the City of Mexico, May 3, from typhus fever, contracted while pursuing investigations regarding the causation of the disease, aged 39.

He received his literary degree from the University of Nebraska, Lincoln, in 1894; and was graduated from the Northwestern University Medical School, Chicago, in 1897. He served as intern in Cook County Hospital from 1897 to 1899 and then continued his research work; was made fellow in cutaneous pathology in Rush Medical College, and in 1889 was made instructor in pathology. During this time he pursued his researches on blastomycosis. In 1902, Dr. Ricketts was made associate professor of pathology in the University of Chicago. His next important work in medical research was regarding the Rocky Mountain spotted fever (tick fever), which occupied his attention for several summers. In 1906, his book on "Infection, Immunity and Serum Therapy" appeared, which has gone through three editions and is a very complete short treatise on the subject. His latest research work was on the causation of typhus fever (tabardillo), which has been epidemic in Mexico for some time past. He was recently appointed professor of pathology in the University of Pennsylvania, and accepted the position with the understanding that he was to be free to continue his researches during the winter, spring and summer.

Dr. Ricketts has been for several years a valued editorial writer on The Journal and much of his research work has been done under grants made by the Committee on Scientific Research of the American Medical Association.

His society membership included the American Medical Association, the American Association of Pathologists and Bacteriologists, and the Chicago Medical, Clinical and Pathological societies. He was a persistent, untiring and insatiable worker, and to this his illness and death are probably due, as he was worn out when he returned to Mexico in April.

A signal honor was shown Dr. Ricketts' memory when President Diaz of Mexico directed that the professors and students of the National Medical School be present on the occasion of the removal of the body to Chicago, and that the medical school and institute of bacteriology be draped in mourning three days.



Howard T. Ricketts, 1871-1910.

The *Brooklyn Eagle*, in commenting on Dr. Ricketts' illness, stated: "He may thus add one more name to the list of modern martyrs of science who get but a passing thought from the preoccupied people of the United States."

The Chicago *Evening Post*, in an editorial, April 30, before his death, said that Dr. Ricketts "belongs to the small corps of American physicians and scientists who are achieving distinction for their scientific research in the origin and course of disease. Dr. Ricketts represented the universities in this corps, having been associated for several years with the University of Chicago. It would be a great pity indeed if he should be cut off before his promising career had reached even its prime."

The Chicago *Tribune*, May 6, in an editorial entitled "On the Firing Line," said: "The death of Dr. Howard T. Ricketts adds another name to the long honor roll of science. The endless warfare that mankind has fought against ignorance and its child, disease, has claimed another victim, but the fight goes on. Dr. Ricketts left his unfinished investigations to his fellow workers in the field of medical research. But he left something much more precious to his fellow men—the example of a high courage and devotion in the cause of humanity.

"Dr. Ricketts died on the firing line of human progress, an it is inspiring to believe, as we may, that he did not die i vain. Mankind is richer for his living and nobler for hi dying."

To the personal friends of Dr. Ricketts the news of hi death will bring, to an unusual degree, a sense of persona loss. Quiet, modest, unassuming, he had a singularly lovabl disposition and a capacity for friendship beyond the averag The friends of his college days and the intimate associates o his years of teaching and research had anticipated for him long and brilliant career, and unite in deploring the sudde termination of a life of usefulness and promise.

**Oliver Phelps Barber, M.D.** Bellevue Hospital Medical Colleg 1870; for fifteen years surgeon of the Michigan Central Railroad at Saginaw and chief surgeon of the Pere Marquett System; a member of the local pension examining board police commissioner of Saginaw in 1895; for two years president of the Saginaw General Hospital and surgeon to tha institution, St. Mary's and the Woman's Hospital; professo of surgery in the Saginaw Valley Medical College and th Michigan College of Medicine, Detroit; major and surgeon o the Thirty-fifth Michigan Infantry, U. S. V., subsequentl division surgeon of the Second Division, Second Army Corps during the Spanish-America war with service in Cuba; die at his home, April 26, from nephritis, aged 60.

**Frederic Tilden Brown, M.D** College of Physicians and Surgeons, New York City, 1880; o New York City; a member o the American Medical Association, New York Academy o Medicine, and American Association of Genitourinary Surgeons; professor of genitourinary diseases in the Universit and Bellevue Hospital Medica College; attending surgeon t Bellevue Hospital, and consulting surgeon to the Presbyterian Nassau and Mineola hospitals is reported to have committe suicide at Bethel, Maine, May 7 aged 56.

**Samuel Peachy Latane, M.D** University of Maryland, Baltimore, 1897; a member of th Medical Society of Virginia; fo several years resident physicia and superintendent of the Johns Hopkins University, Baltimore and later health officer of Winchester, Va., and recently electe secretary of the Virginia Stat Board of Health; while makin a professional call near Opequon May 1, was instantly killed by the overturning of his automobile, aged 35.

**William F. Barbat, M.D.** University of California, San Francisco, 1895; a member of th American Medical Association; formerly secretary of the San Francisco County Medical Society, and assistant secretary of the Medical Society of th State of California; a member of the staff of the Clara Barton Hospital; died in his office in San Francisco, April 24 from the effects of a gunshot wound of the heart, self-inflicted it is believed, with suicidal intent, while despondent, aged 35

**Andrew Jackson Widener, M.D.** American Medical College Eclectic, St. Louis, 1887; at one time secretary of the Arkansas State Eclectic Medical Board and author of the bill enacted by the last state legislature giving the state medical board powe to revoke physicians' licenses for unprofessional conduct; die at his home in Little Rock, April 26, from acute gastritis aged 52.

**Richard Sandford Mallon, M.D.** Cornell University, New York City, 1905; a member of the Medical Society of th State of New Jersey; of Paterson; a member of the staff o the Paterson General Hospital and associated with the pathologic department of that institution; died in the hospital April 27, from acute nephritis, aged 31.

**Eugene Hodenpyl, M.D.** New York University, New Yor City, 1885; pathologist of Roosevelt Hospital; who recentl called attention to the necrotizing effects on carcinoma cells of the fluid from a patient who had apparently recovered; died at his home in New York City, May 5, from pneumonia, aged 47.

**Hartwell Augustus Sibley, M.D.** Bellevue Hospital Medical College, 1878; a member of the Massachusetts Medical Society; a member of the board of health and city physician of Chelsea for twelve years; died at his home in Dorchester, Boston, April 27, aged 60.

**Alfred James China, M.D.** Medical College of the State of South Carolina, Charleston, 1860; surgeon in the Confederate service during the Civil War; since 1902, president of the First National Bank of Sumter, S. C.; died at his home, April 9, from uremia, aged 72.

**John Frost Davis, M.D.** Botanico-Medical College of Cincinnati, 1850; for many years a practitioner of Portsmouth, Ohio; died at the Southeastern Orphanage, Baldwin, Ga., of which he had been treasurer for seven years, April 17, aged 81.

**James R. Haun** (license, registration, Lawrence county, Pa., 1882); a veteran of the Civil War, and a prisoner in Andersonville for ten months; died at his home in Edinburg, April 22, from cerebral hemorrhage, aged 68.

**Asa Milner** (license, years of practice, Iowa, 1887); for nearly fifty years a practitioner of Marion county, Iowa; died at the home of his daughter in Roulette, N. D., April 21, from hypostatic pneumonia, aged 78.

**Jesse J. Carlow, M.D.** Western College of Homeopathic Medicine, Cleveland, 1856; for sixty years a practitioner of Gaysport, Ohio; died at his home in that place, April 23, from senile debility, aged 81.

**Roland Mitchel,** for nearly half a century a practitioner of Pea Ridge, Ark.; a surgeon in the Federal service during the Civil War; died at his home, February 25, from senile debility, aged 83.

**Thomas Miller Lewis, M.D.** Jefferson Medical College, 1857; a surgeon in the Confederate service during the Civil War; died at his home in White Post, Va., April 12, from diabetes, aged 77.

**Jacob E. Hempstead, M.D.** Jefferson Medical College, 1906; a member of the Medical Society of the State of New Jersey; died at his home in Paterson, April 23, from pneumonia, aged 35.

**William H. Kennedy, M.D.** University of Nashville, Tenn., 1857; a member of the legislature from Sanford county in 1872; died at his home in Kennedy, Ala., April 24, aged 84.

**Raymond H. Koch, M.D.** Medico-Chirurgical College of Philadelphia, 1907; formerly of Easton, Pa.; died at his home in Martin's Creek, Pa., April 27, from diphtheria, aged 26.

**James W. Long, M.D.** Cincinnati College of Medicine and Surgery, 1861; died at his home in Madisonville, Ky., April 26, from senile debility, aged 74.

**E. George Stratton, M.D.** Detroit Medical College, 1888; died at his home in Oakland, Cal., April 24, from the effects of an overdose of cocain, aged 42.

**Charles Lewis French,** a practitioner of California, for forty-five years; died at his home in Lakeport, Sept. 4, 1909, from arteriosclerosis, aged 77.

**David N. E. Brown,** from 1855 to 1895, a practitioner of medicine; died at his home in Butler, Ind., March 31, from arteriosclerosis, aged 78.

**Oliver Loftin, M.D.** University of Pennsylvania, Philadelphia, 1850; died at his home in Tyler, Texas, April 9, from bronchitis, aged 81.

**Thomas Edward Stack, M.D.** University of Dublin, Ireland, 1876; died at his home in Powell, Neb., April 22, aged 54.

**James A. Kirkpatrick, M.D.** Nashville; died at his home in Johnson City, Tenn., in January, from nephritis, aged 64.

## *Marriages*

Carl L. Watson, M.D., Boston, to Miss Eva Bartlett Macey of Somerville, Mass., recently.

Elmer D. Twyman, M.D., Independence, Mo., to Miss Leda Allen of Dallas, Texas, recently.

Carl Miller Sneed, M.D., Columbia, Mo., to Miss Katherine Ruby Robb of Montreal, Que., April 20.

Edwin Racelle Raseley, M.D., Uniontown, Pa., to Miss Edith Brearley Flack, at Baltimore, April 26.

William Kenneth Turner, M.D., New Bedford, Mass., to Miss Emma Antoinette Boldue of Boston, April 25.

Joseph Seymour Rambo, M.D., Chandlersville, Ohio, to Miss Catherine Frazier Cochrell of Philo, Ohio, April 26.

Matthew Cotton Darnell, M.D., Duckers, Ky., to Miss Ermina Jett of Frankfort, Ky., at Grassy Springs Church, April 27.

## *Association News*

### NEW MEMBERS

List of new members of the American Medical Association for the month of April, 1910:

#### ALABAMA

Bell, S. B., Ozark.
Searcy, H. B., Tuscaloosa.

#### ARIZONA

Canby, C. B., Goleonda.
Watkins, W. W., Phoenix.

#### ARKANSAS

Hudson, T. F., Luxora.
Rowell, F. C., Hensley.

#### CALIFORNIA

Chapline, Frank, Orange.
Gleason, C. D. R., San Francisco.
Harris, J. B., Sacramento.
Hill, W. B., Long Beach.
Horn, Henry, San Francisco.
Howe, R. C., Colton.
Hull, F. E., Los Angeles.
McCoy, G. W., Los Angeles.
Newell, Edward, San Jose.
Simonds, P. E., Los Angeles.
Stainehfield, H. C., Los Angeles.
Tebbetts, H. B., Los Angeles.
Tourtillatt, W. W., Lindsay.

#### COLORADO

Clarke, E. A., Canon City.
Fraser, Margaret E. V., Denver.
Pratt, Elsie S., Denver.
Rich, W. F., Pueblo.

#### CONNECTICUT

Elmes, F. A., Derby.

#### DISTRICT OF COLUMBIA

Williams, T. A., Washington.

#### FLORIDA

Steen, A. M., Palatka.

#### GEORGIA

Simmons, J. W., Jr., Brunswick.

#### IDAHO

Falk, Ralph, Boise.
Hoyt, J. E., Kendrick.

#### ILLINOIS

Alexander, J. S., Chicago.
Amerson, W. H., Chicago.
Applewhite, L. D., E. St. Louis.
Barth, H. N., Rockford.
Bing, E. A., Altamont.
Brown, C. E., Chicago.
Bushnell, C. H., Chicago.
Chapman, F. A., Sigel.
Churchill, J. F., Chicago.
Cleverdon, Kate, Chicago.
Collier, Wm., Chicago.
Curry, A. B., Bloomington.
McDonnell, Elizabeth J., Chicago.
Evertz, Matthew, Chicago.
Faulkner, Louis, Chicago.
Fletcher, F. D., Chatham.
Fortune, H. C., Literberry.
Hall, W. S., Chicago.
Hanson, Joseph, Chicago.
Johnston, Theodore, Chicago.
Kelly, P. E., Chicago.
Kierulff, L. A., Chicago.
Kobisk, F. B., Lombard.
Koll, I. S., Chicago.
Linder, L. J., E. St. Louis.
McKee, C. W., Chicago.
Molnar, Helen B., Chicago.
Oliphant, Lizzie W., Chicago.
Porteus, R. W., Chicago.
Reed, C. H., Chicago.
Ruppert, G. F., Elgin.
Schinkelberger, P. C., Chicago.
Schrager, V. L., Chicago.
Skaggs, C. S., E. St. Louis.
Smith, H. S., E. St. Louis.
Statkiewicz, W., Chicago.
Stogol, J. B., Chicago.
Swan, C. J., Chicago.
Teter, D. P., Chicago.
Thackeray, W. T., Chicago.
Thompson, G. F., Chicago.
Thorsgaarde, K. L., Chicago.
Tobia, Emilio, Chicago.
Toler, T. W., Astoria.
von Toll, Edward, Chicago.
Walker, H. S., Chicago.
Woodyatt, R. T., Chicago.

#### INDIANA

Castello, H. F., Decatur.
Ford, J. H., Indianapolis.

#### IOWA

Brisbine, R. E., Atalissa.
Dewey, W. H., Moville.

#### KANSAS

Church, Mary V., Topeka.
Davis, A. M., Chanute.
Davis, D. H., Independence.
Ekblad, V. E., Scandia.
Greenfield, Sara E., Topeka.
Grigsby, C. E., Coffeyville.
Lytle, C. R., Durham.
McIlhenny, R. A., Conway Springs.
Righter, W. H., Topeka.
Taylor, O. A., Topeka.
Worley, J. F., Emporia.

#### KENTUCKY

Barnett, A. M., Louisville.
Gribble, B. G., Louisville.
Gibson, T. T., Shamrock.
Guthrie, H. S., Louisville.
Lester, W. H., Dublin.
Long, R. W., Madisonville.
Prather, S. S., Louisville.
Tate, L. A., Hopkinsville.
Threlkeld, A. E., Wheatley.
Travis, D. J., Eddyville.
Wyatt, I. L., Buffalo.

#### LOUISIANA

Caine, A. M., New Orleans.
Devron, J. A., New Orleans.
Gray, E. B., Colfax.
Guthrie, J. B., New Orleans.
Mioton, S. F., New Orleans.
Points, J. F., New Orleans.
Weaver, W. H., McDonoghville.

#### MAINE

Bolster, W. W., Lewiston.
Ferren, F. L., Cumberland Mills.
Larrabee, E. G., Hebron.
Stewart, D. M., So. Paris.
Trufant, L. H., Norway.

#### MARYLAND

Duke, W. W., Baltimore.
Simon, C. E., Baltimore.
Thieme, G. C., Baltimore.

#### MASSACHUSETTS

Johnson, F. E., Erving.
Peirce, A. H., W. Newbury.
Stone, G. H., Clinton.

#### MICHIGAN

D'Arcy, Benjamin, Mayville.
Gregory, M. S., Traverse City.
Helkie, W. L., Three Oaks.
McIntyre, J. E., Lansing.
Minor, E. B., Traverse City.
Obetz, H. L., Detroit.
Seidel, U. D., Reed City.
Spoor, A. A., Big Rapids.
Stafford, C. M., Detroit.
Turrell, C. M., Yale.
Wells, R. E., Traverse City.

#### MINNESOTA

Bloom, C. J., Lake Park.
Fosnes, Edith G., St. Paul.
Hoffmann, J. L., Elbow Lake.
Hunt, H. E., St. Paul.
Kierland, P. E., Mahnomen.
Melby, Benedik, Blooming Prairie.

Robertson, H. E., Minneapolis.
Sanderson, E. T., Minneota.
Walters, F. R., Moose Lake.
Will, W. W., Bertha.

### MISSISSIPPI

Brookshire, J. L., Hushpuckena.
Parvis, J. B., Laurel.
Tenent, C. H., Senatobia.
Waldauer, Joseph, Vicksburg.

### MISSOURI

Alexander, R. D., St. Louis.
Axline, J. T., St. Louis.
Barclay, Robert, St. Louis.
Baron, Jules, St. Louis.
Bauer, C. E., St. Louis.
Brandon, J. P., Essex.
Digges, W. L., New Madrid.
Fakes, J. D., LaForge.
Feinstein, L. A., St. Louis.
Fronske, M. G., St. Louis.
Fuhrmann, R. H., St. Louis.
Goodman, D. C., St. Louis.
Gosney, C. W., Kansas City.
Gray, R. Q., St. Louis.
Langen, W. M., St. Louis.
Hanser, H. A., St. Louis.
Harris, D. L., St. Louis.
Henschel, Edward, Winona.
Hyndman, C. E., St. Louis.
Ilg, Theodore, St. Louis.
Jenkins, J. M., St. Peters.
Kerwin, W., St. Louis.
Kitchen, W. B., Glasgow.
Koetter, A. F., St. Louis.
Konzelman, P. R., St. Louis.
Kroeger, G. B., St. Louis.
Kuper, G. H., St. Louis.
Lingenfelder, Julius, St. Louis.
Meyer, H. H., St. Louis.
Mills, R. W., Webster Groves.
Moore, O. T., St. Louis.
Neer, E. D., St. Louis.
Oatman, L. J., St. Louis.
Powell, I. W., St. Louis.
Quigg, H. D., Marshall.
Reder, Francis, St. Louis.
Reid, Florence J., Kirksville.
Rice, D. F., St. Louis.
Shahan, W. E., St. Louis.
Shanklin, B., St. Louis.
Sharpe, J. B., Senath.
Smith, W. M., Springfield.
Spain, Kate C., St. Louis.
Tooker, C. W., Jr., St. Louis.
Trask, C. D., Kansas City.
Tuttle, G. M., St. Louis.
Von Schrader, A., St. Louis.

### NEBRASKA

Anderson, D. F., Edgar.
Brown, H. R., Daykin.
Kalar, Sara Blaine, Bloomfield.
Pickens, E. A., Benkelman.
Tayman, E. M., Cozad.
Way, F. E., Wahoo.

### NEVADA

Swezy, C. E., Winnemucca.

### NEW HAMPSHIRE

Sargent, F. H., Pittsfield.

### NEW JERSEY

Bleick, T. E., Newark.
Bouynge, H. A., Ridgewood.
Carroll, W. H., Passaic.
Harman, H. M., Frenchtown.
Kensinger, W. H., Camden.
Perkins, J. L., Cranford.
Ramos, N. L., E. Orange.
Rauschenbach, P. E., Patterson.
Rose, W. W., Newark.
Warncke, F. H., Elizabeth.
Woods, A. L., South River.
Zehnder, A. C., Newark.

### NEW MEXICO

Colbert, J. W., Albuquerque.
Miller, C. A., Tularosa.

### NEW YORK

Agnelli, S., New York City.
Andrew, J. H., Brooklyn.
Batten, H. E., Corning.
Bissell, W. G., Buffalo.
Borzilleri, C. R., Buffalo.
Bowen, D. R., Rome.
Brown, A. H., Auburn.
Carpenter, C. A., Bedford.
Cook, F. H., Middletown.
Coborn, Josiah, Hopewell Junction.
Erdman, Seward, New York City.
Foster, N. B., New York City.
Gillen, H. B., Cohoes.
Harnden, Frank, Brooklyn.
Heston, E. H., Arlington.
Hutton, Lefferts, New York City.
Kibbe, E. J., Rochester.
Knowlton, F. P., Syracuse.
Krug, E. F., New York City.
Leopold, J. S., New York City.
Lewis, M. B., Sag Harbor.
Lindeman, H. E., New York City.
Lombardo, Melchiore, Brooklyn.
Massey, M. L., Buffalo.
Mellor, L. R., Syracuse.
Mislig, Michael, New York City.
Needham, G. G., New York City.
Neil, James, New York City.
Paul, G. P., Round Lake.
Peart, W. A., Sanborn.
Pentlarge, V. H., Brooklyn.
Potter, Marjory J. M., Niagara Falls.
Power, W. T., New York City.
von Raitz, Feodor, New York City.
Regester, Hyatt, Buffalo.
Roof, S. W., New York City.
Root, Mary P., Millbrook.
Rose, J. T., Brooklyn.
Schoonmaker, Hubert, Clifton Springs.
Strong, F. R., Brewerton.
Thompson, E. M., Brooklyn.
Tweddell, Francis, New York City.
Valanti, F. A., Buffalo.
White, G. S., Yonkers.
Winters, W. P., Geneva.
Wood, W. B., Tannersville.
York, Margaret M., Flushing.

### NORTH CAROLINA

Baynes, R. S., Hurdle Mills.
John, Peter, Laurinburg.
Mariner, N. B., Belhaven.
Tayloe, D. T., Washington.
Thornton, Irene, Fayetteville.

### NORTH DAKOTA

Christensen, Walter, Lidgerwood.
Hedding, J. A., Hope.
King, F. J., St. Thomas.
Lindner, E. R., Egeland.
Lorenzen, F. C., New Salem.
Plourde, W. A., Overly.
Steele, D. C., Fairmount.
Swarthout, E. F., Streeter.
Swenson, A. W., Bisbee.
Wheelon, F. E., Minot.

### OKLAHOMA

Ballantine, H. T., Muskogee.
Booth, G. R., LeFlore.
Curd, W. E., Copan.
Rogers, C. T., Muskogee.
Sanger, Winnie M., Oklahoma.
Smith, R. V., Guthrie.
Williams, J. C., Stroud.

### OHIO

Bauer, A. C., Cincinnati.
Butler, R. H., Bellefontaine.
Coate, C. R., Laura.
Cook, H. J., Cincinnati.
Dexter, Richard, Cleveland.
Doughty, W. M., Cincinnati.
Gardner, D. S., Massillon.
Harding, B. F., Mansfield.
Lamb, F. H., Cincinnati.
Marquart, O. M., Springfield.
May, R. J., West Salem.
McKesson, E. I., Toledo.
McPherson, C. G., Xenia.
Minnig, Arnold, New Philadelphia.
Mussey, R. D., Cincinnati.
Nuss, W., Cleveland.
Patterson, C. L., Dayton.
Peterka, Edward, Cleveland.
Prunty, F. J., Belpre.
Rabe, J. W., Akron.
Rea, E. H., Irondale.
Schlesinger, W. A., Cleveland.
Shank, R. R., Trotwood.
Shaw, J. H., Cincinnati.
Smith, L. B., Youngstown.
Stevenson, J. W., Cincinnati.
Stillman, G. B., Deerfield.
Tachauer, Albert, Columbus.
Tangeman, C. W., Cincinnati.
Webb, Dudley, Cincinnati.
White, W. W., Ravenna.
Willey, A. J., Delaware.

### OREGON

Belliner, G. C., Salem.
Brosius, F. C., Hood River.
Culin, Walter, Coquille.
Evans, J. C., Salem.
Fields, R. H., Gardiner.

### PENNSYLVANIA

Boice, J. M., Philadelphia.
Cavill, F. T., Jessup.
Cramer, M. J., Monessen.
Crow, S. C., South Sharon.
Dearth, W. A., Pittsburg.
DeLong, F. E., Annandale.
Donaldson, A. B., Bala.
Francis, T. R., Connellsville.
Gurley, L. M., Johnstown.
Hassell, H. W., Philadelphia.
Heimer, L. B., Philadelphia.
Hemminger, E. F., Meyersdale.
Jackson, O. H., Meadville.
Kaufman, A. S., Philadelphia.
Kennedy, D. D., Pittsburg.
Klopp, E. J., Philadelphia.
Lapenta, V. A., New Castle.
Magee, D. M. P., Cynwyd.
McCready, J. H., Pittsburg.
Messmore, J. L., Masontown.
Morgan, D. W., Auburn.
Nisbet, F. L., Meadville.
Piersol, G. M., Philadelphia.
Potts, W. J., Greensburg.
Proescher, Frederic, Pittsburg.
Russell, R. K., Bradford.
Schnatterly, L. W., Freeport.
Shaffer, C. I., Jenners.
Shumaker, E. K., New Bethlehem.
Thompson, C. W., Meadville.
Thompson, R. W., McKean.
Williams, E. C., Port Trevorton.
Williams, J. A., Pittsburg.
Zimmerman, G. L., Lehmasters.

### RHODE ISLAND

Simpson, G. E., Cranston.
Squire, A. F., Newport.

### SOUTH CAROLINA

Anderson, J. L., Greenville.
Crafton, J. N., Colliers.
Howle, T. E., Hartsville.
Jervey, A. J., Charleston.
Pope, T. H., Kinards.
Sauders, R. L., Anderson.

### SOUTH DAKOTA

Long, Martin, Custer.
Stegeman, S. B., Pierre.

### TENNESSEE

Cullum, J. M., Fayetteville.
Green, J. R., Springfield.
Jones, J. H., Garbers.
Lovell, A. I., Graysville.
McDonald, J. T., Monroe.
Nichols, J. O., Etowah.
Richardson, R. M., Normandy.
Teas, J. J., Waverly.
Tucker, B. G., Nashville.

### TEXAS

Allen, J. I., Bloomburg.
Beddoe, A. F., Dallas.
Berkeley, B. F., Alpine.
Bibb, L. B., Austin.
Brown, C. P., El Paso.
Burt, J. D., Farmersville.
Campbell, C. A. R., San Antonio
Clark, L. E., Ennis.
Dupree, W. A., Colorado.
Freeman, W. H., Lockney.
Fulcher, R. L., Blanco.
Fuller, M. L., Bradshaw.
Gallaway, A. H., Jr., Laneville.
Hanson, D. T., Amarillo.
Headley, A. M., Rio Grande City.
Inmon, E. H., Emma.
Jackson, L. B., San Antonio.
Lancaster, E. H., Houston.
Lee, W. R., Texarkana.
McCardell, Douglass, Cold Spgs.
McCloud, T. C., Bryson.
Myers, R. E., Kemp.
Newman, A. M., Canadian.
Patton, W. D., Amarillo.
Town, Col. F. L., San Antonio.

### UTAH

Ashley, R. W., Salt Lake City.
Sprague, H. B., Salt Lake City.

### VERMONT

Blaisdell, E. G., Bridport.
Blanchard, J. F., Newport.
Heminway, L. E., Manchester.
Welch, R. E., Franklin.

### VIRGINIA

Meade, E. W., Castlewood.
Saunders, C. H., Chase City.
Strother, P. M., Scottsville.
Sturgis, W. J., Franktown.
Thornton, R. P., Republican Grove.

### WASHINGTON

Anderson, E. M., Spokane.
Burns, A. E., Seattle.
Eldridge, H. L., Snohomish.
Hards, H. J., Tacoma.
Perkins, M. H., Tacoma.
Sawins, A. H., Spokane.
Wilson, C. S., Tacoma.

### WEST VIRGINIA

Bowles, W. C., Milton.
Burgess, W. H., Williamson.
Mooman, Glenn, Petersburg.
Morrison, L. C., Hurricane.
Motley, J. C., Hinton.
Stroud, C. G., Erbacon.

### WISCONSIN

Arveson, R. G., Frederic.
Borden, F. R., Plainfield.
Lemmer, G. N., Spooner.
McCarthy, G. W., Athens.
Rose, J. F., Lena.
Ross, H. R. T., Ladysmith.
Spencer, G. F., Evansville.
Sullivan, A. G., Madison.
Vaughan, Claude, Caroline.
Weber, A. J., Milwaukee.

### WYOMING

Wiseman, Letitia, Cheyenne.

### HAWAII TERR.

West, T. J., Makaweli.

## Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

### Memorial on Behalf of the American Medical Association in Relation to Senate Bill (S. 6049) Establishing a Department of Public Health, and for Other Purposes

APRIL 26, 1910.—REFERRED TO THE COMMITTEE ON PUBLIC HEALTH AND NATIONAL QUARANTINE AND ORDERED TO BE PRINTED

*To the honorable the Senate and House of Representatives in Congress assembled:*

On behalf of the American Medical Association, an organization representing 76,000 physicians, embracing every state and territory in the United States, I respectfully submit for the consideration of Congress the following reasons why a department of public health rather than a bureau should be established:

Bureaus have existed for a hundred years, and every effort made to secure such a department as would adequately protect the health and lives of the people during the last forty years has been met with the proposition, now in the minds of ome. to enlarge the powers of some existing bureau. (See eport of the Walcott Commission, Exhibit 1, herewith.)

Eight of nine secretaries employ medical men. All of the departments have medical and sanitary problems which they are called on to and must solve.

The War and Treasury departments are now crossing and duplicating the work of each other in Porto Rico, Cuba, Panama, the Philippines, and not long since in California.

The Army, Navy, Treasury and Agricultural departments all have large and important laboratories devoted to medical and sanitary problems.

The War and Navy departments each has a medical school for its officers, and the Treasury should have one unless there s to be a department of health, in which event they might all be consolidated in the interest of both efficiency and economy. The War, Navy and Treasury departments each has hospitals n the more important centers of the United States. Each has a tuberculosis hospital; each has a leprosy hospital.

The Department of Justice gives all legal advice and service o every other department. (See Rev. Stat., secs. 187, 189, 360, 361, 362, 363, 364, and 365.) The secretary of health should in the same way provide for all medical and sanitary advice and service, be responsible for all men so employed, and detail them to advise and assist other departments as they may be required. This department should also provide for all expert medical and sanitary testimony required by other departments or United States courts.

There should be one authoritative department for all official nformation on sanitary and medical matters, so as to lead to a definite governmental policy, making it possible for all who are charged with official responsibility to act under definite law and departmental ruling.

This central department of official sanitary and medical opinion should have the power, and should be required by law, to advise and assist all other departments in the solution of sanitary and medical problems.

Individually the present bureaus and other sanitary and medical agencies perform their ordinary functions satisfactorily, but with such lack of cooperation as greatly to mar results, while in the emergency of epidemics or in dealing with vast interests where the strain of commercial pressure falls on them they almost uniformly fail or are greatly crippled in their sanitary functions. This is the history of even so strong a movement as that of the enforcement of the Food and Drugs Act. It is the history of the Public Health and Marine-Hospital Service of the Treasury Department, and it must and will be the history of any bureau or agency employed for health service whenever it is a minor function in any great commercial department; or, in other words, until the day comes in which there shall be a department whose sole purpose and responsibility is for the health and life of the people, and in which all these varied health agencies can be collected and coordinated.

The following agencies should be transferred to the proposed department of health:

Treasury Department: Public Health and Marine-Hospital Service: medical officers of the Revenue-Cutter Service.

Agricultural Department: Chemistry Division in all that pertains to the purity of human food and drugs; meat-inspection service of the Bureau of Animal Industry; those engaged in the study of human disease in the Biological Division.

Department of Commerce and Labor: Hospitals of the Immigration Bureau; Division of Population, after the compilation of the Census of 1910, and in time for the Census of 1920; the medical officers of the Coast and Geodetic Survey.

Interior Department: Physicians of Indian schools and agencies; physicians of the Alaskan school service; physicians of the United States Reclamation Service; hospitals and medical attendants of the United States National Homes for Old Soldiers; the medical examiners, etc., of the Pension Bureau; the Government Hospital for the Insane; the Freedmen's Hospital.

Department of Justice: Physicians and oculists employed at United States penitentiaries.

Department of State: Foreign hospitals under subsidy; the International Sanitary Bureau.

The War and Navy departments have not been included as the opinion largely prevails that these military functions should not come under a civil bureau.

The department should provide for the medical attention to be given and the sanitary precautions which should be taken in the Philippines, Porto Rico, Hawaii, Panama, and all other lands which are under the exclusive jurisdiction of the United States, and for special study of the problems peculiar to each of them.

A very large part of the work of such a department will of necessity be, acting and cooperating always with and through the state and local boards of health, the investigation of causes, methods, of spread and prevention of tuberculosis, pneumonia, influenza, typhoid fever, cancer, measles, diphtheria, scarlet fever and other common domestic pestilences which cause such a large part of the sickness and mortality of every community. To be effective this scientific research work should be continuous, and on such a scale as is only possible under national authority. Interstate pollution of rivers and water supplies would need to be carefully studied, with the view of prevention, involving the great problem of sewerage and drainage.

Studies would need to be made and railroads instructed as to the sanitation of moving trains engaged in interstate traffic, especially as to the ventilation, heating, and water supply of sleeping cars and other coaches, the best methods of preventing the pollution of the track over which they pass and the stations at which they stop.

The results of these investigations and of all similar matters will have to be communicated to the people, and to be most effective this will require the cooperation of the educational agencies of the Government and the states, as none can reach the people like the teachers of the primary and higher schools, colleges, and universities. The department would also prepare leaflets for the use of the local authorities and for the information of the people, as the Agricultural Department now so well does as to the affairs within its domain.

Therefore provision should ultimately be made to include within this department all the educational agencies of the United States, for the reason that their work is more allied to this department than any other, and especially as they have to deal with those who are in the formative and impressionable period of life and would be most benefited by such life-saving knowledge.

It should be made clear that the department would have no authority to act in intrastate matters, except upon request and in cooperation with state authority, along the lines which now exist between the Agricultural Department and the states. It should be made equally clear that in dealing with interstate and foreign matters it shall be supreme.

Those associated with me by no means undervalue the work now being done under existing health agencies at Washington, and it is not intended that what is here said shall be so construed. Scattered, operating under indefinite or conflicting laws or regulations, comparatively lost in departments created for other purposes, and under chiefs little interested and sometimes not in sympathy with their work, they deserve commendation instead of criticism for what they have done under great difficulties. Nor do we overlook the fact that some states and municipalities are doing admirable work along these lines and that all of them are doing something. But when it is remembered that 600,000 people die and 3,000,000 more are seriously sick every year from causes which are distinctly and practically preventable, bringing sorrow and expense to thousands of homes often least able to bear the latter, and lowering vitality and efficiency beyond the conception of those who have not made a study of the subject, it is not to be wondered at that educators, business men, labor leaders, and men and women in all the walks of life have joined in the plea so long made in vain by the medical profession that the health and life of human beings, by far the greatest asset of the nation, shall at least have as much protection from the National Government as is now so properly and generously provided for domestic animals.

Such a department as we ask you to create, with its corps of trained experts, would be engaged every day in every year in such duties as investigating the cause and prevention of cancer without waiting for a special message from the President; in the extermination of hookworm in Porto Rico and in the states without a plea from Mr. Bryan or a donation from a great captain of finance; the suppression of influenza, a great menace to national health; and in the solution of a hundred other similar problems which are of such scope that the work must be done by the central government or not at all. In view of the recent great increase in the cost of living, which many believe is permanent, and of the common saying, which is probably as true as it is trite, that "the average American family wastes more than would maintain the average European family" for lack of definite information, a practical study of food values and of the most nutritive preparation of food should be given a like prominence to that now so well and ably given to adulteration by Dr. Wiley.

Acting through existing state and local authorities and at relatively small expense, such a department would gather the facts as to the cause and location of every case of sickness and death which occurs in this country, classify, study, and in diagrammatic or other easily understood way put them in every school and home, certainly a warning service of equal value to that conducted by the Weather Bureau. Under such a coordinated system, which is believed to be entirely practicable, the nation, states, municipalities, and counties, each working within its own sphere but in cooperation, and especially with the aid of educators, to make such health and life-saving knowledge a part of the warp and woof of every child, it would be only a question of time until the benefactions of now existing and greatly extended modern science would be placed within the reach of every hearthstone.

To meet the criticism of those who may find it difficult to understand the altruism back of this movement it may be proper to say in conclusion that no one leading in it has any aspirations or ambitions to serve or is in position to or would accept any place in such department if created. Further, in so far as doctors succeed in preventing disease they diminish their own income, this being probably the only vocation which has for years consistently and persistently advocated legislation looking to its own elimination. Subordinated bureaus have failed, and, in the very nature of the vast problems and interests involved, must always fail to meet the needs of such a country as ours; and in the light of this history and supported by the opinion of thousands of disinterested men who have made this subject their life study we urge the creation of such a department as will enable our nation to lead the world in public health work, as it is already doing in so many other ways.

J. N. McCormack.
*Representative of the American Medical Association.*

## POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
Bowling Green, Kentucky

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

### Tenth Month—First Weekly Meeting

Subject for the Month: The Psychoneuroses
Neurasthenia

Etiology: Age, sex, race, debilitating conditions in parents, occupation, physical and mental stress, excesses, trauma, acute illness, chronic diseases.

Symptoms: Essential Symptoms (Charcot): Headache, backache, gastrointestinal atony, neuromuscular weakness, cerebral depression, mental irritability and insomnia. Clinical forms, cerebral, spinal, cardiovascular, gastric and sexual.

Motor Symptoms: Muscular weakness, tremor, twitchings, increased reflexes.

Sensory Disturbances: Fatigue, headache, backache, tender spine, paresthesias.

Disorders of Special Senses: Sight, hearing, smell and taste.

Gastrointestinal Disorders: Indigestion, constipation, flatulence, etc.

Circulatory Disturbances: Palpitation, rapid pulse, vasomotor disorders.

Genital Disorders.

Mental Disturbances: Mental asthenia, loss of memory, depression, nosophobias.

Insomnia.

Diagnosis: Hysteria, petit mal, tabes, general paresis.

Reference Books for the Tenth Month

Church and Peterson: Nervous and Mental Diseases.
Dana: Nervous Diseases. Savill: Neurasthenia.
Pearce: Nervous Diseases. Janet: Hysteria.
Mettler: Nervous Diseases. Turner: Epilepsy.
Spratling: Epilepsy and Its Treatment.

## Book Notices

The Practice of Surgery. By Walter G. Spencer, M.S., Surgeon and Lecturer on Surgery, Westminster Hospital, and George E Gask, F.R.C.S., Assistant Surgeon and Demonstrator of Practical Surgery, St. Bartholomew's Hospital. Cloth. Price, $5.50 net Pp. 1,234, with 707 illustrations. Philadelphia: P. Blakiston's Son & Co., 1910.

This is the tenth edition of a work originated by the late W. J. Wolsham, with such extensive changes by the new authors that it is practically a new treatise. It is a compact, and as fairly complete a work as could well be condensed into one volume, covering surgical pathology and operative surgery. It has in its discussions of pathology much of the thoroughness which makes some of the German treatises so valuable, and, in the parts on operative indications and technic, the brevity, completeness and clearness which characterize English and American works. The arrangement of subjects is neither wholly anatomic nor wholly by regions, but a compromise, the blood-vessels, nerves and muscles, and bones and joints each occupying separate chapters. The rest of the book is arranged by regions, *i. e.*, extremities, head, spine, neck, chest, abdomen, stomach, intestines, etc., each division forming a complete article. In some departments the material has been condensed almost too much, as in the short sections on hernia and goiter.

The book has been brought well down to the present year in pathology and operative practice, including the various serum reactions, radium therapy, cystoscopy, ureteral surgery, and the newer methods in intestinal suture. The writers often omit credit to foreigners in describing their methods, a fault of which French and German authors are equally guilty. Mr. Gask has contributed a chapter on hematology and many valuable plates and photographs, mainly from specimens in St. Bartholomew's Hospital. Besides some 700 illustrations in the letter-press, there are 48 full-page colored plates and skiagraphs. Among the other plates are several showing gross sections of renal tumors photographed in colors, and one in colors showing the local curative effect of radium applied to a facial nevus.

My Personal Experience with Tuberculosis. By Will M. Ross, Stevens Point, Wis. Paper. Price, 50 cents. Pp. 64. 1910.

This little brochure is full of practical information for the lay reader about tuberculosis and how the victim of the disease should go about it to be cured. The author, from practical experience, has a most intelligent conception of the subject and presents it in an intelligible way, stating the direct and indirect causes, how to recognize them, gives proper caution about fake cures and fake treatment, recognizes that the open-air and good food treatment is the proper one, emphasizes the value of rest, cautions the victim about the use and abuse of exercise, gives an excellent diet list, shows the value of living by schedule, tells of things to be avoided, sets out the necessity for preventive measures, the care of the sputum, warns against the dangers of the convalescent stage, which he says is the most difficult stage, and says that at least five years of careful regimen should be observed before considering oneself cured. We have seen no more practical or more sensible pamphlet from a layman than this and none of more educational value in the fight against tuberculosis.

The Bacteriologist's Aid to Memory (A Handy Reference Sheet for the Laboratory). By J. W. S. Seccombe, M.R.C.S., Captain, Royal Army Medical Corps. Paper. Price, 3 shillings 6 pence. London: John Bale, Sons, and Danielsson, Oxford House, 83 Great Titchfield St., Oxford St. W.

This is a large sheet, 3¼ by 3¾ feet, on which are recorded the cultural characteristics on a large number of media, the morphology, the reaction to Gram's stain and miscellaneous properties of thirty-nine different bacteria. Brief remarks re added on the *Amœba dysenteriæ*, Leishman's body and the rypanosomes. Spaces are also left blank, presumably for he addition of the results on other media. Although the chart s not asserted to be exhaustive, omissions of certain phenomena, ike the reaction of the staphylococci, streptococci and other rganisms to the Gram stain, make it less useful. The conenience, however, of having the large number of characterstics of the more common organisms on one large page vill undoubtedly appeal to most laboratory workers.

SOME COMMON REMEDIES AND THEIR USE IN PRACTICE. By ustace Smith, M.D., Fellow of the Royal College of Physicians. loth. Price, $1.25 net. Pp. 112. New York Paul B. Hoeber, 1910.

This little book treats of the clinical use of such common drugs as tartar emetic, oil of turpentine, iron, the alkalies, pium, sodium salicylate and some antispasmodics. While not denying the superiority of the newer methods of treatment in arious troubles, the author emphasizes the fact that in the emedies named we have sure weapons for fighting many of the onditions with which the practitioner comes in contact daily, nd that more study and attention should be given to their clinical use. For these drugs many uses are given which are ot mentioned in the ordinary text-book and which are at ariance with the usual conception of their use in certain nstances. The book contains clinical observations of value, nd suggests a more careful study of common remedies.

## Medicolegal

### Sufficient Evidence of Publicly Professing to Practice Medicine

The Supreme Court of Iowa says, in the case of State vs. Yates (124 N. W. R. 174), that one witness testified that the defendant said he was healing the sick and curing people. Another witness said that he applied to the defendant for reatment for an arm injured by a severe fall on the sidewalk, nd was told by the defendant: "Take off your coat, and I vill cure you, and it will be all right when you leave here," fter which the defendant worked at him for twenty minutes. A third witness testified that he got acquainted with the defendant at a boarding house, and heard him talk with people about the business he was in: "He talked about treating people. He told that he rubbed people and cured them. He said that he was treating people any place he went. He did not say how many people he treated, nor name, nor describe the treatment he gave his patients." This witness said that he applied to the defendant for treatment, and was told that he (the witness) "had a healing in his throat," which the defendant rubbed, and said he could relieve. The defendant gave him treatments, but he got no relief. Subsequently, in regard to payment, the defendant told this witness that he was n the habit of charging $5 for three treatments. The witnesses who testified to being treated said that the defendant did not use medicine or surgical instruments. The court thinks that there was enough evidence to sustain a conviction for publicly professing to practice medicine and to cure and heal within the general rule stated by this court in State vs. Heath, 125 Iowa, 585.

### Duty of Injured Person to Prevent Accumulation of Damages

The Supreme Court of Alabama says, in Birmingham Railway, Light and Power Co. vs. Anderson (50 So. R., 1021), a personal injury case brought by the latter party, that, in general, it is the duty of one injured by the negligent act of another to exercise an ordinary degree of care and prudence to prevent the accumulation of damages. Where his injuries are personal, he is bound to take such care of them as a reasonably prudent person would in like circumstances, and can only recover such damages as would have been sustained had such care been taken. He must employ such medical or surgical aid as ordinary prudence would require under the circumstances. If the contention is that his injury was aggravated by negligence, the burden is on the defendant to show that fact in mitigation of damages.

If the injured person resorts to medical or surgical aid, consulting such a physician or surgeon as a reasonably prudent man would, and follows the treatment prescribed, certainly he discharges every duty he owes to the wrongdoer. Whether the duty rests on one who has suffered personal injury to submit himself to a surgical operation for the purpose of effecting a cure, and thus limiting damages, must depend on his judgment exercised in good faith.

The court thinks that a correct and reasonable rule for such cases is stated in Blate vs. Third Avenue Railroad Company, 44 App. Div. 163, 60 N. Y. Supp. 732, where it is said: "While the person who inflicts the damage has the right to say that sure and safe means to diminish the evil results of the accident must be used, that is the extent of his right. Whether further means should be resorted to is for the plaintiff to determine. In making that determination the plaintiff has the right to consider the nature of the means used to effect a cure and the possible or probable effect on himself. He has to determine for himself whether he is to resort to those means in view of those considerations." And further: "The jury, in getting at the damages, are to say, not only what they are, but whether the means used by the plaintiff to reduce the damages were such as an ordinarily prudent man would use. They cannot say that he should or should not have taken the advice of any particular physician, nor that he should have obtained any particular kind of treatment."

A requested instruction of the jury was correct which charged them that it was the duty of the plaintiff not to aggravate his injuries by his own neglect, and to use reasonable care to cure his injuries.

### Sufficiency of Contract to Pay Physician—Visiting List as Evidence

The Supreme Court of Mississippi says that in Hardenstein vs. Brien (50 S. R., 979), a suit by a physician against an administrator of the estate of a Mrs. Harper, deceased, one witness testified that Mrs. Harper said that she had paid the physican nothing for services for about 16 or 18 years previously, but that in the last illness, running over many months, he had come to see her so often by day and night, any hour in the night he was sent for, that he must be paid for this; that the obligation was too great to be passed over. Another witness testified that one day she said to him that she wanted to pay him something for his services, as he had been good and kind to her, and said to him: "Make out a bill for me, Doctor," to which he answered: "Oh, no, Mrs. Harper; I cannot make out a bill; I don't want to, because you are the widow of a physician, and I won't think of doing such a thing." Referring to it again, she said: "Have you made out that bill?" and he said: "No; I have not made out any bill." Then she said: "I want the thing settled right now; have you made out any bill?" To that he answered: "No; I told you I was not going to make out any bill," and she said: "I want to give you something; will a thousand dollars do?" His reply was: "I would not think of asking that much." Again, she said: "How will $500 do?" and he said: "All right, I will take that."

This constituted a distinct contract, supported by a valuable consideration, namely, the services in the last illness. The effort to show that the amount Mrs. Harper agreed to pay Dr. Hardenstein for services to her in her last illness, that is, the sum of $500, was a gift merely, was preposterous, under the testimony.

Another physician testified that the customary and reasonable charge for a visit of a physician in the city was $2.50. The visiting list of the plaintiff contained no amount, but set out the dates of his visits, and the number of them. It was true that, when he first made this "visiting list," he had no intention of charging Mrs. Harper anything, and the entries in that list were not, at that time, made with a view of charging her. But, from the moment he made the contract with her to accept $500 for all his services during her last illness, he of course relied on these entries from that time forward as showing the dates of the visits and number of them, and the list was competent for that purpose from and after the making of the contract. He should have been permitted to recover on the testimony in this case to the extent of the contract, to-wit, $500.

### Examination of Urine as Evidence of Cellulitis—Damages in Case of Second Amputation Even Though Made by Mistake

The Court of Civil Appeals of Texas says, in Houston and Texas Central Railroad Company vs. Hanks (124 S. W. R., 136), a personal injury case brought by the latter party, that the immediate consequence of his injury was a crushing of the foot, which after a considerable period of great suffering resulted in an amputation of one of the toes. This not giving relief, after a longer period of increased suffering, with complications setting up which threatened the most serious consequences, a second amputation was made, taking off the foot and part of the leg below the knee.

On the trial, the testimony of a physician was admitted in evidence, to the effect that he has examined the urine of the plaintiff and found that the kidneys were involved. This was objected to on the ground that there was no pleading to sustain any injury to the kidneys. But it appeared from the record that, after the amputation of the toe, cellulitis developed, which, it was claimed, rendered the second amputation of the foot and part of the leg necessary. It also appeared that when the objection was made to the admission of the physician's testimony, the plaintiff's counsel made the statement that no damages were claimed for any injury to the kidneys, but that this evidence was offered only as symptomatic of the cellulitis. The testimony of the physician was that the condition of the urine indicated that the cellulitis was very severe, which was the condition relied on to show the necessity for the second amputation. The trial judge specially instructed the jury not to allow any damages for injury to the kidneys. Under these circumstances, the court is of the opinion that the objection to the testimony was without merit.

Nor does the court consider that there was any error instructing the jury: "If you believe that the plaintiff in the selection of the physician or surgeon who treated him, and who amputated his leg, used 'ordinary care,' even though you may believe the surgeon made a mistake in the matter of amputating his foot, the plaintiff would be entitled to recover for the loss of his foot if you believe from all the evidence and the instructions herein given that the defendant company was responsible for the original injury, and that the loss of his foot was a natural and probable result of such injury."

A verdict for $10,500 was rendered in the plaintiff's favor, which, under the circumstances first above stated, is not deemed excessive; and judgment therefor is affirmed.

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# *Current Medical Literature*

## AMERICAN

Titles marked with an asterisk (*) are abstracted below.

### Medical Record, New York

*April 30*

1 *The Alcohol-Injection Treatment of Trifacial Neuralgia. W. M. Leszynsky, New York.
2 The Question of Hysterical Fever. L. A. Levison, Toledo.
3 *Angioneurotic Edema. A. D. Rockwell, New York.
4 Cocainism. T. D. Crothers, Hartford, Conn.
5 Migrain, Periodical Vomiting, and Epilepsy: Periodical Bloody Vomit. O. Lerch, New Orleans.
6 Specialism in Medicine; Is it Overdone? T. J. Hillis, New York.
7 Necessity for Scientific Medical Nomenclature. A. Rose, New York.

1. **Alcohol Injection Treatment of Trifacial Neuralgia.**—There is no good reason to-day, says Leszynsky, why a patient should be subjected to a cutting operation, when the alcohol injection is equally, if not more, efficacious in the majority of cases. This form of treatment when successfully applied is virtually surgical nerve resection without the resulting scar. He believes that in every obstinate case of trifacial neuralgia the alcohol injection treatment should be tried before operation is undertaken. He gives histories of fifteen patients treated successfully by him.

3. **Angioneurotic Edema.**—Rockwell cites a case of angioneurotic edema in which the trouble was brought on by cold or by touching anything cold. Heat was also unpleasant to the patient. Galvanism combined with general tonic treatment produced a cure.

### New York Medical Journal

*April 23*

8 The Statistics of Cancer. T. A. McGraw, Detroit.
9 The Contractile Elements in the Connective Tissue. Wright, New York.
10 *Circumscribed Motor Paralysis and Cutaneous Anesthesia Following Injury of the Cerebral Cortex. W. M. Leszynsk New York.
11 Diagnosis of Acute Mastoiditis by the General Practitione L. Saunders, New York.
12 *Simplified Method of Staining Fuchsinophile and Gramophil Forms of Tubercle Bacilli. F. Proescher, Pittsburg.
13 Prevention of Blindness. F. P. Lewis, Buffalo, N. Y.
14 Rectal Anesthesia. J. H. Cunningham, Boston.
15 A Cystoscopic Study of the Cerebrospinal Fluid in Genera Paresis. S. Stern, Philadelphia.
16 Flatulence. G. M. Niles, Atlanta, Ga.

10. **Injury to Cerebral Cortex.**—A man was struck on th head by a brick which had fallen six stories. The injur must have involved primarily the neighborhood of the lef paracentral lobule, producing at first paralysis below th knee, which was subsequently associated with anesthesia Hysterical sensory impairment superimposed on the traumati organic lesion could safely be excluded. There were no indications of involvement of the peripheral neuron. Hence Leszynsky concludes that the present conditions are directly attributable to the injury (probably laceration and hemorrhage) o the superior portion of the precentral and postcentral gyri This case is unique, he says, inasmuch as the traumatism i analogous to a physiologic experiment on the cerebral cortex the motor and sensory impairment being limited to the dista portions of the lower extremity. Cases of paralysis of the le or foot alone, due to a cortical lesion, are rare. In nearly al of the recorded cases, the cutaneous sensory disturbanc accompanying lesions of the postcentral convolution has bee confined to the upper extremity.

12. **Staining of Tubercle Bacilli.**—Proescher is using the following method: Smears are boiled for one-half minute an sections of tissue are allowed to stand for 15 or 20 hours i a solution containing 4 parts of carbolfuchsin (1 gram fuchsi in 10 c.c. of 96 per cent. alcohol and 90 c.c. of 5 per cent. carbolic acid water) to 1 of carbolgentian violet (10 c.c. saturated alcoholic gentian violet solution in 90 c.c. of 5 pe cent. carbolic acid water). From this the slides are dried o filter paper, immersed in Lugol's solution for 2 minutes decolorized in a solution of alcohol, 50 parts; acetone, 5 parts; nitric acid, 3 parts; washed in water and counte stained with weak methylene blue solution. Counter staining is not absolutely necessary in sputum smears, the granules being easily seen in the pale pink background. The specimens prepared by this method are very satisfactory. The granules appear deep or black violet and the bacilliary body red. Many of the granules are surrounded by red halo. Proescher believes that the combination of acetone, alcohol and nitric acid is preferable to acetone, alcohol, hydrochloric and sulphuric acids for differentiation.

### Boston Medical and Surgical Journal

*April 28*

17 Modern Dietetic Principles: Their Practical Application. W. G. Thompson, New York.
18 *Clinical Aspects of Pulmonary Embolism. G. G. Sears, Boston.
19 *Blood Pressure in the Toxemias of Pregnancy. R. M. Green, Boston.
20 Importance of the Vertical or Articular Processes of the Vertebra in the Production of Congenital Scoliosis. Z. B. Adams, Boston.

18. **Pulmonary Embolism.**—The pathologic records of the Boston City Hospital, according to Sears, show that pulmonary embolism and infarction are fairly common postmortem findings since they were present 106 times in 3,006 autopsies, about 3.5 per cent. How frequently such cases appear in ordinary practice does not admit of statistical expression. The unusual number recently seen by Sears after attention had been particularly called to the subject by the occurrence of two or three striking instances, has raised a question as to the frequency with which they are overlooked, because their possibility is not considered in making a differential diagnosis. Some cases must necessarily escape detection because they cause no symptoms; others because they are terminal events occurring when the patient is already in a serious condition, if not *in extremis*, and the symptoms are confounded with those

of the primary disease; but too many remain undiagnosed because the attention is fixed on certain prominent phenomena or group of phenomena instead of on the whole clinical picture as presented by the history and the physical signs. Diagnosis rests on the sudden development of pulmonary symptoms, more or less intense, associated with circulatory disturbances, which may vary from a slight elevation of the pulse to those of serious cardiac failure, combined with the presence of a possible source of embolism either in advanced cardiac disease or in a venous thrombosis or a phlebitis.

The most characteristic symptoms are dyspnea, cough with bloody expectoration and pain, but the suddenness of its onset alone gives the first distinctive significance. The other two are so infrequent that their absence is of little importance. The discovery of physical signs of consolidation in the lungs may be of assistance in diagnosis, though a large infarction may lead to error by suggesting a pneumonic process. The chief difficulties of diagnosis arise through such a grouping of symptoms that other conditions are simulated, and, while the association of symptoms may vary greatly, certain types may be recognized which may resemble one of the following conditions: cardiac asthma, acute dilatation of the heart, angina pectoris, pneumonia and pleurisy, phthisis, bronchitis and neuralgia.

19. **Blood Pressure in Toxemias of Pregnancy.**—Green differentiates the toxemias of pregnancy as follows: 1. Eclampsia is a toxic condition dependent primarily on the development of the fetus, manifesting itself by general and renal signs. This may be of varying grades, impending or mild, acute or severe, and fulminating or fatal. Each grade presents a definite clinical picture and is associated, the first with a moderate, the second with a marked, the third with an extreme increase of blood pressure. In the first two the symptoms disappear and the blood pressure falls after delivery. In the last the blood pressure rises and the disease progresses to a rapidly fatal termination. The blood pressure seems definitely related to the type of case, and its observation should be of value in prognosis and treatment.

2. Chronic nephritis is a toxic condition occurring during pregnancy from the inability of a previously damaged kidney to meet the new work thrown on it, but independent of any toxin of fetal origin. In such cases the toxemia is relieved by delivery, but the cause is not removed and the high blood pressure and evidence of renal disease remain as future warning signals. In addition there are the non-toxic renal conditions complicating pregnancy, but differentiable, if necessary, by their persistently low blood pressure, and finally the non-toxic albuminuria of purely mechanical origin. This differentiation of types of toxemia of pregnancy is incomplete, since there are well-recognized clinical forms not here represented, notably post-mortem eclampsia and the pernicious vomiting associated with liver necrosis and jaundice or other biliary symptoms. Green expects to continue his observations to determine the facts of blood pressure in such cases and to complete the classification of the toxemias as indicated thereby.

### Lancet-Clinic, Cincinnati

*April 16*

21 Veratrum Viride. J. H. Landis, Cincinnati.
22 The Basel Nomenclature: Its Use in the Schools at Present. E. M. Baehr, Cincinnati.

*April 23*

23 Etiology of Sterility. J. W. Rowe, Cincinnati.
24 Methods of Teaching Materia Medica and Therapeutics. G. W. Spencer, Cleveland.
25 The Passing of the Old Medical College Building of the University of Louisville. R. V. Gilbert, Louisville, Ky.

### Virginia Medical Semi-Monthly, Richmond

*April 8*

26 Nerve Suture. J. S. Horsley, Richmond.
27 *Unique Case of Fracture of Spinal Process. F. L. Biscoe, Washington, D. C.
28 *Hereditary Criminals—The One Sure Cure. C. V. Carrington, Richmond.
29 Case of Sarcoma of the Ovaries. J. E. Rawls, Suffolk.
30 High Medical Education—An Argument for English Preparatory Training Only. A. Memminger, Charleston, S. C.
31 Secondary Anemia Following Acute Intestinal Indigestion. J. E. Walsh, Washington, D. C.

*April 22*

32 Some Neglected Points in the Examination, Preparation and After-Treatment of Surgical Patients. S. McGuire, Richmond.
33 Interesting Features of Extrauterine Pregnancy. S. Highsmith, Fayetteville, N. C.
34 Roentgenology. R. H. Boggs, Pittsburg.
35 The Prevention of Ophthalmia Neonatorum. J. F. Moran, Washington, D. C.
36 A Plea for Patience During the First Stage of Labor. J. E. Patrick, Farmville.
37 Cause and Treatment of Otitis Media. J. L. Kent, Lynchburg.

27. **Fracture of Spinal Process.**—A boy of 17, while playing in a game of base-ball, and in the act of running, attempted to slide, and in doing so his head came in contact with the leg of the opposing player. There was pain in the region of the neck and slightly restricted motion of the head to the right; pain accompanying movements of the head in this direction. A slight swelling appeared on the back of the neck to the right of the median line and on a level with the fourth cervical vertebra, and pressure on this spot caused pain. There was no evidence of interference with circulation in the vertebral artery; no paralysis and no cutaneous anesthesia. The skiagram showed fracture of the right transverse process of the fourth cervical vertebra, with the fragment pointing upward. The fracture was treated by means of a thick crinoline collar covering the entire neck. Recovery was complete.

28. Abstracted in The Journal, March 19, 1910, p. 995.

### Medical Fortnightly, St. Louis

*April 11*

38 Endothelioma of the Peritoneum. E. E. Montgomery, Philadelphia.
39 Abortion. A. Samuels, Baltimore.
40 Gonorrheal Arthritis. J. V. Shoemaker, Philadelphia.

### Kentucky Medical Journal, Bowling Green

*April 15*

41 Phases of Diseases of the Ear and Throat as Seen by the Pediatrician. P. F. Barbour, Louisville.
42 Influence of Climate on Pulmonary Tuberculosis. J. M. Morris, Louisville.
43 Rational Treatment of Hypertension and Sclerosis of Arterial System. C. Pope, Louisville.

### Northwestern Lancet, Minneapolis

*April*

44 History of the Local Administrative Health Work. A. O. Bjelland, Mankato, Minn.
45 A Notable Typhoid Epidemic at Mankato, Minn. F. H. Bass, Minneapolis.
46 State Associations and the American Medical Association. F. R. Green, Chicago.
47 Conservation of Human Life. H. M. Bracken, Minneapolis.

### Laryngoscope, St. Louis

*March*

48 *Index Medicus (1909) of Otolaryngology.

48. **Index Medicus of Otolaryngology.**—Every progressive otologist and laryngologist who desires to keep abreast of the literature of the subject will find almost a complete library of the work in otology and laryngology of 1909 in this issue. This "Index Medicus" has been divided into two sections, first, bibliography; second, abstracts. The sub-classification of this system is based largely on the nomenclature adopted in recent years by national and international otologic and laryngologic bodies, with such modifications as the editor has seen fit to make in order to elaborate and subdivide the subject matter more definitely.

### Journal Abnormal Psychology, Boston

*April-May*

49 Psychogenetic Convulsions. C. D. Fox, Philadelphia.
50 Hysterical Anesthesia. H. Linenthal, Boston.

### Long Island Medical Journal, Brooklyn

*April*

51 Hyperthyroidism in the Adolescent. F. B. Cross, Brooklyn.
52 Newspaper Medicine. H. Greeley, Brooklyn.
53 Cervical Adenitis. R. Durham, Brooklyn.
54 Transposition of Thoracic and Abdominal Viscera. A. C. Jacobsen, Brooklyn.
55 The Rational Treatment of So-Called Inoperable Uterine Cancer. W. B. Chase, Brooklyn.

### Kansas City Medical Index-Lancet

*April*

56 The Missouri State Conference of Charities and Corrections. G. W. Robinson, Kansas City.
57 Nervous Diseases of Children and their Relation to School Life and Work. J. Punton, Kansas City.
58 Dermatitis Seborrheicum. J. P. Kanoky, Kansas City.

### Therapeutic Gazette, Detroit

*April*

59 Various Therapeutic Measures that Have Been Successfully Employed in the Department of Orthopedic Surgery in the Jefferson Medical College. H. A. Wilson, Philadelphia.
60 Bier's Hyperemia Applied to Suppurative Processes in Dispensary Work. S. W. Moorhead, Philadelphia.
61 *Relation of Digitalis to the Bundle of His. H. A. Hare, Philadelphia.
62 Treatment of Gonorrheal Infections by Antigonococcus Serum. T. C. Stellwagen, Philadelphia.
63 Usefulness of Adrenalin Chlorid in Surgery and Medicine. W. H. Wilder, Birmingham, Ala.

61. **Relation of Digitalis to the Bundle of His.**—Given a patient suffering from circulatory failure due to mitral stenosis, Hare says that it is our duty not only to weigh carefully the import of the tumultuous cardiac sounds but by the use of instruments of precision to determine, if possible, whether there is delay in the transmission of the contraction impulse over the bundle. If such a delay exists, digitalis in doses large enough to cause a distinct sharp cardiac effect is probably capable of prolonging this delay and so doing harm. If in addition to this delay there is a jugular pulse synchronous with ventricular systole, digitalis is still more contraindicated, as it will impair the action of the left auricle, and will still further distend it by stimulating the right ventricle. If given at all, the dose of digitalis must be so small as to produce a very gradual effect, one which will not consist in decreasing auricular contraction through vagal stimulation, but which will gently reestablish general cardiac power. In other words, the question of a proper dose is as important as the choice of the proper drug. Give the patient absolute rest, unload the portal system by free purgation, use venesection to relieve stasis, and give rapidly-acting diffusible stimulants for a few hours until the coordination of cardiac movement is reestablished. When this is done, then small doses of digitalis, arsenic and iron may be used to restore cardiac tone.

### Gulf State Journal Medicine and Surgery and Journal of the Southern Medical Association, Mobile, Ala.

*April*

64 Pretabetic Laryngeal Spasm. H. H. Martin, Savannah, Ga.
65 Demonstration of a New Quick Typhoid Agglutination Test. C. C. Bass and J. A. Watkins, New Orleans.
66 Feeding in the Second Year. J. R. Snyder, Birmingham.
67 Prevention and Treatment of Peritonitis. S. W. Johnston, Vicksburg.
68 Herniotomy Under Local Anesthesia. C. W. Allen, New Orleans.
69 Immunizing Treatment of Hay-Fever. W. Scheppegrell, New Orleans.
70 Operation for Cure of Fibroid Tumors of the Uterus without Removal. C. Hamilton, Rome, Ga.
71 Pellagra at Nashville, Tenn. J. M. King. Nashville.

### American Journal of Surgery, New York

*April*

72 *Surgery of the Knee Joint. J. G. Sherrill, Louisville.
73 Ionic Surgery in Cancer of the Mouth and Nose (continued). G. B. Massey, Philadelphia.
74 Retained Membranes: Shall we Remove them at the Time of Labor? G. L. Brodhead, New York.
75 Weak Foot. I. D. Steinhardt, New York.
76 A Case of Cut-Throat. G. G. Cotton, Rock Rapids, Iowa.
77 Operation Card for Patients: A Suggestion. F. C. Yeomans, New York.

72. Abstracted in The Journal, Jan. 8, 1910, p. 151.

### University of Pennsylvania Medical Bulletin, Philadelphia

*March*

78 Experiments with the Alkaloids of Aspidosperma. H. C. Wood, Philadelphia.
79 *Isolation of *Bacillus Typhosus* from the Blood of Typhoid Patients. H. A. Schatz, Philadelphia.
80 Histologic Structure of Spontaneous Subcutaneous Tumors in Mice, Including Five Cases of Multiple Tumors. J W. Hunter, Philadelphia.
81 Studies in Neurofibrils. S. D. W. Ludlum, Philadelphia.
82 *Unusual Retinal Lesions in Association with Incipient Pulmonary Tuberculosis. G. E. deSchweinitz and T. B. Holloway, Philadelphia.
83 Left Homonymous Hemianopsia Occurring in a Worker in Lead. W. C. Posey and C. B. Farr, Philadelphia.

79. **Isolation of Bacillus Typhosus from the Blood.**—Schatz found that *B. typhosus* and *B. paratyphosus* are most numerous in the peripheral circulation during the first week of the disease, and blood cultures made during that time are, as a rule, positive. The isolation of the organisms in question can be accomplished by a very simple method, from 12 to 15 drops of blood being sufficient; the time required for this work need not exceed 18 hours. The method employed b Schatz was essentially that outlined by Peabody in Th Journal, Sept. 19, 1908.

82. **Unusual Retinal Lesions in Pulmonary Tuberculosis.**— The first patient seen by de Schweinitz and Holloway gav evidence from clinical signs of incipient tuberculous lesions a the apex of the right lung, that the diminished blood pressur was probably in association with this condition of affairs, an that although no tubercle bacilli were discovered in th sputum, for, indeed, there was no expectoration, von Pirquet' test was actively positive. In the central region of the retin of the right eye, there was a large whitish exudate whic almost surrounded the macular area. Down and out from th disk in the mid-zone of the fundus there was an irregula exudation of similar color and caliber. Far out in the tempora periphery there was a large irregular lesion having a slightl yellowish tinge in some places, and scattered through it wer a number of fine hemorrhages and small vascular dilatation but it was not possible with any degree of accuracy to determine whether or not these were associated with arterial o venous twigs. One large dilatation was spherical in form an was connected with a venous branch, while near it there wer three similar but smaller spherical dilatations, lighter i color and almost certainly attached to small arteries. Clos by these lesions there was a wide spheroidal patch, from whic projected a whitish spur. Scattered along the course of th upper temporal vein there were numerous small hemorrhages

It was difficult to study the peripheral lesions on accoun of their anterior situation, and because of the patient's inability to maintain extreme outward rotation. In no place i the retina, however, was it possible to demonstrate with certainty an arteriovenous communication. The left eye wa perfectly normal, except that there was a slight tortuosit of the retinal vessels.

The physical examinations of the second patient indicate incipient tuberculosis of the right apex; the von Pirquet tes was positive; there was some intestinal autointoxication, an a diminished systolic blood pressure. Above the macula region and lying beneath the retinal vessels of the right ey was a crescentic patch of white exudation. A branch of the superior temporal vein crossed the circinate lesion, and from a point which corresponded to the center of the concavity gave off a branch which descended perpendicularly. On this branch near its origin there was a spheroidal dilatation of the vein and just below, after the vein had passed beneath a horizontal temporal artery, there was an atrophic area of about the same size, into which protruded a sac-like dilatation of the wall of this vein. Near this atrophic area were a number of small hemorrhagic spots. On the branches of the lower temporal artery which proceed toward the macula a number of aneurismal dilatations, associated with near-by punctate hemorrhages, were visible.

Similar dilatations were noticeable on a vertically descending artery, while the inferior temporal vein, some distance from the disk, also showed irregularities in caliber. The macular region was granular, and the seat of a fine discreet pigmentation, while the vascular terminals about this region were unduly prominent, tortuous, and markedly irregular in their caliber. The peripheral field was normal; in its center there was a scotoma. The left eye was normal in all respects.

### Louisville Monthly Journal of Medicine and Surgery

*April*

84 Male Cystoscopy and Ureteral Catheterization. L. Frank, Louisville.
85 Myelitis. B. C. Frazier, Louisville.

### American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

*April*

86 *Incidence and Clinical Causes of the Toxemias of Pregnancy. E. P. Davis, Philadelphia.
87 *Seventy Cases of Extrauterine Pregnancy Treated Surgically. J. W. Bovée, Washington, D. C.
88 Treatment of Non-Puerperal Pelvic Infections of the Upper Pelvic Zone. R. T. Gillmore, Chicago.
89 Unilateral Twin Tubal Pregnancy. E. H. Pool and F. Robbins, New York.
90 *Erythema Multiforme Gestationis. W. S. Gottheil, New York
91 Teratoma Strumosum Thyroideal Ovarii. F. Proescher and J. A. Roddy, Pittsburg.
92 Vicarious Epistaxis in the Menopause. D. I. Macht, Baltimore.

93 Treatment of Eclampsia a Century and a Half Ago. F. J. Carroll, Summerville, S. C.
94 An Estimate of the Value of Pasteurized and Sterilized Milk in the Dietary of Children. LeG. Kerr, Brooklyn.

86. **Toxemias of Pregnancy.**—Recognizing toxemia as the cause of the altered nervous conditions present Davis says one naturally avoids the mistake of drugging these patients with opium, chloral, bromids, or coal-tar derivatives to quiet the nervous system. Prompt elimination, with hydrotherapy, is most efficient in treating these conditions. The state of the nervous system is the practitioner's most valuable index of the patient's danger, and the sensitiveness of this instrument of warning we scarcely desire to lessen.

87. **Extrauterine Pregnancy.**—The 70 cases of extrauterine pregnancy encountered by Bovée are classified anatomically as follows: Tubal, 67 (1 complicated by uterine pregnancy; tubo-ovarian, 1 ; and retroperitoneal (at full term), 2. The various complications met were uterine fibroids, pyosalpinx, suppuration of the area adjacent to the injured tube, suppuration in coagulated blood that well filled the pelvis, cardiac disease, certain of exhaustion from repeated efforts to check hemorrhage by attempts to clean out the uterus before admission to the hospital, nephritis, embolus, pulmonary tuberculosis, prodigious hemorrhage, and infection of various kinds from introduction of instruments of different varieties into the uterus in attempting to produce abortion. In one case of full-term retroperitoneal pregnancy, death occurred from pulmonary tuberculosis 13 days after operation.

The fetus was found in 33 cases, including 2 full-term specimens. In the 9 patients operated on by the vaginal route alone the fetus was found in 2. In 11 operated on by the vaginal and abdominal routes combined the fetus was removed through the vagina in 5 and through the abdominal opening in 4, while in but 20 of the 48 early pregnancy cases in which the abdominal route alone was used was a fetus found. The fetus was found behind the uterus 8 times, 4 times in the tube, in 1 partly in the tube and partly in a sac, in 2 in a small sac near the tube, once in a cavity formed by the tube and ovary, once on top of the bladder, and once on top of the uterus. In 13 it was found in the lower part of the abdominal cavity. In 2 instances the fetal structures were apparently safely implanted among loops of intestine. In one of these a living four-months' fetus was found. In this instance the history did not clearly determine the date of expulsion from the ruptured tube.

The 13 deaths in Bovée's work were due to the following causes: Secondary hemorrhage, 2; profuse hemorrhage at time of operation caused by beginning by the vaginal route, 3; shock, 3, and 1 each from pulmonary tuberculosis (thirteenth day), embolus (48 hours), exhaustion (ninth day), angina pectoris, and infection. The treatment, Bovée says, is always surgical. The routes employed for operation in his series were the abdominal, 50 times, the vaginal 9, and the vaginal immediately followed by the abdominal or *vice versa*, 11 times. In one of them there was a positive contraindication to the abdominal route as the five-months' fetus and sac were lying behind the uterus, infected and discharging through a fistula into the vagina. Here dilatation of the fistula and emptying the pelvic abscess cavity with drainage was the sole procedure worthy of consideration.

90. **Erythema Multiforme Gestationis.**—A patient, otherwise healthy, had been 4 times pregnant since her marriage in 1900. Each time when the pregnancy had been a few weeks old she had a severe attack of erythema multiforme, the lesions in the early parts of the outbreaks being papular and erythematous, later of the iris form and vesicular, and finally bullous. This eruption persisted during the entire pregnancy and continued for from 4 to 8 weeks postpartum. Three of the attacks have been personally observed by Gottheil.

Treatment, save in so far as it alleviated the pruritus and protected the denuded surfaces, has not been of much effect. On the other hand, termination of the pregnancy and of the postpartum metabolic processes appear in each case to have stopped the outbreak. Gottheil prefers the diagnosis of erythema multiforme to that of dermatitis herpetiformis on account of the characteristic appearance of the eruption in the three outbreaks that he has seen.

### Colorado Medicine, Denver

*April*

95 Serodiagnosis of Syphilis. W. W. Williams, Colorado Springs.
96 Tuberculosis in Childhood. G. R. Pogue, Greeley.
97 The Newer Tuberculin Tests: Their Diagnostic, Prognostic and Therapeutic Values. S. Simon, Denver.
98 Is Cancer on the Increase? W. W. Grant, Denver.

### Mississippi Medical Monthly, Vicksburg

*April*

99 Amebic Enteritis. A. J. Jagoe, Clarksdale.
100 Psychotherapy. J. W. Unger, West Point.
101 Promiscuous Prescribing. W. S. Derrick, Goodman.
102 Diagnosis of Chronic Interstitial Nephritis. M. L. Pollard, Thornton.

### Pennsylvania Medical Journal, Athens

*April*

103 Raynaud's Disease with Polycythemia and Enlargement of the Spleen: Gangrene of Both Toes: Amputation of Both Legs. R. M. Goepp, M. B. Miller and J. A. Kelly, Philadelphia.
104 *Nitrogen Metabolism in a Case of Raynaud's Disease with Cystinuria T. S. Githins, Philadelphia.
105 *Symptomatic Raynaud's Disease. J. H. Musser, Philadelphia.
106 *Symptomatology and Pathology of Anemia of the Central Nervous System. S. Leopold, Philadelphia.
107 *Nervous Symptoms in Leucemia and Hodgkin's Disease. A. H. Woods, Philadelphia.
108 Conclusions Based on a Study of 385 Cases of Perineal Prostatectomy. H. M. Young, Baltimore.
109 Indications for Surgery of the Prostate. J. B. Deaver, Philadelphia.
110 Mastoiditis in Diabetes. B. H. Potts, Philadelphia.
111 Metastatic Gonorrheal Conjunctivitis. W. Zentmayer, Philadelphia.

104. **Raynaud's Disease.**—A patient ill with Raynaud's disease was put on a fixed diet and the urinary nitrogen was studied. He showed extreme irregularity from day to day, but no marked peculiarity in the total excretion of any normal constituent. On two days, however, there was found a large amount of cystin; no putrescin or cadaverin was present. The presence of cystin points to the occurrence of putrefaction, almost always intestinal. The coincidence of cystinuria with Raynaud's disease or gangrene is, so far as can be found, unique.

105. **Symptomatic Raynaud's Disease.**—There are many features in Musser's case which point to the possibility of it being one of pellagra. The patient, aged 22, a seamstress, was perfectly well until four years ago, when striking her finger with a needle it became swollen and painful. The other three fingers became affected and the first finger had to be amputated. Since that time the condition has affected both arms and both legs, the chest and the trunk. The parts affected become white and red, and at times black. The five toes of the right foot were amputated because of sloughing after turning black. There have been attacks amounting almost to hysteroepilepsy. The other most important symptoms are occurrence of sore mouth and enteritis. Musser is not prepared to say that it is a case of pellagra. One other condition suggested is leprosy, the deformities being much like those seen in the latter stages of leprosy.

106. **Anemia of the Cerebral Nervous System.**—Leopold analyzes the changes found in the brain and spinal cord of six cases of anemia of the cerebral nervous system, and also discusses some of the more unusual clinical symptoms in eight cases. The chief features noted were, the variableness in the character of the symptoms, the difficulty of diagnosis when a girdle zone of hypesthesia and pain are present, the presence of muscular atrophy in one case, the sudden onset in another, developing within twenty-four hours. The unusual features in the pathology of the cord consisted in the unilateral involvement of the left cross pyramidal tract in one case and the involvement of the medulla at its upper level in another. No one case was similar to the other, all showing varying stages in the process, from island-like foci in the posterior and lateral columns to diffuse degenerations of the entire cord. The changes found in the cerebral cortex consisted in cloudy swelling, chromatolysis and migration of the nuclei and congestion of the blood vessels. The mental changes consisted in varying pictures from stupor and mental apathy to emotional irritability and delirium.

107. **Nervous System in Leucemia and Hodgkin's Disease.**—Woods believes that the nervous findings are much alike in the two conditions. In leucemia, headache and neuralgic pains are almost constant. Anesthesia, hyperesthesia, and various paresthesiæ, such as burning and numbness, mark involvement of particular nerve trunks and tracts. Paralysis of cranial

nerves are more common than of the nerves of the extremities. Several patients had paraplegia from the navel downward. Tragic endings in apoplexy with hemiplegia, rapidly developing coma and death, may be the first announcement of cerebral trouble. Visual defects, from mere scotomata up to complete blindness, are frequently mentioned. The pupils vary in size and reactions. Troublesome tinnitus aurium and some degree of deafness occur. Dyspnea is frequent. Mental disturbances appear, as melancholia, maniacal outbreaks, delirium and coma. The priapism sometimes mentioned may have been due to vascular stoppage or to nervous involvement. One patient developed severe and long-continued herpes of a large portion of one side of the face. The symptoms in Hodgkin's disease referable to the nervous system in the cases noted were chiefly paralyses from pressure, lancinating pains, spasms of muscles, wasting, various sensory effects of pressure on nerve trunks, and the list that one would expect from involvement of cranial nerves. Herpes zoster was noted in one case.

### Albany Medical Annals

*April*

112 The Differential Diagnosis Between Cancer and Ulcer of the Stomach and Gall Bladder Disease. D. Guthrie, Sayre, Pa.
113 Acute Suppurative Otitis Media. A. H. Brownell, Oneonta, N. Y.
114 High-Frequency Electricity in Treatment of Adenitis, Prostatitis, and Local Affections. W. G. Lewi, Albany.
115 Anterior Poliomyelitis and its Treatment by Muscle Training. J. M. Berry and B. van Denbergh, Troy, N. Y.

### Texas State Journal of Medicine, Fort Worth

*April*

116 Limitations of the Use of Bismuth Paste in Chronic Suppurative Diseases. E. G. Beck, Chicago.
117 Sympathetic Ophthalmia. J. O. McReynolds, Dallas.

### Journal of Advanced Therapeutics, New York

*April*

118 Phototherapy in Arterial Tension. T. D. Crothers, Hartford, Conn.
119 A Few Therapeutics from Observation of *X*-Ray Treatments. W. H. Miek, Omaha, Neb.
120 The Vacuum Method of Relieving the Overworked Senile Heart. M. M. Johnson, Hartford, Conn.

### Alabama Medical Journal, Birmingham

*April*

121 Simple and Diphtheritic Sore Throat. B. D. Sibley, Birmingham.
122 Summer Complaints. G. L. Servoss, Fairview, Nev.
123 Cause and Treatment of Headaches. J. W. Knowlton, Birmingham.
124 *Splenectomy in Splenic Anemia—Recovery. E. M. Prince, Birmingham.
125 Abscess of the Spleen. U. J. W. Peters, Birmingham.

124. **Splenectomy in Splenic Anemia.**—Prince's patient, a male, aged 26, had had periodic attacks of malaria. Six years ago he was rejected by military authorities in his native country on account of a large tumor in the left side. Up to this time the patient knew nothing of the existence of the tumor. Operation was advised and done under gas-oxygen anesthesia. Many adhesions were found between the spleen and the abdominal wall, and on breaking these up a pocket of pus was found. The adhesions throughout were found to be plentiful and the bleeding was very troublesome. The patient was on the table 32 minutes; the pulse went up from 60 to 140. Adrenalin was given while he was on the table, and continued after he was removed to his bed; camphorated oil and strychnin were also given. He had marked cyanosis for ten hours after the operation, and oxygen was given continually during this time. The foot of bed was also elevated and other measures for shock used. Convalescence was uneventful, except for two elevations of temperature due to formation of stitch abscesses. The spleen weighed 56 ounces. The blood picture of this case is interesting: Before operation, red cells 2,400,000; leucocytes, 1,700; hemoglobin, 50 per cent. About 2 months after operation it was leucocytes 8,000; red cells, 5,000,000; hemoglobin, 90 per cent. Eight months after operation the patient is in perfect health, has gained 53 pounds in weight, and is at work as a day laborer.

### Journal of the Tennessee State Medical Association, Nashville

*April*

126 Scientific and Economic Sides of the Meat Question. C. P. McNabb, Knoxville.
127 Multiple Sclerosis, Report of Case. S. T. Rucker, Memphis.
128 Histories of Neurotic Families. J. Lanski, Chattanooga.
129 Sarcoma of the Ovary. E. C. Demoss, Nashville.

### Journal of Ophthalmology and Otolaryngology, Chicago

*April*

130 Shortening of an Ocular Muscle by Tucking. H. W. Woodruff, Joliet, Ill.
131 Removal of the Middle Turbinated Body. J. J. Kyle, Indianapolis.

### Journal Michigan State Medical Society, Battle Creek

*April*

132 Final Results of Thyroidectomy for Exophthalmic Goiter. M. Ballin and J. W. Vaughan, Detroit.
133 Winter Cholera. M. L. Holm, Lansing.
134 Direct Transfusion. W. E. McNamara, Trimountain.
135 Phases of Chronic Diseases of the Stomach, Duodenum, Gall-Bladder and Appendix. W. T. Dodge, Big Rapids.
136 Clinical Importance of Blood-Pressure Observations. B. A. Shepard, Plainwell.
137 *Hydronephrosis and Pus-Producing Infections of the Urinary Tract Complicating Pregnancy. C. M. Davis, Lansing.

137. Abstracted in The Journal, Oct. 9, 1909, p. 1224.

### Northwest Medicine, Seattle

*April*

138 The Wassermann Reaction with a Laboratory Demonstration. A. P. Lensman, Seattle.
139 *The Result of 1,289 Wassermann Examinations. R. C. Matson, Portland.
140 *Latent Syphilis Diagnosed by the Wassermann Test. G. Baar, Portland.
141 *Early Diagnosis of Typhoid by Blood Cultures. E. P. Fick, Seattle.
142 Hyoscin in Obstetrics. G. Parrish, Portland.
143 Problems of State Tuberculosis Sanatoria. E. R. Kelley, Seattle.
144 Pathology of the Appendix. C. G. Sabin, Portland.

139. **The Result of Wassermann Examinations.**—In Matson's examination of 44 cases of primary syphilis, 95 per cent. were positive; in 55 cases of secondary syphilis 50 per cent. were positive; in 27 cases of tertiary syphilis 80 per cent. were positive; in 44 cases of latent syphilis 68 per cent. were positive; in 36 cases of visceral syphilis 88 per cent. were positive; in 3 cases of cerebral syphilis 100 per cent. were positive; in 2 cases of spinal syphilis 50 per cent. were positive; one case of hereditary syphilis was positive; in 6 cases of tabes 5, or 83 per cent., were positive. In his examinations of 112 individuals suffering from typhoid, tonsillitis, carcinoma, paraplegia, neuralgia, optic atrophy, neurasthenia, cerebral hemorrhage, simple anemia, pernicious anemia, aortic aneurism, herpes preputialis, ulcers of the glottis, cirrhosis of the liver, asthma and other diseases, including 9 cases of carcinoma, all were negative, except one case of liver carcinoma, in which the history was indefinite. He also applied the test in 600 inmates of the Oregon State Insane Asylum; 20 per cent. gave positive reaction, while only 5 per cent. gave specific histories, and none presented visible or clinical manifestations; 15 per cent. of 51 cases of dementia præcox were positive; 16 per cent. of 151 cases of paranoia were positive; 25 per cent. of 40 cases of chronic mania were positive; 20 per cent. of 26 cases of chronic melancholia were positive; 20 per cent. of 62 cases of dementia were positive. General paralysis invariably gave positive reactions.

140. **Latent Syphilis and Wassermann Test.**—Baar reports 26 cases, in 21 of which the Wassermann test was made either to corroborate the diagnosis already made, or to prove the necessity of antisyphilitic treatment, in cases in which no diagnosis of syphilis could be made, in spite of all appreciation of present knowledge of clinical symptoms of latent syphilis. The test proved positive in 19, while it was negative only in 2, one being a patient with meningitis spinalis lumbalis, who had been treated with iodid up to the time of the test; the other being a patient with bilateral hydrothorax, who had been subject repeatedly to specific treatment. Baar finds that these results prove beyond a doubt the advantage of the chronic intermittent over the symptomatic treatment.

141. **Diagnosis of Typhoid.**—Fick has successfully employed the ammonium oxalate method of diagnosing typhoid by means of blood cultures in 25 cases. Not a single negative report subsequently proved a clinical typhoid and, conversely, every positive report was clinically proved correct. Fick has modified the Epstein technic, first in the amount of blood taken; 10 c.cm. is preferable and is obtained in all cases in which it can be. Second, it does not seem necessary to plate

and culture out positive blood specimens. This takes considerable time, which is a factor of great importance to the physician, so he believes that it is sufficient to call an organism *Bacillus typhosus*, when it is Gram-negative, is actively motile, and can be made to agglutinate with typhoid agglutinative serum.

### Vermont Medical Monthly, Burlington

*April*

145 Rational Treatment of So-called Inoperable Uterine Cancer. W. B. Chase, Brooklyn.
146 Evolution of Medicine and Some Important Problems Especially Important Connected with it. H. C. Tinkham, Burlington.
147 Sudden Death in its Medicolegal Aspects. C. F. Dalton, Burlington.

### Journal Oklahoma State Medical Association, Muskogee

*April*

148 The Trend of Modern Therapeutics and Treatment of Disease. A. B. Leeds, Chickasha.
149 The Relative Pathology Complicating a Displaced Uterus. G. N. Ballard, Oklahoma City.
150 Laryngeal Tuberculosis. H. H. Wilson, Shawnee.
151 Ozena. J. R. Dale, Hobart.
152 Why Statistics are Important. C. L. Reeder, Tulsa.
153 Morphinomania. C. Blickensderfer, Shawnee.

### Detroit Medical Journal

*April*

154 Operative Treatment of Fractures. F. B. Walker, Detroit.
155 An Enormous Waste of Human Life. G. H. Cunningham, New York.
156 Various Catheters for the Eustachian Tube. E. Amberg, Detroit.
157 Medical Inspection of Public Schools. J. W. Van Derslice, Oak Park, Ill.

### Montreal Medical Journal

*April*

158 The Ancient Greek Schools of Medicine. A. G. Nichols, Montreal.
159 Demonstration of Trypanosoma Cruzi. J. L. Todd, Montreal.
160 Sacroiliac Strain, Tendon Transfer, Double Congenital Club-Foot. J. H. Nutter, Montreal.
161 *Unusual Rupture of an Aneurism. J. McCrae, Montreal.

161. **Unusual Rupture of an Aneurism.**—The subject of McCrae's report, a male negro, aged 43, died suddenly of a ruptured aneurism. A porter by occupation, he had been troubled for 3 weeks by pain in the chest, beginning between the shoulders and coming to the front; it was burning in character, rather intense and severe on coughing or sneezing. Swallowing, also, was accompanied by the same pain. For an hour after eating, the pain seemed increased, and occasionally he felt as if he were choking; by reason of the pain he could not sleep on his right side. No sign of aneurism was elicited. He suddenly developed dyspnea, slowing respirations and a pulse that was barely perceptible. Presently his breaths were drawn at minute-long intervals, and he died, not before it had been observed, however, that the right chest became flat on percussion from the apex to the fifth rib in front. Death followed the onset of dyspnea in about 15 minutes.

The autopsy, 5 hours after death, showed that an aneurism of the transverse arch of the aorta, not bigger than 3 by 2.5 cm. had ruptured; the blood had passed behind the esophagus and had dissected up the parietal pleura on the back wall of the thorax, throwing the lung forward, until a clot, weighing more than 1,200 grams, had nearly filled the available space of the right chest. The ascending limits of the aorta were not enlarged. The left carotid took origin from the innominate artery. The left subclavian opened 1 cm. beyond this. At the level of the left subclavian opening, on the posterior wall, was an area 3 cm. in both diameters, surrounded by a distinct ridge and forming a shallow sacculation in which the wall was fairly transparent from extensive loss of the media. At the upper and outer angle of this area was a somewhat slit-like opening 2.5 cm. transversely by 8 mm. in the long axis of the vessel opening into a false aneurismal sac, lying to the left side of and in front of the aorta. This sac was 3 cm. from side to side and 2.5 cm. in height. An opening from this sac (the final rupture) led into the tissues behind the esophagus, and was in direct connection with the huge retropleural hemorrhage. In the first part of the descending aorta was another puckered area showing loss of media. Below this the aorta showed little change, save frequent fatty plaques of the intima.

### The Ophthalmic Record, Chicago

*April*

162 Cataract Resulting from Electric Shock. J. M. Robinson, Duluth, Minn.
163 Herpes Zoster Ophthalmicus. E. A. Clarke, Canon City, Colo.
164 Recovery from Chronic Sympathetic Ophthalmitis with Normal Vision. G. Friebis, Philadelphia.
165 Congenital Cataract of an Unusual Type. W. Zentmayer, Philadelphia.

### Buffalo Medical Journal

*April*

166 Dividing Professional Fees. M. D. Mann, Buffalo.
167 Gunshot Lesions of the Spinal Column. J. P. Creveling, Auburn, N. Y.
168 The Medical Man of China. J. A. Rafter, Buffalo.

### Journal of Nervous and Mental Disease, Lancaster, Pa.

*April*

169 *An Isolated Case of Family Periodic Paralysis. M. Mailhouse, New Haven, Conn.
170 *Anesthesia and the Lack of it in Diagnosis of Spinal Cord Tumors. P. Bailey, New York.
171 *Spinal Cord Tumor Observed within a Period of 10 days: Observations of the Behavior of the Cerebrospinal Fluid. W. C. Krauss, Buffalo.
172 *Henoch's Purpura with Spinal Cord Symptoms. G. W. Howland, Toronto, Canada.
173 *Ankle Clonus in a Case of Major Hysteria. J. D. Heard and T. Diller, Pittsburg.

169. **Family Periodic Paralysis.**—Mailhouse agrees with J. J. Putnam that inhibition plays a prominent rôle in the development of the symptoms and that the paralytic phenomena are similar to those produced by curare. In a case observed by him there was a striking diminution in the amount of magnesium salts eliminated by the urine, hence possibly retention in the blood or muscle and hence inhibition at such times when the resisting power is lowered. Another phenomenon pointing in the same direction is that of the coagulating blood in this case, calcium salts being considered now as promoting blood coagulation. When a specimen of blood was taken from the ear, clotting took place so rapidly that it was with much difficulty that the pipette could be drawn full of the fluid. An examination of the digestion of the patient in the interval between attacks also showed an abnormality. Gastric digestion was imperfect in that he was unable to care for the connective tissue that he consumed in his meat. Examination of the urine showed the presence of creatin in not inconsiderable quantities. There also appeared a positive reaction in tests for protein (there were no casts) and in two instances for protcose, i. e., like a Bence-Jones albuminuria, as is found in cases of osteomalacia.

170. **Anesthesia in Spinal Cord Tumors.**—A careful investigation of all the cases in the literature has convinced Bailey that no tumor of the spinal cord can be diagnosticated with sufficient certainty to justify operation if cutaneous sensibility is intact. In three patients seen by him many things pointed to a tumor being present, but the subsequent course of the disease proved that in all probability there was no tumor, and certainly that operative interference would have resulted in nothing but embarrassment to those recommending it. The chief point of clinical difference at the time the symptoms were at their height was the absence of anesthesia. In all, one or both knee-jerks were lost and the pain was the exact counterpart of pain as it may occur in tumor; in two, there was distinct local atrophy; in one there was fibrillary twitching. In none was the spinal complex complete; sphincter paralysis was absent and paralysis was slight or wanting. But these symptoms are frequently missing when the tumor is demonstrable; not so anesthesia. Consequently, it seems to Bailey, as though absence of anesthesia should constitute the final contraindication to operation. To this general rule there is one notable exception, namely, the tumors of the cauda equina growing in the sacral canal. These slowly growing and excrutiatingly painful tumors can exist for months or even years without interfering with sensibility. A number of such cases successfully operated on, are on record. In all of these preoperative diagnosis was certified to by excessive tenderness and sensitiveness in the sacrum, demonstrable by pressure externally and per rectum. This latter symptom, namely, bone tenderness, is so pronounced in these cases that the patients cannot lie on the back or stand the slightest jar

without extreme pain. The bone tenderness is so characteristic that it in itself is almost sufficient to justify the diagnosis of tumor. Coupled with some spinal symptoms, the diagnosis is certain even in the absence of anesthesia.

171. **Spinal Cord Tumor.**—In these three cases a phenomenon was observed by Krauss during the course of these operations, which he thinks may be of some service in locating the situation of the tumor after the dura has been exposed, provided the tumor is intradural, or intramedullary. The increased bulk of the cord produced by an intradural or intramedullary tumor will completely occlude the lumen of the dura and interrupt the passage or flow of the cerebrospinal fluid. There will result a damming back of the cerebrospinal fluid cephalad of the constriction and an increased tension will follow. Caudad of the constriction (tumor) the cerebrospinal fluid will be diminished in tension, owing to the cutting off of the normal tension and circulation. Incising the dura cephalad of the tumor will cause a spurting of the cerebrospinal fluid, a jet being projected from several inches to a foot or more in height, according to the tension or force of the fluid; while caudad of the tumor, an incision into the dura, will cause only a welling out of the fluid from the aperture, flooding the field of the operation without any force or tension. Observing the behavior of the fluid, the surgeon will know whether he is cephalad to the tumor or caudad to it, and can make his incision accordingly.

172. **Henoch's Purpura with Spinal-Cord Symptoms.**—The problems to be solved in Howland's case are (1) whether it is a case of purpura in which spinal-cord hemorrhages are present, and is a painful elbow due to a local joint hemorrhage or to the spinal hemorrhage? Or (2) is it a case of syringomyelia accompanied by its quota of sensory signs and joint conditions? And (3) what relation is there between the syringomyelia and the purpura?

173. **Ankle Clonus in Major Hysteria.**—The diagnosis of hysteria in this case rested on the character of the convulsive seizures; the spinal and submammary tenderness; the mental condition of the patient; the paralysis of the left arm; together with the rapid improvement of all these symptoms under treatment appropriate for major hysteria. This improvement was coincident with the enforcement of a treatment consisting of strict isolation and systematic and studied neglect of the patient. As to the ankle clonus, when this patient was first examined, the evidence strongly pointed to the diagnosis of hysteria, except for the presence of the ankle clonus, which is always looked on as an expression of an hysterical state; and this view is borne out by the complete disappearance of the ankle clonus two weeks later, during which period the patient had in every way greatly improved and by complete recovery under a strict antihysterical treatment.

### Archives of Ophthalmology, New York

*March*

174 Value of the Serodiagnosis of Syphilis in Ophthalmology. M. Cohen, New York.
175 Quinin-Blindness: Report of Cases. G. E. de Schweinitz, Philadelphia.
176 Ophthalmia Nodosa. F. W. Marlow, Syracuse.
177 Surgical Treatment of Trachoma by the Combined Excision of Heisrath and the Tarsal Resection of Kuhnt. H. W. Wootton, New York.
178 Enucleation Necessitated by Getting into the Conjunctival Sac the Point of an Aniline Pencil. J. Dunn, Richmond.
179 A Modified Sideroscope. W. K. Gzn, Leyden, Holland.
180 Adenocarcinoma of the Pituitary Body: Case Under Observation for Four and a Half Years: Pathologic Examination. W. T. Shoemaker, Philadelphia.

### Journal of Biological Chemistry, Baltimore, Md.

*March*

181 The Purin Ferments of the Rat. A. Rohde and W. Jones, Baltimore.
182 The Salts of Cytosine, Thymin and Uracil. V. C. Myers, New Haven, Conn.
183 *The Presence of Iodin in the Human Pituitary Gland. H. G. Wells, Chicago.
184 The Physiologic Behavior of Iminoallentoïn and Uroxanic Acid. T. Saiki, New Haven, Conn.
185 *Nylander's Reaction. M. E. Rehfuss and P. B. Hawk.
186 *Nylander's Reaction in Presence of Mercury or Chloroform. M. E. Rehfuss and P. B. Hawk.
187 Effects of Soluble Salts on Insoluble Phosphates. J. E. Greaves, Salt Lake City, Utah.

183. **Iodin in the Pituitary Gland.**—Wells concludes from his own analyses and others that the presence of iodin as a normal constituent of the pituitary gland must be regarded as unproved. The positive results obtained by Schnitzler and himself have been due to the therapeutic presence of iodin, although it still remains possible that the hypophysis may at times contain appreciable quantities of iodin due to a selective affinity for iodin similar to that of the thyroid.

185. **Nylander's Reaction.**—Rehfuss and Hawk regard Nylander's reaction as one of clinical value. In the examination of over 700 urines there were only 2 instances in which Nylander's reaction was positive and Fehling's test negative. The statement of Kistermann that any protein-free urine of acid reaction which gives a negative Nylander's test may safely be said to be sugar-free in a clinical sense seems to be justified. In making the test, 5 c.c. of the urine under examination are placed in a test tube, 0.5 c.c. of Nylander's reagent are added and the tube placed in a boiling water bath for five minutes. The authors use a large porcelain bath, the bottom of which forms an admirable background for observing and comparing the various color changes. The tube is then removed and examined before a white background. A black end-reaction indicates the presence of a reducing sugar in the urine under examination.

186. **Influence of Mercury on Nylander's Reaction.**—Rehfuss and Hawk have investigated the influence of mercury in the urine on Nylander's reaction and find that it has no inhibitory action, either when added to the urine in small amounts (0.005 per cent.) or when excreted in the urine by syphilitic patients receiving mercury. They also found that the presence of chloroform in the urine will not prevent the obtaining of a positive Nylander's reaction when dextrose is present. In case an excessive amount of chloroform is present, it should be removed by subjecting the urine to a preliminary boiling for a period of five minutes before applying the test.

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## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### Lancet, London

*April 16*

1 *Localization of Cerebral Function, based on the Clinico-Pathologic Study of Mental Disease. J. S. Bolton.
2 Surgery of the Lymphatic System. W. S. Handley.
3 Lumbar Puncture in Meningitis and Allied Conditions. G. S. Landon.
4 *Sterilization of the Skin by Alcoholic Solution of Iodin. H. F. Waterhouse and W. S. Fenwick.
5 Embolism of the Abdominal Aorta with Mitral Stenosis and Thrombosis of the Pulmonary Veins; Death; Necropsy. S. P. Phillips.
6 Bile-Producing Primary Malignant Tumor of the Liver ("Malignant Adenoma"). F. P. Weber.
7 Epidemic. Cerebrospinal Meningitis, Treated by Flexner and Jobling Serum; Recovery. J. J. Weaver.
8 *Occurrence of a Peculiar Protein in the Urine. J. Henderson.

1. **Localization of Cerebral Function.**—In this lecture Bolton records his observations with regard to the structure and functions of the final type of cortex, the pre-Rolandic or psychomotor. Bolton regards the human cerebrum not as a sensorimotor, but as an intermediate, or associative ganglion, which, on the one hand receives sensorial impressions and elaborates them by processes of association into the physical equivalents of psychic products of high complexity, and which, on the other hand, to a variable extent, controls, selects and coordinates certain of these physical complexes whose function is to set in action the lower motor centers. On this functional basis he would divide the cerebrum into pre-Rolandic and post-Rolandic portions, the former of which possesses controlling and executive functions, and the latter receptive and elaboratory. He subdivides the pre-Rolandic part, or frontal lobe into a posterior or psychomotor area, which is concerned with the evolution of such physical complexes as are necessary to give external expression to the results of cerebral association, and into an interior or prefrontal area which is able to control, select and coordinate certain of the results of post-Rolandic cerebral association, and either to allow these to undergo psychomotor transformation or to inhibit this process. The cortex of the post-Rolandic portion of the cerebrum Bolton regards as consisting of projection areas, of which the visuosensory area is a type, each of which is surrounded by or

possesses in its proximity zones of special association, of which the visuo-psychic region is a type, which zones are hall-marked in function according to their appropriate projection areas; and of intermediate cortex in which are fused and elaborated the results of special processes of association.

4. **Sterilization of the Skin.**—Waterhouse employs a 2 per cent. solution of iodin in rectified spirit, painting this solution on the skin 2 hours prior to the operation, the preliminary shaving and any necessary washing of the skin having been performed some time earlier in order to allow the skin to dry. For greater security in important cases, he repeats the painting one hour later on the operating table. In radical operations for hernia in small boys when it is always difficult to keep the penis under cover he invariably paints the whole organ and scrotum with the 2 per cent. iodin solution and leaves them uncovered with a full sense of security. In cases in his experience in which it appeared probable that the skin incision might be infected by discharge from a hollow viscus —e. g., colotomy and cholecystotomy—it was found advisable to paint the line of incision with the 2 per cent. iodin solution each time the wound was dressed. The incision was then covered by dry cyanid gauze. Though this frequent painting might be carried out twice daily for from 4 to 6 days no interference with the healing of the incision was noted. Comparing the iodin method with that still in common use, Fenwick is convinced that the former is more easily carried out, takes less time, is less unpleasant to the patient, and gives better results than the latter.

8. **Peculiar Protein in the Urine.**—The diagnosis in the case cited by Henderson was doubtful. The striking features were anemia, cachexia and wasting, and the condition of the urine. Careful and repeated examination of the patient failed to detect any evidence of malignant disease, the presence of which was at first suspected. There was no evidence of disease of the bones. The blood presented the characters of a fairly severe secondary anemia. The case was regarded as one of chronic nephritis of some standing, and probably of the "diffuse" variety, accompanied by a considerable degree of anemia and a peculiar urinary condition.

To the naked eye the urine presented nothing abnormal. Its color was pale amber, its reaction distinctly acid, and it had a specific gravity of 1015. On subjecting it to the ordinary heat test for albumin an abundant white curdy precipitate was at once obtained. This precipitate was completely dissolved on the addition of one drop of 20 per cent. acetic acid. The precipitate had no resemblance to that of phosphates, which is frequently found on performing this test. On contact with nitric acid in the cold, a copious, thick, white precipitate was obtained which disappeared on warming, to reappear on cooling. From these results it was evident to Henderson that he had to deal with a protein other than ordinary globulin. All the ordinary protein tests were obtained—marked biuret, Millon, marked Liebermann, and tryptophane reactions, and on boiling the urine with lead acetate alkaline solution it blackened. The protein was precipitated by all the ordinary reagents which precipitate proteins—viz., trichloracetic, tannic, and picric acids, etc. The protein was fully precipitated on half saturation with ammonium sulphate. After filtration this precipitate was dialyzed against running water, and the product left in the sausage paper behaved quite as in the original urine. The ammonium sulphate precipitate was further dialyzed till free from salt, and it again showed the same properties. The material obtained from this salt-free product, either taken down to dryness *in vacuo* at a low temperature or precipitated with alcohol and dried, was found to be a whitish-grey powder, ash-free, and when in solution it possessed all the properties of the original body in the urine.

### British Medical Journal, London

*April 16*

9 *Ideals in Psychiatry. E. Goodall.
10 *Cardiolysis. H. T. Bewley.
11 The Board of Trade Sight Tests. A. R. Galloway.
12 Phlyctenular Diseases of the Eye. S. Stephenson and J. A. Jamieson.
13 *Series of Cases of Congenital Ophthalmoplegia Externa (Nuclear Paralysis) in the Same Family. H. Cooper.
14 Mucocele of the Nasal Sinuses, and its Complication by Optic Neuritis. R. Fullerton.
15 Successful Rhinoplasty In an Old Woman. S. White.
16 Inequality of the Papilledema In Certain Cases of Increased Intracranial Pressure. R. L. Ley.
17 Ossification in the Brachialis Anticus Following Injury to the Elbow. W. Tyson.
18 *Case of Poisoning by Camphorated Oil. F. Barker.
19 *Treatment of Varicose Veins of the Leg by Avulsion. H. D. O'Sullivan.
20 *Surgery of the Lymphatic System. W. S. Handley.
21 *A New Aspect of the Effects of Boric Acid as a Food Preservative. J. Bernstein.

9. **Ideals in Psychiatry.**—The chief features of a psychiatric clinic, according to Goodall, consist in suitably designed wards and exercising grounds, an out-patient department, rooms for hydrotherapy and electrotherapy, massage and gymnastics, a lecture theater, a consultation room for the medical staff, where cases, as admitted can be discussed, and lines of treatment or research agreed on, where also there can be medical reunions, with discussion of recent developments in research. There should be a medical library, a laboratory for clinical examinations, and others for pathology, biochemistry, and experimental psychology. The medical staff should consist of a director without administrative duties (but the steward who performs these would be subordinate to him); of paid assistants in good proportion; resident physicians on an honorarium, attached for training in mental disorders and who would assist in the work generally, experts in charge of the different laboratories. Qualified medical men should be allowed to conduct research in these. There should be the usual lectures and clinical and laboratory courses for students, courses and demonstrations for postgraduates, and courses in forensic psychiatry for the instruction of law students. The nurses should be in high proportion, say one to five patients. It is highly important that as few legal formalities as possible be observed in regard to the admission, detention and discharge of patients, and that the director be accorded a free hand in respect to treatment. In all cases of doubt and difficulty the psychiatric clinic would have the advantage of the advice and assistance of those in charge of the other clinics of the university or hospital. Such a clinic would be the natural training place for students who proposed to take up mental disorders as a specialty, and for those who seek a diploma in psychiatry, such as many are now advocating.

10. **Cardiolysis.**—When the ribs or sternum, or both, are distinctly moved up by each systole of the heart, Bewley holds that this movement may be looked on as the heart's prayer for more room. One cannot cure the leak nor wholly remove the internal extra work, though by rest and appropriate treatment we endeavor to lessen it; but the external extra work Bewley thinks can be removed by giving the heart space enough from before backward so that it may not be forced to move unyielding structures at each systole—that is to say, by resecting several ribs, and, if necessary, a part of the sternum. For such cases he believes cardiolysis will be found of very great use and if the condition of the patient is sufficiently good, one should seriously consider the advisability of the operation.

13. **Congenital Ophthalmoplegia Externa.**—In Cooper's case the patient's father, grandfather and great grandfather were born with the same affliction but had no squint, the paralysis being complete save for the internal ocular muscles. His father had two uncles, one affected, one not. He had two aunts, neither of whom was affected. The father also had two brothers, one affected, one not. The patient also had a younger brother who was affected slightly. Three other brothers and one sister are well. It is interesting to note that no female member of the family has been affected; no case has ever developed after birth, but all have been congenital. The ptosis has been almost complete in all cases, except that of the patient's youngest brother, who is the first of the series in whom the affliction has appeared in a lesser degree.

18. **Poisoning by Camphorated Oil.**—A female child, 1 year and 4 months old, swallowed at least half an ounce of camphorated oil, so that about one dram of solid camphor in solution was probably taken. The father found the child with its mouth full of oil. He promptly turned her over and she vomited. One hour later she vomited again. The eyes gradually became staring, she moaned, and convulsions began. She was then given some salt and water, and vomiting occurred. Barker saw her two hours after she took the oil.

There were marked convulsions, with irregular breathing, flushed face and profuse perspiration; the pulse was rapid, the pupils were moderate and equal in size and inactive to light, and there was no conjunctival reflex. The breath did not smell of camphor and the mouth was not sore. The baby was put in a hot bath, with cold cloths to the head. The stomach was washed out with warm water until quite clear of oil and débris. Remedies seemed to have little or no effect. Chloral hydrate (3 grains) by the rectum, small doses of potassium bromid by stomach tube and by rectum, hot milk and water similarly given, and brandy were tried.

About midnight Barker gave chloroform cautiously, and with even the most sparing dosage, the fits were to some extent controlled. But they became periodic and in the intervals the breathing was so markedly stertorous, and the face more cyanosed than before, that he ceased giving the anesthetic. While giving chloroform the fits were heralded by a flickering of the eyelids, the spasms spreading to the abdominal and back muscles, and then to the extremities. There was usually at first conjugate deviation of the eyes and drawing of the mouth to the left, followed by the turning of the eyes and mouth to the right. On ceasing the chloroform the convulsions became more continuous but were not so violent, the breathing was decidedly better, and the face a more natural color. Later there was a slight return of conjunctival reflex. About 5 a. m. collapse set in and the baby died about 12 hours after having taken the oil.

19. **Treatment of Varicose Veins.**—The novelty of O'Sullivan's operation lies in the complete extirpation of the affected veins through small incisions. In one case about 25 inches of vein were removed through incisions of the total length of 7 inches.

20. Published in *The Lancet*, April 16, 1910.

21. **Boric Acid as a Food Preservative.**—Bernstein found by experimentation that boric acid to the extent of 0.3 per cent. (20 grains to the pound) prevents objective decomposition, such as is detectable by smell. If objective putrefaction has commenced, it inhibits further changes of this kind possibly leading to diminution in the smell. It has a marked selective activity on the various organisms, inhibiting the growth of yeasts and organisms of the *proteus* group, and possibly other harmless saprophytes, though not the organisms of the *coli* group. Hence it seems obvious with the aid of boric acid, stale meat can be used for the making of sausages, and even meat that has already started decomposing. If, then, to such meats Gaertner's bacillus has obtained access, it will have had several days at least in which to grow, and, what is important, unhindered by the prolific saprophytes.

### Medical Press and Circular, London

*April 6*

22 Clinical Forms of Scapulalgia. Prof. Kirmisson.
23 Pregnancy and Labor After Ventrofixation of the Uterus (Hysteropexis Hypogastrica). W. Sinclair.
24 Suction Treatment of Mammary Abscess. J. M. Graham.
25 The Muriated Iodobromin Baths of Salsomaggiore, North Italy. J. J. Eyre.

### Clinical Journal, London

*April 6*

26 Mediastinal Tumors. J. H. Abram.
27 Diagnosis of Talipes or Clubfoot. R. P. Rowlands.
28 Geographic Distribution and Etiology of Cancer. F. M. Sandwith.

### Journal of Obstetrics and Gynecology, London

*March*

29 *After-Results of Abdominal Operations on the Pelvic Organs: 1,000 Consecutive Cases. A. E. Giles.
30 *Intramural Cysts of the Uterus. E. B. M. Haarbleicher.
31 Results of Ligature of the Fallopian Tube in the Rabbit. A. L. McIlroy.
32 Carcinoma of the Cervix of a Prolapsed Uterus in a Patient aged 86, with a Contact Carcinoma on one Labium: Vaginal Hysterectomy. H. R. Andrews.

29. **After-Results of Pelvic Operations.**—Giles holds that operations for the removal of the appendages of one side have no detrimental effect on the general health, the cases in which ill-health could be traced to the operation numbering not more than 5 per cent. About 90 per cent. of his patients were actually better after the operation than they were before. The relief of symptoms is well-marked after these operations, he states; about 87 per cent. of patients were free from pain afterward or experienced less pain than before the operation, while a further 5 per cent. were free from pain for a time and developed pain later from other causes. Dyspareunia, dysmenorrhea, menorrhagia and leucorrhea were relieved in a number of cases. The removal of the appendages of one side was followed by irregularity, diminution or cessation of menstruation in a small number of cases (8) and in 6 there followed a diminution of the sex instinct. Giles says that the chances of the disease developing in the remaining ovary and tube are not very great; such a recurrence took place in about 10 per cent. of cases. Consequently, in view of the definite value of the remaining ovary and tube it is always worth while preserving them when they appear to be healthy. Soiling of the peritoneal cavity with the contents of an ovarian cyst favors the occurrence of later disease and therefore the interests of the patients are safeguarded by the removal of these cysts (however large) intact, without tapping.

The remaining tube and ovary have a considerable value from the point of view of subsequent pregnancy; 33 patients, or 25 per cent. of the married women under 40, became pregnant. Of these 19 had full-term deliveries (some repeated), 5 had miscarriages, and 7 had extrauterine pregnancies, while 2 were pregnant when seen. It would appear that after the removal of appendages of one side there is greater liability to the occurrence of extrauterine pregnancy than is the case with normal women. The 19 women who had full-term pregnancies, bore, between them, 25 children; and 4 more children were born at full term when ovariotomy was undertaken during pregnancy. A study of the sex of these children in relation to the side on which the remaining or active ovary was situated definitely refutes the theory that the right ovaries produce boys and the left ovaries produce girls; it shows clearly that there is no relation between the side from which the ovum is derived and the sex of the child.

30. **Uterine Cysts.**—Haarbleicher shows that intramuscular cysts of the uterus do exist. They are found in all parts of the uterus—near the cornua, near the fundus, in the body, at the junction of the body and the cervix, and in the cervix or the left or right, in front or behind. The volume of these cysts is usually so small that they are only found as objects of pathologic interest at a postmortem, or in specimens removed by operation, but apparently they may reach a considerable size and attract clinical attention. The epithelium may be well-defined, ciliated or non-ciliated columnar cells, or represented merely by a smooth internal lining or not demonstrable at all. They may contain pavement epithelium. These cysts may be of congenital origin. They may be acquired. The frequent occurrence of abundant hemorrhage noticed in some cases is probably to be attributed as suggested by Robert Meyer to concomitant vascular lesions (arteriosclerosis, fatty degeneration and increased blood-pressure). The cysts do not appear to be in any case the only pathologic conditions present, though in some cases the condition of the appendages is not mentioned. In no case reported was the character of the cyst diagnosed before operation or death. In 2 cases the patient's life might have been spared had the condition been recognized directly the abdomen was opened.

### Quarterly Journal of Medicine, Oxford, Eng.

*January*

33 Importance of Optic Neuritis and Retinal Hemorrhages in Diagnosis of Chronic Septic Endocarditis. A. W. Falconer.
34 Partial Heart-Block Occurring During an Attack of Acute Rheumatism. J. Cowan, J. W. McLeod, and A. R. Paterson.
35 Rat-Bite Fever. T. J. Horder.
36 Case Showing a Greatly Lengthened A-C Interval with Attacks of Partial and of Complete Heart-Block, with an Investigation of the Underlying Pathologic Conditions. T. W. Griffith and A. E. Cohn.
37 Cerebrospinal Fluid in the Infective Diseases of the Meninges, Especially Cerebrospinal Fever. A. Connal.
38 Intermittent Hydrarthrosis. A. E. Garrod.
39 Lactic Acid in Metabolism. J. H. Ryffel.

### Annales de Gynécologie et d'Obstétrique, Paris

*March, XXXVII, No. 3, pp. 129-192*

40 Influence of Breast Feeding on the Final Stature. (Influence de l'allaitement sur le développement définitif de la taille.) V. Wallich.
41 Obstetric Importance of Septum in Vagina. (Le cloisonnement du vagin au point de vue obstétrical.) C. Sauvage.
42 Ovarian Ingrafts. (Les greffes ovariennes.) L. Sauvé.

### Archives Générales de Chirurgie, Paris

*March, IV, No. 3, pp. 221-330*

43 Perivascular Symmetrical Lipomas. L. Delrez.
44 *Parathyroid Treatment of Fractures. L. Morel.
45 Traumatic Lesions of the Meniscus of the Knee. (Lésions traumatiques des ménisques articulaires du genou.) P. Gorse.
46 Colopexy to Complete Operations for Uterovaginal Prolapse. P. Mauclaire.

44. **Parathyroid Treatment of Fractures.**—Morel concludes from a long series of experiments on rabbits and cats that parathyroid gland in substance or parathyroid extract has a notable influence on the growth of bone and on the healing of fractures in the young organism, but that there is no influence apparent in this respect in older individuals. The results observed suggest, he says, that the healing of fractures in children might be promoted by parathyroid treatment.

### Archives des Maladies du Cœur, etc., Paris

*March, III, No. 3, pp. 145-208*

47 *The Third Heart Sound. (Quelques remarques sur le troisième bruit du cœur.) W. S. Thayer.
48 Apparatus for Graphic Registration of Arterial Pressure in Health and Disease. (La pression artérielle à l'état normal et à l'état pathologique, mesurée par un procédé graphique.) R. Wybauw.
49 *The Plasmodium of Malaria. (Plasmodies du paludisme.) J. Sabrazès.

47. This article appeared in the *Archives of Internal Medicine*, October, 1909, and was abstracted in THE JOURNAL, Nov. 6, 1909, page 1595.

49. **The Plasmodium of Malaria.**—Sabrazès describes a technic for staining the plasmodia and directs attention to their apparent inability to penetrate into the granulated red corpuscles and the importance of this fact for the regeneration of the blood after the malarial attack.

### Bulletin de l'Académie de Médecine, Paris

*April 5, LXXIV, No. 13, pp. 333-340*

50 Accidental Contamination with Tubercle Bacilli of Meat from Non-Tuberculous Animals. (Rôle des viandes non tuberculeuses dans la diffusion de la tuberculose.) G. Linossier and G. H. Lemoine.

### Grèce Médicale, Syra, Greece

*XII, Nos. 3-4, pp. 5-8. Last indexed April 16, p. 1342*

51 Syphilis of the Spinal Cord Assuming the Form of Lateral Amyotrophic Sclerosis. C. T. Manthos.

### Lyon Chirurgical, Lyons

*April, III, No. 4, pp. 357-482*

52 *Elephantiasis in Cancer and Acute Carcinosis. E. Tédenat and J. Martin.
53 Fractures in the Malleolar Region. E. Destot. Commenced in No. 3.
54 Two Cases of Genu Valgum in the Adult. J. Rebattu and J. Magdinier.
55 Trophic Disturbances in the Legs Consecutive to Old Fracture of the Pelvis. (Troubles trophiques du membre inférieur consécutifs à une fracture ancienne du bassin.) G. Cotte and J. Gaté.

52. **Elephantiasis in Cancer.**—Tédenat and Martin report a case of cancer of the rectum in which the legs and lower part of the trunk developed induration and enlargement suggesting elephantiasis; the patient was a man of 55. The same tendency was apparent in a number of other cases, the clinical and autopsy findings suggesting that when such is observed in coincidence with internal epithelioma it indicates extensive diffusion of the malignant disease, contraindicating operative measures as liable merely to aggravate conditions. In some of the cases the tendency to "pig's skin" with remote scattered nodules was observed with epithelioma of the breast; in another case the indurated edema over the body was secondary to epithelioma of the uterus.

### Obstétrique, Paris

*March, III, N. S., No. 3, pp. 201-288*

56 *Serotherapy of Albuminuria. (Valeur du sérum de sang de la veine emulgente de la chèvre dans le traitement de l'albuminurie gravidique.) R. Daunay and P. Lequeux.

56. **Serotherapy of Albuminuria in Pregnancy.**—Daunay and Lequeux report their experiences with treatment of nephritis by injections of serum derived from the blood taken from the afferent vein of the goat kidney. By this means they hoped to obtain the internal secretion of the kidney. In the three cases reported the effect of the serotherapy in inducing diuresis was marked and the albuminuria diminished while the granulated red corpuscles increased after each injection. The best results were obtained in a case of old chronic, possibly tuberculous, nephritis which had flared up under the influence of the pregnancy. The blood pressure always dropped after the injection but gradually rose again, although never to the same height as before. In the two other cases it proved impossible to arrest the progress of the uremia and the patients died.

### Presse Médicale, Paris

*April 6, XVIII, No. 28, pp. 249-256*

57 *Exophthalmic Goiter and Pregnancy. (Maladie de Basedow et grossesse.) E. Bonnaire.

*April 9, No. 29, pp. 257-264*

58 *Technic and Results of Thymectomy. (Ablation du thymus.) V. Veau and E. Olivier.
59 *Clinical Signs of Enlargement of the Thymus. M. d'Oelsnitz.

57. **Exophthalmic Goiter and Pregnancy.**—Bonnaire reports two cases in which exophthalmic goiter developed during pregnancy. There was first simple enlargement of the thyroid in one case; later, after exposure to chilling, the exophthalmic symptoms became apparent, with sudden paralysis of the right heart entailing pulmonary edema. These alarming symptoms subsided after venesection and delivery was then induced, the pregnancy being almost at term. The uterus retracted normally at first, but three hours later there was threatening hemorrhage until the inertia was conquered by the usual means. Examination a few weeks later revealed persisting dilatation of the right heart, exophthalmos, enlarged thyroid, tachycardia and leucoderma. In the other case the thyroid became suddenly enlarged at the seventh month, threatening suffocation, and there was intermittent tachycardia. Introduction of the inflatable bag into the uterus induced a few contractions and this alone seemed to arrest entirely the tendency to dyspnea. The pregnancy continued to term without further trouble except for several violent attacks of hysteria. There was no exophthalmos, but he regards the case as an unmistakable incomplete form of the Basedow syndrome. The phenomena observed in these cases confirm, he declares, the assumption that the "Basedow accidents" are the result of some neurosis of the sympathetic system or some lesion of the nerve centers. Both the patients had been previously healthy; the first was a iii-para, the other a primipara.

58. **Thymectomy.**—Veau and Olivier give an illustrated description of their technic for subtotal subcapsular thymectomy for hypertrophy of the thymus. They have performed the operation in four cases to date, and this experience, with the cases in the literature, confirm, they state, the facility, the harmlessness and the good results of thymectomy. The questions still pressing for solution are: how can hypertrophy of the thymus be recognized? and, what are the operative indications?

59. **Clinical Signs of Hypertrophied Thymus.**—The functional symptoms and physical signs of enlargement of the thymus are reviewed as observed in six cases. The children were between 6 months and 3 years old; one succumbed before clinical examination during an emergency tracheotomy. In the other cases the enlargement was suspected from the combination of physical signs, and operative treatment in one case and autopsy in another confirmed the assumption. The suffocative breathing differs from that of croup in that the chest changes its shape during inspiration, the sternum protruding, the transverse diameter diminishing and the circumference below increasing. The dyspnea is also exaggerated by reclining and by hyperextension of the head. In some of the cases the first symptoms were those of laryngismus stridulus, so that it is advisable in every case of persisting and intense laryngismus stridulus to examine for possible enlargement of the thymus. The temperature was high in some cases; probably some intercurrent infection had modified the size and consistency of the thymus gland, adding to the natural tendency to trouble from this source. In two cases there was slight persisting cyanosis of the face and in one

abnormal tension in the fontanelle, with constant torpor in both suggesting congestion of the brain and disappearing after thymectomy. The superficial veins in the neck also become engorged as the child cried. An important sign, the author states, is the protuberance of the chest at the manubrium and first two costal cartilages on the right side. This asymmetrical protuberance was very marked in one case and was evident in all. The best way to detect it is to inspect the sternum with the eye at its level, with the child lying on its back, inspection being supplemented by palpation. The finger inserted from above, behind the sternum, relieved the child's breathing in the one case in which this was done, suggesting that this may be useful in diagnosis. With radiography the abnormal shadow was on the same side as the protuberance and dulness. Auscultation is not of much help except in excluding other respiratory affections. Intubation failed to relieve the breathing in the case in which it was done and severe syncope followed. A tendency to syncope was also observed during tracheotomy in another case and it proved fatal in a case reported by Simon in 1902. The venous hemorrhage was exceptionally profuse with these tracheotomies and the inflow and outflow of the air were gentle and noiseless. The tracheotomy, however, answers the purpose even without resection of the thymus sometimes, evidently from relief of the congestion and the changes in the consistency, size and position of the thymus. In the one case in which part of the gland was resected, the amount was too small to explain all the benefit derived, except by assuming the cooperation of the above factors.

### Semaine Médicale, Paris

*April 13, XXX, No. 15, pp. 168-180*

60 Multiplicity of Pathologic Anatomic Changes in Pneumonia with Splenization of the Lung. (Splénopneumonies.) J. Sabrazès.

### Beiträge zur Klinik der Tuberkulose, Würzburg

*XVI, No. 1, pp. 1-69. Last indexed April 23, p. 1414*

61 *The Laws of the Tuberculin Cutaneous Reaction and Its Application in Standardization of Tuberculin. (Das Gesetz der kutanen Tuberkulinreaktion.) V. Ellermann and A. Erlandsen.

62 *Subfebrile Temperature in Diagnosis and Treatment of Pulmonary Tuberculosis. M. Engländer.

63 Practical Experience with the Intradermal Tuberculin Reaction in Pigs and Cattle. (Praktische Erfahrungen mit der intrakutanen Tuberkulin-Reaktion bei Schweinen und bei Rindern.) G. Martin.

64 Combined Technic for Staining Tubercle Bacilli. (Versuche über die zuverlässigste Färbung der Tuberkelbazillen.) S. Hatano.

61. **The Laws of the Cutaneous Tuberculin Reaction.**—Ellermann and Erlandsen have found that the diameter of the papule is proportionate to the concentration of the tuberculin. (Their quantitative, titration method of applying the test was mentioned in The Journal, April 17, 1909, page 1300.) The diameter of the papule increases by 1 mm. with a concentration increasing by multiples of 2, from 2 mm. with 1 per cent. tuberculin to 7 mm. with 32 per cent., and they show how this law can be applied in standardization of tuberculin.

62. **Subfebrile Temperatures in Diagnosis of Tuberculosis.**—Engländer presents evidence to show that the temperature becomes variable as one of the earliest signs of tuberculosis, before there is any other manifestation of the disease. This instability is revealed in the subfebrile temperatures that may be observed during repose and after exercise. He has worked out the temperature standards in health on a number of soldiers and others, accepting as the standard from 36 C. to 36.3, up to 36.6 C. (96.8 to 98 F.) on arising in the morning; 37 C. to 37.2 C. (98.6 to 99 F.) between 10 and 12 a. m.; in the afternoon at 5 p. m., 37.5 C. (99.5 F.). The ideal would be for each person to determine the specific individual standard for his temperature at these times, then it would be easy to recognize any tendency to a subfebrile temperature. It is important to compare the temperature only with the standard for the given hour. Engländer, himself, has a morning temperature of 36.3 C., with a maximum of 37.4 C. in the afternoon. Any increase in these figures for the given hour is pathologic for him, although the figure even then is below the normal standard. He determines the temperature by the urine, regarding this as by far the most convenient and reliable technic for taking the temperature outside of the rectum. (His method was described in The Journal, March 23, 1907, page 1049.) The difference between the urine temperature and the temperature of the axilla parallels that of the rectal temperature, but the urine technic is much easier for the general practitioner.

### Berliner klinische Wochenschrift

*April 4, XLVII, No. 14, pp. 613-660*

65 Nutrient Suppositories instead of Enemas for Rectal Feeding. (Ueber Nährsuppositorien.) I. Boas.

66 Implantation of Periosteum and Bone Flap to Remedy Defect in Femur. (Ueber eine Periost-Knochentransplantation in einen durch Resektion verursachten Femurdefekt.) M. Katzenstein.

67 Vaginal Ovariotomy during Delivery and Simplified Vaginal Cesarean Section; Slitting the Cervix over the Metreurynter. (Metreurynterschnitt.) A. Dührssen.

68 Etiologic Treatment of Obesity. (Neuere Gesichtspunkte bei Entfettungskuren.) G. v. Bergmann.

### Deutsche medizinische Wochenschrift, Berlin

*April 7, XXXVI, No. 14, pp. 641-688*

69 Accumulation of Gas (Air) in the Body, and Treatment. (Ueber Gas-[Luft] Ansammlung im Leibe und ihre Behandlung.) C. A. Ewald.

70 Etiology of Epidemic Poliomyelitis. (Zur Aetiologie der akuten epidemischen Kinderlähmung.) P. Krause and E. Meinicke.

71 *Importance of Diaphragmatic Breathing with Weakness and Insufficiency on the Part of the Heart. (Bedeutung der Zwerchfellatmung für Herzschwäche und Herzinsuffizienz.) T. Rumpf.

72 Action of Mercury and Iodin in Experimental Syphilis. (Wirkung des Quecksilbers und Jods bei der experimentellen Syphilis.) E. Tomasczewski.

73 *Estimation of Secretory Functioning in Roentgen-Ray Examination of the Stomach. (Zur Diagnostik der sekretorischen Funktion des Magens mittels des Röntgenverfahrens.) E. Schlesinger.

74 *Physical Measures in Treatment of Sciatica. (Zur Ischiasbehandlung und zur physikalischen Therapie.) F. Klug.

75 *Treatment of Puerperal Mastitis. M. Hirsch.

76 Suction Hyperemia in Ear, Nose and Throat Disease. A. Eitelberg.

77 Limitations of Cobra-Venom Hemolytic Reaction. (Grenzen der Leistungsfähigkeit der Cobragiftmethode.) W. Beyer.

71. **Importance of Abdominal Breathing in Case of Weakness and Insufficiency of the Heart.**—Rumpf has been teaching for years that greater attention should be paid to regulation of breathing with heart disease. The art of breathing properly should be emphasized; especially in heart disease costal breathing should be suppressed as much as possible and abdominal breathing promoted. Roentgen-ray examinations show that with abdominal breathing the lungs follow the diaphragm downward, with traction on the apex of the heart, pulling it more toward the vertical line. This checks the tendency to dilatation. The Roentgen rays show how the left outline of the heart is drawn inward and down, thus making the left heart smaller, and in some cases also the right. The contents of the abdomen are compressed and that part which can escape the pressure does so. In consequence of this, the contents of veins and lymphatics are forced upward into the chest and the circulation is relieved as the blood from lower regions thus finds its way upward more readily, facilitating the pumping action of the heart. The following relaxation of the diaphragm during expiration aids further in forcing the blood along in the veins—all these factors cooperating to facilitate the heart action. Systematic practice of diaphragmatic breathing is a valuable aid in all cases of cardiac incompetency or weakness with dilatation of the heart or danger of such. With emphysema and obesity, the thorax generally becomes enlarged as breathing is mostly thoracic. These and other facts cited explain, Rumpf declares, the favorable results of underfeeding in many forms of cardiac insufficiency, as with the Karell cure. It is possible that the relief obtained with supports for the heart is due to the resulting compression of the thorax, compelling abdominal breathing. The diaphragmatic breathing can be practiced while the patient is in bed.

73. **Roentgen-Ray Estimation of the Secretory Functioning of the Stomach.**—Schlesinger gives the findings in a number of cases to show that an intermediate zone of secreted fluid may be observed after the patient has taken the suspension of bismuth for Roentgen-ray examination. This intermediate zone seems to have been mostly overlooked to date, he asserts; it is missing in case of anacidity while it is pronounced with hyperacidity. In his examination of 100 patients normal secre-

tion was revealed by a medium-sized intermediate zone. The conditions in the secretion during the period of digestion can be followed with the fluoroscope.

74. **Treatment of Sciatica.**—Klug found a tendency to flatfoot in a large number of 150 patients with sciatica during the last year. In 15 out of 40 in-patients with sciatica, insoles for treatment of the tendency to flatfoot were successfully applied in 15 cases. The sciatica disappeared as the foot anomaly was corrected. He cites a few typical cases, among them that of a woman of 53 with a traumatic injury of the leg followed by sciatica rebellious to all treatment. Local hydrotherapy of the leg and a flatfoot insole restored almost normal conditions. Sciatica had persisted for months after the leg was otherwise normal but yielded almost at once to the use of the insole. He does not call the condition flatfoot but "sinkfoot," as the sciatica may develop before actual flatfoot is observed. He reports good results in treatment of sciatica with steam douches, fully 85 per cent. of patients being cured, he states, by this measure.

75. **Treatment of Puerperal Mastitis.**—Hirsch has applied Bier's stasis hyperemia in about 17 cases of puerperal mastitis, supplemented by radial incision in 5 other cases. He applied boric acid in substance to the incision and healing was complete in less than a fourth of the time than with other measures. He asserts that pulverized boric acid is a powerful but non-toxic disinfectant which dissolves in the warm secretions and penetrates all the crevices of the wound. He has long applied this technic for suppurating wounds and abscess cavities, filling the cavity with the boric acid and leaving it for a day or so.

### Fortschritte der Medizin, Leipsic

*March 24, XXVIII, No. 12, pp. 353-384*

78 Causes and Characteristics of Pain in the Back. (Ueber Rückenschmerz.) von Criegern.
79 Giant Growth in New-Born Infants. (Riesenbildung beim Neugeborenen.) W. Krull.

### Jahrbuch für Kinderheilkunde, Berlin

*March, LXXI, No. 3, pp. 249-378*

80 Symptom of Soap Production and Elimination of Bases in the Infant Intestine. (Ueber das Symptom der Seifenbildung und die Ausscheidung der Basen im Darm des Säuglings.) H. Bahrdt.
81 Purin Metabolism in Infants. I. (Ueber den Purinstoffwechsel des Kindes.) A. Niemann.
82 Research on the Metabolism to Determine the Influence of Salts on the Infant Organism. (Einfluss der Salze auf den Säuglingsorganismus.) E. Schloss.

### Medizinische Klinik, Berlin

*April 3, VI, No. 14, pp. 531-570*

83 *Dietetic Treatment of Cholelithiasis. R. Kolisch.
84 Pathology of Cirrhosis of the Liver with Enlarged Spleen and Ascites. (Zur Pathologie der Bantischen Krankheit.) H. Luce.
85 Action of Hydrotherapy Applied to the Chest. (Wirkungen und Nebenwirkungen von Brustumschlägen.) G. Simmon.
86 *Difference in Evacuating Time of the Stomach as the Individual Lies on Right or Left Side, and Its Diagnostic and Therapeutic Importance. (Die Entleerungszeit des Magens in rechter und linker Seitenlage und ihre diagnostische und therapeutische Bedeutung bei Hypermotilität, Pylorusinsuffizienz, Atonie und Pylorusstenose.) A. Markovic and F. Perussia.
87 *Treatment of Progressive Paralysis. A. Steyerthal.
88 Advantages of Electric Incandescent Baths in Bronchial Asthma. (Weitere Erfahrungen über die Glühlichtbehandlung des Asthma bronchiale.) E. Tobias.
89 Estimation of Pentose in Urine. (Nachweis der Pentosen im Harn.) F. Blumenthal.

83. **Dietetic Treatment of Cholelithiasis.**—Kolisch has ecome convinced by years of experience with thousands of ases that dietetic measures are possibly most important of ll in treatment of cholelithiasis. The aim in treatment is ot to act on the stones but to combat the inflammation in he gall-bladder. His attention has been called to the heredtary nature of gall-stone disease, its regular association with onstitutional anomalies connected with functional disturbnces of the liver, such as gout and the uratic diathesis, and o the frequent development of cholelithiasis during pregancy. Treatment, he states, should aim to avert everything iable to injure the already weak liver functioning; the diet hould be regulated to spare the liver as much as possible and lso to keep the intestines in good order, free from catarrhal rocesses or cure them promptly when such arise. He ascribes large part of the benefit from the Carlsbad cure to the effect on the intestines; the connection between intestinal catarrh and gall-stone colic is unmistakable in many cases. The diet should avoid chemical, thermic or mechanical irritation of the stomach; the stomach should not be overloaded and food should not be allowed to stay long in it, especially during or following an attack. The food should be light and digestible, avoiding condiments and very acid foods, raw vegetables and fruit, fat that does not melt readily, fat and salted meat and food prepared with yeast or fermenting. Cold drinks should be avoided. Fat that is readily dissolved, such as oil, cream or butter, is useful and very nutritious while taxing the stomach very little and stimulating the digestive processes. The amount of albumin allowed should be small and fractioned in small amounts, avoiding all highly seasoned food and that containing much extractive and purin bodies. Hot drinks, he says, have as favorable action as hot cataplasms, but he advises the latter also, applied for two hours after dinner every day for two or three months, forbidding a drop of cold fluid for six months after the last attack, at least. He has applied a Bier suction bell to induce hyperemia in the region in certain obstinate cases, with good results. He advises abstention from sports of any kind for at least a year after the last attack, and he advises against horseback riding, driving over bad roads, lifting heavy weights and straining, saying also that gymnastics and massage should be discontinued during this time. A year is none too long for these measures to be kept up, he adds; the reward being a permanent latency of the gall-stone disease which well repays the effort required to refrain from taxing the liver and overexercising.

86. **Difference Between Time of Evacuation of the Stomach as the Individual Lies on the Right or Left Side.**—Markovic and Perussia call attention to the diagnostic and therapeutic importance of the difference in the time required for the stomach to empty itself with excessive motility, pyloric insufficiency or stenosis and atony, according as the individual lies on the right or left side. They emphasize that the findings with the individual standing do not give a correct idea of the conditions as well as when the individual is examined with the *x*-ray in various attitudes. Their research on healthy persons and on others with various gastric affections showed that the stomach emptied itself in from 2½ to 4½ hours as the person lay on the right side; lying on the left side, from 5 to 8 hours were required even in health. When the difference is unusually great, the stomach emptying itself very rapidly as the patient lies on the right side, there is generally pyloric insufficiency. On the other hand, when the difference is unusually small, owing to the more rapid evacuation as the patient lies on the left side, hypermotility may be assumed. With motor insufficiency from atony there is long delay before the evacuation when the person lies on the left side. With beginning pyloric stenosis the difference is slight, as the motor functioning is rather increased than diminished and thus, even reclining on the left side, the stomach content is forced to the pylorus much more readily and under higher pressure than in case of atony; the resistance of the pylorus is the same whether the individual lies on the right or left side. In a case of gastric cancer the stomach did not empty itself until after 5 hours on the right side and after 7 hours on the left, and the course of the case confirmed the assumption of cancerous stenosis.

87. **Treatment of Progressive Paralysis.**—Steyerthal appeals to practitioners and especially those at health resorts to search for the signs of progressive paralysis in the very earliest stages as he is convinced that, if the patient can be removed from his ordinary environment and his brain given a rest, it may be possible to ward off the development of the disease. He has encountered a number of cases in which the prognosis of incurability proved false, the patients recovering enough to resume business. The disease seems to be of a milder character now than heretofore, he asserts, assuming more the simple dement form, with a very slow and insidious course. So long as the patient is able to appreciate that he is not quite well and needs rest, there is reason to hope for improvement. Fürstner has reported eight cases in which the recovery of the patients and their resumption of business for a long number of years had convinced him that his diag-

nosis of progressive paralysis had been erroneous, but Steyerthal affirms that the trouble had probably been detected in its early stage and had yielded to appropriate measures.

### Münchener medizinische Wochenschrift

*March 29, LVII, No. 13, pp. 674-728*

90 *Recognition and Treatment of Non-Perforated Duodenal Ulcer. M. Wilms.
91 Treatment of Varicocele. H. J. Lameris.
92 *Treatment of Exophthalmic Goiter. (Behandlung der Basedowschen Krankheit.) A. Kocher.
93 Improved Technic for Histologic Diagnosis of Tuberculosis. (Der Tuberkelbazillennachweis mittelst Antiformin und seine Verwendung für die histologische Diagnose der Tuberkulose.) H. Merkel.
94 Fate of Fat Acids in the Organism and Relations with Acetone Bodies. (Ueber den Abbau von Fettsäuren im Organismus und über die gegenseitigen Beziehungen der Azetonkörper.) L. Blum.
95 Connection between Plasmolysis, Digestibility, Solubility and Staining Properties of Bacteria. (Beziehungen zwischen Plasmolyse, Verdaulichkeit, Löslichkeit und Färbbarkeit von Bakterien.) W. Kruse.
96 Etiology of Granulomatous Lymphomatosis and Lymphatic Leucemia. (Zur Aetiologie der Hodgkinschen Krankheit und der Leukaemia lymphatica.) E. Fraenkel and H. Much.
97 *Cancer and Mechanical Laws of Development. (Die malignen Tumoren und die Entwicklungsmechanik.) J. Ries.
98 Theory and Practice of the Wassermann Reaction. E. Jacobsthal.
99 Carbon Dioxid Snow in Treatment of Warts, Corns, etc. (Behandlung der gewöhnlichen harten Warzen, des Klavus und Tyloma mit Kohlensäureschnee.) J. Fabry.
100 Adhesive Plaster Dressing for Ambulatory Treatment of Traumatic Effusion in the Knee. A. Blecher.
101 *Insidious Chronic Septic Endocarditis. (Endocarditis lenta.) H. Schottmüller. Commenced in No. 12.

*April 5, No. 14, pp. 729-776*

102 Differentiation of Diplopia of Psychic Origin. (Zur Diagnostik psychogenen Doppeltsehens.) F. Hamburger.
103 Importance of Tonsillitis in Etiology of Acute Articular Rheumatism. (Mandelentzündung und Rheumatismus.) Pickenbach.
104 *Dosage for Bier's Constriction Hyperemia. (Dosierung der Stauungshyperämie.) M. zur Verth.
105 Cholera Toxin. M. Hahn.
106 Atypical Proliferation of Epithelium after Injection of Scarlet Red Oil and Amidoazotoluol Oil into Human Subcutaneous Tissue. H. Stoeber.
107 Serologic Differentiation of Human Blood from Different Individuals. (Ueber eine Methode das Blut verschiedener Menschen serologisch zu unterscheiden.) E. von Dungern and Hirschfeld.
108 Mechanism of Metallic Sounds in Ileus. (Bedingungen des Zustandekommens des peristaltischen Metallklingens bei Ileus.) G. Leuenberger.
109 The *Micrococcus tetragenus* in Septicemia and Mixed Infections. O. Meltzer.
110 Relations between the Tonus, the Secreting Power and the Position of the Lowest Part of the Stomach. (Beziehungen zwischen dem Tonus, der Salzsäureproduktion und der Lage des tiefsten Punktes des Magens.) H. Bränning.

90. **Recognition of Duodenal Ulcer Before Perforation.**—Wilms was able to differentiate the bleeding duodenal ulcer, in the absence of perforation, in three cases recently and cured the patients by merely folding over the floor of the ulcer and suturing it together so that the floor protruded into the lumen of the intestine. The ridge thus formed sloughs away and the same results are attained as with excision, with a much less serious operation. In his three cases there had been recurring intestinal hemorrhage for years unaccompanied by disturbances on the part of the stomach in two cases; in the third a gastroenterostomy had already been done. He applies his method of diagnosis from within. He first attempted it for examination of the lower segment of the esophagus, by introducing the finger through an incision in the anterior wall of the stomach; the wall is drawn up around the base of the finger with a purse-string suture, the finger being protected with a rubber cot. By this means it is easy to reach and palpate the interior of the upper part of the duodenum. When the ulcer is flat it is hard to distinguish it unless the wall of the duodenum is pressed against a hard background. He protests against routine performance of gastroenterostomy and urges suturing the ulcer, as above mentioned, to ward off perforation and hemorrhage.

92. **Treatment of Exophthalmic Goiter.**—Kocher states that there are fully 1,000 cases on record now of operative treatment of exophthalmic goiter, including 376 cases from the Kocher clinic, 76 per cent. of the patients being cured. In the latter group the exophthalmos has subsided in three-fourths of the cases; its subsidence depends more on its duration than on its degree. He discusses the 20 cases in which the operation failed to cure, showing that recurrence of the goiter was responsible for this in some of the cases, in others secondary lesions of the other organs were responsible, and in the remainder there was a tendency to neurasthenic-hysteric manifestations. The latter had been sometimes erroneously ascribed to the exophthalmic goiter itself, but they should be considered separately and the fact borne in mind that a neurotic tendency influences the onset, the degree and the course of the exophthalmic goiter. He compares the almost inevitable improvement and the constant cure when the operation has been correctly done with the uncertain results of internal treatment, everything speaking in favor of the former. At the same time, he insists on the importance of supplementing operative measures with internal, and preparing patients for operation by absolute rest and symptomatic treatment, although he warns against anything liable to raise the blood pressure or induce excessive diuresis. He adds that the best internal treatment is a stay at an altitude of from 3,000 to nearly 5,000 feet, mild hydrotherapy in the form of cool sponging and baths, regulation of the diet to reduce the proportions of albumin and fats, and a rest cure interrupted by regular, systematically increasing muscular exercises against resistance, with phosphorus, arsenic or iron internally. He advises against specific thyroid treatment, his experience being that in any form its action is inconstant and transient in these cases, although he admits that organotherapy may yet be perfected to great efficacy.

97. **Etiology of Cancer.**—Ries suggests the possibility that injury of the nucleus of the cell causes it to lose the faculty of checking the development of the supernumerary centrosomes, which thus develop atypically and the proliferation assumes a malignant nature.

101. **Slow Endocarditis.**—Schottmüller applies the term "endocarditis lenta" to an infection localized in the endocardium, the germs sallying forth thence occasionally into the blood. The germ in question, he says, he isolated ten years ago, entitling it the *Streptococcus mitior seu viridans;* it is not very virulent but induces necrosis in parts of the endocardium, leading to wart-like efflorescences and causing a clinical picture distinguished by the insidious onset, the vague slight pains in the joints and groups of muscles, with palpitations and dyspnea and a dry cough, the latter causing the suspicion of a lung rather than of a valvular affection, especially if the patients are pale and anemic. In the five cases in his experience there were evidences of mitral endocarditis. At first there were no audible murmurs in some cases, but the persistent fever suggested the true diagnosis. In two of his cases death occurred from cerebral hemorrhage, in the others the disease progressed to myocarditis. The spleen was generally enlarged. The main feature of the disease is the tendency to embolism and to aneurism in various arteries and to hemorrhagic nephritis. Patches of purpura and retinal hemorrhages confirm the septic nature of the affection, but the fever was never very high and chills were rare. The endocarditis generally proved fatal in a year or two. The diagnosis is rendered certain by the bacteriologic blood findings. Treatment can be only symptomatic.

104. **Dosage for Constriction Hyperemia.**—The most suitable degree of constriction is shown to be that of the minimal ("diastolic") arterial pressure, that is, the degree of constriction with a 15 cm. wide, air or water-filled cuff with which the peripheral pulse just begins to show the influence of the constriction. The region at this moment of the minimal arterial pressure contains the largest possible amount of blood. The point of arterial minimal pressure is slightly below the minimal pressure as determined by auscultation; but the auscultation findings are useful for warning against too powerful constriction in applying the constricting band.

### Therapie der Gegenwart, Berlin

*April, LI, No. 4, pp. 145-192*

111 Medicinal Treatment of Cholelithiasis. F. Eichler.
112 *Apparatus for Treatment of Asthma. G. Zuelzer.
113 Relish and Appetizers. I. (Genuss und Genussmittel.) W. Sternberg.
114 *Treatment of Surgical Tuberculosis. W. Kausch. Commenced in No. 3.
115 Medicinal Treatment of Diabetes. Lenné.

112. **Apparatus for Treatment of Asthma.**—Zuelzer regards the primary inflation of the lung as the most essential factor in the acute attack of asthma; the congestion in the bronchial

mucosa is of secondary importance. In treatment he formerly gave atropin to combat this tendency to exaggerated distention of the lungs, but lately has devised an apparatus which answers the same purpose by regulating the respiration. An illustrated description of the apparatus is given. It is worked by compressed air or oxygen and permits a positive pressure up to 40 cm. water during inspiration and a negative pressure of the same intensity during expiration. After three or four minutes' use of the apparatus, the outlines of the lung retrogress by 2 or 3 fingerbreadths. The apparatus, he says, can take the place of a pneumatic cabinet.

114. **Treatment of Surgical Tuberculosis.**—Kausch lays special stress on the technic for treatment of cold abscess with iodoform-glycerin emulsion: The main points he states are to inject the fluid under pressure and in sufficient amounts, afterward holding the mouth of the fistula closed for five minutes at least, and better still for ten. At the end of this time if any fluid escapes it is pure glycerin, the iodoform having settled on the walls. He uses a rubber and glass syringe, the tip being introduced into a hard rubber olive or ball, the latter fitting over the mouth of the fistula more tightly than with other appliances and permitting application of more force. He reports a number of examples to show the good results attainable with this technic. In one case a man of 60 had had a tuberculous process in the left elbow and wrist for several years, both joints being much deformed; there were also ten fistulas and amputation had long been advised. Kausch applied constriction hyperemia according to Bier and injection of iodoform-glycerin emulsion into the fistulas under pressure; the arm was also immobilized with a splint. The entire process healed in about two months, leaving a fairly movable wrist. In another case the diagnosis wavered between tuberculosis and osteomyelitis and no improvement was observed in four weeks during which the iodoform treatment had been carried out by assistants. Kausch then investigated and found that too small amounts had been injected and without sufficient pressure and the mouth of the fistula had not been held closed long enough afterward; he then made the injections himself and prompt recovery followed. The patient in this case was a woman of 50 with a fistula in the left shoulder which had persisted for a number of years.

### Virchows Archiv, Berlin

*March, CXCIX, No. 3, pp. 385-570*

116 Pathologic Anatomy and Microbiology of Measles. (Masern.) C. Ciaccio. Commenced in No. 2.
117 Atresia of Duodenum and other Malformations. (Fall von Duodenumatresia in Kombination mit Defekt des mittleren Oesophagus und des untersten Rektum sowie mehrfachen anderen Missbildungen.) K. Meusburger.
118 Seven Cases of Deformities in the Esophagus. (Fistulae oesophageo-oesophageales congenitae.) S. Ciechanowski and L. K. Glinski.
119 Endoneural Proliferation from Pressure on Peripheral Nerves. (Weiteres über endoneurale Wucherungen.) S. Trzebinski.
120 Tumor of Base of Skull. (Interessante Geschwulst der Schädelbasis.) G. Masera.
121 Russell's Fuchsin Bodies. (Russellsche Körperchen.) J. W. Miller.
122 Chemical and Histologic Research on Staining of Fat Tissue. (Ueber Fettfärbung.) P. Eisenberg.
123 Study of Infundibular Cysts in the Human Brain. H. W. E. Ehlers.
124 Origin of Melanin. (Zur Melaningenese.) Meirowsky and A. Jaeger.

### Wiener klinische Wochenschrift, Vienna

*April 7, XXIII, No. 14, pp. 495-528*

125 *Pathologic Anatomy of Suicide. (Zur pathologischen Anatomie des Selbstmordes.) J. Bartel.
126 *Exclusion of Source of Heat Production during Momburg Belt Constriction. (Ausschaltung der Muskulatur als Wärmequelle, eine Folge der Momburgschen Blutleere.) H. Ehrlich.
127 *New Studies of Strychnin, Calomel and Bismuth. (Beitrag zur Bewertung von Medikamenten.) K. Chodounsky.

125. **Pathologic Anatomy of Suicide.**—Bartel tabulates the classified findings in 122 cases of suicide, including 55 women or girls. Certain traits in common were observed, especially hypertrophy of the internal organs and considerable development of the lymphatic tissue, the thymus being unusually large in many of the cases. On the other hand, the arterial system seemed to be undeveloped, the appendix remarkably long, the stomach showing mammillation and the thyroid in colloid degeneration; the ovaries in the women were frequently studded with cysts. Defects in development were common. He urges closer examination of the anatomic conditions, striving to discover constitutional factors for the tendency to suicide.

126. **Exclusion of Heat Production in the Muscles as Result of Momburg Belt Constriction.**—Ehrlich reports a case in which a healthy young man had the belt constriction applied to arrest hemorrhage from a traumatic injury in the groin. The tubing was left in place for thirty-two minutes, while the femoral artery was sutured. Fifteen minutes after the close of the operation the patient's temperature was found to be 35.2 C. and it did not return to normal for five hours (95.1 F.). This experience was repeated in animals under the Momburg belt constriction; Ehrlich explains it as due to the motor and chemical insufficiency of the musculature resulting from the constriction. Hours were required for the restoration of normal temperature and especially sensitive animals never recovered. The disturbance in the heat production persisted longer in animals weakened by hemorrhage than in normal animals. Especial care therefore is necessary in applying the Momburg belt to anemic patients.

127. **New Research on Action of Strychnin, Calomel and Bismuth.**—Chodounsky reviews certain research that has been done in his laboratory which seems to throw new light on some old drugs. Experiments with frogs, rabbits, etc., failed to confirm the general assumption that strychnin is a tonic for the musculature of the stomach and intestines; on the contrary, there was rather muscular relaxation, even during tetany. These experiences, he declares, warn against the use of strychnin in chronic gastrointestinal diseases, especially when there is a tendency to constipation. He has found in the literature 14 fatalities from the therapeutic use of calomel, death occurring in from 3 to 42 days after a total dose of from 0.3 to 2.7 gm. (5 to 40 grains) in 7 cases and in the others after a total dose of from 2.4 to 4.6 gm. (up to 70 grains). Serious intoxication was observed in small dogs given a total of 1.04 gm. (22 grains) in the course of 12 days, and a total of 2.75 gm. (42 grains) for large dogs in 6 days. The prolonged administration of small doses seems to be more dangerous but the larger doses have a more intense toxic action in case there is no purging. His research also showed that the production of bile was diminished after calomel, and also that the drug had an irritating action on the kidneys. His research has further confirmed the toxic possibilities in the use of bismuth.

### Zeitschrift für Urologie, Leipsic

*March, IV, No. 3, pp. 161-240*

128 Improved Technic for Electrotherapy of Prostatitis. (Ueber Elektrisierung der Prostata mittels intermittierenden Induktionsstroms.) G. J. Muller.
129 Bladder Calculi in Diverticula in Women. (Zur Kenntnis der eingesackten Blasensteine bei der Frau.) E. R. W. Frank.
130 Source of Phosphaturia in Gonorrhea. (Zur Frage des Ursprunges der Phosphaturie bei Gonorrhoe.) H. Lohnstein.

### Zentralblatt für Chirurgie, Leipsic

*April 9, XXXVII, No. 15, pp. 529-568*

131 The Alcohol-Iodin Method of Surgical Sterilization. (Zur Desinfektion der Haut nach Grossich.) G. Hesse.

### Zentralblatt für Gynäkologie, Leipsic

*April 9, XXXIV, No. 15, pp. 497-528*

132 Operative Treatment of Retroflexion of the Uterus. (Die Operation von Pestalozza.) F. Montuoro.
133 Necessity for Legal Regulations in Regard to Artificially Induced Abortion. (Notwendigkeit gesetzlicher Bestimmungen für den künstlichen Abortus.) W. Thorn.
134 Retroperitoneal Tumors. R. Marek.

### Gazzetta degli Ospedali e delle Cliniche, Milan

*March 24, XXXI, No. 36, pp. 377-384*

135 Precipitation of Colloidal Metals in Contact with Certain Organic Substances. (Sulla precipitazione dei fermenti metallici in contatto con alcune sostanze organiche.) G. W. La Ferla.

*March 27, No. 37, pp. 385-400*

136 *Possibility of Typhoid Infection from Snails. (Tifo e lumache.) P. Barabaschi.

136. **Snails and Typhoid Fever.**—Barabaschi allowed snails to feed on cultures of typhoid bacilli after which agglutinating typhoid bacilli were found in the dejecta of the snails, showing

the possibility of contagion by transportation of germs in this way to vegetables usually eaten raw, on which snails and slugs feed.

### Policlinico, Rome

*April 3, XVII, No. 14, pp. 419-450*

137 *Diagnosis of Inherited Syphilis in Foundling Asylums. (La diagnosi della sifilide ereditaria nei brefotrofi.) M. Flamini.

*April 10, No. 15, pp. 451-482*

138 *The Antimalaria Campaign. (Contributo alla eziologia ed alla lotta contro la malaria.) D. Falcioni.

137. **Diagnosis of Inherited Syphilis in Foundling Asylums.**—Flamini has tried the various differential tests to distinguish the infants with an inherited syphilitic taint, but states that the technics are too complicated for general adoption in such institutions. Only the Porges-Meier method is simple enough, and he found that this is not entirely reliable. He obtained a positive response in only 11 out of 49 infants tested, and only 5 of these were unmistakably syphilitic; 4 showed certain signs suspicious of syphilis, and 2 have seemed to be entirely free from any tendency to the disease up to the present time. The Porges-Meier test is the precipitation that occurs when a 1 per cent. solution of lecithin (in physiologic salt solution, with addition of 0.5 per cent. phenol), is added to 5 times the amount of syphilitic serum diluted with 5 times its amount of physiologic salt solution. The process observed in the mixture after a few hours' incubation resembles positive findings with the agglutination test.

138. **Antimalaria Campaign.**—Falcioni states that in his years of experience with malaria around Rome and elsewhere, he never visited a case in which he was not able to find specimens of the anopheles on the walls or ceiling somewhere in the house; if nowhere else it was found in the cellar. He also states that he never encountered a case in which the patient had not slept over night in the malarial zone in some house. He has been impressed with the fact that the malarial zone is not dangerous throughout but merely in certain inhabited centers. The anopheles does not bite during the day or evening but only late in the night, and only, he asserts, in the shelter of a house, barn or other building. The laborers can dig, mow, thrash, etc., staying on the Campagna all summer long, but if they sleep out of doors, far from buildings, they do not contract malaria. He has never encountered a case in a herder or shepherd sleeping in this way. In the shelter of the buildings the anopheles seems to live for months, as it is protected against the vicissitudes of the weather. He is convinced that it is the only source of infection, and that the most important measure in prophylaxis of malaria is to kill off the anopheles in the houses where infection has occurred, petrolizing further all places in the vicinity of houses where the anopheles is liable to breed, and screening houses, etc. Draining the land is not enough alone as he has seen cases of malaria in well-drained regions. He urges the organization of a central office in each malarial district to keep records of the endemic foci on the various plantations from year to year and direct the prophylaxis, instituting preventive courses of quinin at points where danger threatens, making the course more or less intense with the severity of the endemic, and thus gradually stamping it out at every point.

### Hospitalstidende, Copenhagen

*February 23, LIII, No. 8, pp. 225-248*

139 Celloidin Technic for Sections. (Erfaringer med den Suzuki'ske Metode til Fremstilling af Celloidin-Snitserier.) A. Juriseh.

*March 2, No. 9, pp. 249-280*

140 Advantages of India-Ink Technic for Bacteriologic Research. (Burri's Tuschmetode til Fremstilling af ægte Renkulturer af Bakterier—Dyrkning fra een eneste Bakterie—Spirochætepaavisning, etc.) O. Thomsen and K. Jakobsen.

141 Death of Fetus near Term Probably Result of Therapeutic Administration of Salipyrin. (Fosterets Død som Folge af Salipyrinbehandling?) F. Teilmann.

*March 9, No. 10, pp. 281-304*

142 *Determination of Ferments in Stools, Especially Pancreatic Ferment. (Om Fermentpaavisning i Fæces.) K. A. Heiberg.

*March 16, No. 11, pp. 305-328*

143 Advantages of Anesthesia by Peroral Intubation. (Om Kuhn's perorale Tubage.) L. Mahler.

*March 23, No. 12, pp. 329-360*

144 Case of High Scapula. (Tilfælde af højtstaaende Skulderblad.) A. Hald.

145 The Health Record on the Danish Polar Expedition. (Sundhedsforholdene paa "Danmark-Expeditionen.") J. Lindhard.

142. **Determination of Pancreatic Ferment in Stools.**—Heiberg reports in detail two cases in which the findings in regard to the presence of pancreatic ferment in the feces were negative. The assumption of obstruction of the pancreatic duct was confirmed by autopsy. In one case the findings had been positive until not long before death, and the cancer had only recently obstructed the outlet to the pancreas. In the other case the cancer was in the head of the pancreas and the findings had been constantly negative from the first examination. He used the simple and comparatively reliable Gross-Koslowsky casein method to determine the presence and amount of the proteolytic ferment.

### Ugeskrift for Læger, Copenhagen

*March 31, LXXII, No. 13, pp. 369-388*

146 Decline in Mortality from Tuberculosis in Recent Years. (Tilbagegang i Tuberkulosedødeligheden.) C. Jensen.

### Upsala Läkareförenings Förhandlingar

*N. S. XV, No. 3, pp. 127-210. Last indexed Feb. 19, p. 663*

147 *Case of Incomplete Myxedema with Raynaud's Symptom. (Fall af myxoedeme fruste med Raynaud's Symtom.) L. Ehrenberg.

148 *Temperature of the Skin of the Fingers in Health and in Disease. (Iakttagelser öfver hudtemperaturen å fingrarne hos friska och sjuka.) L. Ehrenberg.

149 *Methods of Treating Large Cavities in Long Bones. (Några ord rörande behandlingsmetoderna af stora, svårläkta benhålor i de långa rörbenen med demonstration af ett fall, som för 5½ år sedan behandlades med Thierschning å benhålansväggar.) G. Ekehorn.

150 Changes with Age in Number of White Corpuscles in Rabbit Blood. (Om åldersvariationer i de hvita blodkropparnes antal hos kaninen.) G. Lindberg.

151 Delivery of Living Child with Permanently Backward Doubled Body. (Forlössning med dubbelviket, lefvande foster.) S. Lindqvist.

147 and 148. **Abortive Myxedema with Raynaud's Disease.**—Ehrenberg's patient was a woman of 56 who for more than ten years had had recurring attacks of local syncope and asphyxia in the hands and feet, suggesting Raynaud's disease, accompanied by dryness of the skin, subnormal temperature and other indications of myxedema, this assumption of a tendency to myxedema being confirmed by the benefit realized under thyroid treatment. The case is the only one of which he knows that suggests a thyroid origin for the vasocontractile phenomena first described by Raynaud. In order to show the intensity of the temperature changes, he gives the curves representing the peripheral temperature, especially of the hands, in this case and also in 26 healthy persons for comparison. The temperature even in health was found to vary widely, but the extremes were never so marked as in the case reported.

149. **Thiersch Flaps in Treatment of Cavities in Long Bones.**—Ekehorn reviews the various methods in vogue for treating large cavities in the long bones and reports a case in which a cavity left from an osteomyelitic process promptly healed under the application of Thiersch flaps to line the hole, after failure of various other measures. The skin flaps "take" readily, he states, and healing is soon complete by this method.

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## Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

THE NATURE OF CANCER. Suggestion for a New Treatment. By John Clay. Cloth. Price, 3 shillings 6 pence net. Pp. 159 with illustrations. London: Swan Sonnensehein & Co., 1910.

GRUNDRISS UND ATLAS DER SPEZIELLEN CHIRURGIE. Von Georg Sultan, M.D. Second Edition. Lehmann's medizinische Handatlanten. Vol. xxxvii. Cloth. Price, 16 marks. Pp. 624, with 261 illustrations. München: J. F. Lehmann's Verlag, 1910.

HYPNOTISM AND TREATMENT BY SUGGESTION. By J. Milne Bramwell, M.B., Author of "Hypnotism: its History, Practice and Theory," etc. Cloth. Price, $1.75 net. Pp. 216. New York: Funk and Wagnalls Co., 1910.

SIXTY-FIRST ANNUAL REPORT OF THE BOARD OF TRUSTEES AND SUPERINTENDENT OF THE CENTRAL INDIANA HOSPITAL FOR INSANE AT INDIANAPOLIS. For the Fiscal Year Ending Sept. 30, 1909. To the Governor. Paper. Pp. 63.

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## *Original Articles*

# THE CURE OF EARLY PARESIS*

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NEW YORK

In a paper read before this society five years ago,[1] I made a contention that it was possible to arrest, and probably to arrest permanently, certain cases of paresis when they were observed in the earliest stages and submitted to prompt and prolonged treatment. To the objection that the cases cited in illustration of my point, were not really cases of paresis, but of cerebral syphilis or "pseudoparesis," I could answer only by contending that there were no possible criteria by which we could distinguish "pseudoparesis" and certain forms of cerebral syphilis from paresis itself, except by saying that when the patients recovered, the cases were false, and when the patients died the cases were real. In the pseudoparetic cases as in true cases, we have headaches, convulsions, syncopal and aphasic attacks, disturbance of the pupillary reflexes, tremors, cranial nerve palsies, even attacks of hemiplegia, lymphocytosis of the cerebrospinal fluid, and positive reaction to Wassermann's test. In each kind of case also, we find changes in character, increased irritability, inability to conduct business affairs, defects of attention, somnolence, confusion and quick exhaustibility of the mental processes on exertion. In cases in which paresis is firmly established, with grandiose delusions, real dementia, marked facial and tongue tremors, speech defects, involvement of the pyramidal tracts. I make no claim that the disease can receive, at the most, more than a remission.

The clinical facts on which my contention is based, have been so abundant and positive since I first wrote on this subject that it seemed almost unnecessary to emphasize the point further. I am led to do so, however, because my view has been misunderstood by some who have jumped to the conclusion that I have asserted that paresis can be cured when fully developed; also, because my view as to the essential unity of nervous syphilis and parasyphilis has been so strongly confirmed by the discovery of the pale spirochete and the evidence of its activity by Wassermann and other tests in parasyphilitic conditions.

The observations of Drs. Noguchi and Moore[2] show that in general paresis and in cerebral and nervous syphilis, there is a positive reaction both to the butyric acid and the Wassermann test; also that there is a practically equal evidence of lymphocytosis in the cerebrospinal fluids. Similar results were obtained by Dr. Rossanoff[3] in his observations recently presented before the New York Academy of Medicine. Dr. Kaplan's observations presented at the same time lead to the same conclusions. It is very well established, then, that so far as the blood and the cerebrospinal fluid tests go, there is no qualitative difference in the reactions between paresis and so-called syphilis of the nervous system. There is indeed a rather stronger and more positive reaction in paresis than in the ordinary syphilis of the nervous system.[4]

The attempt to find a test which should distinguish between paresis and nervous syphilis or "syphilitic neurasthenia," has been made by Nonne and some of his followers. The most recent observations regarding the utility of what is known as the Phase I Test of Nonne failed to show that it is of any distinct value in distinguishing between these two conditions (Noguchi and Moore[2]). It follows, then, that since there is an essential underlying unity between true paresis, and "luetic neurasthenia," "pseudoparesis," "nervous syphilis," there is no reason to suppose that if we can cure one, we can not also forestall and even cure the other. This is what I assert to be possible and also, that it is not infrequently done. Over and over again, it has been my experience to see luetic patients suffering in almost the same way, nervously and mentally, and yet, in one case, after a time, a true paresis develops, and in the other case it does not. And, furthermore, it has been my experience to see patients who have, clinically, developed nearly all the signs of paresis, improved, and remained practically well for years.[5]

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* Read before the New York Psychiatrical Society, Nov. 3, 1909.

[1] Dana, C. L.: Curability of Early Paresis, THE JOURNAL A. M. A., May 6, 1905, xliv, 1413.

[2] Noguchi, H., and Moore, J. W.: The Butyric Acid Test for Syphilis in the Diagnosis of Metasyphilitic and Other Nervous Disorders, Jour. Exper. Med., July 17, 1909, abstr. in THE JOURNAL A. M. A., Aug 14, 1909, liii, 591.

[3] One of Dr. Rossanoff's conclusions is the following: "Inasmuch as the Wassermann reaction and the butyric acid reactions seem to indicate syphilis only when it exists in an active or potentially active form, their regular occurrence in general paresis would tend to prove that that disease is a manifestation of active syphilis, of activity of the *Spirochæta pallida*. While the evidence for this view is not as yet complete, it is sufficient to justify its being used as a basis of therapeutic essay." Rossanoff also cites a case which was diagnosticated general paresis. The patient, however, recovered under treatment by mercuric injections, whereupon the diagnosis was changed to cerebral syphilis. While it cannot be proved, clinical experience in other cases justifies one in saying that if this patient had not received treatment he would have died with the symptoms of paresis. Cases like this have occurred in my experience and have been potent in forcing me to my conclusions as to the nature and management of this disease.

[4] Apelt's later observations (Arch. f. Psychiat., xlvi, No. 1) only show that the "Phase I" or globulin reaction does not occur so often in so-called cerebral lues or luetic neurasthenia as it does in tabes and paresis, but it does occur, and all the serum and blood tests indicate only a quantitative, not a qualitative, difference between the conditions.

[5] Sometimes cases which present mainly the appearance of cerebral syphilis do not improve under treatment, but go on steadily to a fatal termination with all the symptoms of paresis. Two patients came under my care at about the same time, beginning in the same way. One is now apparently in active health; the other died of paretic dementia. There must, then, be some plus factor in the matter which is potent to bring about the unfavorable result. This may be inadequate or belated treatment, or it may be a more degenerate, unstable brain. The luetic poison quickly brings about hopeless toxic changes in abiotrophic cells. Paresis that is fatal, then, is that in which the luetic infection is severe and uncontrollable, or that in which the brain-cell, being congenitally weak, easily falls prey to the toxin. This is the only difference which I can see between cerebral syphilis and "parasyphilis."

The ordinary, and perhaps I should say asylum view of prognosis of paresis has been recently presented by Dr. Green,[6] who made a very careful study of 200 cases, with reference to this point. He puts the limit of the duration of the disease at five years, this occurring only in the young; and he does not speak even of the possibility of cures, or long remissions. Such a view expresses, I think, a narrow and misleading conception of the malady, for paresis exists sometimes for years before it reaches the alienist or the hospital. A writer in one of the medical weeklies, during the past summer, also states unequivocally that paresis is not only never cured, but surely and always kills, i. e., it is not even permanently arrested. This also expresses what I should term a very juvenile view of paresis. Quite appropriately this writer quotes a French novelist in support of his position, but does not, I think, get any apperception of some more serious writers. As against Guy de Maupassant, I would quote Alzheimer, who states that he has most positive evidence that paresis has remained unprogressive for many years.

I wish now to put on record the final history of the cases which I reported five years ago, as an illustration of arrest in preparetic states. The details of the early history of the cases are given in the article referred to.[1] I shall add a few further reports of cases illustrating the clinical fact which I am trying to prove, for I know that it is only by the presentation of such data, accurately and impartially given, that any conviction can be produced; the minds of many alienists, at least, seem to be absolutely fixed in an attitude of pessimism towards the prognosis of paresis in any of its stages. The cases are referred to in the order they were reported originally.

Case 1.—A broker, aged 40, had an attack of melancholia, with the somatic symptoms indicating paresis; that diagnosis was made in his case. He had tremors and Argyll-Robertson pupils, but he had shown no dementia. He improved in the sanitarium and kept well for three years afterward, at which time I reported the case. He continued well for four years more, but he lived a life of great self-indulgence. He had losses in business and finally developed genuine symptoms of paresis and died in about a year. He had had, therefore, a remission of seven years, during which he was in every respect a normal man.

Case 2.—The patient had continued well for four years from the time when I saw him, when his symptoms were marked. He had had a luetic infection twelve years before. His symptoms were those of convulsions, speech disturbance, feeble memory and depression. He has continued well, and is now in active business. It is eight years since he recovered.

Case 3.—A man, aged 34, had a speech disturbance, Argyll-Robertson pupils, facial tremor and depression to the point of melancholia. When I reported his case he had been attending to his work and was well for the last three years. I saw him again in the past year and he had continued well, so that his remission has thus far lasted eight years.

Case 4.—A lawyer, aged 30, had all the evidences of a beginning tabo-paresis. The progress of his disease was arrested, and for seven years he has been able to do his professional work with a fair degree of success.

Case 5.—A broker, aged 40, had had an infection, his trouble began with a violent epileptic attack, followed by periods of maniacal excitement. For a year he had a great deal of mental irritability and depression, and a certain degree of weakness of comprehension and judgment. He has now continued well for six years since the first attack.

Case 6.—A man, aged 43, a broker, lost all his money in Wall Street, and then tried to steal some to make good. He developed a melancholia and killed himself.

Case 7.—This was one of those types of luetic infection, followed by anxious depression or a mild form of hypochondriacal melancholia. For twelve years the patient used to have an injection of mercury, every two weeks. It is now nine years since he was under systematic treatment and he continues well.

The following further cases illustrate the preparetic state and its possible outcome:

Case 8.—T. S., aged 46, lawyer, came to me in October, 1906. There was no hereditary history of importance. His father lived to 70, his mother died at 60, of an accident. The patient was married and had three healthy children. He had contracted lues about twenty-three years before coming under my observation. He suffered severely and though he was treated, his health broke down and he had to rest from business. After his recovery, i. e., for about twenty years, he had been quite well and had seen nothing of doctors until his present illness. About three and one-half years before I first saw him he suffered from sexual weakness, which had gradually progressed till he had become practically impotent. Of late his bladder had been a little weak. Two years before coming under my care he had lost consciousness suddenly and was aphasic for two days. His capacity to speak in court had been lessened since then. One year before the time when I saw him he had an attack of severe vertigo. Since then his mental powers had been lessened. He could not work long, could not concentrate, was forgetful, and had attacks of vertigo. He was very somnolent, sleeping ten hours at night and in the afternoon. He was depressed, emotional and unable to do much work of any kind. His gait and stature were normal, speech clear, handwriting much impaired. The knee-jerks and ankle-jerks were present but uneven. The pupils were uneven and did not react to light, but did to accommodation. The left pupil was irregular in shape. The patient had no anesthesias, lightning pains or ataxia. There was tremor of the hands and the face showed distinct facial tremor. The main mental symptoms were incapacity to work, mental inadequacy, defective memory, emotional excitability (irritability and depression) and somnolence. The physical symptoms were changes in deep reflexes, Argyll-Robertson pupils, facial tremor, defects of handwriting, sexual impotence without local cause, as attested by Dr. Eugene Fuller, who saw him in consultation, and vesical weakness. It was six months before the patient improved very much but at the end of that time he was very much better, except of the sexual impotence, and the pupils. His memory was good, his somnolence and apathy better. A letter received from him recently states that he is well, nearly three and one-half years since I first saw him.

Such a case as this is illustrative of a type which I have also seen progress till all the marks of paresis are developed.

Case 9.—J. E., aged 43, single, occupation engineer. The history furnished by his family physician, Dr. Parslow, is as follows: The patient's father died of Bright's disease, at 69; the mother was living in good health; he had four sisters all living. One had epilepsy for some years, but recovered. Three aunts died of tuberculosis.

The patient was always robust; used alcohol and tobacco moderately. His habits were excellent, with the exception of sexual excess, which undoubtedly made serious inroads on the patient's vitality. About three weeks after connection, in the latter part of 1901, three hard chancres appeared on the dorsum of the penis, followed by adenitis, roseola, etc. The secondary stage ran a mild course. Mercurial treatment was faithfully carried out. About one year after the primary sore, the patient was stricken with left hemiplegia. At this time, a neurologist saw him. Mercury by inunction was pushed. The motion of the left arm was seriously impaired, but improved. After the patient was up and around, it was noticed that he would fall asleep at his work, especially after eating; he was very hard to arouse mornings, even after ten or twelve hours' sleep. As he was in charge of complicated machinery, his employers had to displace him. His friends noticed that he acted queerly at times. Dr. Parslow never noticed any delusions or hallucinations. The patient wept easily, and his mental depression was marked; his countenance changed from a bright and intelligent to a dull and stupid expression. He was given iodids in large doses, but failed to improve.

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[6] Green: Jour. Ment. Sc., 1908 or 1909.

When examined by me, he still showed some evidences of the left hemiplegia, the arm being somewhat contractured, and there were slight athetoid movements in the left hand. There was no anesthesia or ataxia. The reflexes were exaggerated, more on the left than on the right, but there was no clonus. The pupils were sluggish, but not actually of the Argyll-Robertson type. Mentally, he was simply very slow and forgetful; did not have even the ordinary school knowledge, nor could he recall the ordinary events of the day. He would fall asleep during the daytime and sleep all through the night. He had no cranial nerve palsies; no speech defects, but had a little tremor of the face and hands. He did not show any actual neglect of the person, and his sphincters were intact. He could read a little and write imperfectly. His condition had been gradually getting worse, notwithstanding large doses of the iodid of potassium, amounting to 120 grams a day.

The patient was put on hypodermic injections of salicylate of mercury, and gradually began to improve, and in about six months' time he seemed well, and went back to his work.

I saw him a year ago, five years after my first visit. He was then well mentally in every way. His speech was good, his memory clear, and he simply had some relics of his old hemiplegia.

This is a case of cerebral syphilis, but it was passing into dementia. The patient already had tremor, sluggish pupils, exaggerated reflexes. He was dull, slow, had lost his knowledge of things, was extremely forgetful, queer in actions, depressed, emotional, somnolent and partially demented.

Case 10.—E. A. M., male, aged 52, married, with two healthy children, came to see me first in May, 1906, suffering from tabetic pains. He had had a luetic infection at the age of 20, and was thoroughly treated for two years; he had had no luetic manifestations since then. He had been a hard worker at the dry-goods business. His habits were good; he used no alcohol or tobacco in excess. In 1898 he broke down with what was called "nervous prostration," and was unable to work for about six months. Two years later, in 1900, he began to have the characteristic pains of tabes, and had been treated for these symptoms and these alone, since that time.

Status in 1906: The gait was normal; there was slight Brauch-Romberg sign present, slight ataxia of the hands to the finger-nose test. Argyll-Robertson pupils, unequal in size, knee-jerks and ankle-jerks absent, tremor of the facial muscles and of the hands, no hypotonia, no anesthesia, bladder slow, sexual function very weak, tachycardia, but no valvular lesion. Mentally, the patient was irritable and quite forgetful; he had a slightly exaggerated manner, was a little *exalté*, was easily confused, could not play cards without making mistakes, could not sign his name on account of nervousness and tremor. He was somnolent during the day, falling asleep at his desk, was not able to read except for a few moments, was unable to do his work well, becoming easily confused and exhausted. There was a general change in his character, so marked that his wife came to consult me about it. He had no delusions, but was somewhat depressed.

The diagnosis, in 1906, was tabes and developing tabo-paresis. November, 1909, after several months' rest and treatment part of the time at a sanitarium, the patient returned to business and he has continued at it ever since. I have seen him at intervals during the past three and a half years. He is now mentally normal; he is no longer forgetful and can attend to his work. He can write and dictate readily. Facial tremor is gone. The tabetic symptoms are the same, almost exactly, as they were three years ago.

Case 11.—W. D., aged 30, married, denies infection. In 1902 he gradually developed a spastic paraplegia with bladder and sexual weakness, the disease taking the course of Erb's syphilitic spinal paralysis. In the fall the patient developed delusions of grandeur, and when examined by me he had all the somatic and mental symptoms of general paresis, with facial tremors, Argyll-Robertson pupils, and involvement of the pyramidal tracts. This diagnosis was confirmed by Dr. Frederick Peterson and the physician in charge of the institution to which the patient was committed. He was insane and delusional for nearly a year, but gradually improved, and has now been practically well of his mental trouble for over seven years. He has not known quite the mental vigor of his former years, and his spinal symptoms have remained about the same. The total duration of the condition is now nearly eight years.

This is a remission in general paresis, and it is not one of the class of cases on which I base my remarks. It is admitted by all that there may be long remissions in general paresis.

I could cite other cases from my notes, but I prefer to get the evidence of other neurologists, and Dr. Joseph Collins has kindly placed the two following cases at my disposal:

Case 12.—A man, aged 45, stock-broker, unmarried, was seen May 31, 1904. He had had syphilis when 23, an apparently moderate infection, treated by a prominent specialist for three years and pronounced cured. When 31 years old the patient had an attack of diphtheria; when 38, an attack of typhoid fever.

The first symptom of the present disorder, of which the patient is cognizant, occurred in 1903. He was in bathing. The propinquity of a certain person was responsible for extreme erethism, followed after a long time by orgasm. The patient experienced a profoundly disagreeable sensation in the head, and had a feeling of confusion and syncope. Following this he was in bed for a fortnight, and his physician who treated him, said that he had a heat-stroke. After that time the patient was subject to periods of profound depression. He lacked initiative, was moody, sullen, unsociable, and impotent. He frequently made mistakes in his orders and thought he had to give up business. Depression was his worst symptom. The pupils were unequal; one knee-jerk was absent, and there was distinct slowing of speech. This man took an enormous amount of mercury, by hypodermic injections and inunctions, and is to-day practically well. The physical signs remain the same, save that the speech has become distinct. He is able to transact his business as well as ever.

Case 13.—A man, aged 46, had syphilis when 21; he was rather alcoholic. When 38 years old he developed symptoms of mental confusion, associated at times with violence, but depression was his chief symptom. Gradually he became indifferent to his family, exhibited loss of self-control and was most easily excited and annoyed. Examination showed pupils that were unresponsive to light, slight tremor of the lips, tongue, and hands, and exaggerated knee-jerks. He seemed to have insight into his condition and explained his inability to work by saying that he was weak. He would frequently make mistakes in writing, however, and displayed evidences of marked forgetfulness. He was put under intensive mercurial treatment, and to-day, six years after I first saw him, he is running a store.

The question in all these cases, of course, comes up whether these patients really were suffering from paresis in an extremely early stage. Some authorities seem to take the position that we can never be sure we have a case of paresis until the patient is dead, and the characteristic anatomic changes are found in the cortex of the brain. This anatomic test of the existence of paresis, is an unworkable one, and would make the talents and acuteness of the clinician practically of no value. Besides, it seems to me to be utterly without foundation. I do not believe that in the very early stages of paresis any anatomic change exists which could be detected by the microscope, and if we have to wait for our diagnosis of the disease until these anatomic changes occur, I can well agree that the prognosis must always be hopeless. But it is my conviction that we can recognize the malady before any appreciable changes do occur or, at least, changes which are beyond hope of repair or arrest. Let me illustrate this position by the following history:

Case 14.—A young man, a lawyer, aged 33, was infected with syphilis about eleven years before he was seen by me. He was treated for the disease continuously for two years, and after that period, every six months, for about six years. He continued his professional work, and was very successful in it, until about a year before I saw him, when he suffered from symptoms of what was thought to be neurasthenia. He was treated on this basis, and went out West, took active exercise on horseback. He improved somewhat, but then became considerably worse, and was finally brought to me in January, 1909, when he had distinctly the symptoms of paresis—forgetfulness, inability to concentrate, confusion of ideas, irritability, a good deal of mental depression, and certain almost delusional ideas regarding the way in which he was treated by his friends. Physically, he had distinct and characteristic dysarthria, tremors of the face and hands, exaggerated reflexes, and Argyll-Robertson pupils. The Wassermann test was positive. He improved a little for a time, but at the end of the following summer he was distinctly demented and delusional, and had all the characteristic physical symptoms of general paresis. These progressed, and he is now in the third stage of the malady.

The point of interest in this case is this: On inquiring carefully about the patient's earlier years, I found that five years before I had seen him, he had had an attack of mental depression, of a somewhat hypochondriacal type, such as so frequently ushers in paresis. This had occurred without special cause, and in a man whose habits were good, and who had inherited a sound constitution. I further learned that after he recovered from this depression, he had been a little different in temperament and character, a little more irritable and unreasonable, a little more egotistical and expansive than usual, his friends thinking that he was simply rather more conceited and difficult to get on with than before. But, in the light of subsequent events, it seems clear that these were the mental forerunners of his later attack, because when the later attack came on, all these characteristics were simply very greatly exaggerated. Thus, it seems that this attack of paresis can be traced back to a period of five years, during which time the patient achieved a really brilliant success in his profession, transacting his work effectively, and not suffering from any physical troubles whatever. It seems incredible that during all these years of successful professional work and social activity, he had any serious degenerative changes in the cortex of the brain, which changes are supposed to be necessary to enable one to make a diagnosis of paresis.

If the history of cases of paresis could be traced back in all instances, to the very remotest beginning, I believe that in a good many instances this prolonged preliminary period of slight mental perversion might be discovered, and, in this case I think that if treatment had been undertaken along proper lines three years before or two years before, the malady might have been kept in check.

The onset of a parasyphilis, occurring in persons who have had an infection, takes place in different ways as follows:

1. Acute symptoms of syphilitic exudates in the brain, ending promptly or later in paresis, or ending in cure, with or without mental symptoms, or ending in some deterioration with final serious cerebral vascular changes.

2. Acute mental symptoms, maniac or melancholic, ending in cure or paresis.

3. Tabetic and paretic symptoms, ending in taboparesis or in tabes with arrest of paresis.

4. Insidious mental and physical deterioration, ending in paresis.

The above initial conditions all may or may not end in paresis, depending on treatment, the constitution of the patient, and the intensity of the infection. Often they go on until nearly every symptom of paresis appears, yet they are even then arrested. The clinical phenomena, from the beginning to near the end, are produced by the same pathologic agent, and often can be controlled by treatment, even when the signs are ominously identical with early symptoms of general paralysis. This is what I mean by "cure of early paresis."

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# THE SOY BEAN AS AN ARTICLE OF DIET FOR INFANTS

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The soy bean, sometimes incorrectly called the soja bean, has attracted attention from time to time as an article of diet for Americans and Europeans, but the attention has been ephemeral and but few if any attempts have been made to place the bean on a practical scientific basis as an article of diet. The composition of this bean and the facts that it is free from starch and of high protein content led me to try it as an article of food for young children and infants, and a preliminary report was made before the American Pediatric Society[1] in May, 1909.

The high protein content of this bean, about 25 per cent., probably accounts in part for the small amount of other nitrogenous food taken by the Chinese and Japanese, as the soy beans, and articles of diet made from them, are used in nearly every meal by the natives of Japan and China; and, when one takes into account the composition of the bean and the amounts eaten, it will be found that the Oriental gets a fair amount of protein daily. This general and continued use of the bean demonstrates conclusively that the protein of the bean may be utilized in the body in place of that of other vegetables and of meats. All sorts of foods are made from the beans, such as gruels, soups and porridges, but it is chiefly used in the East in the form of a cheese-like substance of which many varieties are made. It is eaten as a vegetable and picked green and used as a salad.

When one considers the American taste for meat and its great abundance in this country, there is little probability of the soy bean replacing meat by coming into general use, but it will be found of value as a source of protein when meat is contraindicated and especially when, as in diabetic diets, the patient tires of meats. As to its use in diabetics Dr. Julius Friedenwald and I expect to publish shortly a more or less extended report of cases showing its great value in this connection.

In the feeding of infants and of some young children one difficulty is to supply sufficient protein in a form in which it can be digested and assimilated. Mothers' milk is often not available, and the protein of cows' milk may not be suited, or cannot be adapted to the infant's digestion or, owing to certain diseases, may be contraindicated; and it is in these difficult and abnormal cases that the soy bean would seem to have a place.

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[1] Arch. Pediat., July, 1909; abstr. in The Journal, July 10, 1909, p. 140.

To determine the true value of the soy bean in infant feeding it is necessary to have definite knowledge of the composition of the foods prepared from them, and some simple means of preparing food of definite composition at will. As soy beans are not available in most markets, and as their cooking is a tedious process, the possibility of making gruel flour from the soy bean was taken up with a firm which makes a specialty of making gruel flours, and after some experimenting a satisfactory flour was produced. This flour was then sent to a laboratory in New York for analysis, and the following results were obtained:

| | Per Cent. |
|---|---|
| Protein (N. x 6.25) | 44.64 |
| Fat | 19.43 |
| Mineral matter | 4.20 |
| Moisture | 5.26 |
| Crude fiber | 2.35 |
| Cane sugar | 9.34 |
| Non-nitrogenous extract | 14.78 |
| Starch | None |
| Reducing sugars | None |
| Polarization normal weight due to optically active substance other than cane sugar (included in proteids and non-nitrogenous extract) | 7.86° |

The percentage of protein in this flour is almost one-third greater than the percentage of protein in the whole beans. This is caused by removing the coarse fibrous hulls which contain little protein.

A vegetable food of such composition certainly is remarkable when compared with round of beef, medium, which contains:

| | Per Cent. |
|---|---|
| Protein | 19.0 |
| Fat | 12.8 |
| Moisture | 60.7 |

Each ounce of this soy gruel flour yields about 13 grams of protein and 120 calories, and it can be used (1) as a gruel, (2) in broths, (3) in making biscuits or muffins. It may also be mixed with cereals, barley jelly, cream of wheat and the like.

Leaving out of consideration its use in diabetes both in adults and in children, the soy bean may be found of benefit in the following conditions as well as others:

In summer diarrheas and certain forms of intestinal disturbances a weak gruel (one or two level tablespoonfuls to the quart), made from the bean or, preferably, from the gruel flour made from the bean, will be found of great value. As a rule, it is well borne and digested and rarely causes either vomiting or an increase in the diarrhea. Barley or some other cereal should be added as suggested below. Later, when the food is to be increased, condensed milk or cows' milk may be added to the soy-bean gruel to advantage.

It is also of value as a diluent for cow's milk when used in the strength of four level tablespoonfuls to the quart (protein 1.4 per cent.) and this may be employed with condensed milk to advantage, greatly increasing the protein of the condensed milk mixtures. In many cases in practice condensed milk mixtures are of great service, but one serious drawback is the low protein content of the diluted milk. By the use of the soy-bean gruel this can, in a measure, be overcome. When this mixture is being used an occasional tablespoonful of orange juice should be administered as an antiscorbutic.

In cases of marasmus and in cases in which cow's milk mixtures are not well borne the soy-bean gruel may be added as a diluent of milk mixtures, and for backward, runabout children who are below *par* the addition to the dietary of soy broth or muffins may be tried.

The caloric requirements of the young infant are about 45.4 calories for each pound of body weight during the first three months of life; about 40.9 during the second three months, and about 36.4 calories to the pound during the second half of the year. The following table shows the approximate composition and caloric value of the gruels made from the soy-bean gruel flour. Each ounce contains about 13 grams protein and 120 calories.

| Amount. | Protein. % | Fat. % | Sugar. % | Calories. |
|---|---|---|---|---|
| ¼ oz. (1 level tablespoonful to quart) | .35 | .15 | .08 | 30 |
| ½ oz. (2 level tablespoonfuls to quart) | .70 | .30 | .15 | 60 |
| ¾ oz. (3 level tablespoonfuls to quart) | 1.0 | .45 | .23 | 90 |
| 1 oz. (4 level tablespoonfuls to quart) | 1.4 | .60 | .30 | 120 |
| 2 ozs. to quart | 2.8 | 1.2 | .60 | 240 |
| 3 ozs. to quart | 4.2 | 1.8 | .90 | 360 |
| 4 ozs. to quart | 5.6 | 2.4 | 1.2 | 480 |
| 5 ozs. to quart | 7.0 | 3.0 | 1.5 | 600 |
| 6 ozs. to quart | 8.4 | 3.6 | 1.8 | 720 |
| 7 ozs. to quart | 9.8 | 4.2 | 2.1 | 840 |
| 8 ozs. to quart | 11. | 4.8 | 2.4 | 960 |

If 6 level tablespoonfuls of the flour be used in making a quart of gruel, a satisfactory strength, 32 ounces would contain 19 grams of protein and 180 calories, being equal in protein to the same amount of average mother's milk, but containing about 400 calories less food value on account of the low fat and sugar content—a fact very important to remember in using soy-bean gruels. The caloric value of the gruel may be increased by adding condensed milk, sugar or cereals.

(1 oz.) 4 level tablespoonfuls of barley or wheat flour will add 100 calories.

(1 oz.) 4 level tablespoonfuls of oat flour will add 115 calories.

(1 oz.) 2 level tablespoonfuls of granulated sugar will add 100 calories.

(1 oz.) 3 level tablespoonfuls of milk sugar will add 100 calories. Two ounces of sugar in a 32 oz. mixture = 6 per cent.

### COOKING DIRECTIONS

*Gruels.*—A quart of gruel is made by boiling from 1 level tablespoonful to six ounces of the soy gruel flour in one quart of water for fifteen minutes, adding water to make up for loss by evaporation. Salt should be added to taste.

| Composition. | Protein. % | Fat. % | Carbohydrates. % |
|---|---|---|---|
| One level tablespoonful to quart... | .35 | .15 | .08 |
| One oz. (4 tablespoonfuls to quart) | 1.40 | .60 | .30 |

These gruels do not thicken during cooking as they contain no starch, and readily settle on standing. This may be overcome by adding 1 to 2 heaping teaspoonfuls of barley, oat or wheat gruel flour before cooking, which will add from 0.6 to 1.2 per cent. starch to the gruels, and also slightly increase the percentage of protein.

*Broths.*—Add from 1 to 8 ounces of the flour to one quart of beef, mutton, veal or chicken broth and boil for 15 minutes, adding water to make up for loss by evaporation; or, boil the same quantity of the soy flour for one-half hour with one quart of water, to which has been added a piece of ham, bacon or salt pork to give flavor. Each ounce of the flour will add to the broth about 13 grams of protein and 120 calories, or in percentages, add 1.4 per cent. protein, 0.60 per cent. fat and 0.30 per cent. carbohydrates. A broth made with 6 ounces of the soy flour to the quart would be half as rich in protein and fat as steak.

*Muffins.*—To make muffins from the soy flour, take 1¼ teacupfuls of the soy flour, ¼ teacupful of wheat flour, ½ teaspoonful of salt, 2 eggs, 1 teacupful of sweet milk, 2 rounded teaspoonfuls of baking powder, and 1½ tablespoonfuls of melted, but not hot butter. Beat well together, adding the melted butter last, and bake in gem pans in a hot oven. This will make about 12 muffins which will contain about 150 grams of protein and which will yield about 1,800 calories of which the carbohydrates produce but 280.

The soy flour, being non-nitrogenous, requires the addition of some wheat flour in making muffins, as above. The mixture of wheat and soy flours in this formula will contain about 36 per cent. protein and 20 per cent. carbohydrates, against 14 per cent. protein and from 60 to 70 per cent. carbohydrates in gluten flour. The proportion of protein to carbohydrates is from 8 to 10 times as large in the mixed soy and wheat flour as in gluten flour.

I am indebted to Mr. M. F. Deming for assistance in getting a satisfactory soy flour made.

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# HYPERTENSION AND THE VALUE OF THE VARIOUS METHODS FOR ITS REDUCTION

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Until comparatively recently high blood-pressure has been considered an indication for active therapy, rather than a compensatory process, demanding treatment of the underlying condition. Unfortunately our knowledge of the primary factors responsible for the condition are still far from complete. We know that certain anatomic changes, as the vascular varieties of nephritis, sclerosis of the celiac axis or its branches or of the aorta above the diaphragm lead to or are associated with hypertension. In addition, however, there are cases of hypertension in which careful anatomic studies have failed to reveal the cause and which for the present we must designate as idiopathic. Janeway[1] has called attention to the frequency of hypertension without urinary findings. The view that hypertension is a compensatory process has been suggested by many, especially by Krehl,[2] and merits the most careful consideration. Hypertension in nephritis may increase elimination through the impaired kidneys, by forcing more blood through the organ; or marked sclerosis of the arteries in other organs may lead to increased blood-pressure in the effort to supply it with the required amount of blood. Some work has already been done on the effect on elimination of lowering the blood-pressure in hypertension associated with nephritis. (Kinnicutt,[3] Rossbach,[4] Bourginski,[5] Loeb,[6]) but the results obtained have been far from uniform. Loeb in his recent careful experimental work, has shown that lowering the blood-pressure 35 to 45 points, by nitroglycerin, leads to diminished elimination of water and urinary solids.

TABLE 1.—EFFECT OF NITROGLYCERIN, 1/100 GRAIN, IN REDUCING BLOOD-PRESSURE

| Patient. | Initial Blood-Pressure. | Time in Minutes | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 | 4 | 6 | 8 | 10 | 12 | 15 | 18 | 21 | 25 | 30 | 35 | 40 | 50 | 60 | 90 | 120 | 150 | 180 | 210 |
| J. M. .......... | 168 | 155 | 145 | 150 | 150 | 140 | ... | 140 | ... | ... | ... | ... | ... | 142 | ... | ... | 150 | ... | ... | 150 | 150 |
| J. R. .......... | 210 | 205 | 210 | 205 | ... | ... | 195 | 205 | 205 | ... | 205 | ... | 205 | ... | ... | ... | ... | ... | ... | ... | ... |
| G. V. W........ | 235 | 220 | 210 | 200 | ... | 195 | ... | 205* | ... | 210 | 215 | ... | ... | ... | 215 | ... | 220 | ... | ... | 220 | ... |
| A. B. .......... | 165 | 165 | 165 | ... | ... | 165 | ... | ... | 165 | ... | ... | 165 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| W. L. .......... | 230 | 215 | 205 | 205 | ... | ... | 220 | ... | 225 | ... | ... | ... | 225 | ... | ... | ... | ... | ... | ... | ... | ... |
| S. B. .......... | 170 | 150 | 155 | 153 | ... | 152 | ... | ... | ... | 152 | ... | ... | 160 | ... | ... | ... | 160 | ... | 165 | ... | ... |
| H. M. S....... | 185 | 185 | 160 | 125 | 130 | 130 | ... | 135 | 140 | 150 | ... | 151 | 155 | 165 | 175 | ... | 180 | ... | ... | ... | ... |
| C. J. .......... | 210 | 210 | 210 | 210 | ... | 210 | ... | ... | ... | 210 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| M. T. .......... | 180 | 145 | ... | 130 | ... | ... | 135 | ... | 142 | 145 | ... | ... | 150 | ... | 165 | ... | 170 | 175 | ... | ... | ... |
| W. S. .......... | 230 | 215 | 205 | 205 | ... | ... | ... | 220* | 220 | ... | 230 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |

* Headache.

My observations have been confined to the direct effect on systolic blood-pressure of sweating, venesection and the various vasodilators. In a majority of the cases tested the urinary findings were of such character that chronic interstitial nephritis could be diagnosed. In a few patients the urinary findings differed not at all from normal or so slightly that it is possible kidney involvement was absent; since anatomically cases of this character not infrequently show extensive interstitial changes, however, a nephritis could not be excluded; for this reason no attempt was made to classify etiologically the nature of the hypertension.

The Stanton sphygmomanometer with wide arm-band was used throughout.

Several readings were taken before submitting the patient to the test, as it was found that the first reading, in case the patient was somewhat frightened or unaccustomed to the slight pain caused by the compression, might be 10 or 15 points higher than later readings. Since toleration for the vasodilatation is comparatively easily acquired, care was taken to select patients who had not recently received medication of this character. As some samples of sodium nitrite and nitroglycerin are inert, the activity of the preparation employed was first determined by animal experiment.

### NITROGLYCERIN

There is considerable difference of opinion in regard to the proper dosage of nitroglycerin. Some have given enormous doses without ill effect. Stewart[7] gave at a single dose 5 grains, von Noorden[8] 5½ grains, Hochaus[9] 7 grains, Himmelsbach[10] 2½ grains. On the other hand severe collapse has resulted from comparatively small doses, as 1/120 grain (Loeb). Initial large doses should never be given, 1/100 of a grain is the usual dose, and this amount was selected for our tests. When a fall in pressure did not occur with this amount, 1/50 of a grain was given, but without any more effect than from the smaller dose. The nitroglycerin was given in the form of 1 per cent. alcoholic solution, dropped on the tongue from a graduated minim pipette. Seven of the ten patients selected reacted to the nitroglycerin by a fall in blood-pressure varying from 20 to 50 mm. One patient gave a transitory drop of 15 mm. but within five minutes the pressure was within five points of the previous level. The two remaining patients failed completely to react, the pressure remaining unchanged.

The first evidence of fall in pressure appeared, in all but one case, within two minutes and with one exception the maximum fall in pressure was attained within ten minutes and in the majority of cases within six minutes. This maximum was maintained for a few minutes, the pressure rising gradually until within thirty-five to forty minutes it had risen to within about 10 points of the original level. After this the rise was so gradual that in one case after the lapse of three hours it still was slightly below the normal level.

As a result of the medication two of the patients complained of severe headache. These two patients were only moderately affected by the nitroglycerin, the headache appearing during the recovery from the maximum fall. Only one of these patients had suffered from headache as a consequence of his hypertension.

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[1] Janeway, T.: Pathologic Physiology of Chronic Arterial Hypertension and its Treatment, Am. Jour. Med. Sc., 1907, cxxxiii, 50.

[2] Krehl, L.: Ueber die krankhafte Erhöhung des Arteriellen Druckes, Deutsch. Arch. f. klin. Med., 1905, xxi, 1872.

[3] Kinnicutt, F.: Nitroglycerin in the Treatment of Chronic Nephritis, New York Med. Jour., 1886, xliii, 219.

[4] Rossbach, M. J.: Wirkung die Herzhypertrophie und Blutdrucherhöhung der Nierenschrumpfung Compensirend bezüglich der Harnausscheidung, Berl. klin. Wchnschr., 1888, xxii, 83.

[5] Bourginski: Lancet, London, 1885, ii, 733.

[6] Loeb, A.: Klinische Untersuchungen über den Einfluss von Kreislaufsänderungen auf die Urinzusammensetzung, Deutsch. Arch. f. klin. Med., 1905, lxxxiii, 452.

[7] Stewart, D.: Tolerance to Nitroglycerin, The Journal A. M. A., May 27, 1905, xliv, 1678.

[8] Von Noorden, C.: Discussion on Arteriosclerosis, Cong. f. inn. Med., 1909, xxi, 152.

[9] Hochaus: Discussion on Arteriosclerosis, Cong. f. inn. Med., 1904, xxi, 165.

[10] Himmelsbach, G.: Large Doses of Nitroglycerin, Med. News, Philadelphia, 1893, lxii, 14.

In none of the patients, after the use of nitroglycerin, was there a rise in pressure, as has been reported by Loomis,[11] Hewlett,[12] and Dmitrenko[13] in man and by MacNidder[14] and Miller[15] and Matthews in dogs.

### SODIUM NITRITE

Sodium nitrite, on account of its prolonged action, is considered by many more satisfactory than nitroglycerin. I employed it in solution in two-grain doses. Ten patients were studied; six reacted with a fall in pressure of 30 mm. or more; one 20 mm.; two 5 mm.; and one was unaffected.

The maximum drop was 75 mm.; in this instance the effect was transitory, as thirteen minutes later the pressure had risen to within 5 points of the original level. The first effect was observed as early as four minutes in one case; as a rule, however, not before six minutes. The maximum effect was obtained in from eight to fifteen minutes. The recovery to normal was more gradual than with nitroglycerin. Headache and other untoward symptoms were never observed.

Case 2, Table 3, is interesting, as the pressure continued to fall so that after the lapse of seven hours it was 70 mm. below the original level. The day following, the pressure fluctuated between 130 and 150 mm., although for several days previous to the test the pressure had been 200 mm. Following this the patient's pressure was taken daily; within forty-eight hours it reached 130 mm. and remained at this point during the two weeks the patient remained in the hospital. When the patient entered the hospital he was having uremic convulsions, the daily output of urine averaging 600 c.c. With the fall in pressure he became more comfortable, the convulsions disappeared and the urine averaged 1,700 c.c. daily. This case has been referred to in some detail for the purpose of calling attention to the rather decided and more or less permanent reduction in pressure that may take place in this class of patients. Another point of interest is the increased urinary output with the fall in pressure, although there was no special change in the fluids ingested, or in the loss through other channels. It is scarcely possible that the single dose of erythrol had anything to do with the permanent fall in pressure, as I observed a somewhat similar behavior in a patient in whom the erythrol could not possibly have been responsible. This patient (No. 9, Table 3) reacted in the ordinary manner to the drug, the pressure the day following having returned to the previous level of 200 mm. The pressure was then taken daily without material change in its height for a week, then without any treatment except rest in bed the pressure underwent decided change so that without a period of three days it fell from 200 mm. to 110 mm., where it remained two weeks, the patient feeling very comfortable. Then without apparent cause and without any change in the treatment the pressure rapidly mounted up to 222 mm. The patient became restless and complained of headache and developed uremic symptoms. Vigorous daily sweats were begun and within 10 days the patient was much improved, the pressure meanwhile having fallen to 90 mm., and remained approximately at this point during the patient's stay in the hospital. It is questionable whether the sweats were responsible for the fall in pressure, or whether it was due to some undetermined cause. These two cases are of special interest as they are the only ones in my experience in which prolonged hypertension has been followed by normal pressure, and corresponding improvement on the part of the patient. It certainly shows how conservative

TABLE 2.—EFFECT OF SODIUM NITRITE, TWO GRAINS, IN REDUCING BLOOD-PRESSURE

| | Initial | Time in Minutes | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Patient. | Blood-Pressure. | 2 | 4 | 6 | 8 | 10 | 12 | 15 | 18 | 21 | 25 | 30 | 35 | 40 | 50 | 60 | 90 | 120 | 150 | 180 | 210 |
| C. J. | 210 | 210 | 207 | 208 | 170 | ... | 135 | 140 | 165 | 185 | 205 | 205 | 205 | 205 | 205 | ... | 205 | 205 | ... | ... | ... |
| H. M. S. | 185 | 185 | 185 | 185 | ... | ... | 180 | ... | ... | ... | 180 | ... | ... | ... | ... | 185 | ... | ... | ... | ... | 205 |
| O. R. | 158 | ... | 140 | ... | 110 | ... | 115 | ... | 110 | ... | ... | 110 | ... | 115 | ... | 125 | ... | 135 | ... | ... | .... |
| L. B. | 170 | 165 | ... | ... | 140 | ... | 150 | ... | 185 | ... | ... | 150 | ... | ... | ... | 155 | .... | 160 | ... | ... | ... |
| L. L. | 235 | ... | 230 | 225 | ... | 215 | ... | 200 | ... | ... | ... | 210 | ... | ... | ... | 220 | ... | 225 | ... | 235 | ... |
| L. B | 170 | ... | 170 | 162 | ... | 145 | 145 | 140 | 145 | ... | 150 | ... | 150 | ... | 150 | 160 | 165 | ... | ... | ... | ... |
| W. L. | 230 | 230 | 230 | ... | 225 | ... | 215 | 210 | 220 | 220 | ... | ... | ... | ... | ... | 215 | ... | ... | ... | 225 | ... |
| T. P. | 185 | ... | 185 | ... | 182 | 170 | ... | 155 | ... | 160 | 155 | 155 | 155 | ... | ... | 165 | 170 | ... | ... | ... | ... |
| A. B. | 160 | 160 | ... | 160 | 155 | ... | 155 | ... | ... | 155 | ... | 155 | 155 | 155 | ... | ... | ... | ... | ... | ... | ... |
| R. G. | 220 | ... | 220 | 220 | 220 | ... | 220 | ... | 220 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |

TABLE 3.—EFFECT OF ERYTHOL TETRANITRATE, ONE-HALF GRAIN, ON BLOOD-PRESSURE

| | Initial | Time in Minutes | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Patient. | Blood-Pressure. | 2 | 4 | 6 | 8 | 10 | 12 | 15 | 18 | 21 | 25 | 30 | 35 | 40 | 50 | 60 | 90 | 120 | 150 | 180 | 210 |
| L. D. | 195 | 195 | 195 | ... | 190 | 190 | 190 | ... | ... | 190 | ... | ... | ... | 190 | ... | ... | ... | ... | ... | ... | ... |
| G. W. | 200 | 200 | 200 | 185 | ... | 175 | 175 | 170 | 162 | 142 | ... | 145* | 160 | 150 | 142 | 145 | 150 | 150 | 150 | 150 | 150 |
| C. J. | 200 | 200 | 200 | 205 | ... | 200 | 200 | ... | 200 | ... | ... | 200 | ... | ... | 200 | ... | ... | 200 | ... | ... | ... |
| H. M. S. | 175 | ... | 158 | 155 | 90 | 65 | 70 | 65 | 75 | 90 | 115 | 120 | 120 | ... | ... | 135* | ... | 140 | ... | 140 | ... |
| W. S. | 235 | 235 | 235 | ... | 235 | 220 | ... | ... | 220 | 220 | ... | ... | 220 | ... | ... | 225 | ... | 225 | ... | 225 | ... |
| G. V. | 205 | 205 | 193 | ... | 175 | 170 | 180 | 180 | 185 | 185 | 190 | 195 | 195 | ... | 195 | ... | ... | ... | ... | ... | ... |
| S. O. | 195 | 190 | 195 | 195 | ... | 190 | ... | 185 | ... | 180* | ... | 180 | 185 | ... | 180 | ... | ... | ... | 185 | ... | 205 |
| W. W. | 175 | 175 | 152 | 150 | 145 | 140* | 138 | 140 | 140 | ... | ... | 145 | 160 | ... | ... | 160 | ... | 145 | ... | ... | ... |
| A. L. | 205 | ... | 190 | ... | 170* | ... | 170 | ... | 180 | ... | 175 | ... | ... | 180 | ... | ... | 180 | ... | ... | 180 | ... |
| A. B. | 165 | ... | ... | 160 | ... | 160 | ... | 160 | ... | ... | 160* | ... | ... | ... | ... | 165 | ... | 175 | ... | ... | ... |

* Headache.

### ERYTHROL TETRANITRATE

Ten patients each received a half grain tablet of erythrol tetranitrate; the tablet was chewed and then swallowed. Five reacted by a fall in pressure of 30 mm. or more; two 15 mm.; two 5 mm.; and one was unaffected. The maximum fall was 110 mm.; this patient going into collapse, recovery taking place within fifteen minutes. The first effect appeared usually within four minutes, the maximum was reached within ten minutes or somewhat earlier than with sodium nitrite. The duration of the maximum effect was more prolonged then with sodium nitrite and the return to normal much more gradual. Six patients after receiving the medicine complained of severe headache, which in one instance continued for twelve hours. The headache appeared as a rule during the period of recovery from the maximum drop, came on suddenly and was intense in character. One patient had marked headache without reduction in the blood-pressure.

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[11] Loomis, H. P.: The Limitations of the Value of Nitroglycerin as a Therapeutic Agent, Med. Rec., New York, 1905, lxvii, 411.

[12] Hewlett, A. W.: The Effect of Amyl Nitrite Inhalations on the Blood-Pressure in Man, Jour. Med. Research, 1906, xv, 383.

[13] Dmitrenko, L. F.: Zur Pharmakodynamik des Nitroglyzerin, Ztschr. f. klin. Med., 1909, lxviii, 458.

[14] MacNidder, W. B.: The Action of the Nitrites on the Heart, Am. Jour. Med. Sc., 1908, cxxxv, 99.

[15] Miller, J. L.: Some Principles of Drug Treatment in Cardiovascular Conditions, THE JOURNAL A. M. A., Nov. 21, 1908, li, 1745.

we must be in drawing conclusion in regard to the effect of any special line of treatment.

### COMPARATIVE EFFECT OF THE VASODILATORS WHEN TRIED ON THE SAME PATIENT

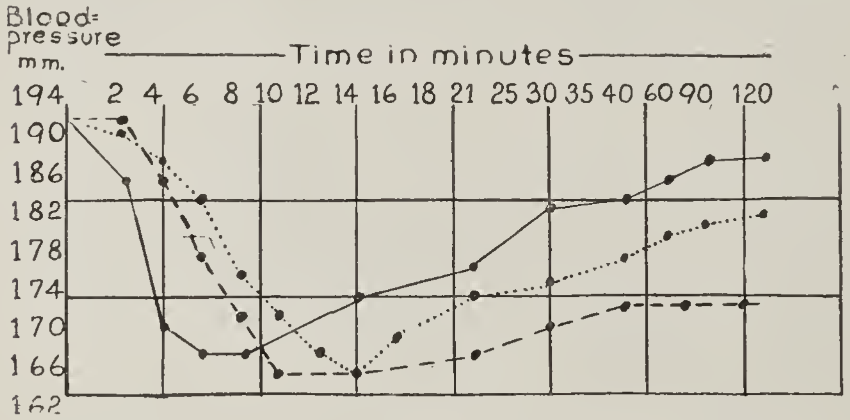
One patient, H. M. S. received on different days each of the three vasodilators. His pressure was not at all lowered by sodium nitrite, dropped 60 points after nitroglycerin and 110 points after erythrol.

Another patient, C. J., was not affected by nitroglycerin or erythrol but gave a drop of 65 points after sodium nitrite. A third patient, W. S., reacted by a drop of 30 points after nitroglycerin and 15 and 20 points respectively following erythrol and sodium nitrite. The patient who went into collapse after half a grain of erythrol was not affected by sodium nitrite.

The illustration shows the comparative action of the three drugs. This tracing was made by taking the average of each drug on the ten patients. This shows nitroglycerin most prompt in its action, erythrol second, sodium nitrite third. The degree of fall is strikingly similar in the three. Erythrol is most lasting in its effects as shown by the curve.

### VENESECTION

The withdrawal of 300 c. c. or more of blood from the normal individual is followed by a transitory fall in blood-pressure. Butterman[16] bled ten students, withdrawing from 200 to 480 c. c. and nine had a fall in pressure varying from 5 to 30 mm. Patients with hypertension do not necessarily react in the same manner. The effect on blood-pressure is dependent largely on the rapidity with which the blood is withdrawn. The first patient in Table 4 was bled slowly 500 c. c. from an arm vein, the blood-pressure remaining unchanged. One week later the same amount was withdrawn rapidly, a fall of 15 points resulting.



Comparative effect on blood-pressure of nitroglycerin (solid line), erythrol tetranitrate (line composed of dashes) and sodium nitrite (dotted line).

TABLE 4.—EFFECT OF BLEEDING ON BLOOD-PRESSURE

| Case. | Blood-Pressure Before Bleeding. | Amount of Blood Withdrawn. C.cm. | Blood-Pressure After Bleeding. | |
|---|---|---|---|---|
| 1 | 200 | 500 | 200 | |
| 2 | 190 | 500 | 185 | |
| 3 | 160 | 600 | 150 | Two hours later 160. |
| 4 | 185 | 500 | 170 | Two hours later 180. |
| 5 | 220 | 450 | 210 | |

As shown by Table 4 the effect of bleeding on blood-pressure was very slight and transitory.

### SWEATING

In determining the effect of sweating on blood-pressure only those cases are reported in which the patients sweat profusely for at least 30 minutes. The method of inducing the sweat varied, being either by hot wet blankets, by hot bricks, or by hot air. The blood-pressure was taken just before the sweat was discontinued. As shown by Table 5, three of the five patients reacted by a reduction in pressure ranging from 13 to 20 points; in one of these cases four hours elapsed before the previous level was regained. In every instance the patient felt much better after his sweat; this was especially noticeable in the patients with uremic dyspnea, their breathing being much improved, even in instances in which the blood-pressure was not reduced. The relief obtained is not to be explained by elimination of water or urea, as the amount of the latter in a profuse sweat rarely exceeds 15 grains. A redistribution of blood is probably an important factor, the splanchnics being relieved by the better filling of the cutaneous vessels. This is analogous to what takes place in the Nauheim bath, in which the calcium and sodium salts produce distinct hyperemia of the skin, which in patients with poststernal distress is followed by relief; and percussion shows a reduction in the cardiac dullness, although the blood-pressure may have remained unchanged. Of greater interest than the effect of a single sweat was the result of daily sweats.

TABLE 5.—EFFECT OF SWEATING ON BLOOD-PRESSURE

| Case. | Blood-Pressure Before Sweating. | Blood-Pressure After Sweating. | |
|---|---|---|---|
| 1 | 160 | 140 | Four hours before it reached previous level. |
| 2 | 190 | 190 | |
| 3 | 170 | 170 | |
| 4 | 190 | 175 | Two hours before it reached previous level. |
| 5 | 185 | 172 | |

A number of patients were given one or more sweats daily for a period of two weeks or more, the blood-pressure being carefully taken each day but not immediately after the sweat. Here as with the other measures the results varied, in some the pressure remaining unchanged, in others a gradual fall in pressure took place. One patient in particular, who had been under observation for several years, the pressure during this time never falling below 210 mm. received daily sweats for two weeks, during the first five days, there was the usual transitory reduction after each sweat. From this time on, however, the pressure became permanently lower, the last five days never rising above 180 mm. previous to the sweat, and falling to 160 mm. after the sweat. Other cases with similar results could be cited. Rather prolonged benefit has resulted from temporarily relieving the heart of some of its burden in this way. It might be argued that rest in bed was instrumental in bringing about the improvement. The patient just referred to on a previous occasion was placed in a hospital on account of poststernal oppression and mild attacks of pulmonary edema was confined to bed and given the same general treatment but without the sweats. After two weeks pressure was the same as on entering. This indicates that his fall in pressure was probably due to the sweats.

The sweats, however, like all other measures, are not lasting in their effect, as within a short time the pressure returned to the previous level. Several of the patients sweated were complaining of poststernal oppression. This was largely relieved by a few sweats. It has been my experience that poststernal oppression, so-called uremic dyspnea, and mild pulmonary edema are relieved more uniformly by sweats than by any other measure.

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[16] Butterman: Einige Beobachtungen über Blutdrucke bei Kranken, Deutsch. Arch. f. klin. Med., 1902, lxxiv, 1.

[17] Carter, H. W.: Clinical Observations on Blood-Pressure, Am. Jour. Med. Sc., 1901, cxxii, 854.

Attention should be called to some of the dangers f sweating. One of these patients was sweated in an lectric light cabinet, at a hospital where the attendant vas accustomed to turn on the cold spray immediately fter removal from the bath. When the cold spray vas applied to my patient, he complained of great posternal oppression and slight pulmonary edema. The ay following it was requested that the blood-pressure e taken just before and then during the application f the cold spray, and it was shown that the application f the cold spray caused a rise in pressure of 60 mm. f mercury. Such measures are evidently decidedly angerous. Another patient, who had a pressure of 20, for at least four years, shortly after being removed from the bath and while lying quietly on the ot in the hydrotherapeutic room suddenly developed ft-sided numbness, transitory in character and coninuing only a few hours. The pressure had been taken few minutes before the attack and showed a reduction f 25 mm. The baths were continued with this patient, is pressure finally remaining around 190; he then eveloped repeated transitory hemiparesis with numbess. As the patient had been entirely free from atcks of this sort excepting for one rather marked hemiaresis five years previously, and as the attacks entirely isappeared after the sweats were discontinued, they robably were responsible for the disturbance. This an best be explained by assuming that the brain could e sufficiently supplied only through the narrowed vesels when very high pressure was maintained, lowering f the pressure causing cerebral ischemia with transiory hemiparesis. The same disturbances have also folowed the use of vasodilators, indicating the necessity f careful further observation on this point and the ossible danger of moderate reduction of hypertension.

Assuming that the lowering of high pressure is desirble, as it may be in certain cases, these and other obrvations have shown that it is attained with considerle difficulty. The vasodilators are all transitory in eir action, and in some cases without any effect. weats and venesection are of value, especially the rmer. With the increasing tendency to assume that e hypertension is compensatory in character, the only tional method of treatment is to remove the cause; re we reach the borderline of our knowledge, and unl better informed must consider increased elimination rough skin and bowels and mental and physical quiet the most satisfactory procedure.

### CONCLUSIONS

1. In moderate doses active preparations of nitroycerin and sodium nitrite temporarily reduce the ood-pressure in the majority of cases of hypertension.
2. Erythrol tetranitrate causes a more prolonged retion in blood-pressure than nitroglycerin or sodium trite, but so frequently causes severe headache that its inical value is much impaired.
3. Headache after any vasodilator does not mean that e are getting the physiologic effect in the sense that e blood-pressure is reduced, as the headache may apar independently of any change in pressure.
4. A patient's blood-pressure may be decidedly afcted by one of these vasodilators and uninfluenced by nother.
5. Occasionally the blood-pressure of patients with arked hypertension may show very marked fluctuaons without apparent cause.
6. A single sweat reduces hypertension less than a oderate dose of vasodilators. If sweats are given daily, a rather marked reduction of pressure, lasting throughout the day, is observed not infrequently. When the sweats are discontinued the blood-pressure soon returns to its previous level.

I wish to express my thanks to the interns at Cook County and St. Luke's Hospitals for their interest and valuable assistance in these observations.

100 State Street.

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## DR. LYMAN SPALDING, THE FATHER OF UNITED STATES PHARMACOPEIA

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In connection with the coming revision of the Pharmacopeia, a special interest attaches to the circumstances that led to the preparation of the first Pharmacopeia of the United States of America, and to the life and works of its originator and principal author, Dr. Lyman Spalding, who in January, 1817, at a meeting of the New York County Medical Society took the first decisive action toward uniting the medical societies and colleges of the different states for the purpose of devising a national pharmacopeia. That Dr. Spalding had long had the idea in mind is evinced by the fact that on May 21, 1808, he expressed before the New Hampshire Medical Society a dissatisfaction that there were so many separate pharmacopeias for different states. The regret was uttered in presenting as secretary of the society a copy of the Massachusetts Pharmacopeia which had been sent to him by Dr. John Warren, of Boston, a brother of Dr. Joseph Warren, killed at the battle of Bunker Hill. In the United States at that period and in the colonies previous to the union, the London and the Edinburgh pharmacopeias had been in use until certain of the states adopted special works on the subject. The importance of a legalized standard for substances used in medicine had always been evident from the standpoint of public health. So long ago as the year 1542, when the senate of Nuremberg sanctioned a work of the kind prepared by Valerius Cordus, the interest of governments in standardizing drugs was recognized. In England, May, 1618, a pharmacopeia issued by the College of Physicians was legalized as the London Pharmacopeia, and by the same act a separate charter was granted to the apothecaries for the sale of drugs and medicines, these substances having been previously handled by grocers as well as apothecaries. By the same law, the censors of the College of Physicians conjointly with the wardens of the apothecaries received authority to exercise supervision over apothecary shops so as to regulate the quality of drugs. It was by such an exercise of the law under intelligent control that, not only was the preparation of medicines of recognized value regulated in the interest of public health, but the banishment from apothecaries' shelves was ordained of many popularly cherished, substances of imaginary medicinal value such as calculi, crab's eyes, and moss from human skulls.

The Edinburgh Pharmacopeia was first issued in 1699 and the Dublin Pharmacopeia in 1807. These works together with the London Pharmacopeia were displaced in 1858 in Great Britain and Ireland by the British Pharmacopeia issued under authority of a provision in the Medical Act of the General Medical Council Unfortunately, the efforts of Lyman Spalding in the

United States did not bring about a legal recognition of the Pharmacopeia by the Federal Government.

Many incidents in the life of the man who justly may be called the "Father of the United States Pharmacopeia" show that while his interest in professional work was broad extending to many branches of medicine he entertained from an early period of his career a special interest in chemistry and materia medica, leading naturally along the line of thought that culminated in the production of the work which has become a monument to his activity.

Lyman Spalding was born at Cornish, N. H., in 1775. His father was a farmer and a soldier of the colonial and the revolutionary wars. His general education was received at Charleston Academy, a few miles from Cornish. From 1787 to 1796, Dr. Nathan Smith, the distinguished physician and educator, was engaged in the practice of his profession at Cornish and was the family physician and preceptor of Lyman Spalding who studied in his office and accompanied him on his rounds visiting the sick. In 1795, Lyman Spalding went to Harvard Medical School from which he was graduated in 1797. Nathan Smith, also an alumnus of Harvard Medical School, traveled on horseback on one occasion from Cornish to Cambridge with Lyman Spalding. Another trip of the same sort Dr. Spalding made in the company of Philander Chase, afterward episcopal bishop of Ohio. After graduation, Dr. Spalding continued to assist Nathan Smith for three terms (1797, 1798 and 1799) in his lectures on chemistry and materia medica at the then newly established Dartmouth Medical School.

Dr. Spalding first settled for practice for four months at Walpole, N. H., in 1799. In June of that same year, an opening occurred at Portsmouth, N. H., where he remained until 1812. While at Portsmouth, he was favored with the use of the garden of Peter Coues, a sea captain who had once served on the famous battleship *Royal George*. Dr. Spalding was married in 1801 to Elizabeth, daughter of Captain Coues. An interest in materia medica led Dr. Spalding to plant poppy, lettuce and scutellaria. The opium and lactucarium he prepared were used in his own practice and the scutellaria was utilized in experiments for the cure of hydrophobia. William D. Peck, afterward professor of botany at Harvard, furnished the seeds from which the plants were grown.

In 1802, Dr. Spalding was appointed post surgeon at Fort Constitution, Portsmouth, which position he retained until 1812.

In 1809, Dr. Spalding went to Philadelphia and took a postgraduate course of four and a half months studying medicine under Benjamin Rush and under Dr. Barton, a professor of materia medica who was greatly interested in botany. He then went to New York, attended lectures for one month at the College of Physicians and Surgeons, returning to practice at Portsmouth in May, 1810. In October of that year he was invited to be professor of anatomy at the Fairfield Medical School, Fairfield, N. Y. This medical school originated from the Fairfield Academy started in 1803. Lectures on chemistry were begun in 1808 and medical lectures in 1810. Dr. Spalding was the first medical lecturer at the institution and, in 1812, when the school became incorporated as the College of Physicians and Surgeons of the Western Division of New York State, he was made president and professor of anatomy and surgery. As a preparation for teaching, and especially for teaching anatomy, Dr. Spalding had in 1807, previous to his visit to Philadelphia, acted as prosector, selected by Dr. Nathan Smith, to assist the well-known anatomist Dr. Alexander Ramsey in a course of lectures given at Dartmouth and lasting for several months. Dr. Spalding's work at Fai field necessitated a trip on horseback every Novembe from Portsmouth to Fairfield where he remained at th college for two or three months. At the time he was mad president of the institution in 1812, there were fro 50 to 65 students attending lectures there. During th winter of 1811-12, Dr. Spalding arranged to have D George C. Shattuck, of Boston, his intimate friend, g with him to Fairfield as professor of medicine, but owin to the inconvenience of the long trips at an inclemen season and the interference with his practice at Bosto Dr. Shattuck soon resigned the position though hi friendly relations with Dr. Spalding continued as lon as they both lived. Dr. Spalding's connection with Fai field College continued until 1817 when, owing to polit ical differences between the medical faculty and th college trustees, he resigned the presidency.

Before his disassociation from Fairfield College, D Spalding went to New York in 1812 to enter practi being induced to settle in the metropolis because of th death of Dr. Edward Miller whose practice he hoped t obtain. Having made the acquaintance in 1797 of D Samuel L. Mitchill, of New York, Dr. Spalding's intr duction into New York medical circles was, through th kind offices of his friend, speedily and happily accomplished. Other papers of which he was the author hav ing been favorably received by the New York Count Medical Society, he decided in January, 1817, to broac his plan for a national pharmacopeia. The propositio was on the whole favorably received. Such oppositio as was encountered the originator of the plan manage to overcome by surrounding himself with an efficie corps of collaborators, namely Thomas T. Hewson, E Ives, Elisha DeButts and Jacob Bigelow. He was himself chairman of the committee on publication of whic the other gentlemen were members. In the formatio of the committee on publication, Dr. Spalding journeye one year from New York to Boston, a second year fro New York to Philadelphia and a third from New Yor to Washington. In August, 1820, his son, L. D. Spal ing, aged 10 years, carried the proof of the Pharmac peia from New York, where his father was unavoidabl detained, to Philadelphia delivering the papers into th hands of Dr. Hewson of the latter city. For his son traveling expenses and board during the trip, Dr. Spal ing charged the Pharmacopeial committee $13. T total cost of getting out the first Pharmacopeia, whic ultimately appeared August 15, 1820, under the name "The Pharmacopeia of the United States of Americ 1820." was $2.235. The bill for printing was abou $650. The book was announced as being issued by th authority of the medical societies and colleges. It wa printed at Boston by Wells and Lilly for Charles Ewe No. 51, Cornhill. The text was in English and also i Latin it being explained by the publication committe that the use of Latin not only in the nomenclature bu in all the essential parts of the work was adopted owin to the belief the book was thus rendered more intelligib to foreigners, and more useful in those districts of th United States where the French and German languag were spoken.

Immediately on the completion of the Pharmacope Dr. Spalding proposed before the New York Medic Society a revision of the code of ethics; but before h could carry this plan through he met, in the spring 1821, with an accident which ultimately brought to end the activities of a brilliant life. The injury fro vhich he suffered was caused by a box falling from a ieight on his head while he was walking on the street. Failing of relief under the care of his New York and Philadelphia colleagues, he went to Clarkston, near Tappan-on-the-Hudson, hoping to be benefited by the ranquility of a stay in the country. At that time, the ody of the British Major André, buried in 1780, was lisinterred. On exhumation of the body, Dr. Spalding alled attention to the fact that the hair on André's iead, which was shaved at the time of his execution, was f a considerable length. This phenomenon became the ubject of a contribution made in 1906 to the *Chronique Iedicale,* Paris, by Lyman Spalding's grandson, Dr. . A. Spalding, of Portland, Me., to whom I am indebted for the main facts recorded in this brief biography, and in whose possession are many valuable and ineresting documents relating to the first Pharmacopeia f the United States and the career of its talented riginator.

Sept. 25, 1821, convinced that he had not long to ive, Dr. Lyman Spalding sailed for Portsmouth where is relatives lived. Having made the journey by water, e arrived at his destination October 12. He died Oct. 0, 1821, and was buried in the North Burying Ground, 'ortsmouth, N. H.

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# INFECTIONS DUE TO THE BACILLUS AEROGENES CAPSULATUS

## WITH A REPORT OF TEN CASES

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Many and varied were the conjectures in times past explain the presence of gas in the tissues and hollow gans. By some it was thought to be the result of deomposition, and by others, atmospheric air, gaining ntrance either through ulcers of the intestinal tract or sions of the lungs. The former surmise, in a certain umber of cases such as pneumaturia, etc., was probably ue, but those cases in which the gas supposedly entered rough an ulceration and manifested its presence in the ssues by emphysema, were without doubt cases of gas cillus infection.

In gas bacillus infections also we probably find the planation of many of the cases of air embolus written out by the very old writers, since it has been clearly tablished by Dr. Welch and others that gas, as the[1] sult of post-mortem development of the *Bacillus rogenes capsulatus,* frequently occurs in the vessels d heart cavities at autopsy.

### HISTORY OF BACILLUS

The *Bacillus aerogenes capsulatus* was discovered by r. William Welch of Johns Hopkins and its description iblished in an article by Drs. Welch and Nuttall.[2]

It is usually the case that two investigators are at work the same time, without cooperation, on any original servation. This was true in the discovery of B. A. C., d in 1893 Dr. E. Fraenkel published a description of e organism causing "gas phlegmon" which was iden-al with the organism discovered by Dr. Welch.[3]

In 1895, Goebel, ignorant of Dr. Welch's work, published a report on the bacillus of foamy organs.[4]

E. Fraenkel in 1893 first demonstrated the relation of B. A. C. to "gaseous phlegmon," the original work of Welch and Nuttall showing only its connection with gas in the blood. Later Dr. Welch repeated Fraenkel's experiments and confirmed his results.

Clinically, to Maisonneuve and Pirogoff is due the credit for the first descriptions of the disease. Maisonneuve, writing in 1853, called the disease *gangrène foudroyante,*[5] and Pirogoff, in 1864, acute gangrenous edema.[6]

Bottini[7] in 1871 first demonstrated the transmissibility of the disease and between that time and the discovery of its origin in 1891 there was much confusion, especially with the bacillus of malignant edema and Pasteur's *vibrion septique.* To-day in some of the text-books of surgery the description of B. A. C. and bacillus of malignant edema infections are confused. Even in some of the newer text-books B. A. C. is disposed of in a few lines which leave one with no clear idea as to its relation to other infections or the degree of danger associated with it. We cannot refrain from stating here that to really appreciate and understand how rapidly events may happen and with what fatal results in gas bacillus infections, one should see such a case as No II in our series.

Since Dr. Welch's first paper on the subject, except the discovery by Dunham in 1897 that the organism produces spores, little has been added to our knowledge of its bacteriology and practically nothing has been added to the clinical side or to our knowledge in the way of treatment. One of us (Lahey) has tried to limit the extension of the process in animals by the proximal injections of hydrogen peroxid but has done so only at the cost of the animal's life.[8]

The sites from which the B. A. C. have been recovered are many. In general way it might be said that the intestinal tract and the soil are the sources from which it is most consistently recovered. Dr. Hirshberg, working in the Johns Hopkins laboratory, recovered the organism from the intestinal tracts of rabbits, dogs and swine. In 1896, Dr. Walker at Johns Hopkins recovered it from dust collected in sweeping the floors, and at the same institution Dr. Harris recovered it from the contents of an old cesspool.

Dr. Welch reported in 1896 the bacillus recovered from a bullet in the head of the tibia, producing emphysematous gangrene, and E. Fraenkel reports the recovery of the organism from a splinter of wood in a case of tetanus.[9] One of us (Lahey) recovered it from the soil of the Boston City Hospital grounds, and in our series of cases it was recovered in a scalp wound resulting from a blow produced by the runner of a sleigh in midwinter on a snow-covered street. A case of B. A. C. infection following a lion's bite has also been reported.[10]

As Dr. Welch has stated, many cases have naturally been reported from Baltimore because of the interest in the subject there. As he also states, most of the writings are by Americans, and it is also of interest to note that practically all of these are by easterners. Few if any cases to our knowledge have been reported from any of the extreme western cities where traumatic lesions, in which soil infection would be likely, must be common.

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[1] In the following lines B. A. C. will be used for *Bacillus rogenes capsulatus.* We have in places substituted gas bacillus a shorter term.

[2] Welch and Nuttall: Bull. Johns Hopkins Hosp., 1892, iii, 81.

[3] Fraenkel, E.: Ueber Gasphlegmonen, Hamburg u. Leipzig, 93.

[4] Goebel: Ueber den Bacillus der Schaumorgane, Centralbl. Allg. Path. Anat., Jena, 1895, Part 5, p. 433.

[5] Maisonneuve: Gaz. méd. de Paris, 1853, p. 592.

[6] Pirogoff: Grundzüge der allgemeinen Kriegschirurgie, Leipzig, 1864, p. 867.

[7] Bottini: Gior d. r. Acad. di. med. di Torino, 1871, x, 1121.

[8] Lahey: Boston Med. and Surg. Jour., Dec. 16, 1909, p. 882.

[9] Fraenkel, E.: München. med. Wchnschr., 1899, No. 42 and 43.

[10] Jour. Med. Soc. New Jersey, 1905, i, 274.

### NOMENCLATURE

Owing to the confusion attached to this disease, the names by which it has been styled are numerous. The following are some of them: traumatic gangrene; *gangrène foudroyante;* acute mephitic gangrene; phlegmonous emphysema; gaseous phlegmon; emphysematous gangrene; fulminating gangrene; *gangrène gaseux.*

B. A. C. infection seems to us the best term to apply to this disease, because it takes its origin from the cause of the disease which must remain constant.

The other terms, such as gangrenous emphysema and phlegmonous gangrene, are not as satisfactory, since they take their origin from symptoms which may be present individually from a wholly different cause.

### BACTERIOLOGY

The organism is a non-motile, anaerobic, short, thick bacillus, having a capsule, as its name suggests. It resists the decolorization of the iodin in Gram's stain and grows on nearly all media in the absence of oxygen. The gas formed in its growth is said to be of the following composition: hydrogen, 64.3, $CO_2$, 27.6, nitrogen 8.1 parts; it burns with a pale blue flame.

The organism grows on culture media in the presence of oxygen, as has been demonstrated by one of us (Lahey) at least twenty-four hours.

### CHARACTER OF THE INFECTION

The gas bacillus makes its presence known always by a definite picture, the intensity of which is influenced by the severity of the infection and its situation.

The temperature is elevated as the process develops, sometimes directly after the injury or operation, sometimes late, depending on whether the process be of the acute fulminating type or of the late, delayed type of infection. There is nothing characteristic in the pulse, being elevated as a rule in proportion to the temperature.

The first appearance of the process almost invariably is the watery, blood-tinged discharge, not pus. On close inspection may be seen small bubbles of gas coming from the wound, or very slight crepitation is felt beneath the skin at the edges of the wound. Large or small blebs varying in size from a quarter up to four or five inches in diameter may be the first evidence, causing one to be suspicious of B. A. C. infection. These blebs are covered by skin at first dark red and shading into blue or green in appearance, later becoming distinctly blue in color, and are characteristic in B. A. C. infections. Their contents are fluid, which has the characteristic foul, sweetish odor of B. A. C. infections.

If one be suspicious of gas bacillus and well-acquainted with its odor, it sometimes may be thus distinguished before any other evidence is at hand. A culture taken will show the presence of the organisms and we have then a very early diagnosis.

Pain in all of the cases has been almost entirely absent, although since there is much edema there must be considerable pressure on the nerves. This is probably explained by the fact that the toxins of B. A. C. which have such a necrosing action may interfere with the conductivity of the various nerves in the tissues surrounding the process. Delirium is usually a late symptom, appearing after the process has become generalized and being present until death.

Nausea, vomiting and the constitutional symptoms so characteristic of other infections are not usually present in B. A. C. infections until the process has become very extensive and as a rule beyond control. This seems explainable by the fact that the process extends mostly by direct extension and not through the lymphatics or blood channels. The lymph glands in pure infections are not enlarged and tender as in streptococcus and staphylococcus infections. There is no reddening and induration of the lymphatic channels and as a rule no development of fresh processes situated apart from the original infection. The process ascends a limb as a match burns with the lighted end held down, or, on the trunk, spreads out as a grass fire, extending between muscle planes, beneath peritoneum, along the path of least resistance, separating these layers by the distending action of the gas as it is formed.

Fascia, tendons and ligaments resist the infection strongly and as a rule are not affected by it. Muscle seems to be its most favorable site in which to flourish. At the original site of the wound we find the lacerated tissue soft, moist and of the consistency of pulp. Beyond this the tissues are pale and water-laden, containing small amounts of gas and apparently being prepared to assume the pulp-like consistency of the tissues at the original site of injury.

The foregoing description is that of an unmixed infection due to B. A. C. From this we may have the intermingling of the two processes—B. A. C. and staphylococcus or streptococcus infections—in any degree or proportion. The process may be a frank staphylococcus or streptococcus infection with occasional bubbles of gas and B. A. C. in small numbers, as in the lacerated wound of the scalp in this series, or may starting as a simple ischio-rectal abscess, as has happened in the hands of one of our friends, begin to show itself as a B. A. C. process, rapidly changing from the predominance of the pus process to the complete overshadowing of it by the B. A. C. infection and resulting in death. In a case of this character the pus process remains local or practically so, with a tendency to recovery, while the B. A. C. process extends out into the tissues in the form of a practically unmixed process, which explains its severity.

In the cases in which the bacilli are limited to the wound, which contains a mixed process, it seems to us in cases we have seen much more amenable to treatment. But even in these cases the bacilli may remain locally present for some time, being active enough to produce gas, but not extending as is shown in Case 3

### TREATMENT

The treatment is always operative. Sometimes the operation will consist in the removal of stitches and allowing the wound to gape widely. Again it will require multiple incisions and sometimes we must resor to amputation. There are other things to do in the way of treatment but these are procedures which should be used as measures secondary or as adjuvants to the results obtained by one or more of the operative procedures. These secondary measures consist of frequent irrigations or spraying of the infected wound with hydrogen peroxid, the delivery of oxygen constantly into the wound from a catheter connected with an oxygen tank, or the submerging of an extremity in a constant soak.

First, to consider the indications for one or more o the operative measures. Concerning the opening o wounds widely there should be no doubt or hesitancy. In the presence of a fairly well-grounded suspicion the wound should be laid widely open and irrigated with hydrogen peroxid while a decision is made as to wha more radical surgical treatment shall be instituted.

The other two methods, multiple incision or amputtion, are not so easy to choose between.

Amputation must always offer the greatest chance f recovery, but also presents the disturbing thought iat an extremity may have been sacrificed when mulple incisions might have accomplished the same result. n the trunk multiple incisions of course must be the aly operation, no other being applicable.

In this series of ten cases four patients were treated y amputation, two died and two recovered. Two re- vered under treatment with hydrogen peroxid, the ound being opened and treated locally; one recovered ith oxygen delivered into the wound and one patient ied with only local, non-oxidizing agents applied. In vo cases treated by multiple incisions there was one eath and one recovery.

Statistics as to operative results can be of little value nce it is evident that the patients who recover under ɔening of the wound and secondary treatment with me form of oxygen would naturally be the mild ıses, while amputation statistics would show many eaths, both because it is applied only in the extreme ses and because the operation itself, particularly when condary to a compound fracture, etc., is of grave nger.

From this or from any other series of cases one canot draw conclusions as to what is the best form of eatment in an individual case. In most cases it is fe to say that multiple incisions should be used only the very early cases, and always with amputation in serve if the former operation does not check the pross. Amputation is practically always to be selected r the acute, rapidly extending process. While not ways so, it is usually true that amputation must be ɔne before the third day of the disease to be successl in saving life in a majority of the cases.

## CASE REPORTS

Case 1.—May 1, 1908, L., aged 27, single, a sailor; is said have had arm run over by a freight car. Long lacerated und on inner side of arm; elbow joint open; much laceron: radial artery pulsating. Wound cleaned, irrigated, loose gments of humerus removed, drainage in front and back, tured. Amputation refused by patient.

May 2, 1908: Dressing removed on account of bleeding, and und packed.

May 4, 1908: Few bubbles of gas escaped from wound and pitus beneath skin. Culture +.

*)peration.*—Arm amputated at junction of upper and middle rd. Stump packed and left open.

June 1, 1908: Discharged, having had an uneventful recov-.

Case 2.—March 30, 1907, K., aged, 51, was run over by ight car, causing traumatic amputation of left leg 4 inches ove ankle, and right foot at mediotarsal joint. Both wounds l of dirt and grease. Chopart amputation on right and putation at point of election on left.

April 1, 1907: Temperature has remained elevated, patient irious; wound dressed; left leg shows typical sweetish, foul ɔr: bluish green discolorations over wound; blebs filled with ody serum having very strong and characteristic odor; pitus and gas bubbles from wound. Culture +. Patient noved to operating floor and reamputation at middle of gh by transfixion. Following operation temperature fell to rmal, but patient failed to recover from the shock of the ond operation and died in two days. No organisms were overed from wound and stump was apparently healing by st intention.

Case 3.—March 20, 1906, L., aged 34, married, derrick fell leg, causing compound fracture of tibia. Wound cleaned l put in plaster shortly after entrance; circulation of foot ɔr; moderate laceration of tissue.

March 21, 1906: Patient comfortable; circulation in foot still poor; plaster split.

March 22, 1906: Wound dressed; no evidence of sepsis, save bloody serous discharge of peculiar odor; afternoon temperature 103; pulse 130; bluish discoloration of entire leg; greenish area over upper part of tibia surrounding one of the wounds; gas escapes from wound on pressure; audible crackling sound of escaping gas on pressure. Culture +.

*Operation.*—Mid-thigh amputation. Subcutaneous tissues gangrenous.

March 24, 1906: Gas bubbles and positive cultures.

March 26, 1906: Few gas bubbles escape at each dressing on pressure.

March 30, 1906: Gas bubbles present up to to-day when, peculiarly, the temperature has reached normal.

April 19, 1906: Discharged. Convalescence uneventful up to this date.

Case 4.—March 20, 1906, Mrs. W., aged 32, was admitted for gluteal abscess with deep fluctuation and suppurating abrasion. Incision and drainage; no free pus found but subcutaneous tissues apparently necrotic.

March 23, 1906: Wound dressed and edges found edematous and necrotic; gas escapes from edge of wound on pressure; culture +; patient delirious; former incision enlarged and again no free pus found.

March 25, 1906: Wicks have been changed; wound irrigated with hydrogen peroxid; no gas in tissues beyond wound, but general condition of patient failed, delirium came on and she died.

Case 5.—Jan. 2, 1907, L., aged 52, stevedore, was struck by an electric car, knocked down, and sustained compound fracture at middle of left humerus. Cleaned, bones approximated and sutured.

Jan. 6, 1907: Wound dressed; large amount of bloody fluid (serum) evacuated. W. B. C. 17,400; temperature has remained 102 since operation.

Jan. 7, 1907: Dressed this forenoon; crepitus about wound and few gas bubbles from wound; wound widely opened and oxygen delivered into wound constantly. Culture +.

Jan. 10, 1907: Still slight crepitation and few bubbles; cultures ++.

Jan. 14, 1907: Uneventful recovery, except for a slight transient delirium.

Case 6.—February 14, C., aged 27, single, teamster, was thrown from a pung on snow-covered street and dragged, runner striking head and causing long lacerated scalp wound. Wound full of hair and dirt. Wound cleaned and sutured loosely with rubber dam drain.

February 18: On the day following operation wound was dressed and a slight odor, sweetish and foul in character, detected. A few bubbles of gas came from wound. Smear from wound showed gas bacilli. Wound was laid open widely and irrigated frequently with hydrogen peroxid.

February 22: No gas from wound for past two days. Irrigations of hydrogen peroxid continued. Following this temperature came to normal and uneventful recovery ensued. Culture for gas bacillus negative on February 23.

Case 7.—Aug. 5, 1906, L., male, aged 15, was struck by an automobile, causing crush of foot with large lacerations about ankle and lower leg. Wound cleaned, irrigated, curetted and sutured, with drainage.

Aug. 6, 1906: Dressed on day following operation (because of possibility of gas bacillus). Wound fairly clean; some discoloration of flaps distal to wound and similar discoloration between second and third toes; swelling somewhat increased.

August 7, 1906: Owing to foul, sweetish odor and discharge of bloody serum, multiple incisions were made about wound. Tissues were found to contain gas in small amounts and with but little extension. Culture +.

Following this, recovery uneventful.

Case 8.—June 27, 1907, P., aged 56, painter, fell from staging (30 feet), sustaining fracture of lower end of radius and compound dislocation of ulnar. Large amount of dirt in joint. Extensive laceration of tissues. Wound enlarged, thoroughly cleaned and irrigated; rubber dam drain inserted and wound sutured loosely.

June 28, 1907: Plaster split; no odor; temperature 99.2 F. in forenoon; 101.8 in afternoon.

June 29, 1907: Foul, sweetish odor from wound; wound dressed; blue blebs, slight crepitation and gangrenous tissue found; removed to operating floor where multiple incisions were made. No gas was found but all of the tissues of the arm were pale and watery in appearance. Wounds were washed out with hydrogen peroxid.

June 30, 1907, patient died.

CASE 9.—April 24, 1907, Mrs. H., aged 51, fell from a balcony on the outside of the house and received a compound fracture of the femur, with dirt in wound. Wound cleaned and sutured with drain and plaster spica employed. String attached to drain for removal.

April 26, 1907: Drain removed by pulling on string.

April 27, 1907: Foul odor of gas bacillus, elevated temperature and delirium. Wound dressed; gas escapes from wound; crepitation on palpation; characteristic blue blebs; odor so strong that it could be smelled throughout the ward. Operation advised; mid-thigh amputation; patient died on table.

CASE 10.—X., a man, aged 66, was admitted to the Boston City Hospital for diabetic gangrene of the right foot; the condition had existed for five months and was complicated by a considerable sepsis; there was discoloration of the entire foot. At entrance, urine contained 3.5 per cent. of sugar and acetone bodies. Under a starch-free diet the urine became worse, but improved under a moderate diet. After two weeks mid-thigh amputation was recommended and accepted. It was done under spinal anesthesia, and was entirely free from post-operative shock. For sixty hours the convalescence was uneventful; then the temperature rose to 102 F., the wound being clean. Eighteen hours later there was a slight oozing of bloody fluid from the stump, and soon after this bubbles of gas were observed in the exudate, the stump becoming enormously swollen with extreme rapidity, discoloration and large blebs also developing rapidly. All sutures were removed and the wound left gaping, but the patient died within twelve hours from the time the gas bubbles were discovered.

A careful and thorough autopsy confirmed the findings made when the bubbles were discovered; the gas bacillus was found almost everywhere; the intestinal tract contained enormous numbers of them. The spinal canal did not show the slighest trace of irritation in any part. The precise route of contamination of the wound was not determined.

## CONCLUSIONS

From the foregoing and other cases which we have seen, not here reported, it appears that in the majority of instances interference must be undertaken before the third day to make a favorable outcome probable. This is particularly true of the pure infections.

It is true, at least in this series of cases, that a lack of response to the infection in temperature is suggestive of a fatal result.

The grave danger of complete plaster-of-Paris dressing is only too well illustrated in Case 9. The dressing in all soil-infected wounds should not be an impervious covering and should be one which makes constant observation of the wound easy.

Laborers must be particularly liable to this infection, because they are exposed so often in the course of their occupation to soil-infected wounds.

While the disease is relatively common it is certain that in only a small percentage of soil-infected wounds do gas bacilli develop.

What is the explanation of this? It seems to us that the condition is similar to that in the rabbit, whose blood is well able to take care of large quantities of living gas bacilli, injected into the blood-stream; but in this same rabbit, if a leg be broken and then injections made into the blood stream, a B. A. C. process may be started at once around the fracture. The same conditions seems true in the human being, that normal human tissue is able to successfully resist the presence of a considerable quantity of gas bacilli. While this cannot be proved by
injection into the blood-stream, as in the rabbit, it
corollary is established by the fact that many of th
lacerated wounds acquired by workmen in the street
and from soil elsewhere must contain gas bacilli (sinc
it is prevalent in the soil, as we know), yet but a sma
percentage of them show gas bacillus infections. Thi
suggests that the tissues when not badly injured can an
do by their own vital resistance render harmless th
B. A. C. present.

This is further evidenced by the recoveries followin
amputation, even when some gas bacilli remains in th
stump. What happens in this case is that the manu
facturing site or nest of gas bacilli, that is the badl
lacerated tissue at the point of fracture or injury, whic
is the culture media, is removed by the amputation a
one sweep, changing the fight from one in which all th
odds are on the side of B. A. C. (Since new bacilli a
constantly sent out in increasing number from the ne
at the point of injury to take the place of dead ones) t
a contest in which conditions are reversed. Health
tissue, even though it contain the gas and numbers
the bacilli in their process of spreading, is well able t
successfully resist them, as is shown by several reporte
cases and the cases in this series, in which the patien
have recovered although gas remained in the stump aft
amputation.

Furthermore, it seems but reasonable to suppose th
in the cases infected with B. A. C. the blood retains
destructive, or at least a resistant, action to their pre
ence. At autopsy we find large amounts of gas in t
vessels, sufficient to produce fatal results from air em
bolus if present during life. Yet in B. A. C. infectio
we find gas only in the part affected, the process bein
always a local one, extending by direct progression.
the bacilli find their way so rapidly into the vessels aft
death it is but reasonable to assume that the reason th
they do not do so during life is that conditions there a
unfavorable for them.

How long the gas bacilli may live in the circulatin
blood we cannot say. Their presence in the circulatin
blood without producing gas has been definitely demo
strated at Johns Hopkins Hospital.[11] It seemed probab
to us that Case 10 was infected through the blood fro
his own intestinal tract, from which enormous numbe
of B. A. C. were recovered. This seems not at all in
probable, particularly since Dr. Brewer of New Yo
has demonstrated the liability of the kidney to sept
infarcts when rabbits are fed bacteria and when one
the kidneys is exposed and only such gentle injury i
flicted as would result from the tapping of the org
with the handle of a knife; and more so when it is rea
ized that B. A. C. develop more easily and rapidly in t
presence of sugar, this patient, No. 10, being a diabeti

In Case 4 it would seem probable from the situati
of the lesion that the infection might well have co
from the intestinal tract by direct contamination in t
feces, which we know as a rule contain numbers of g
bacilli. Knowing of another rectal case not reported,
ischiorectal abscess which was opened and became i
fected with B. A. C., resulting in the patient's death,
advise that all ischiorectal abscesses be protected fro
feces as carefully as possible.

That B. A. C. infections do not take place more co
monly in this condition seems strange but is explain
we believe, by the fact that the abscess cavities are us
ally left widely open and that they are lined with a la
of granulating and walling-off tissues as a result of t

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[11] Guyn, N. B.: Bull. Johns Hopkins Hosp., 1899, x, 134; Co
Bull. Johns Hopkins Hosp., 1902, xiii, 234.

ocess. both conditions being unfavorable to the devel- pment of B. A. C.

In Case 3 it is interesting to note that temperature emained elevated as long as gas was present, although o other symptoms were apparent.

In the one case in which the process was mixed, Case , the infection was a mild one. This is in agreement ith the majority of opinion that mixed infections are ss severe than pure ones.

In these cases, five were compound fractures. The resence of soil in the wound was noted in six cases. he soil was that of a door-yard in two cases, from the irt about a railroad in two, from street dirt in two, and robably in a third case. In one the injury was acquired n a street covered with snow.

Case 10 is interesting because of the existence of dia- etes, as any medium is made more favorable for B. A. C. rowth by the addition of sugar. Reasoning on this isis it would seem that diabetics should be more sus- ptible to the infection.

Plaster dressings were applied in three cases, two of hich died. In both cases which died the process would ive been discovered earlier had some other dressing ian plaster been applied. If plaster dressings are ap- ied they should be split, and in any injury in which . A. C. would be likely to occur, that being any soiled id lacerated wound, the dressing should be thoroughly ispected for odor, watery discharge, emphysema, and irticularly for bubbles of gas. This will mean inspec- on of the closest kind, for a small bubble of gas can isily escape the eye of one not on the lookout for B. . C. infections.

To consider the B. A. C. infections as rare is a mis- ke. We have published in this article only unreported ises, but a much larger number of cases exists in the oston City Hospital records. Many cases have been re- orted by other men and the condition certainly cannot called uncommon. The complication must have oc- urred though unrecognized, or at least unpublished, in ie practices of many general practitioners, particularly the experience of those seeing many accident cases.

One should feel that the possibility of its occurrence so definite that it should be guarded against. We are oth of the opinion, from the cases we have seen, that it liable to occur and will occur if given half a chance a lacerated, soil-infected wound.

The best results are to be obtained, we believe, rough prophylaxis, early diagnosis and prompt inter- rence.

By prophylaxis we mean thorough cleansing of all cerated or crushing wounds, careful cleansing and re- oval of dirt in soil-infected wounds, opening of the ound to the air as far as is feasible, instead of tight ture, even with drain, thus securing aerobic condi- ons which are unfavorable to B. A. C. The applica- on of a dressing which allows the entrance of air to e wound as far as possible and dressings which may easily removed for inspection of the wound, are also portant. By early diagnosis is meant the careful atch for the signs before described, frequent cultures om the wound when in doubt and reopening of the ound where there is any question of gas bacillus in- ction.

By radical treatment we mean amputation in the lminating type, with the stump left widely open; ultiple incisions in the milder type, with careful and equent inspection, so that amputation may be resorted if the former treatment is not effective.

In regard to hydrogen peroxid and oxygen gas we can make no definite statement, but we do advise the use of the former in the stump after amputation and in the wound after the flaps have been opened.

We are of the opinion that B. A. C. infection is not a well-understood process in the minds of the average physician. We trust that we may have stimulated an interest that may result, should the infection occur in the experience of any hitherto unfamiliar with it, in its early discovery and successful treatment.

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# AN INQUIRY INTO THE CAUSATION OF NON-SPECIFIC URETHRITIS

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Gonorrheal urethritis has held the attention of the medical profession so strongly from the earliest times that comparatively little interest has been taken in other forms of urethritis. I have endeavored in the following notes to classify certain of the non-specific urethritides, and to offer a hitherto unmentioned explanation of their origin, as well as that of certain forms of prostatic, vesicular, and vesical infections, the etiology of which have been more or less obscure. The material utilized as a basis for these observations has been obtained from 1,524 cases occurring in private practice.

I have rigidly excluded from the discussion all gonorrheal cases, all cases of chemical or mechanical irritation, urethritis ab ingestis, and all the rarer forms of urethritis attributed to general infective processes such as mumps and typhoid, or diathetic conditions like gout and rheumatism. It has also been necessary to exclude all cases of relapsing gonorrheal urethritis, and all cases of post-gonorrheal urethritis, i. e., discharges occurring in individuals who are gonococcus-free, but who may be subject to irregular attacks of subacute urethritis. Many rare and unique cases of urethritis reported by Guiard, Nogues, and others have failed to stand criticism because of a history of a previous gonorrhea, so that all such patients were excluded from this series. It is so common an occurrence to see the flare-up of a chronic post-gonorrheal urethritis without any apparent cause that it was deemed best to exclude such cases from the discussion.

I have in addition ruled out of consideration all cases in which there has been the slightest history or suspicion of gonorrhea unconfirmed by microscopic examination at the time; likewise all cases of patients who have been either injected, irrigated or instrumented. It was also thought advisable to exclude all cases of urethritis occurring in men over 40, owing to the possibility of an error in the history of the patient's earlier sexual experiences.

There remains for consideration a comparatively large class of patients who present themselves to the physician with a discharge following connection more or less definitely, or who accidentally notice a glueing of the meatus, or who complain of premature ejaculations or frequent night emissions. Again there are those who come to the physician with marked cases of prostatitis, vesiculitis, or cystitis, denying any and all probable antecedent cause, and in whom the examiner is unable to find gonococci, stone, stricture, etc., to account for the existing condition. It is this class of cases which I have thought deserving of a closer study with a view to a better understanding thereof.

It is exceedingly difficult to make a proper classification of the urethritides from the fact that any classification will differ according to whether the viewpoint be clinical, bacteriologic, or pathologic, but as it is important to have some working scheme, the one in the center of this page may suffice.

The etiology of the non-gonorrheal or non-specific groups is rather difficult to grasp at first, and it is only after a number of such cases have been seen and studied that the whole picture is clearly presented to the mind. The irregularity of the incubation period, the marked variation in inflammatory reaction, the changes in the urethra, and the varied microscopic picture of the discharges all tend to indicate differences too great to be explained by difference in virulence of organisms or suitability of soil. The fact is forced on one that there are two general types, at least, of non-specific urethritis; the one acute in character, following sexual congress after a regular incubation period, unattended by lesions indicative of chronicity, tending to run, like a true gonorrhea, a well-marked clinical course, and favorably influenced and easily cured by proper treatment; the other, chronic in nature from the start, sometimes noted after sexual congress, but with an incubation period markedly irregular—so much so that it cannot be said to have a true incubation period—presenting always urethral lesions which from their pathologic picture must have taken months or years to develop, and showing no tendency toward self-limitation, but characterized by resistance to treatment, and at times not amenable to cure. The former class I have termed cohabitative, sexual or infective urethritis; the latter auto-infective, or autogenous urethritis, both classes belonging to the non-specific group of urethritides.

ANTERIOR URETHRITIS

| ACUTE | | | | CHRONIC | | | | |
|---|---|---|---|---|---|---|---|---|
| Gonorrheal. | Non-gonorrheal. | | Aseptic. | Gonorrheal. | Post-gonorrheal. | Non-gonorrheal. | | Aseptic. |
| | Cohabitative, sexual or infective. | Auto-infective, or autogenous. | | | | Cohabitative, sexual or infective. | Auto-infective or autogenous. | |

The acute forms of urethritis, non-gonorrheal in origin, are fairly infrequent, only 11 or 0.022 per cent., being encountered in 493 cases of urethritis of all types. The following case is quoted as being typical of this class.

Case 1.—*Patient.*—Male, white, aged 27, single. Last connection five days before examination (Sept. 22, 1908); previous one three weeks before. This forenoon he noted a slight white discharge. No pain or burning on urination.

*Examination.*—Healthy male. Moderately long foreskin, worn back. Meatus showed slight puffiness and hyperemia. Moderate grayish-white discharge (pus-cells in numbers, few epithelial cells, large number of Gram-positive cocci closely resembling gonococci with plain stain). First glass, hazy with shreds. Second glass, clear and no shreds.

*Treatment and Course of Disease.*—Zinc sulphate, 2 grains to the ounce. alternating with silver nitrate, 1/12 per cent., and daily anterior irrigations with 1 to 4000 permanganate of potash.

September 23. Discharge less. First, clear with fine shreds; second, normal; 28 French sound in anterior urethra. No infiltrations.

October 6: Daily ℞. Bare mucoid discharge. First, clear, few shreds. Second, normal.

October 18: No discharge for five days. First and second normal. Prostate and vesicles normal to feel and to microscope. Treatment stopped

October 25: No discharge. Urine normal.

December 2: Regular life. No discharge. Urine normal.

Such cases have an incubation period rather simila to that of a gonorrhea, five to nine days, but in the no specific case it is apt to be somewhat longer, as the i fection is milder in character. In 11 cases the shorte period was four days, the longest twelve. These cas always show evidence of acute inflammation, as indicat by a reddened or puffy meatus, with a congested a pearance of the urethral mucosa. The discharge is ye lowish, but rarely frankly yellow, and only fairly pr fuse, seldom approaching the amount seen in gonorrhe The discharge shows numbers of some organism usual alone, or else markedly predominant. The first gla of urine is more or less hazy with shreds, the seco clear. An immediate urethral examination will not sho any infiltrative changes. It must, however, be borne mind that a urethral examination done at the close such a case may possibly show fine infiltrations, where if done at the inception no infiltrations would be foun It is also to be remembered that such cases rapidly b come chronic, and if first seen at such a time they m easily be misinterpreted. These cases are truly infecti ones, they are acquired by direct contact during conne tion, and I will speak of them as cohabitative, sexual infective.

The infecting organism was studied in 11 cases of th type. In 5 cases Gram-positive cocci alone were note in 5 cases bacilli alone were found, 4 Gram-positive, Gram-negative; in 1 case both cocci and bacilli we found. The coccus is usually the *Staphylococc albus;* the Gram-negative bacillus was the colon bacill The Gram-positive bacillus has not been recognized name. It occurs as a diplobacillus. lanceolate shap with the rounded ends approximated.

It is unfortunate in this respect that more work h not been done to ascertain the pathogenicity of vari organisms found in the female vagina. Gurd[1] has inde recently investigated the flora of the female genital tr with great thoroughness, but no attempt was made prove on anthropoids the pathogenicity of organis found, which experiments, if looked into, might st further clear up this aspect of the subject, and prove assistance in the future.

Closely analogous to such cases, on the surface, those of patients who come into the physician's of purporting to have some acute urethral infection dati back to this or that connection. An examination sho little if any meatal puffiness or redness; the dischar which is white and scanty, shows a variable and mi bacterial character; the urine is clear with shreds or the worst hazy with shreds, rarely definitely cloudy, in true acute urethral inflammations. Such cases often denominated "strain," or else attributed to m turbation, or to connection with an unclean wom whatever that may mean. The patient is given some jection; in a few days the discharge has ceased, and atient is considered cured, and the injection a cure-all. ut if the examiner will make a careful urethral examiation of such cases he will discover, in almost every intance, more or less marked infiltrations in the urethra, specially in the penile portion about the middle third. urethroscopic examination will show the characteristic icture of a glandular or infiltrative urethritis. These acts being so, it must then be granted that this "new" ase is not new at all, but merely a new observation on he part of the patient of an infective process which ust have been already established for some time to pro-uce such marked pathologic changes in the urethra itelf.

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[1] Gurd: Jour. Med. Research, xviii, No. 2.

It is interesting to glance at two lines of argument hich support the view that such urethral conditions are ery often unobserved until some particular suspicion r coincident effect calls the patient's attention to the light discharge; first, the overwhelming proportion of uch cases among medical students, who are notoriously iven to a minute inspection of both subjective and obective phenomena; second, the statement of Waelsch[2] ho refers to an intractable form of non-specific ureritis which he has found only in medical men. There surely no reason why medical men should have a onopoly of a distinct urethral disease; it is, however, ertain that they are apt to be better observers and more ritical of their own bodies than the ordinary layman, that what would pass as insignificant with the latter ould not so easily escape the self-examination of the ormer. Out of 59 cases of urethritis in medical stuents in my series 14, or 23 per cent., were non-specific nature, whereas out of 434 cases in private practice nly 27, or 0.062 per cent, were non-specific. And of ese 27, 9, or one-third, were in physicians. Roughly peaking, non-specific urethritis is discovered four times ore frequently in medical men than in laymen, simply ecause of the mild disturbances it causes. Often this ondition can be found in patients who are not suspicous of any urethral trouble, but who consult us for variocele, circumcision, etc., and I have noted it in men ho have never had sexual connection, or in others who ave always used condoms.

The so-called incubation period of this type of ureritis is naturally vague and uncertain, and as stated 30 cases was found to vary from one to thirty days. he meatus rarely presented signs of acute inflammation. he discharge is slight, grayish or white, with varied acterial contents, never presenting large numbers of one rganism either alone or decidedly predominant. The rst glass of urine is usually clear, but shows fine floatng shreds; the second glass is normal. And, to complete e picture, an immediate urethral examination will show ore or less marked infiltrations. The prostate may kewise be involved, though presenting no symptoms. t is to be noted that though chronicity is the marked haracteristic, yet these cases, with the necessary conomitant conditions, may show temporary "flare-ups." n addition, it is perfectly possible for a patient to cquire the first type described, acute non-specific ureritis, on a urethra already damaged in the manner utlined above.

What the origin is of this low-grade infection, and how is brought about are natural questions that arose durng a study of the cases. After many factors were looked nto and cast aside, it appeared somewhat probable that perhaps a long foreskin with its necessary accompaniment of moisture and dirt might account for the condition. A glance at the following tabulation shows the condition of the foreskin in 30 of these cases.

| | |
|---|---|
| Long foreskin | 18 |
| Medium foreskin | 5 |
| Short foreskin | 2 |
| Circumcised | 1 |
| Not noted | 4 |

To ascertain the normal condition of the foreskin in childhood, as possibly bearing on the chronic forms described above, 91 successive male children were examined at the Touro Infirmary and Charity Hospital, through the kindness of Dr. King Logan. Their ages were from 2 months to 12 years. The following facts were noted.

| *Foreskin (91 Cases)* | |
|---|---|
| Phimosis | 15 |
| Long | 69 |
| Medium | 1 |
| None | 6 |
| *Meatus (59 Cases)* | |
| Reddened | 34 |
| Normal | 12 |
| Not seen | 4 |

Adhesions of Foreskin, 56; Discharge from meatus, 9.

Almost without exception the prepuce is long, often phimotic, adhesions are present, and there is about the meatus spreading peripherally over the glans penis an area of congestion, more or less red and of a width approximately dependent on the extent of the adhesions. When the adhesions are broken up this superficial congested area disappears rapidly as a rule. The statements of many pediatric specialists concur in the belief that a long foreskin with marked adhesions is the overwhelming rule in the male baby. I was unfortunately unable to find in the young male a definite case of marked urethral discharge, non-gonorrheal, but the conditions were not favorable in that most of the children had just urinated recently, thereby preventing any accumulation of discharge. I found, however, several cases, 9 in number, in which there was slight urethral moisture containing epithelial cells, few pus cells and bacteria; indeed, it cannot be hoped to find a definite non-specific urethritis except once in many hundred cases. In this connection it should be borne in mind that an adult may show a medium foreskin which when he was a child would have been a long one.

This condition of a long foreskin encourages heat, moisture, and uncleanliness around the meatus, all favorable factors for germ development. Jungano[3] recently, and many others before him have shown how many organisms are habitually present about the meatal lips and the glans penis, in addition to those in the normal urethra; with such factors tending to encourage germ development and urethral congestion it is quite possible and highly probable that many urethras are not able to withstand bacterial invasion and become permanently infected with organisms of low pathogenicity. Likewise it is not unlikely that some of the obscure joint lesions and kidney infections of childhood may owe their origin to such a source. A consideration of these facts makes it rather probable that in the young male all the conditions are present which allow a local infection to start; that in some cases it does so start, is unnoted, and becomes extremely chronic and slowly produces changes in the urethral mucosa, submucosa and glands. Later on after puberty, following intercourse and the attendant alcoholic irritation, the passage of very acid urine, etc., the mind becomes suspicious, attention is centered on the penis, a slight discharge is found, and the patient presents himself to the physician for an examination.

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[2] Waelsch, L.: General Syphilis without Primary Manifestation nd Professional Syphilis in Medical Men, München. med. Wchnschr., pril 27, 1909; abstr. in THE JOURNAL A. M. A., June 5, 1909, lii, 895.

[3] Jungano: La flore de l'appareil urinaire normale et pathologique, Paris, 1908.

A careful examination of such a patient discloses the condition described above, for which I have tentatively suggested the term auto-infective or autogenous urethretis, by which is meant the type which invariably develops spontaneously in one's self, in contradistinction to that variety which follows intercourse, therefore designated cohabitative, sexual or infective urethritis. This form is much more common than the sexual variety, being noted 30 times, or 0.063 per cent., in 493 cases of urethritis; it is about three times as frequently met as the sexual or infective type. A striking fact is that I have never yet noted its occurrence among Jews, who are without foreskin practically from birth.

To illustrate this condition more fully the following case is quoted as typical of this type of urethritis:

Case 2.—*Patient.*—White, male, aged 20, single; denied all previous venereal diseases. Discharge noted morning of day of examination (April 24, 1908); some burning on urination noted day before. Last connection eight days before examination; previous one four weeks before.

*Examination.*—Healthy male; long foreskin; meatus medium red, perhaps a little puffy. Slight watery, grayish discharge, showing pus, epithelial cells, few cocci and diplobacilli. First urine, clear with few fine shreds; second, normal.

*Treatment and Course of Disease.*—Anterior irrigation with 1 to 4000 potassium permanganate.

April 25: Barest moisture (pus and epithelium, very few cocci and bacilli). First, clear, with few fine shreds; second, normal. Treatment, anterior irrigation with 1 to 4000 potassium permanganate.

April 26: No moisture; first, clear, with 2 to 4 shreds; second, normal; 23 French sound showed very numerous and marked infiltrations, especially in the first three inches of the urethral canal.

June 2: Patient said that he was well and discontinued treatment. Urine normal, both glasses.

The question as to whether the organisms of the auto-infective or autogenous type of urethritis are infective for other urethræ is interesting, and I have found one case which is very suggestive. Two young men, never before infected, A and B, had connection with the same woman on the same night, A two hours before B. B came into my office a few days later, October 8, 1908, with a fairly profuse yellowish discharge, showing a Gram-positive diplobacillus, lanceolate-shaped, in great numbers. The first urine was hazy, with shreds, the second, normal. His urethra and prostate were normal, and the case ran the typical course of an anterior urethritis, being cured in fifty days. He told me of A, and I advised him to tell A to watch out for signs of infection. A came to me eleven days after B's first visit, October 19, 1908. For two days he had noted a slight smarting on urination. He presented a long foreskin, and a medium red meatus, with a slight white discharge containing epithelial and pus cells, and large numbers of lanceolate-shaped, Gram-positive diplobacilli, with various other urethral bacteria. These diplobacilli were similar to those found in B's case. The first urine was slightly hazy, with numerous shreds, the second normal, prostate normal. Three days later his urethra was examined, and marked anterior infiltrations found. The patient was treated for three months and a half before he was cured. A stated that he would never have thought of any trouble unless he had been cautioned by B.

The prognosis of the cohabitative or sexual form of urethritis is good, and as a rule the patients are easily cured. Many of the so-called gonorrheas which are cured by a few injections are unquestionably unrecognized cases of this type. The prostate may occasionally become involved, but other complications are rare; I have, however, seen epididymitis occur.

The most effective treatment for this type consists o injections of silver nitrate, 1/12 per cent. to ⅛ per cent increasing in strength as the inflammatory proces declines, combined with daily irrigations of potassim permanganate in ascending strengths. The proteid silve salts are good, but I prefer to use the nitrate as givin better results. As the case progresses toward a cure a astringent injection is alternated with the silver, unti the latter is finally discarded. The duration of treatment varies from three to four weeks, the longest tim being about three and a half months in cases in whic the prostate is involved. There are some forms, however, due to an infection with a slender bacillus, whic appear to be more amenable to the action of the zin salts, perhaps comparable to the results of zinc in conjunctivitis due to the Morax-Axenfeld diplobacillus.

On the other hand, the prognosis of the auto-infectiv or autogenous form of urethritis is not so favorable. Th infective process has been going on for many months o years, inflammatory changes have become well marked and there is often a well-developed fibrosis in localize areas of the urethra. In addition, the prostate is ofte infected, and it may, and usually does take months t effect a cure; in fact, in many of these cases it is impossible to restore the mucosa and submocosa to a norma state. Too often a slight urethral moisture remains, o else recurs several months after treatment has bee stopped, and prolonged observation of such patients fo several years has led me to believe that few if any ar positively cured, a slight discharge containing pus cell being present if the urine is held for six or eight hours

This type of cases is best treated along the followin lines; circumcision; massage of the prostate, followed b intravesical irrigations and hot rectal douches, if th prostate be involved, as shown by the presence of pus i the prostatic secretion rather than by digital examination of the gland; dilatation of the urethra in combination with urethral irrigation; injections. Of the latte silver nitrate in strengths of 0.25 per cent. to 0.5 pe cent. offers the most hope in the severe cases; it shoul be kept up for one or two weeks, then giving place to course of urethral dilatation. It is advisable to give long course of treatment subdivided into short period with an interval of rest in between. Time is an essential element in the treatment to enable the infiltration to soften and be absorbed. Ointments applied locall to the urethra would apparently be useful, but I hav not found them very efficacious; in sluggish cases, however, it is well to try ichthyol or balsam of Peru, in ful strength or with equal parts of lanolin.

I would again insist on the fact that many such patients may be apparently cured; they may have normal prostate, normal urine, no discharge, and a urethra without perceptible infiltrations; yet if observed for six t eighteen months they will almost always show a slight discharge, a few shreds in the urine, and infiltrations of the urethra now again perceptible, indicative of the fac that the infecting agent has not been entirely eradicated. Again, there are other cases, belonging to the same general class, in which even a temporary cure cannot be effected, a slight discharge and marked infiltrations persisting in spite of all treatment. I have kept such patients under treatment and observation for two years and more, until I was convinced that with our present methods a cure was impossible.

In many cases belonging to this class the patients are made neurasthenic, and spend many hopeless years be-ause this fact is not known. With experience it does ot take long to ascertain the possible limit of improve-ient of each case; when this point is reached the patient hould be told the truth as to the condition, and he hould be advised to discontinue the treatment, but to eport at intervals for an examination.

I have purposely avoided any discussion of the aseptic ype of urethritis; there is no doubt of its existence; it s always associated with infiltrative lesions of the ure-hra, and is probably dependent on deep glandular in-ections. It is most probable that when more work has een done on the anaerobic flora of the urethra we shall ave a much better understanding of this class of cases.

It is highly probable that the urethral condition which s brought about by the form of auto-infective or autog-nous urethritis will readily account for the variability hich so many cases of gonorrhea show. Considering rst cases of gonorrhea only, and for the sake of clear-ess those limited to the anterior urethra, it is well nown how many differences they show in their clinical ourse; some heal kindly, and complete resolution fol-ows; others tail off in a most exasperating chronicity, hough gonococcus-free; others flare up with acute xacerbations time and again. If, however, one comes to ealize that these first anterior gonorrheas occur, some on virgin soil, others on a field already damaged by less irulent but none the less persistent organisms, it will oon be clear that the virulence and chronicity of the onorrhea may well be determined by the presence or bsence of pre-existing inflammatory changes in the rethra. I have therefore come to the belief that the ariation from the normal which must exist in many rethras accounts for the chronicity and tediousness of any a first gonorrhea.

There are certain cases of prostatitis and vesiculitis hich occur in patients who give no history of venereal nfection, or of instrumentation, or of any other source f contamination. Such an infection must be explained, s some do, as a result of normal masturbation, or as a escending infection which unaccountably fastens on the rostate alone, leaving the rest of the genito-urinary tract ntouched, or as a direct infection from the rectum or lood-stream, or, finally, on the assumption of a low-rade ascending infection, which, giving little discomfort o the patient, was unnoted or passed over by him at he time. I firmly believe, as a result of clinical obser-ations, that many such cases follow some antecedent rethral infection, which becomes extremely chronic, ies down or out, but not until after it has infected the exual glands. It is certainly common enough in gonor-hea to see an infected prostate with normal urine and no ymptoms of trouble. It is pretty certain that some cases f cystitis in women are brought about by a direct scending infection from the vagina. I have noted in-olvement of the prostate in 6 out of 11 patients who resented themselves for circumcision or varicocele with o urinary symptoms whatsoever; in these cases the urine as clear, symptoms were entirely absent, and the condi-ion was found only by routine examination of the rinary tract as a prelude to treatment. This form of nfection must be taken into account in considering the tiology of senile hypertrophy of the prostate.

The following cases are quoted in detail because of heir instructive features in this connection:

CASE 3.—*Patient.*—Male, white, aged 24, single: never had tayed with a woman in his life. In the summer of 1904 e had an attack of malaria, and at that time noted burning n urination and a thick white discharge. Shortly after this e was laid up with a slight epididymitis. He had had no

TABLE 1.—COHABITATIVE AND AUTO-INFECTIVE TYPES CONTRASTED: 4 CASES EACH

COHABITATIVE, SEXUAL OR INFECTIVE

| Age. | Foreskin. | Meatus. | Incubation. | Discharge. | Bacteria. | Urine. | | Urethra. | Prostate and Vesicles. | Treatment. | Duration of Treatment. | Result. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 1" glass. | 2" glass. | | | | | | |
| 21 | Medium.... | Puffy and hyperemic. | 5 or 21 days. | Medium yellowish | G. P. coccus.. | Hazy with shreds. | Normal. | Normal....... | Normal....... | Injections and irrigations. | 26 days..... | Cured .... | |
| 19 | None........ | Pink and puffy. | 4 days.. | Medium yellowish. | G. P. diplo-bacillus. | Hazy with shreds. | Normal. | Few fine infiltrations. | Normal....... | Injections and irrigations. | 50 days..... | Cnred .... | Circumcised 6 years ago. Few fine infiltrations noted at end of case. |
| 19 | Short....... | Congested.... | 7 days.. | Medium, white, watery. | G. P. coccus.. | Hazy with shreds. | Normal. | Normal....... | Prostate badly involved, much pus. | Massage, injections and irrigations. | 2½ months.. | Cured .... | One year later. No discharge; 1" and 2" glasses normal. |
| 22 | Not noted.. | Pink and puffy. | 12 days. | White.. .......... | G. P. coccus.. | Cloudy with shreds. | Normal. | Not noted.... | Normal....... | Injections and irrigations. | 23 days..... | Cured .... | *Staphylococcus albus* in pnre culture. All connections for past 4 months with same woman. |

AUTO-INFECTIVE OR AUTOGENOUS

| Age. | Foreskin. | Meatus. | Incubation. | Discharge. | Bacteria. | 1" glass. | 2" glass. | Urethra. | Prostate and Vesicles. | Treatment. | Duration of Treatment. | Result. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 26 | Very long.. | Reddened.... | .......... | Mucoid.......... | Bacilli and cocci. | Clear; few shreds. | Normal. | Marked infiltrations. | Normal....... | Dilatations and irrigations. | 8 weeks..... | Cured .... | Never with a woman in his life. |
| 20 | Long. ...... | Slight pinkness. | 8 days.. | Watery, yellowish. | Diplo-bacilli and cocci. | Clear, with shreds. | Normal. | Marked infiltrations. | Not noted.... | Dilatations and irrigations. | 4 days...... | Cured?... | Discharge ceased — certainly not cnred. |
| 22 | Very long.. | Puffy, not red. | 2 or 9 days. | Watery, white... | Rare cocci... | Hazy with shreds. | Normal. | Dense infiltrations. | Not noted.... | .................... | .............. | ............ | Not treated. |
| 19 | Long. ...... | Normal. | 3 or 17 days. | Scant, white...... | G. P. cocci, diplococci and bacilli. | Clear, with shreds. | Normal. | Marked infiltrations. | Normal....... | Injections, irrigations and dilatations. | 3½ months. | Cured .... | Examined 2 years later; 1" and 2" glasses normal. |

treatment except internal medication. At the time of examination (March 13, 1905) the discharge and burning continued; he urinated every two hours in the day and twice at night. Erections were good and night emissions frequent.

*Examination.*—This showed a long adherent foreskin, chronic balano-posthitis, and masses of smegma could be squeezed out of pockets in the preputial cavity. The meatus was red and contained a thick grayish-white discharge showing pus, cocci and bacilli. The right globus minor was somewhat thickened and hard. First, second, and third glasses were cloudy (pus) with shreds. Prostate was a little enlarged, increased in density, and tender; right vesicle thickened, left normal. Secretion from prostate and vesicle was dirty white, showing under the microscope all pus with cocci.

*Treatment and Course of Disease.*—Patient was circumcised, many adhesions being broken up. He was treated for five months and discharged cured. He was reexamined in June, 1908, three years later; no discharge; meatus normal. Urine, both glasses normal. Prostate and vesicles normal to feel; secretion white, containing spermatozoa, lecithin, granule cells, with rare leucocytes.

January, 1910: No trouble. No discharge. First and second glasses normal.

Case 4.—*Patient.*—Male, white, aged 26, single; never had stayed with a woman in his life. He complained of frequent night emissions, two or three per month. He had worried about them only lately, and then only because he did not understand them.

*Examination.*—This showed a very long foreskin, a congested, purplish area about the meatus with some redness of the urethral mucous membrane; slight watery discharge showing epithelium, pus, few cocci and bacilli. First urine had mucoid haze with shreds; second clear. Prostate showed involvement to feel and on examination of secretion by microscope; 20 French sound showed very dense, large, well-marked infiltrations in penile urethra.

The patient was treated and cured.

A thorough study and understanding of the above facts will lead one to a more definite comprehension of the etiology and pathology of non-specific urethritis, and will point the way to a more exact knowledge of the causation and development of certain obscure cases of genitourinary infections; at the same time it will enable one to explain logically the exceeding variability in the reaction of certain urethrae to gonorrheal invasion.

In Table 2, 41 cases are tabluated as regards special points to which attention should be called:

TABLE 2.—SPECIAL POINTS IN 41 CASES

| COHABITATIVE OR SEXUAL (11 Cases) | | AUTO-INFECTIVE OR AUTOGENOUS (30 Cases) | |
|---|---|---|---|
| *Foreskin* | | *Foreskin* | |
| Long | 4 | Long | 18 |
| Medium | 1 | Medium | 5 |
| Short | 2 | Short | 2 |
| Circumcised | 1 | Circumcised | 1 |
| Not noted | 3 | Not noted | 4 |
| *Urethral Infiltrations* | | *Urethral Infiltrations* | |
| Marked | 0 | Marked | 14 |
| Fine | 3 | Fine | 10 |
| None | 2 | None | 0 |
| Not noted | 6 | Not noted | 6 |
| *Prostate* | | *Prostate* | |
| Involved | 2 | Involved | 10 |
| Normal | 6 | Normal | 14 |
| Not noted | 3 | Not noted | 6 |
| *Bacteriology* | | *Bacteriology* | |
| Bacilli and Cocci: | | Bacilli and Cocci: | |
| Scarce | 0 | Scarce | 7 |
| Numerous | 1 | Numerous | 2 |
| Numbers not noted | 0 | Numbers not noted | 10 |
| Bacilli (numerous): | | | |
| Gram-Pos. | 4 | Bacilli (numerous) | 1 |
| Gram-Neg. | 1 | | |
| Cocci: | | Cocci: | |
| Numerous | 5 | Numerous | 2 |
| Numbers not noted | 0 | Numbers not noted | 5 |
| (All Gram-Pos.) | | | |
| *Grouped Cases* | | *Total Urethritis* | |
| Private practice | 1,400 | Private practice | 434 |
| Medical students | 124 | Medical students | 59 |
| Total | 1,524 | Total | 493 |

| *Non-Specific Urethritis* | | |
|---|---|---|
| Private cases | 27 | (.063 per cent.) |
| Medical students | 14 | (.23 per cent.) |
| Total | 41 | (.083 per cent.) |
| (a) Sexual or Infective. | | |
| Private cases | 7 | |
| Medical students | 4 | |
| Total | 11 | (.022 per cent.) |
| (b) Auto-infective or Autogenous. | | |
| Private cases | 20 | |
| Medical students | 10 | |
| Total | 30 | (.06 per cent.) |

## CONCLUSIONS

In closing I feel warranted in offering the followi
conclusions:

1. Non-specific urethritis, acute and chronic, is
definite clinical entity.
2. Many of the non-specific cases of urethritis are n
of a sexual origin.
3. A long foreskin may be the possible starting-poi
of those types of non-specific urethritis not due to co
nection, because it produces urethral congestion in ear
life, and favors moisture and germ growth.
4. The variation and chronicity of many cases of go
orrhea are due to pre-existing urethral changes of a no
specific character.
5. The existence of chronic non-specific urethrit
offers a feasible explanation of the origin of many cas
of obscure prostatic or vesicular infection.
6. The practice of circumcision should be encourage
as a means of preventing autogenous urethral infectio

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# ANIMAL EXPERIMENTATION IN RELATIO TO PRACTICAL MEDICAL KNOWLEDGE OF THE CIRCULATION*

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IN THREE PARTS

## INTRODUCTION

There are but two paths along which the advance
medical science and art can be pressed; they are observa
tion and experiment. The two lead to the same goal
both are beset with difficulties or even with obstacl
which for the time being are, or may even forever be, i
surmountable. In any case it is essential, in order to a
certain beyond peradventure that either of the paths ha
led us to our goal, to show that the two lead to the sam
place. Still, to have threaded one of the paths succes
fully usually assures an easy and early approach by wa
of the other. Indeed, the opening up of one path ofte
leaves the finding of the other merely the matter of
single trial. When this is the case we are apt to los
sight of the fact that actually the goal has been reache
by an advance pressed along both pathways.

The bearing of these remarks on the subject-matte
of this paper becomes obvious when it is recalled that
subjects of observation and experiment the medic
investigator employs both man and the lower animal
The method of pure observation may be employed in th
study of both, whereas man can be employed as the su

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* This paper is one of the series prepared for and reprinted
the Council on Defense of Medical Research of the American Med
cal Association for circulation among the public. Fourteen of the
pamphlets are now ready, taking up the relations of animal expe
mentation to ethics, diagnosis, cancer, vaccination, the live sto
industry, tuberculosis, typhoid, dysentery, plague, rabies, surger
internal secretions, the circulation of the blood, protozoan tropic
diseases, etc.

ect of an experiment only with his full knowledge and onsent and in such a way as to inflict neither bodily liscomfort nor pain, except the not infrequent instances n which the experimenter himself serves as subject of he experiment. But experiments of the kind that can e made by the experimenter on himself are, for obvious easons, limited in number. There remains, then, a vhole host of experiments that must be performed on the ower animals, if medical knowledge is to be advanced. This statement is true, it matters not what view we may hold as to the justifiability of experiments on animals; t is nevertheless called into question by certain misinformed or misguided persons who argue that experiments vith the lower animals cannot serve to throw any light n the functions, either normal or abnormal, of the rgans of man. This objection, though untenable as it tands, contains an element of truth. It is true that nferences, based on animal experiments, as to the functions of the organs of man must be carefully guarded. When, however, they are checked by critical observation f, and painless experiment on, man, inferences from nimal experiments have, we believe, led us to the greater art of our practical medical knowledge and the part which is considered the most valuable.

Scientists, then, are all agreed that the findings of the aboratory must be in full accord with the matured conclusions of bedside observation if they are to be entitled o enrolment in the category of established medical ruth. Furthermore, it is equally true that bedside bservation can lead to the truth only when it is checked y experiment, which in this case may, however, be made or us by the slow and precarious methods employed by Nature. It is just at this point that it becomes difficult o determine what part of medical advance along any line s due to the achievements of the animal experimenter nd what part to keen observation, at the bedside, of xperiments performed by disease and trauma. However his may be, all who are in a position to know are of the pinion that they are mutually helpful.

Indeed, they are mutually helpful in more ways than ne. A very large part of the best clinical observation has been, and is being, made by clinicians who have had he opportunity of witnessing and performing animal xperiments during their student days, or who have ctually been engaged in research involving animal xperimentation. The fruit of clinical observation naturally depends very largely on the attitude of mind which he clinician brings to bear on his cases. Our system of medical training recognizes this fact in requiring that he student be given every opportunity in the laboratory o develop the critical way of contemplating things that must be employed when interrogating Nature.

It is not merely a coincidence that the periods of most apid medical progress (Hippocratic, Alexandrian, Galenic and modern) have also been the periods of greatest activity in the pursuit of animal experimentation or ts equivalent. Furthermore, it has not been merely a matter of chance that in each of these periods the most highly esteemed men (Hippocrates, Erasistratus, Galen, Harvey) were at one and the same time practitioners of medicine and animal experimenters, actually or in effect; nd that at least two of them (Hippocrates and Galen) were the greatest clinicians of their times as well as the uthorities of clinicians for centuries after them.

They were the authorities not alone in the particular ields in which they had conducted animal experiments, but, as a matter of fact, in every field of medicine. Is it not, therefore, permissible to assume that the relatively mall number of experiments, for the performance of which they managed to snatch a few moments here and there from their clinical activities, gave to them the attitude of mind that made them the fountain-heads of all medical knowledge during the long periods of medical aridity that succeeded them?

In order, then, to give a just valuation to the debt which the physician of to-day owes to animal experimentation, account must be taken, not only of the results capable of more or less direct application to the practice of medicine, but also of such observations and experiments on man as are stimulated by experiments on animals and of the attitude of mind of the physician toward his patient determined by the scientific, and therefore critical, atmosphere surrounding his activities.

### *I. THE DISCOVERY OF THE CIRCULATION*

The story of the discovery of the circulation of the blood has been so frequently told that it will not be necessary to review it here in any great detail. Indeed, my only reason for relating it at all is to attempt to show the part played by animal experimentation in its unfolding. The limited scope of this paper compels me to confine myself to the most important phases of, and contributions to, the subject.

The earliest recorded views on the physiology of the blood-vessel system that are entitled to serious consideration are those of Hippocrates. There seems to be no good reason for believing that Hippocrates actually performed carefully planned experiments on animals. The statement is, however, made[1] that Hippocrates (the name stands for a period rather than an individual) probably acquired his knowledge, among other ways, through observation of votive offerings, of slaughtered animals, and of injuries received in war and peace. These are tantamount to animal experiments; they are chance operations on living animals. Such slow and uncertain methods of acquiring knowledge must, however, have led to the development of a far from perfect theoretical scheme of the blood-vessel system. I call attention here only to his observation of pulsation in the aorta and pulmonary artery with the obvious comment that this phenomenon could have been revealed only by viewing the artery exposed in the living animal.

Whether Aristotle performed experiments on animals seems to be a matter of dispute.[2] In any event, however, his views are probably mainly the outcome of reflection based on dissection and the accumulated knowledge of his time. And in many respects, it might be added, Hippocrates was nearer to the truth than Aristotle.

The contribution of Praxagoras to the physiology of the blood-vessel organs consisted in drawing more clearly than had Hippocrates the distinction between the arteries and veins, and in showing that "the phenomenon of pulsation, previously regarded as a common attribute of arteries and veins, really belonged only to the arteries. . . . They were, furthermore, distinguished by the nature of their contents; for, while the veins were still considered as receptacles for blood, the arteries, according to the new view, contained no blood, nor any liquid material, but only an invisible gas or air."[3]

I have not succeeded in discovering the source of Praxagoras' views on the pulse; it is, however, evident that they could have arisen only from experiments or chance observation on living man or animals. His erroneous conclusions that arteries contained air must have been drawn from observations on dead, not on living animals.

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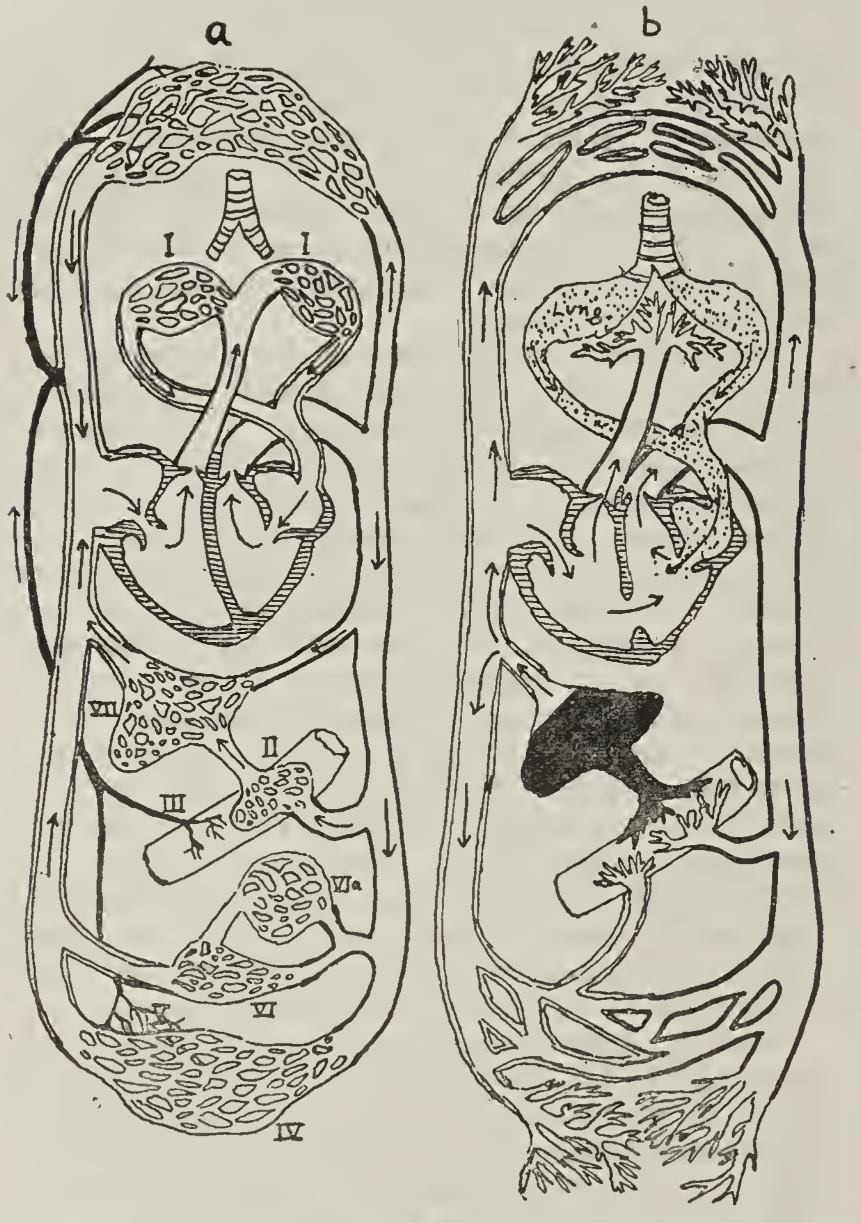
[1] Neuburger and Pagel: Handbuch der Geschichte der Medizin, Jena, 1902-5, i, 236.

[2] Nicolai: In Nagel's Handbuch der Physiologie, Brunswick, 1909, i, 674; and in Neuburger and Pagel Vol. i.

[3] Dalton: History of the Circulation, p. 38.

The next important contributions to the physiology of the blood-vessel organs seem to have been made by Erasistratus. They were based on experiments on animals[4] and on dissection of the human body. He seems to have been unduly influenced by the views of Praxagoras: the veins still contain nourishing blood, the arteries "vital spirits." Experimentation, however, forced him to proceed one step in advance of the views then held and admit the existence of "synanastomoses" of the arteries and veins, which, however, allowed blood to pass into the arteries only under abnormal circumstances, as in plethora and when an artery is opened.



Scheme of the circulation (Nicolai); (a) according to Harvey (modified); (b) according to Galen (reconstructed). Heart-wall shaded; arteries heavily contoured; veins doubly contoured; capillaries lightly contoured; lymphatics (nutriment) solid black; air dotted; I, lung capillaries; II, intestinal capillaries; III, chyle capillaries; IV, somatic capillaries; V, lymph spaces; VI, renal capillaries; VIa, glomerular capillaries; VII, liver capillaries.

Erasistratus also describes accurately "all of the cardiac valves and their action. According to him, they provide the mechanism by which the heart alternately takes in and expels blood on the right side and pneuma on the left."[5]

There now occurs a gap of almost 500 years in the progress of medical science and art, and there seems to be no evidence that careful animal experiments were made during this interval. The gap is closed by the activities of practically a single individual, Galen, through whose animal experiments, coupled with keen clinical observation, the physiology of the blood-vessel system was advanced another step.

Galen's main contribution to this subject consists of the proof that the arteries contain blood and not pneuma. Two experiments are offered as proof of this fact:

1. "Expose an artery of a living animal. Then open it by applying to it, as you choose, either the point of a writing style, a needle, a slender scalpel, or any similar instrument that will make a narrow cut. Blood will at once exude. The artery, then, must have contained blood and not pneuma.

2. "The artery of a living animal is exposed by dissection, and, after isolating it with a cord on two sides and then opening it in the middle, we showed it to be full of blood."[6]

Galen's conception of the blood-vessel system is very well illustrated in the accompanying diagram (b). The nutriment taken up from the alimentary canal is converted into blood in the liver. Thence it is conveyed by the veins to all parts of the body, including the lungs (through the pulmonary artery), for the purpose of nourishing them. "The venous blood was dark, thick, and rich in the grosser elements of nutritive material." From the air carried through the pulmonary vein to the left ventricle from the lungs the vital spirits were extracted and added to the blood.[7] Or, according to another account,[8] the blood, traveling back and forth in the pulmonary vein, transported the pneuma from the lungs to the left ventricle. "The arterial blood (then) was thinner, warmer, bright-colored and, above all, spirituous." "As every organ is supplied with both arteries and veins, it can absorb each kind of nutriment in due proportion for its own needs." "The pulse was due to a 'pulsatile force' resident in the walls of the artery, but derived by them from the heart, in which it also existed. This was a force of active expansion, dilating the artery and attracting fluids into its cavity; while its subsequent contraction caused an expulsion of its contents in the same degree. Thus the diastole of the artery was an active, and its systole a passive movement."[9]

These views of the blood-vessel system prevailed until the Renaissance. At this time the dissection of the human body, which previously had been forbidden, led anatomists first to question some of the Galenic physiologic doctrines and then to seek the answers in the living animal. Thus was animal experimentation revived after a 1,200 years' sleep which began with Galen's death.

Vesalius, the father of anatomy, showed experimentally that the pulse was not dependent on the uninterrupted connection of the walls of the arteries with the heart; as Galen had maintained, since the peripheral part of a severed artery, connected with the heart by means of a cannula, still continued to beat.[10]

The next step was the refutation of the view handed down from the earliest times that the blood passed through the ventricular septum from the right to the left side, and the substitution in its place of the idea of the lesser circulation. Servetus, religious reformer and physician, was the first to surmise this course of the blood from the right to the left ventricle. In a book entitled "Christianismi Restitutio," dealing almost exclusively with questions of religion, there is inserted a strikingly clear description of the pulmonary circulation. No mention is made of animal experiments, and it is usually stated[11] that Servetus jumped to the conclusion which Realdus Columbus subsequently proved y means of experiments on animals and probably in mplete ignorance of the views of Servetus on the ıbject.[12] It should not be forgotten, however, that ervetus' argument was based on the then known physiogy of the circulation, which was the result of animal xperimentation. In his experiments Columbus "always und the arteria venalis (pulmonary vein) containing o air, but full of arterial blood and yet not pulsating.[13] olumbus, it might be added, was thoroughly imbued ith the importance of animal experiments in the elucation of the functions of the blood-vessel system. "One arns more in a day from the vivisection of a dog," he ys, "than from feeling the pulse or from reading alen for months."[14]

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[4] Nagel: Handbuch der Physiologie, p. 674.
[5] Dalton: History of the Circulation, p. 57.
[6] Galen: Quoted by Dalton, p. 72.
[7] Dalton: History of the Circulation, p. 77.
[8] Nagel: Handbuch der Physiologie, p. 675.
[9] Dalton: History of the Circulation, p. 78.
[10] Nagel: Handbuch der Physiologie, p. 677.
[11] Dalton: History of the Circulation, p. 122.

There seems to be some difference of opinion as to hether Cæsalpinus is to be credited with making any ontribution of real value to our knowledge of the bloodessel system. Whereas, Dalton,[15] on the one hand, aintains that the main purpose of Cæsalpinus was "to efend the physiologic ideas of Aristotle as against alen, rather than to carry the doctrine of either to a urther development,"[16] Foster and the Italian authors,[17] n the other, concede to Cæsalpinus the recognition not lone of the true action of the heart-valves and the pulonary circulation, but also of the fact that "the flow f blood to the tissues took place by the arteries and by he arteries alone, and that the return of the blood from he tissues took place by the veins and not by the arteies." And, whereas, Boruttau[18] states that Cæsalpinus id not clearly understand the greater circulation—the ransit of the blood from the arteries to the right heart hrough the veins—Luciani quotes the following experient as showing that Cæsalpinus had thoroughly masered the conception of the circulation of the blood: He [Cæsalpinus] observed that if in a living animal a ein be exposed, tied and shortly thereafter cut into on he capillary side of the ligature, the first blood to xude is of a dark color, while that coming later is ighter. This observation led him to assume the existnce of anastomoses between the arteries and the eins."[19]

In view of the difference of opinion in regard to the alue of the contributions of Cæsalpinus, we may be ustified in concluding that, whatever his views may ave been, they could not have been clearly and conistently stated. Possibly it was for this very reason hat the doctrines of Cæsalpinus made no impression on is contemporaries. It would appear that little heed was paid to them until they were disinterred, so to peak, by antiquarian research."[16]

How different the reception accorded Harvey's tract, 'On the Motion of the Heart and Blood in Animals!" Vhereas no notice had been taken of the views of æsalpinus in fifty-seven years, i. e., up to and after he time Harvey had committed himself in print, before ixteen years had elapsed Harvey's views had been subected to published criticism, both favorable and unfaorable. The unfavorable criticism, it should be added, ame, not from experimenters, but mainly, if not exclusively, from clinicians who, through fear that the new octrine would wreck completely the fabric of medicine as then practiced, unwisely considered it better to bolster up the tottering structure with the old views than to rebuild it on the firmer foundation of animal experimentation. Those who then and since have put Harvey's views to the test of experiment have succeeded in substantiating him in all but a few minor details. The reason for the stability of Harvey's views may be gleaned from the well-known introductory words to the tract which laid the foundation of modern experimental medicine:

> When I first gave my mind to vivisections, as a means of discovering the motions and uses of the heart, and sought to discover these from actual inspection, and not from the writings of others, I found the task so truly arduous, so full of difficulties, that I was almost tempted to think with Fracastorius, that the motion of the heart was only to be comprehended by God. . . . At length, and by using greater and daily diligence and investigation, making frequent inspection of many and various animals, and collating numerous observations, I thought that I had attained to the truth, that I should extricate myself and escape from this labyrinth, and that I had discovered what I so much desired, both the motion and the use of the heart and arteries. From that time I have not hesitated to expose my views on these subjects.[20]

With the appearance of Harvey's work, the blood-vessel system, with at best imperfectly understood functions, becomes known to the world as the circulatory system, a term that stands at one and the same time for a system of organs and the mechanism thereof.

Harvey's demonstration of the circulation of the blood was incomplete; he had to assume the existence of "porosities of the flesh" in order to account for the passage of the blood from the arteries to the veins. Four years after Harvey's death, however (1661), the missing link was supplied by Malpighi, at one and the same time physician, anatomist, physiologist, histologist and the founder of scientific pathology. With the aid of the microscope, Malpighi succeeded in following in the lung of the living frog the course of the blood from the arteries through the capillaries into the veins, "so that," to use Malpighi's words, "the circulation of the blood is evidently exhibited."[21]

Thus, in barest outline, was the fundamental action of the blood-vascular system determined. The necessary facts, it has been seen, were gathered from all sources; the most important and decisive ones, however, were all the outcome of experiments on animals. Inferences from structure were made by all investigators; but, unsupported by experiment, they failed, even in the hands of Harvey, to lead to the truth. Nor could the case have been otherwise; a new mechanism, to be understood, must be seen and studied while in action.

The discovery and demonstration of the circulation of the blood ends the first phase of the physiology of the blood-vascular system and begins the second. With this second phase the physiologists of to-day are still concerned; it has to do with the elaboration of the details of the circulation. The limits of this paper make it impossible even to enumerate the lines along which the investigations have been carried, were the list to include only those of direct practical significance, and those in which animal experimentation has played a part. For the purpose of recalling to the mind of the reader some of the more important results of this activity, mention may, however, be made of the discovery of the automatic action of the heart, its regulation through the inhibitory and acceleratory nerves, of the vasomotor mechanism; of the measurement of the blood-pressure and blood-velocity, of the origin and transmission of the pulse as a wave, of the cause of the heart sounds, of the survival of organs with artificially maintained circulation, etc. Reference will be made in Parts II and III of this paper to the practical bearings of these and of many other contributions.[22]

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[12] Luciani: Lehrbuch der Physiologie, German Edition, 1905. i.
[13] Dalton: History of the Circulation, p. 129.
[14] Neuburger and Pagel: Handbuch der Geschichte der Medizin, . 27.
[15] Dalton: History of the Circulation, p. 147.
[16] Foster: History of Physiologie, p. 35.
[17] Luciani: Lehrbuch der Physiologie, 1905, i.
[18] Neuburger and Pagel: Handbuch der Geschichte der Medizin, , 332.
[19] Luciani: Lehrbuch der Physiologie, 1905, i, 122.
[20] Harvey: De Motu Cordis, 1628; transl. by Willis.
[21] Dalton: History of the Circulation, p. 224.

(*To be continued*)

148 West Gorham Street.

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# A METHOD FOR THE MATHEMATICAL READING OF THE ORIGINAL WASSERMANN REACTION

### PRELIMINARY REPORT

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To the physician, for whom it has become a practical diagnostic necessity, the reports of the Wassermann reaction have presented great vagueness and inaccuracy.

TABLE OF RESULTS IN TWENTY-TWO WASSERMANN TESTS, EXPRESSED IN PERCENTAGES AND BY OLD METHOD

| Source of Cases. | No. | Description After 16 Hours. | | Per cent. After Centrifuging. | Old Method. |
|---|---|---|---|---|---|
| | | Sediment. | Fluid. | | |
| March 14. Maternity service. Dr. St. | 1 | Heavy sediment | Clear fluid | 100 | Very strong. + + |
| | 2 | Fairly heavy | Pink fluid | 75 | Very strong + + |
| | 3 | No sediment | Wine-red fluid | 0 | Negative. — |
| | 4 | Slight dark-red | Dark red fluid | 25 | Moderate. ± |
| | 5 | Very little sediment | Dark red fluid | About 10 | Weak. ? |
| General service and private practice of a New York physician. Dr. S. | 6 | | Wine-red fluid | 0 | Negative. — |
| | 7 | Dark sediment | Pink fluid | 80 | Very strong. + + |
| | 8 | Dark sediment | Pink fluid | 80 | Very strong. + + |
| | 9 | | Wine-red color | 0 | Negative. — |
| | 10 | Dark red | White fluid | 100 | Very strong. + + |
| | 11 | Dark red | White fluid | 100 | Very strong. + + |
| Private cases | 12 | Very little dark red | Dark red fluid | Too little to measure | Weak. ? |
| | 13 | Dark sediment | Deep pink fluid | 50 | Fairly strong. + |
| | 14 | Little red | Dark red fluid | Too little to measure | Very weak. ? |
| | 15 | Very little | Dark red fluid | Too little to measure | Very weak. ? |
| Private practice. Dr. P. | 16 | Dark-red red | Pink fluid | 50 | Strong. + |
| Private practice. Dr. W. | 17 | Dark-red red | Pink fluid | 50 | Strong. + |
| Private practice. Dr. A. | 18 | Dark-red red | Deep pink fluid | 25 | Strong. + |
| | 19 | | Wine-red fluid | 0 | Negative. — |
| | 20 | | Wine-red fluid | 0 | Negative. — |
| March 18. Private practice. Dr. So. | 21 | | Wine-red fluid | 0 | Negative. — |
| Private practice. Dr. W. | 22 | Dark red (little) | Red fluid | 20 | Very weak. ? |

It has been the custom to call the reaction "negative" or "positive," and if positive, "very weak," "weak," "medium," "strong," or "very strong." Such terminology, by its own nature, makes for inexactitude, which is anything but desirable, to say nothing of being unscientific. The human mind cannot grapple with adjectives. It needs figures. Completely to grasp variations of a color-scheme or quantitative gradations, we must obtain our impressions numerically. The terms are from zero to one hundred. No one would think of writing a hemoglobin estimate as pale pink, pink, red, dark-red, crimson, etc. We have determined what intensity of color in hemoglobin represents 100 per cent., and we have readjusted our conception of weaker concentrations accordingly. A similar, if not homologous, method would be of great use in writing the Wassermann reaction, and it is such a method which I am about to present.

The Wassermann test is based on a few simple facts. Antigen produced from syphilitic liver, guinea-pig's heart or beef-heart, according to their respective availability, in solution of a given determined strength; a 20 per cent. solution of inactivated serum of the patient to be tested; and a 10 per cent. solution of complement from the uninactivated serum of a guinea-pig, each solution being in the bulk of 1 c.c., are poured together in a test-tube and remain in a thermostat or water-bath for one hour at body temperature. If the suspected serum contains suitable amboceptor the antigen and complement will be linked, and the reaction will be one which we consider positive. We must in some way determine whether such a process has occurred. This we do by introducing 1 c.c. of washed sheep's erythrocytes in a 5 per cent. suspension, and 1 c.c. of a solution of rabbit serum of known hemolytic titer, the rabbit having been immunized to the aforesaid red corpuscles. After the addition of these two ingredients the liquid in the test-tube is pink in color and opaque. The tube is once more subjected to body temperature for one hour and the result is noted. If the complement be not bound to the antigen by the human amboceptor, it will be free to link itself with the hemolytic system and hemolysis will take place.

The crux of the entire reaction is to determine what becomes of the complement. If it join the system composed of antigen and human amboceptor, the reaction is positive; if it join the system consisting of sheep's red blood cells and sheep's amboceptor, the resulting blood laking denotes a negative reaction. Between the two extremes of total binding of the complement and total hemolysis, the gradations are infinite. The proportion of bound and free complement varies, so that visual signs of binding or laking are expressed in terms of opacity, translucency, or transparency of the fluid at the end of the test. These variations have been recorded graphically by the minus sign for a negative reaction, the plus sign for a positive, and two plus signs for a strongly positive. Almost everyone has his own system. Obviously such a method would not only vary between two individuals, so that the man who makes the test might have a different idea of the value of his hieroglyphics from that which would be connoted to anyone else, but it would vary from day to day as to the investigator himself. Thus we have had, and have, no unit of measure to standardize results. This want can be met by a method which is simplicity itself.

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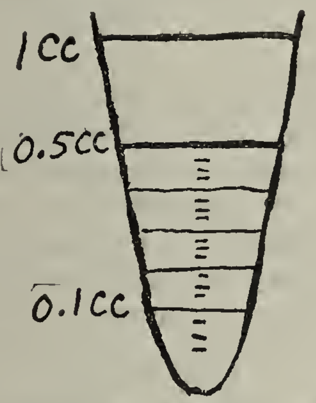
[22] It will be quite impossible to give full credit to all investigators in the fields referred to. Nor am I sanguine enough to believe that I have succeeded in my attempt to mention the first workers who have called the attention of the scientific and medical world to the subjects to be discussed.

Into each test-tube we have introduced, as has already been stated, 1 c.c. of a 5 per cent. suspension of sheep's erythrocytes. In volume this is 1/20 c.c. In the course of the test either the entire volume is hemolyzed, or none, or only a variable portion. All we need do to determine this portion is to see what fraction of 1/20 a cubic centimeter remains at the termination of the test. After from sixteen to twenty-four hours all surviving red blood cells have descended in the tubes, and according to their number the deposit is heavy or light. They lie unevenly, however, in the concave bottom of the test-tube, and thus the eye can distinguish only the greatest quantitative differences in the red cells. In a pointed centrifuge tube these difficulties are somewhat less, and the gradations in the deposit easier to determine, but in different tubes of varying calibration inaccuracies are inevitable. Therefore, working on this principle, I employed graduated centrifuge tubes and centrifuged the contents of my test-tubes sixteen hours after removal from the thermostat. In this way I was able to read off the number of surviving red blood cells. I count total hemolysis as zero, and 1/20 c.c. of erythrocytes in bulk, or the maximum amount, as one hundred. By comparing the volume of surviving erythrocytes according to this scale, and recording the result in per cent., one immediately has a quantitative idea of the reaction. Thus, if 1/40 c.c. of red blood cells are left, the reaction is 50 per cent.; if 1/30 c.c., 66⅔ per cent. If n equals the reading in the tube, and x the desired percentage, the equation is:



Graduated centrifuge tube.

$$\begin{aligned} 1/20 : 1/n &= 100 : x \\ x/20 &= 100/n \\ nx &= 2000 \\ x &= 2000/n \end{aligned}$$

The bottom of the average graduated centrifuge tube is divided off as in the diagram, each fine space representing 1/40 c.c.

In this tube the graduation is too coarse. I shall have tubes made with thicker walls, finer calibration and larger spaces, and shall subsequently render a new report with my more accurate apparatus. This one is to be regarded as a preliminary communication, but it will be serviceable to indicate the value of the method.

Among about 400 Wassermann reactions I have made both here and abroad, I have as has already been stated, always been struck with the difficulty of imparting a conception to a second person of the strength of the reaction. The accompanying table will show at once the advantage of the new method over the old. But let me for a moment describe what is seen in a test-tube in which the reaction has been made after sixteen to twenty-four hours have elapsed. With a negative reaction we have merely a clear wine-red fluid; in a strongly positive test the red cells lie heaped at the bottom and above them the fluid is pure white. If the test be positive, but weaker, the cells are below and the supernatant fluid, containing dissolved hemoglobin, is pink, salmon-colored, deeper red, etc., according to the amount of hemoglobin in solution. The stronger the reaction the greater are the number of corpuscles at the bottom and the paler the color of the fluid. The weaker the reaction, the deeper the intensity of the fluid and the smaller the number of corpuscles. These differences expressed mathematically become definite and objective instead of subjective and vague, as they have been heretofore.

To procure the results in the accompanying table I did the reaction as outlined, and after sixteen hours shook up the contents of each tube, centrifuged for two or three minutes by electricity, and noted what part of 1/20 c.c. of corpuscles remained, calculating the percentage by the formula already mentioned. The character of the supernatant fluid after centrifuging corresponded exactly with that in the tube, as described in the table, before centrifuging. I shall apply this method to the Noguchi modification and publish my results of this together with further observations on the original test. The histories of the cases cited here have no bearing on the theme. Thus they were omitted in order to hasten my paper toward its object and its conclusion. In the table I represent side by side the old method and the new, for a contrast of the obvious inaccuracies of the former with the definiteness of the latter will speak more forcibly than countless paragraphs.

136 West Eighty-eighth Street.

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## AN AUSCULTATORY PHENOMENON MET IN INFANTS AND CHILDREN

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The sign to which I wish to direct attention, so far as I am aware, has not been described previously. My search of the literature has been confined to the standard works on diseases of children. Briefly it may be stated as follows; normally the inspiratory murmur over the left side, especially posteriorly, in infants and children is decidedly louder and harsher than over the right side; or, reversely, the inspiratory murmur over the right side is weaker and less harsh than over the left side. Why this is so I can not explain positively, but I suspect that it may be due, in part at least, to the fact that in the left lung there being but two lobes, the same amount of air as enters the right lung is not distributed over as great an area as it is in the latter. Whatever its physics or its etiology may be I no longer have any doubt that this sign does exist as a normal phenomenon of the child's chest and that it has an important bearing on the diagnostics of pulmonary conditions. It has been regularly sought and found by myself and my assistants in all normal children, at my clinic at the Lebanon Hospital, Philadelphia, for the past year. Dr. Charles Mazer, whose attention I first directed toward it more than a year ago, informs me that since then he has examined every child that has passed under his care for it, and that he has never failed to find it in all normal children. That a recognition of this sign or the relative difference between the loudness and harshness of the inspiratory murmur of the two sides of the child's chest is of great aid in permitting a correct interpretation of pathologic conditions affecting the lungs and pleura can be best illustrated by the brief citation of a few cases.

Case 1.—Female infant, aged 16 months. Normal birth, breast-fed, dentition normal; has ten teeth now; wasted and marantic in appearance; came to my clinic at the Lebanon Hospital with the diagnosis of marasmus; had been treated for this in another hospital for three weeks without benefit; no vomiting and bowels normal. The child's age, the presence of ten teeth and the absence of digestive symptoms precluded any gastro-intestinal condition as a cause of wasting and made the diagnosis of true marasmus very improbable. The temperature by rectum was 99 F. Percussion gave but the slightest possible impairment of resonance on the left side posteriorly, extending with even less emphasis into the axilla. Auscultation showed that the breath sounds on the left side equaled in intensity and harshness those on the right. Because we had become accustomed to regard the sounds on the left as normally louder and harsher this equalization was looked on as a distinct and marked impairment of the sounds on the left side, but in a comparative sense only, and a diagnosis of fluid on this side was made. Exploratory puncture revealed pus, and after thoracotomy and drainage the child made a perfect recovery in about three months.

Case 2.—Female infant, 6 months old, seen in consultation. Diagnosis of bronchopneumonia of right side posteriorly had been made by the attending physician. He emphasized the impaired resonance under the angle of right scapula and pointed to some increase in the loudness and harshness of the breath sounds over this area. The child's temperature had been normal for ten days and leucocytosis was absent, but the child still coughed and had failed to gain, in fact, was considerably wasted. A careful examination of left side revealed slight impairment of resonance with breath sounds distinctly present but weaker than over the right side. There were no râles over the right side. The impaired resonance under the right scapula was regarded as due to the liver and the harsher than normal breath sound to an over-working lung, and the diagnosis of fluid on the left side was suggested. Puncture revealed a dirty-appearing, foul-smelling pus.

Case 3.—Male infant, 13 months old. Temperature 103 F., pulse 140, respiration 64; face flushed; alæ nasi moving. Physical examination showed the left side resonant and a few râles; breath sounds harsh and loud posteriorly on the left. On the right side was detected an area of impaired resonance extending from the lower half of the right border of the scapula latterally toward the right as far as the midaxillary line. The inspiratory breath sound was harsh and loud posteriorly equalling that of the left side; expiratory sound was slightly prolonged and blowing. Fine moist râles were also heard. The diagnosis was acute lobar pneumonia of right middle lobe. Crisis on the fifth day. On the seventh day the temperature rose to 103 F. Physical examination showed flatness on the right side posteriorly and distant râles with breath sounds weaker than on the left, but sufficiently audible to resemble in intensity and quality the normal sounds on the right side. In view of the previous history of pneumonia, the flatness and the displacement of the liver and the heart, the diagnosis of effusion was made and confirmed by puncture.

Case 4.—Male infant, 8 months old. Diagnosis of pneumonia on the left side was made by the attending physician. There was a cough, temperature of 102 F., pulse 110, and respiration 20; a few large moist râles were heard on both sides; chest was resonant throughout. The inspiratory sound was distinctly harsher and louder over left side posteriorly. I suggested that this was normal and made a diagnosis of simple bronchitis. Recovery occurred within three days.

Case 5.—A female infant, 17 months old, the daughter of a physician, had a temperature varying between 102 and 104 F. for the previous five days. The father feared typhoid fever, but one of his colleagues had made a diagnosis of pneumonia on the left side, noting the loudness and marked harshness of the sounds on this side when compared with the right. The suggestion was made that this was a normal phenomenon. Further physical examination of the chest was negative. The child apparently was in no pain. The right drum-head was found to be red and bulging. Diagnosis, acute otitis media. I suggested an aurist. Puncture of the ear-drum was followed by a free discharge of pus, and recovery.

Cases 1 and 2 illustrate the value of recognizing the fact that there is something wrong (usually presence of fluid) when the inspiratory sound on the left side loses in strength and equals or is less in intensity and harshness than on the right.

Case 3 shows that, with other features (impaired resonance, râles and prolonged expiration) present, when the inspiratory sound on the right side is harsh and loud, approaching that which is regarded as normal for the left, trouble, usually consolidation, exists in the right lung. The second part of the case illustrates that weak breath sounds on the right may lead to confusion and prevent a correct conclusion, as they are normally weaker on this side. In such instances we can only compare the character of the sounds with that which experience has taught us to regard as normal for this side. Therefore ausculation, unless the breath sounds are entirely absent, is of little value in diagnosing fluid on the right side. Dependence must be had largely on the history of the case, percussion and the displacement of internal organs.

Cases 4 and 5 illustrate that, unless one is familiar with this sign as a normal phenomenon, one is liable to regard it as indicative of a pathologic condition, especially pneumonia, on the left side. Case 5 further illustrates the importance of making a complete physical examination in every case of obscure fever, not neglecting the ear, even in the absence of pain.

### CONCLUSIONS

1. Normally in infants and children there exists a marked relative difference in the intensity and harshness of the inspiratory sound of the two sides of the chest, that on the left being louder and harsher. This difference is best noted posteriorly.

2. The absence of this sign on the left usually means fluid in the left pleural sac.

3. The diagnosis of fluid on the right is made more difficult by reason of this sign.

4. The diagnosis of consolidation on the left is made more difficult.

5. Unless this sign is taken into consideration the diagnosis of pneumonia on the left is apt to be made when other conditions are responsible for the fever.

6. Consolidation should be suspected on the right when the sound on this side equals in harshness and intensity that which is normal for the left.

7. Equalization of the sounds on the two sides, that on the left being weaker than normal, usually indicates fluid on the left.

1502 Diamond Street.

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**Prophylaxis of Typhoid Fever.**—The discussion on this subject which was carried through eleven meetings of the French Academy of Medicine was concluded by adoption of a series of resolutions advocating specific sanitary and hygienic measures. A resolution was voted down which stated that the danger of contagion from healthy typhoid bacillus carriers is negligible in comparison with the danger from contaminated water. The possible peril from bacillus carriers, sick or well, and the necessity for seeking them out were emphasized in the resolutions adopted.

# MYIASIS

## A REPORT OF THREE CASES OF PRIMARY RECTAL INFECTION*

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It has long been known that man is one of those organisms in which myriads of parasites and pseudoparasites find conditions congenial to their growth, development and continued existence. Among these are the diptera, which form the subject of this paper.

The diptera include all the different varieties of *Brachycera* or flies from which the larvæ of myiasis originate.

The following facts may be noted in regard to flies as set forth in an interesting paper by McCampbell and Corper:[1]

> Some lay no eggs, living larvæ issuing from the female (viviparous). It has also been noted that when certain of the dipteræ become parasitic, no wings are developed. Nothing seems to be known as to whether the larvæ may reproduce, as has been noted in the embryonic types of some other forms of animal life. The sexual organs in the larvæ, according to most entomologists, are not completely developed until after the adult fly stage is reached. The larva is entirely different from the adult fly; and, during the pupal stage which intervenes all the organs of the larva, except the reproductive, undergo degeneration, and are regenerated. Such an arrangement suggests a very high specialization of these organs; and it may be possible that when these larvæ become parasitic within the body, reproduction may take place. It seems positive that the eggs can hatch and the larvæ grow to full size in the intestines of man. It has also been observed that larvæ may exist for long periods of time within the body.

Myiasis is the term applied to the accidental infection of the body cavities and of the skin by the larvæ of these dipterous insects.

This infection by fly larvæ was designated by Hope as myiasis; and the condition has since been divided by other writers into myiasis externa, or dermatosa, and myiasis interna or intestinalis.

The following are some of the leading or principal families of flies the larvæ of which produce this condition: (a) The "blue-bottle," flesh fly; (b) *Lucilia macellaria,* the screw-worm fly and (c) the *Dermatobia hominis,* a tropical American fly. These are chiefly responsible for the external varieties of the disease.

Among the flies producing myiasis intestinalis we find the common house fly (*Musca domestica*), the *Sarcophagia* or flesh fly and the *Anthomyia canicularis.*

The common house fly seems to be the source of infection in the three cases coming under my observation. The number of generations of this fly varies greatly with climatic conditions, supply of food and other factors. The number in North Carolina, according to Metcalf, would undoubtedly be from 10 to 14 broods a year. This fly, like many other insects, passes through 4 distinct stages in the process of development—the egg, the larva, the pupa, and the adult, the full process requiring from 10 to 14 days. The adult fly lays the eggs in suitable places, usually in stable manure, occasionally on human excreta and decomposing vegetable matter. The duration of the egg stage in favorable weather is but a few hours. The larvæ are white-pointed maggots from 1 to 2 c.m. in length, and composed of 9 or 10 well-defined segments. The larval or maggot stage covers a period of about five days in summer, varying greatly, however, with the weather conditions in general. The pupal stage may not extend beyond 5 days, while under other conditions, as in winter, it may persist for months.

It is universally held that the invasion of such body cavities as the ears and nose, and of the wounds on the surface, is the result of the accidental deposit of eggs at the point infected; and that those which are found in the intestines are ingested with the food on which the adult fly has deposited its eggs. It is evident that little if anything has been said of infection by rectum. Finlayson's suggestion of the possibility of such an avenue of infection stands out alone against the generally accepted teaching of infection by the mouth following the accidental swallowing of the eggs and newly hatched larvæ with food.

The history of the three cases which have come under my observation in the last three years, and which I now propose briefly to relate, points almost unmistakably to rectal infection.

CASE 1.—*History.*—A native of Onslow county, North Carolina, married and mother of four children, ever since her first pregnancy, twenty years ago, has been suffering with "piles;" even prior to that time she suffered from painful menstruation and chronic constipation. For the last eight years her life has been still further burdened with rectal prolapse, proctitis and mucomembranous colitis. During this time her life has been that of a well-nigh bedridden invalid. She was absolutely confined to her room; a common stool chair with an opening in the bottom and "chamber" underneath, exposed to the flies, served her as a commode. In the summer of 1906 she discovered large numbers of small, white worms or maggots, as she calls them, in her stools, to which she called my attention. On examination, these organisms proved to be larvæ of the common house fly. During this summer as well as in 1907 and 1908, she had several recurrent attacks of the infection, each being manifested by expulsion of from fifty to several hundred dipterous larvæ. Preceding and accompanying each attack, digestive disorders, vomiting, colicky pains, abdominal distention and increased mucous bowel discharges—symptoms common to her—were greatly aggravated. At times these parasites were expelled massed or clumped in small balls, approximately the size of an ordinary marble; at other times they were equally mixed with liquid mucoid stools. After each expulsion there came a distinct amelioration of all the bowel symptoms. This patient, of course, was anemic, pale, almost cadaveric, suffering greatly with indigestion and all manner of abdominal and rectal distress.

*Management and Course.*—Having failed to prevent the recurrence of these attacks of myiasis by any manner of medication or rectal irrigation, and also failing to get her consent for proper operation, about the middle of the summer of 1908, I advised absolute protection of the anus from all approach of flies during the act of defecation. The result was a complete cure of the infection, without any subsequent recurrence to date, together with a marked improvement of the rectal and colonic troubles. Such satisfactory results, coupled as well with the statements of the patient that she had experienced no less than twenty such attacks during the summers of 1906-7 and 8, furnish the strongest and most convincing proof that this patient, at least, became infected by the deposition of the eggs of the house fly on the prolapsed rectal membrane during the time spent at stool on an open chair.

CASE 2.—*History.*—A white man, aged 24, a merchant by occupation, first came to me for treatment in July, 1908. He was thin, decidedly feeble and anemic. Eight years prior to my interview with him he began suffering with slight rectal prolapse, which now was quite an inch with each bowel passage. For the past six years he had discovered at various times hosts of small white worms in his feces. He brought samples of these parasites for my inspection. These, which varied sharply in length and size, were the larvæ of the common house fly. He claims to have had dozens of these attacks during these five years; and stated that as many as 500 of these little worms were sometimes expelled at a single defecation, while at other times only a few or so accompanied each stool. In addition to symptoms previously mentioned, each of his attacks was preceded for 48 hours by sinking, depressed feelings, accompanied by burning, internal, colicky pains near the region of the umbilicus. These symptoms, to him significant of the approaching expulsion of maggots, loss of appetite, nausea, colic, and diarrheic actions, ushered in the attack. The first loose stool contained the majority of the larvæ, all being expelled in 3 or 4 stools. After this the diarrhea, burning colic, nausea and depression subsided. His life habit had been to be slow at stool and always to defecate in the horse stable, if possible.

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* Read before Seaboard Medical Association (Virginia and North Carolina) at Norfolk, Va., Dec. 9, 1909.

[1] McCampbell, E. F., and Corper, H. J.: Myiasis Intestinalis Due to Infection with Three Species of Depterous Larvæ. THE JOURNAL A. M. A., Oct. 9, 1909, p. 1160.

*Management and Course.*—My injunction to him to quit the use of the horse stable as a privy and to use a closed vessel, caused a cessation of his infections from July, 1908, until August, 1909, when he reported the return of the maggot and pleaded guilty to a return to his horse stable practice. Another point of interest is that all the attacks of this patient came in the summer months, the earliest recalled occurring in April.

Case 3.—*History.*—The patient, a white woman, aged 50, married 30 years, and the mother of 9 children, in July, 1908, came to my office for treatment; she was pale, almost yellow in complexion, very nervous, and suffering with acute indigestion and diarrhea. The attacks, alternating with constipation, had troubled her at irregular intervals for 2 years or more. She came much distressed because she discovered that morning while at stool that hundreds of little white maggots had come from her bowel. This patient was a constant user of an open privy, and was a sufferer from internal piles, which at times came down during defecation.

*Management.*—The same advice to keep off the flies was given to this patient, but as I have lost sight of her, I cannot speak with positiveness of her recovery.

### SUMMARY

Having thus cited the peculiarities of each of these cases, let me briefly submit the following summary as a closing feature, believing that the similarity of symptoms and surrounding conditions common to all three cases are of significant interest:

1. All the individuals affected were white adults, intelligent, fairly cleanly of habit and truthful of statement.
2. All suffered constantly or periodically with protrusion of folds of the rectum during defecation.
3. All were equally exposed to fly contamination during the process of defecation.
4. All suffered with more or less tenesmus, and were slow at stool, thereby offering ample opportunity for the deposition of eggs on the protruded membrane, smeared with feces, mucus and more or less blood.
5. All symptoms characteristic of these attacks ceased or were much improved with the expulsion of the maggots.
6. No recurrence of the infection took place in either of the first two patients so long as they followed my advice to protect the anus thoroughly from the approach of flies during the act of defecation. The third patient having been lost sight of, I am not able to speak with certainty regarding recurrence.

Finally, the facts set forth in these cases seem to me to demonstrate, beyond a reasonable doubt, that the avenue of infection was by rectum. This opens up an interesting field for further observation, and suggests that a large number of cases of myiasis intestinalis occur in persons affected with anal and rectal disease, and that in them it is due to the fact that the proper precaution to prevent rectal invasion has not been observed. The remedy, from this point of view, is evident.

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**Electrotherapy.**—Electrotherapy must not be regarded as a cure-all, nor as a placebo, but if used in connection with other therapeutic measures it will be found to be a very useful servant.—H. M. Imboden, in *Albany Medical Annals.*

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# EXTRAUTERINE PREGNANCY

## DISCHARGE OF FETUS BY RECTUM; PELVIC ABSCESS; INTESTINOVAGINAL FISTULA; GENERAL ADHESIVE PERITONITIS; PHLEBITIS OF BOTH LEGS; RECOVERY

J. R. LAUGHLIN, M.D.
HAGERSTOWN, MD.

*Patient.*—Mrs. J. B., aged 24; married six years; no children.

*Present Illness.*—She had missed two periods and was suddenly seized with severe pain and cramps in right side, followed by a bloody discharge which had continued three weeks, when I first saw her, June 8, 1908.

*Examination.*—The uterus was slightly enlarged and firmly fixed; there was a slight bloody discharge from the cervix. The pelvic organs were very tender and there was a board-like hardness over the hypogastrium. Temperature was 100 F., pulse 88.

*Course of Disease.*—The patient was treated for pelvic peritonitis for four weeks with improvement of symptoms, but no change in rigidity. July 5, her bowels became very loose with bloody stools, and on July 6 a partially decomposed fetus about two inches in length was passed at stool. A few days later the temperature rose to 104 F. and an incision made in the vaginal vault evacuated a profuse purulent discharge with fecal odor. Drainage was kept up for two weeks, but on investigation a recto-vaginal fistula was found by which feces were discharged through the vagina. Four weeks after the operation the fistula had closed, the vaginal discharge had ceased, and the woman seemed well when she suddenly developed a left femoral phlebitis; this promptly yielded to rest and elevation and she was discharged cured August 20.

*Subsequent History.*—Four months later she had what appeared to be a typical attack of acute appendicitis. An incision was made in the median line of the abdomen but the adhesions were so dense that the appendix could not be reached, as many as three loops of intestine were found firmly adherent together and it was impossible to find a piece of free intestine more than six inches in length. A few cysts filled with fluid were found; these were opened and an uneventful recovery followed. Four months later she had a similar attack, except that the pain was not especially localized.

She was put to bed and given local treatment, and improved for two weeks, when the old fistula reopened, but closed again in a few days. She again developed a phlebitis, this time in the right leg. By July 23, 1909, all symptoms had disappeared and she has continued well since.

146 West Franklin Street.

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# ACUTE PERFORATION OF A DUODENAL ULCER

J. T. ULLOM, M.D.
PHILADELPHIA

*Patient.*—S. M., aged 63, a married man. Aside from the case of a sister who died at 73 of "stomach trouble," the family history offered nothing of interest. The patient had had no serious illness beyond the ordinary diseases of childhood, and malaria at 38, but had suffered more or less for the last 20 years from stomach trouble, diagnosed by Dr. Osler near the beginning as "nervous dyspepsia."

*Present Illness.*—The patient was well during the winter of 1907-08, but in March, 1908, he had what he called an ordinary bilious attack, with clay-colored stools and vomiting of greenish material, after which he continually had more or less trouble which he referred to his stomach. This usually manifested itself two or three hours after dinner with distress, distention and belching; the attack, if not relieved by vomiting, would be followed by discomfort all night, accompanied by acid eructations. The vomitus was sometimes green, sometimes brown and often of amazing quantity. There was never any suggestion of blood in the vomitus nor was it ever coffee-ground in character. Gastric analyses made on numerous occasions showed a total acidity of about 40 and a free hydrochloric of about 20.

Urine analyses showed no abnormality except a specific gravity of 1010. Physical examinations made during this period showed nothing abnormal. The lungs and heart were normal, the abdomen contained no mass and there was no area of tenderness. The skin was sallow and the face expressive of illness. Despite his wretched condition and considerable loss of flesh the patient went to his office every day during the spring and early summer of 1908. About 11 o'clock one morning he had an attack of pain, referred to the right side of the abdomen, so severe as completely to prostrate him.

*Examination.*—The temperature was subnormal, the pulse 120, and very weak and the patient was bathed in a cold perspiration. The abdomen was extremely rigid, and exquisitely tender and the patient resisted any attempts to examine it.

*Operation.*—It was realized that some serious intra-abdominal accident had occurred; the patient was hurried to the Germantown Hospital, and a laparotomy was performed. A large incision was made, and a perforation was found in the duodenum just outside of the pylorus. This was closed and the abdominal wound sutured. The patient was returned to his room as quickly as possible, as his condition became very bad while on the table.

*Post-operative History.*—The patient reacted nicely and that evening at 6 was conscious, although uncomfortable. Temperature 98.6, pulse 96, respiration 20. At times during the afternoon his respirations were Cheyne-Stokes, but they were much better toward night. His condition remained pretty good for the next two days except for a complete suppression of urine. At the end of that time he passed a large quantity of urine and continued to void large quantities daily. This showed a trace of albumin and some hyaline and granular casts. Temperature and respirations remained satisfactory and the abdomen showed no signs of peritonitis. After seventy-two hours, on September 13, the patient became very restless, slightly delirious and hard to control, got out of bed, and tore out the stitches in the abdominal wound, allowing the wound to gap. He remained delirious and extremely restless. About midday, September 15, he was seized again with agonizing pain in the abdomen of apparently the same character as the initial pain, which could be relieved only by repeated injections of morphin. He died at 6:30 p. m. that day.

*Post-mortem Examination.*—A partial autopsy was obtained and there was found a duodenal ulcer just outside of the pylorus running longitudinally and a trifle obliquely, about 4 cm. in length, and 1.5 cm. in width. At the end of this ulcer nearest the pylorus was the perforation which had occurred on September 10 and which showed no signs of healing. At the other end of the ulcer was another perforation that had apparently taken place at 12 o'clock on the day of death, as manifested by the severe paroxysm of pain at that time. On microscopic examination there was complete erosion of the mucosa, submucosa, and the muscular layers and at the edge of the ulcer there was increased fibrous tissue and some round-celled infiltration. The kidneys were smaller than normal and the capsule stripped with some difficulty. On section the cortex was slightly contracted and microscopically the picture was that of chronic diffuse nephritis.

This case was of interest to me as offering considerable difficulty in diagnosis. Here was a man of 63, with a history of dyspepsia running back for twenty years, with periods of comfort alternating with periods of considerable gastric distress. After a year of good health, he began to lose flesh, became anemic, and experienced pain some time after meals, which was relieved by vomiting. There were acid eructations, but rarely spontaneous vomiting and no hematemesis, melena, or localized tenderness. The diagnosis now seems an easy one but before the perforation it was felt that there was very little on which to base a diagnosis. When the perforation occurred it was realized only that a rupture of some viscus had occurred, but whether appendix, stomach, intestine or gall-bladder could not be told with any degree of certainty.

When the literature on duodenal ulcer was examined, it was found that many cases are absolutely latent and perforation or a serious hemorrhage are the first indications of an ulcer. Gibbon and Stewart present seven cases of perforated duodenal ulcer and in three of these there was absolute latency, and in the other four, one showed symptoms of indigestion for twenty-four hours, one for a week, one for two weeks, and one for several months. Musser's case showed symptoms of hyperacidity for ten years. Smith found symptoms referable to duodenal ulceration in only three out of fourteen cases, although nine patients had digestive disturbances. Haggard states that ulcer of the duodenum very frequently exists without symptoms and a fatal hemorrhage or a perforation are the first signs of trouble. Morot, according to Haggard, finds that 20 per cent. of duodenal ulcers are latent. Shaw and Berry examined 157 cases post mortem and found that no history could be obtained in ninety-one. Moynihan states that many ulcers remain latent for a long period.

The classical symptoms of duodenal ulcer are three, pain, melena, and hematemesis. Pain is the most constant symptom found and usually comes on from one to three hours after meals. It is coincident with the discharge of the acid chyme into the duodenum and depends on the character of the food ingested. Sometimes it is relieved by eating. This is explained by the closure of the pylorus when food is introduced into the stomach. The pain is often relieved at its acme by vomiting and the patient immediately becomes normal again. The position of this pain is usually to the right of the median line and below the ribs in the position described as that of the gall-bladder.

It varies much in severity from a simple discomfort to a most agonizing pain and it rarely is found to radiate. Tenderness, which must be considered with pain, is not often found, owing, no doubt, to the position of the duodenum. The presence of blood in the stools, in the absence of hemorrhoids, is of course evidence of ulceration in the alimentary canal somewhere, and taken in connection with the characteristic pain, makes the diagnosis almost certain. Blood may appear in the stools as a frank hemorrhage, as old blood in tarry stools, or as occult blood. Every patient presenting symptoms referable to gastric or duodenal ulcer should be examined for occult blood. The vomiting of blood is more apt to occur in ulcer of the stomach, but is sometimes found in duodenal ulceration. In the twenty-three cases of Moynihan, hematemesis and melena occurred in four, hematemesis alone in three, and melena alone in two. No doubt in many cases blood would be found to be discharged by the bowel if more examinations for occult blood were made There are two grave accidents to be feared in duodenal ulceration, perforation and hemorrhage. Perforation gives the symptoms common to perforation of any abdominal viscus, prostation, weak rapid pulse, cold extremities, cold sweating, intense abdominal pain with board-like rigidity succeeded in a few hours by tympanites and the symptoms of peritonitis. The diagnosis can be made only on the history of the case and the location of the pain and tenderness. Hemorrhage is shown by pallor, shock and the appearance of blood at the anus. If a large blood-vessel is eroded death is apt to occur before anything can be done.

This case was a very instructive one and it seems now that a closer analysis of symptoms with an examination for occult blood would have made a diagnosis possible.

24 Carpenter Street.

# IMPROVED ETHER INHALER AND BLOOD ASPIRATOR

EDWIN PYNCHON, M.D.
CHICAGO

In my paper in THE JOURNAL, June 20, 1908, were illustrated and described an anesthesia apparatus and a blood aspirator, which were designed for use in surgical operations in the mouth and throat. Having since then improved these devices I will describe briefly the changes made therein, which are shown in the illustrations here given. In place of the foot bellows formerly employed in the anesthesia apparatus (Fig. 1), I have substituted the less expensive and simpler Politzer air-bag of the six-ounce size, provided with an inlet valve in the bag, and have supplied, in addition, a similar valve in the tube leading therefrom to the ether bottle, in order to prevent any rearward motion of the air while the hand bag is being expanded. In this way the air current supplied is intermitting, and its motion is timed with the patient's inspirations.

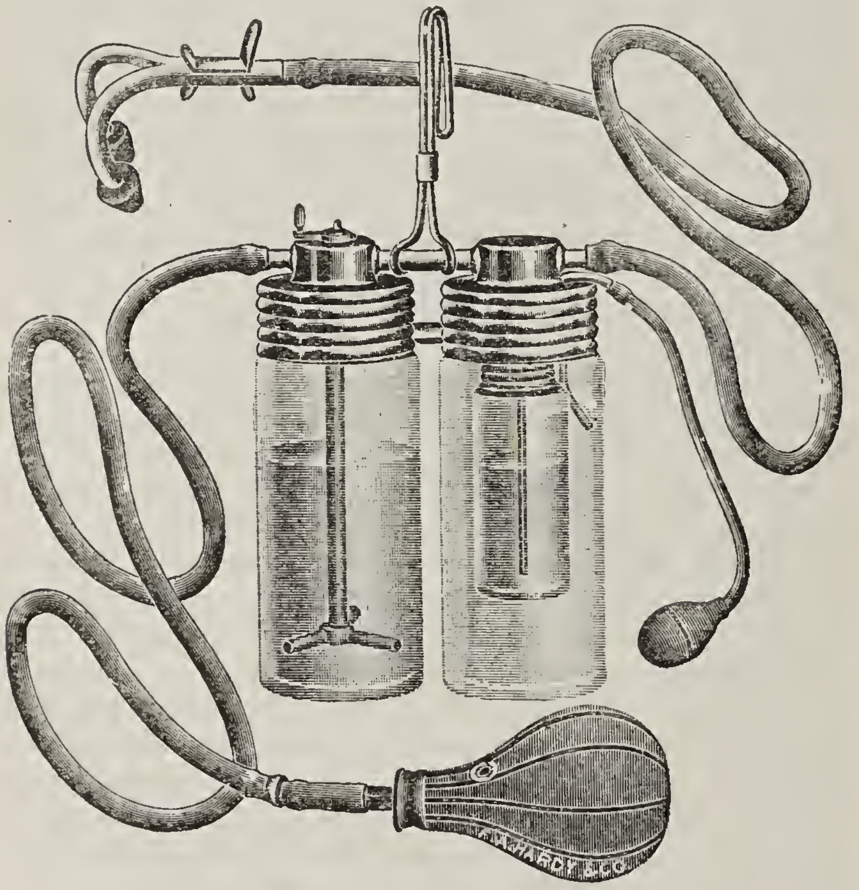

Fig. 1.—Anesthesia apparatus.

The bottles are of different shape, and of larger size, than those formerly employed. The first bottle is not more than two-thirds filled with ether. The second, or mixing bottle, as suggested by Brophy, prevents the passing to the patient of the fluid anesthetic, as might otherwise occur should the anesthetic bottle be too nearly filled, or should too much force be employed in the supply of air. The air-tube in the ether bottle is provided with a three-pointed extension, so as to divide up the entering air, and cause its better exposure to the ether. By operating the lever on the top of this bottle, which swings 180 degrees, the passing air current may be more or less forced to bubble through the ether.

In the second bottle, which was formerly employed as only a mixing or safety chamber, I have been enabled, owing to the wide mouth, to introduce a smaller bottle for the use of chloroform, which thus can be added to the etherized air current if at any time required. By slightly compressing the small connecting rubber ball the air above the chloroform is condensed, so as to force outward into the larger bottle a few drops thereof through the escape tube. At all other times the etherized air passes about this bottle without absorption of chloroform.

From the mixing bottle a rubber tube leads to the patient; it terminates in a Y-shaped tip, with conical hard rubber plugs, so as to fit tightly into the patient's anterior nares. In order to meet the requirements of different ages, from infancy to maturity, I have found that four sizes of these tips are required. The patient is first anesthetized with the mask, in the usual manner. Then a change is made to the inhaler as the operation is begun. In this way the anesthetist is at no time in the way of the operator, and an even anesthesia can be easily maintained. Furthermore, as all the etherized air is compelled to pass through the nose, it is both warmed and humidified before reaching the lungs.

In the blood aspirator the same size and style of bottle is employed as those used in the inhaler (Fig. 2). Being wide-mouthed it permits of easy emptying of the coagulated blood. The aspiration tip differs from the one formerly employed, and terminates in a cage of perforated metal, with one large conical opening at the end for blood clots. This cage can be unscrewed and removed for cleansing. With this device, after the mouth gag has been adjusted, blood and saliva can be removed, and the operative field kept fully exposed. The exhaust, when required, is created by the air pump, which is operated by a nurse. The receiving bottle is supported by a tape from the neck of the assistant who, while holding down the tongue with a depressor in his left hand, has in his right hand the aspiration tip for use when required. The patient is in the Rose position, whereby the larynx is above the plane of the pharynx. With the aid of the aspirator, accumulating fluids are removed, and are therefore not drawn in the lungs, causing respiratory arrest, or swallowed, causing vomiting. Through a combination of the improved anesthesia and the aspiration, postoperative complications are to a large extent avoided.

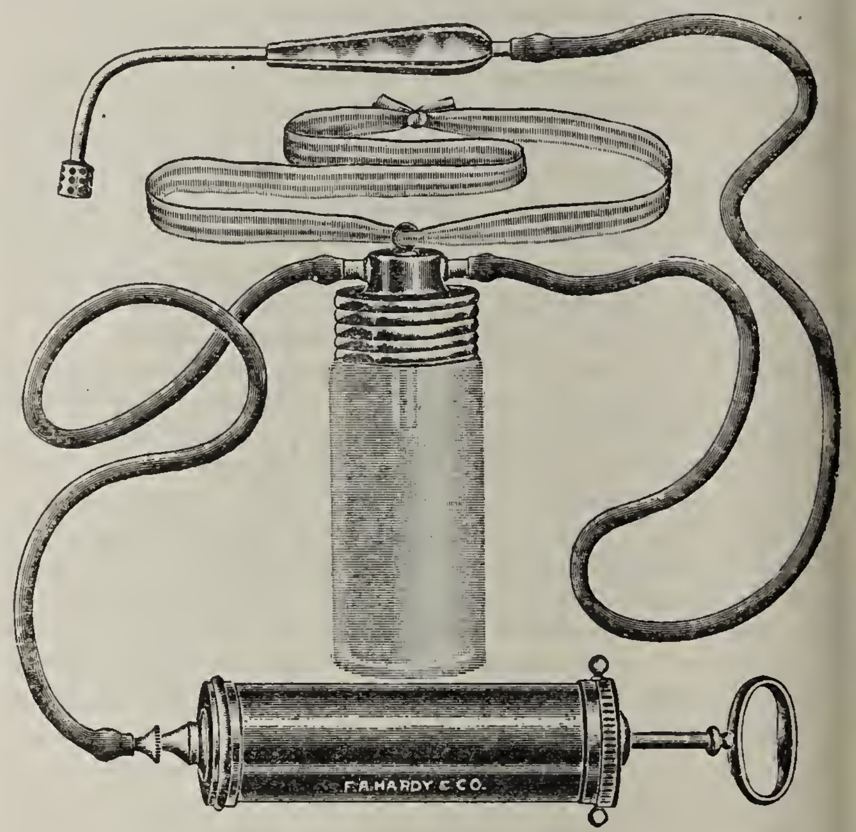

Fig. 2.—Blood aspirator.

103 State Street.

# ERYTHEMA FROM BALSAM OF PERU

H. H. HAZEN, M.D.
WASHINGTON, D. C.

Of late years there have been a number of cases reported in which balsam of Peru applied locally in scabies has caused a nephritis and it frequently sets up a dermatitis at place of application. Lewin[1] mentions a case in which 8 gm. applied locally to the arms, shoulders, and chest for scabies caused an urticaria and bronchitis. With the exception of this case I have been unable to find anything in the literature that corresponds to my case.

The patient, a white man, aged 20, had contracted gonorrhea, and a severe epididymitis shortly developed. While under treatment he noticed an itching between the fingers, which soon spread up to the wrists, and then up the forearms, being especially marked on the flexor surfaces of the elbows. The eruption appeared on the abdomen, and one or two papules appeared on the penis. The lesions appeared as papules or vesicles, which itched intensely, especially at night. The patient's physician, Dr. Craig, diagnosed scabies and recommended either sulphur or balsam of Peru. At a later date, Dr. Craig informed me that the boy had himself made a mixture of balsam of Peru and lard and had used it very freely. After the use of the ointment for one week there appeared on the face and all over the body a blotchy ill-defined eruption that itched intensely when he perspired. It is to be noted that the patient had taken no drug whatsoever internally for the gonorrhea, now almost cured; I saw him two weeks after the secondary eruption had appeared. In the interval he had thought that the scabious lesions were spreading and had been applying the ointment very vigorously and had been rapidly getting worse. He had no trace of the scabies, but was almost completely covered by a macular, ill-defined, measly eruption that was of a faint pink or purplish color. The macules were about 1 cm. in diameter and were roughly oval in shape. Over the extensor surfaces of the knees the skin was thickened and of a markedly purplish hue. There was no factitious urticaria. The eruption resembled that caused by the internal use of copaiba, except that it was paler in color. To some extent it resembled a macular syphilis, but no chancre could be found, there was no glandular enlargement, no alopecia, and no sore throat or mouth. The diagnosis of erythema from balsam of Peru was made. The urine was examined for a possible nephritis. The specific gravity was 1005, the color pale yellow, not brown as is usually the case in balsam of Peru intoxications, and contained a number of gonorrheal shreds, but no albumin that could be demonstrated by either Heller's or the heat and acetic acid test. The ring test also failed to show any resinous bodies. There were no casts and no red blood cells. I ordered the use of the balsam stopped and prescribed instead a mild lotion. Within a week the patient was well, though previously he had been getting worse steadily. The results, I think, make the diagnosis certain.

1204 Eighteenth Street.

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[1] Lewin: Nebenwirkungen der Arzneimittel, 1899, p. 629.

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# THE CRESCENDO MURMUR IN MITRAL STENOSIS

ALFRED E. COHN, M.D.
NEW YORK

Last August, Dr. E. M. Brockbank[1] published his theory of the crescendo murmur in mitral stenosis and concluded contrary to the current teaching, that this murmur was made during auricular systole (presystolic), that it occurred during the early portion of ventricular systole, possibly in the presphygmic period. Letters were subsequently published by Sir John Broadbent, Dr. Taylor and Dr. Samways criticizing Brockbank's notion from one point of view and another.

In October I reported[2] the findings in a case of mitral stenosis in which the presystolic murmur was constant and which persisted during those cycles in which there was ventricular silence, the irregularity being due probably, to digitalis poisoning. In this case the murmurs which accompanied ventricular contraction, together with the first and second sounds, were wanting, the presystolic murmur alone marking the occurrence of the cycle.

I wish to report a second case which I have been enabled to study with the permission of Dr. N. E. Brill. This also is a case of mitral stenosis, with a presystolic murmur, in which there are no cardiac irregularities. After admission to the hospital the patient was treated from time to time with tincture of strophanthus and the tincture and infusion of digitalis. During the time of the digitalis poisoning, an irregularity was noted which on analysis proved to be similar to that of the case already reported. Here also the irregularity was due to the fact that there was recurring ventricular silences. These occurred frequently after every third beat, sometimes after intervals of five and nine beats. There was no regularity in the recurrences of these ventricular silences. At the time ventricular contraction should have taken place, there was heard to mark the occurrence of a cycle only a presystolic murmur, the two heart sounds and the accompanying systolic and diastolic murmurs being wanting at these times. It will be noted in the accompanying tracings (Fig. 1 that the a-c interval is prolonged to 0.35 second. It will also be noted that the auricular systoles after the cycles in which there was ventricular silence are premature, and that the a-c interval is considerably shortened. Some days after the administration of digitalis was stopped the irregularity noted disappeared. Dr. Brill has kindly confirmed these auscultatory phenomena. This case and the one already reported seem to me to throw considerable light on the question of the production of the presystolic murmur. It would seem that, since during the time of the ventricular silence it could be demonstrated that the auricles only contracted, it is reasonable to presume against Dr. Brockbank, that an auricular systole is responsible for the production of the crescendo murmur.

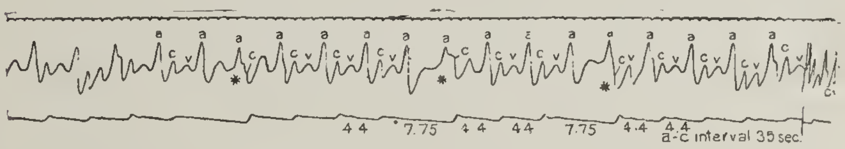

Fig. 1.—March 10, 1910. The long radial pauses are represented in the jugular tracing by a-waves only. The a-wave which follows the star (*) is premature by about 0.11 second. In this cycle also. the a-c interval is reduced from 0.35 second to 0.25 second. The upper line in both tracings represents the time in 1/5 seconds.

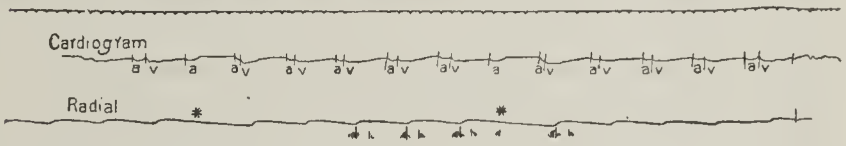

Fig. 2.—March 11, 1910. The upper curve is an inverted cardiogram; the lower is the radial tracing. The long radial pauses (*) are represented in the cardiogram by an a-wave only; a v-wave, representing ventricular contraction, is here wanting. It was in these cycles that the presystolic murmur alone, unaccompanied by first and second sounds together with their murmurs, was heard. It will also be noted that in this tracing the As-Vs interval gradually increases up to the cycle in which the a-wave occurs alone. The following cycle again shows a short As-Vs interval, 0.1 second; and gradually lengthens to 0.3 second.

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[1] Brockbank, E. M.: Brit. Med. Jour., Aug. 28, 1909.

[2] Cohn, A. E.: Brit. Med. Jour., Oct. 16, 1909.

## Therapeutics

### MERCURY IN SYPHILIS

In spite of the vicissitudes through which practical therapeutics has passed in modern times, mercury still retains its rank as the one indispensable drug in the treatment of syphilis. Attempts have been made, however, to make its use more exact, and its effects more prompt. The importance of this subject has been increased by the finding of the *Spirochæta pallida* as the probable cause of the disease, and by the discovery of the Wassermann reaction, which has shown that the syphilitic element in disease is far more frequently an important factor in guiding treatment than had hitherto been realized.

In undertaking the treatment of a case of syphilis, several questions arise which have not yet been definitely settled, or at least about which there is still room for difference of opinion.

In the chronologic history of the individual case the first therapeutic question which arises is, when shall the administration of mercury be commenced? It has been the fashion with most teachers to advise that mercury should not be prescribed until the appearance of the secondary cutaneous lesions. It is argued that it is extremely difficult to make an accurate diagnosis of the primary lesion, and that if one commences the use of mercury before the rash appears, and then, if the rash never does appear, that one cannot be sure that he has not made a mistake in diagnosis, that the patient never had syphilis, and that consequently he has unnecessarily undergone a tedious, expensive, not beneficial, and possibly absolutely injurious, treatment. It is indeed a most astonishing argument to use against a proposed treatment, that there is a not inconsiderable chance that the diagnosis may be incorrect. But the discovery of the *Spirochæta pallida*, and the growing conviction among the members of the profession that it is the cause of syphilis, has lessened the liability to error in diagnosis. Dr. H. M. Christian, of Philadelphia, in an excellent practical article on this subject (*Monthly Cyclopedia and Medical Bulletin,* January, 1910), says that he "would be disposed to put a patient on treatment at once if *spirochætæ* were found on any given lesion, but he also states that he would require pretty convincing evidence that they were actually present. He also quotes Harris (The Journal Dec. 5, 1908) as saying, "After demonstrating the organism in a primary lesion, it is not only unnecessary but harmful to wait for secondary manifestations. The most logical therapy is excision of the chancre, when possible, and in all cases the immediate institution of vigorous antisyphilitic treatment."

Having decided to commence the treatment with mercury, the next question which arises is, what preparation of the drug shall be used, and how shall it be administered? In many cases it is preferable to administer the medicine internally and the preparations best adapted for such use are the protiodid, the biniodid, the bichlorid of mercury, and mercury with chalk. The one best adapted for general use is the protiodid, which may be given in doses of 0.015 to 0.02 gram (¼ to ⅓ of a grain) three or four times a day, the smaller dose and less frequently repeated if the medicine causes too frequent movement of the bowels. This treatment should be employed constantly, even in benign cases, for at least eighteen months.

The inunction treatment is an exceedingly "efficient method of attacking the disease in its incipiency." On this point Christian writes: "At the outset of every case of syphilis, if it is at all practicable and can be done without attracting attention, I advise a course of 20 inunctions, employing 4 grams (a dram) of the official mercurial ointment, rubbed well into the different parts of the body, once a day, the treatment lasting from at least 10 to 15 minutes." While patients are under this inunction treatment, a "body bake" or, as Christian suggests, a Turkish bath at least once a week is advisable. At the end of 3 weeks Christian begins the internal administration of mercury, but thinks that it is advisable to give a course of inunctions at least 2 or 3 times during the first year in every case of secondary syphilis. If there is "marked anemia with loss of flesh, and profuse eruption threatening to appear on the face, with marked alopecia," Christian believes that internal medication is temporizing, and more strenuous measures should be inaugurated. He also believes that every patient who has recovered from all manifestations of syphilis should receive a three weeks' course of mercurial inunctions twice a year for 4 or 5 years.

A third method of administering mercury, which has been gaining considerably in favor during recent years, is that by intramuscular injection. Most writers on this subject advise the intramuscular injection to be made into the gluteal region. It is not absolutely demonstrated that this is the only place or perhaps even the best place for these injections. Dr. Henry A. Pulsford, of South Orange, N. J. (*The Journal of the Medical Society of New Jersey,* September, 1909) writes: "In selecting the point for each puncture one should be sure that the layer of muscle into which the needle is to be thrust is sufficiently thick and not too well supplied with vessels and nerves. In general we avoid the lower part of the buttock, in order that our patients may sit without undue discomfort; the vicinity of the trochanter, because the deeper tissues, being tendinous and aponeurotic, are unsuited for injection; and the center of the gluteal region, because there is a possibility of puncturing the gluteal vessels or the sciatic nerve. Our choice is consequently restricted practically to two areas on either side, each about three inches in diameter, and situated, the one just to the right or left of the intergluteal fold, and the other midway on a line connecting the upper end of the fold with the anterior superior spine of the ilium. I have made a great many injections in both of these two areas without ever wounding any important vessel or nerve, and with but little pain or discomfort to the patients."

The best syringe for these injections is one made entirely of glass, of small caliber, and graduated to fractions of a minim, such as is made for tuberculin injections. The needle should be from 1½ to 3 inches in length. Steel needles are much cheaper than those of iridoplatinum, but are likely to be corroded by soluble mercurial salts.

Concerning the administration of the injections, Pulsford further writes: "The technic as far as sepsis is concerned is the same as that observed in the injection of a therapeutic serum. The sterile fluid is drawn into the syringe, and any air bubbles carefully expelled. Then the skin having been properly cleansed, the needle is thrust through it in a perpendicular direction so as to reach the required depth at a single stroke. Next assure yourself that the point of the needle does not lie in a vein, by detaching the barrel and watching the lumen for a moment. If blood flows through the needle, make another puncture; otherwise replace the syringe and proceed with the injection. It is not necessary to massage the injected mass. The most careful practice is to make the injections with the patient lying face downward, but those well accustomed to the procedure may be properly injected standing, provided they are required to relax the gluteal muscles. The dressing of the puncture is necessary only when bleeding occurs."

The preparations of mercury used in this way includes both soluble and insoluble salts. The most useful soluble salts are the benzoate and the biniodid. These are well tolerated and efficient, and all others are superfluous, in the opinion of Levy-Bing, as expressed in his monograph on intramuscular mercurial injections, published in Paris, in 1909. The salts mentioned are used in 1 or 2 per cent. solution, in isotonic saline solution. The insoluble salts most frequently used are the basic salicylate, calomel and grey oil, the latter being an emulsion of metallic mercury in an oily vehicle. "The vehicle for calomel and the salicylate may be either an oil or a mucilage. In my experience the combination recommended by Levy-Bing of 3 parts of anhydrous wool-fat with 7 of white liquid petrolatum has proved satisfactory. It is most important that all these substances be pure and neutral. Calomel should be especially pure, and should be washed in boiling alcohol before being incorporated with the vehicle, and both calomel and mercury salicylate should be finely divided by prolonged trituration with the menstruum.

But of these preparations may be sterilized in a water-bath; the grey oil, however, is spoiled by heat and consequently must be prepared from sterile materials with sterile utensils and under aseptic conditions. As the process consists of a trituration of the mercury with the wool-fat for at least two hours, it may be imagined what a formidable task this is. If carefully guarded from contamination these injection fluids need not be repeatedly sterilized." (Pulsford)

Injections of soluble salts should be used when rapid mercurialization is required. They may be used at the beginning of treatment. The insoluble salts are indicated in the routine treatment of most cases. Calomel is usually more effective in urgent cases, but it causes too much pain to use in ordinary cases, in which the salicylate and the grey oil are preferable.

In beginning treatment it may be necessary to give an injection every day for a few days; but afterwards a weekly injection will be sufficient.

The average weekly dose is 1 grain of metallic mercury, 1 1/6 grains of calomel, or 1⅔ grains of salicylate of mercury.

Among the disadvantages of this form of treatment should be noticed the fact that they are more or less painful. With the soluble salts the pain begins at once and lasts for from 1 to 6 hours. With insoluble preparations it begins within an hour, and lasts from 2 to 5 days. The pain is most severe after calomel, and least so after grey oil, which is often entirely painless.

Hard masses of exudates, known as nodes, sometimes forms about the injected mass. These often retain a part of the injected fluid, which may subsequently be suddenly absorbed.

Embolism sometimes results from the injection of the fluid into a vein. Although this has rarely, if ever, proved fatal, it should be avoided. Abscesses rarely occur if the injections are properly administered.

The points of superiority over other methods of administration are that it enables the physician to introduce promptly into the general circulation a definite amount of mercury. It cannot be vomited, nor does it form insoluble combinations with the food or secretions, or pass through the alimentary canal and entirely escape absorption. It does not cause enteritis, nor does it become lodged in the liver, with the danger of being suddenly passed into the circulation in excessive amount. It does not cause diarrhea or loss of appetite. It has the advantage over innunctions that it does not cause irritation of the skin or dermatitis.

Intramuscular injections of mercury should not be used in patients who have excessive dental caries. Injections of insoluble salts should not be used in patients who are the victims of tuberculosis, nephritis, diabetes, hepatic disease, or cachexia. It should not be attempted to apply this treatment to patients who are unable to make personal visits to the physician at least once a week.

Whatever method of administering mercury is adopted, certain general hygienic rules must always be observed. The teeth must be put into good condition and the mouth must be kept clean. Chewing tobacco must be absolutely interdicted. Moderate smoking and temperate drinking may be allowed to those who are accustomed to the use of tobacco and alcoholic drinks, unless some special condition renders it advisable to discontinue their use entirely.

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**The Electrostatic Treatment of Lupus.**—J. A. Voorthuis (*Proc. Roy. Med. Soc.*, February, 1910), has obtained good results in the treatment of lupus with static electricity after the method of Suchier. The process begins with thorough cleansing and disinfection of the parts to be treated. Under local or general anesthesia the tuberculous granulations are removed by strong, sharp curettes. After the bleeding has ceased and the wound has become almost dry the patient is connected with a metallic electrode in connection with the negative pole of the static machine. A pointed electrode connected with the positive pole is placed on the skin in the neighborhood of the wound and the circuit opened. Lifting the positive electrode 1 mm. from the skin the spark is seen and it is directed on every part of the wound. In five or ten minutes the wound is covered with a brownish crust, surrounded by an anemic ring of healthy skin. There is slight swelling, but this disappears in a few hours. Serum is often secreted, which should be absorbed by an aseptic tampon. The wound is then dry and no bandage is required. In a few weeks the crust is loosened and epidermization has taken place under it. A flat, pink scar is left, which in a few weeks becomes white. The application is not painful. A spot the size of a shilling requires treatment for half an hour. The cure takes much less time than the Finsen treatment. The difficulty is in removing all the granulations with the curette. It is possible also to use the spark inside the cavities of the nose and mouth, by means of a small glass tube and a copper wire. The effect must be due to the heat. By this method heat is continually created by means of proximity of wound and electrode, and it can be continued indefinitely without damage to the patient. Whether the speed of the ions, the stress of the current and the light concur in the effect is not determined.

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## THE AMERICAN MEDICAL ASSOCIATION—ITS POLICIES AND ITS WORK

### VII. MEDICAL EDUCATION

The low educational standards which have obtained and which to a large degree still obtain in many American medical schools have long been deplored. It was not to be expected that a new and rapidly developing country like this should at once have schools of the same high grade as those found in the older countries; but there was no legitimate excuse for the fact that conditions with us were worse than in any of the other new countries—Canada, Australia, New Zealand, etc. The lack of legal restrictions in the organization and incorporation of medical colleges undoubtedly has been largely responsible for the existence of the great number of mediocre and low-grade medical educational institutions. As is well known the birth of the American Medical Association was the result of a convention called in May, 1846, to consider the subject of a higher standard of medical education. After the Association was formed, this subject was the principal topic in the annual discussions, and there are very few of the reports of the transactions that do not contain some discussion or some resolution on the subject. It would be hardly correct to say that these continued efforts of the Association accomplished nothing, since the resolutions and discussions directed attention to the deplorable conditions existing and many colleges did raise their standards, both of entrance requirements and of pedagogic efficiency. But the greater number did not raise them, and in such colleges students were admitted with little more, or even less, than a common school education; and they were graduated with the merest smattering of medical knowledge. In spite of pleas for higher standards the number of these low-grade schools increased until there were practically as many medical colleges in the United States as in all other countries combined. The attempts by the more progressive members of the American Medical Association to bring about a reform in the conditions that existed were rendered largely ineffective by the fact that the Association itself was dominated by representatives of the very institutions which needed reforming.

Such were the conditions when the reorganization of the American medical profession took place. After the reorganization, however, a new order of things was brought about. A special body was created—the House of Delegates—whose function is to transact the business of the Association; the members of this body are not direct representatives of proprietary medical colleges, but are representatives of the profession as a whole and therefore less likely to be biased in their efforts to carry out the objects of the Association.

Under these new conditions, in 1902, a committee on medical education was appointed similar to those formed in previous years but with far different results. In its report in 1904, this committee, recognizing the futility of temporary bodies, recommended the appointment of a permanent council with funds at its disposal to carry on its work. This recommendation was adopted; the Council on Medical Education was created; provision was made for the employment of a secretary who would devote all his time to the work; and an appropriation was made to meet the necessary expenses. Instead, therefore, of the short-lived, isolated efforts of temporary committees, however excellent their work, there was now an opportunity for steady continuous effort by a permanent body.

Recognizing from the first that its chief function was to obtain and publish facts regarding medical education, the Council immediately took steps to procure reliable information regarding medical standards and medical teaching institutions both at home and abroad. Lists of colleges were prepared, copies of their announcements secured and permanent files arranged; information was obtained regarding the entrance standards, the length of medical courses, the character of the college curricula and the requirements for graduation; copies of the medical laws and statements regarding the licensing of physicians in each state and in every foreign country were collected; in fact, official and reliable information bearing on all phases of medical education in this and other countries was obtained from every available source. The Council naturally took over the work, begun in 1901 by THE JOURNAL, of obtaining data regarding the number of students attending medical colleges, the number of graduates and other information relating to medical education, and published in the annual Educational Number of THE JOURNAL. It likewise assumed the responsibility of securing official statistics from state examining and licensing bodies, a work which was begun by THE JOURNAL in 1903, and on which were based the tables showing the successes and failures of medical college graduates. This matter also is published annually in the State Board Number of The Journal, of which this issue is an example.

In addition to the data regarding medical colleges in the United States, the Council also compiled the first complete list of foreign medical colleges—a list which revealed the startling fact that there were practically as many colleges in the United States as in all other countries combined. This systematic collection of educational data has been continued from year to year, with the result that an abundance of valuable information has been obtained regarding medical education, medical teaching institutions and regulations governing the licensing of physicians in this and other countries. In fact, it is no exaggeration to say that there is now more information on these topics to be found in the educational department of the American Medical Association than in any other one place. The result is that the Council is now recognized, both at home and abroad, as an important source of information regarding medical education, and requests for such information are received daily.

The collection of information, however, by no means represents the extent of the Council's activities. From time to time it appointed special committees which submitted reports on preliminary education, the granting of advanced standing for work done in colleges of liberal arts, a model medical curriculum, the character of the state license examination and the use of practical tests, a model medical practice act and other important topics. Probably the most notable of these was the special committee on medical curriculum consisting of one hundred leading medical educators of the United States, assisted by a large number of other leaders in medical education acting in an auxiliary capacity.

Another important feature of the Council's work has been an annual conference on medical education which has been largely attended by members of the state licensing boards, by delegates of state medical associations, by officers of the United States governmental services and by representatives of medical colleges, universities and educational organizations, every section of the country being fully represented. At these conferences the Council presented reports of its work, calling particular attention to conditions of medical education and medical registration in the various states. These conferences have furnished an opportunity for a thorough discussion of all reports and methods of procedure and have been of great value to the Council in the formulation of its standards.

The most important work of the Council, however, is yet to be described. Almost at the outset it became evident that medical college catalogues and announcements, as a rule, could not be relied on to reveal actual conditions or to furnish data on which standards could be based. It was decided, therefore, to inspect, personally, all colleges and thus to obtain information at first hand. After the preparation of an outline of the points to be considered in the study of each college, this work of inspection was begun and during the college session of 1906-7, the personal inspection—the first ever made by any organization of all the medical colleges in the United States—was completed. Since then a second tour of inspection, which included the medical schools of Canada also has been completed. The conditions revealed by these inspections were far from creditable to the schools as a whole. Although a number of high-grade, fully equipped and excellently conducted medical colleges were found, there were many which were seriously deficient both in the quality and in the amount of work done. Several were found devoid of laboratory and clinical facilities, the sole equipment in some instances being a desk, a typewriter and some chairs. In some of the larger colleges the didactic curriculum of thirty years ago was being continued; instead, however, of giving the same course of lectures to two classes in two separate years they were now giving the same course to four classes in four separate years.

The collection, and, still more, the publication of these educational data, have had a tremendous effect on the standards of medical education. The publication of facts regarding medical licensure in the various states has aided in the movement toward higher, more uniform and more effective laws and methods in the licensing of physicians. The publication of statistics regarding tuition fees of colleges has answered the "poor boy" argument so frequently used as an excuse for conducting low-grade colleges. It has been shown that, for the same or even for less money than he would pay in a low-grade college, the student could secure a thorough training in a good, well-equipped medical school. The Council has shown that in practically every other country, thorough courses in the pre-medical sciences are required of every prospective medical student. The result of the publishing these facts has been that instead of only three medical colleges which require for matriculation a preliminary education in advance of the ordinary high-school course, there are now twenty-four having that requirement; and by the beginning of the next college session this number will doubtless be increased to forty or more. In addition seven state licensing boards now insist that applicants shall have had one or two years of college work preliminary to their medical course.

The publication of statistics showing the unsatisfactory conditions has had much to do with the rapid reduction in the number of medical colleges. This has fallen from 166 to 132, although it must be admitted that the decrease in the demand for physicians has also had considerable influence. As a result of the mere publication of actual conditions, several colleges voluntarily have closed their doors in order that higher standards and improved methods of teaching might prevail and a number have been closed by the action of state licensing boards. A greater reduction in the number of schools, however, was through voluntary mergers in several cities of two or more colleges, forming in each instance one stronger and better equipped college. By this process of merging, in the last six years forty-four colleges have been replaced by nineteen institutions of higher grade.

The chief function of the Council, as already stated, is to obtain and to publish facts regarding medical education; and such publicity can result only in good to medical education in general. There is no desire to criticize any individual college for the Council fully recognizes the difficulties against which individual colleges have had to contend in their efforts to make improvements. It is encouraging to note that the majority of colleges have welcomed investigation, have invited a publication of the facts, and have greatly aided the Council in its work. It is to be regretted, however, that some medical colleges remain which may not welcome the presentation of facts and which may be injured thereby. We may apply to this educational situation what President Taft recently said of the commercial world: All business should be made legitimate so that laws for the general good will not injure that business. Similarly it may be said that those colleges which fear publicity should make such improvements in their methods and equipment that the publication of facts will not injure them. Curiously enough, some of the lowest-grade medical colleges inspected by the Council, were, in the opinion of their deans, "the best in the country," which points the truth of a statement made recently by the United States Commissioner of Education,[1] that the people not only need protection against those who use false pretenses in the realm of education but also against those who offer an inferior grade of instruction, under the delusion that it is as good as the best. "The well-meaning no less than the dishonest need some impartial test by which their educational offering may be proved, of what sort it is."

While much remains to be done and while there are still a large number of wofully deficient medical schools, the character of the greater number has been decidedly improved in the last few years. Entrance requirements have been increased and better enforced, college terms have been lengthened, new buildings and hospitals have been erected, new laboratories have been added and old laboratories better equipped, libraries and museums have been developed, a much larger number of expert, full-time salaried instructors has been secured and better methods of teaching have been adopted. In fact, so many have been the improvements in medical education as to warrant the assertion that more has been accomplished in the past six years than in all of the previous sixty years of the Association's existence; and it is gratifying in the extreme to those who have long struggled and pleaded for higher and better standards of medical education to see, at last, so much already accomplished and the outlook so bright for still greater things in the future.

Of course this work has created some opposition to, and in a few cases active antagonism against the American Medical Association. Exposing the weakness of some institutions affected powerful interests and, naturally, friction resulted. In the vast majority of cases, however—and this is but another illustration of the altruism that pervades the medical profession—the very evident need of such changes has been recognized and the efforts of the Council on Medical Education have been heartily endorsed and its work materially aided.

## A MONUMENT TO MEDICAL HEROES

An article entitled "The Public's Forgetfulness," in the *Outlook*, Aug. 11, 1906, called attention to the heroic character and beneficent results of the work of the Army Yellow Fever Commission in Cuba in 1900, and urged some recognition by the nation of the achievement and of the courage of those who had submitted to experimental infections in the course of these investigations. This article attracted the attention of President Roosevelt, who, after obtaining a full and authoritative report on the subject from the War Department, sent a message to Congress which was probably the briefest he ever wrote. It was as follows:

> THE WHITE HOUSE, Dec. 5, 1906.
>
> *To the Senate and House of Representatives:*—The enclosed papers are transmitted to the Congress in the earnest hope that it will take suitable action in the matter. Major Reed's part in the experiments which resulted in teaching us how to cope with yellow fever were such as to render mankind his debtor and this nation should in some proper fashion bear witness to this fact.
>
> THEODORE ROOSEVELT.

Senator Owen of Oklahoma, who has already given evidence of his interest in a matter of great practical importance to the public weal by advocating the creation of a department of health, has now shown himself equally appreciative of educational and moral values by the introduction of a bill (S. 8024) which will put into execution the recommendation of that message. It appropriates the sum of $50,000 for a statue in Washington "in honor of the Yellow Fever Commission composed of Major Walter Reed, Surgeon, U. S. Army, Dr. James Carroll, Dr. Jesse W. Lazear and Dr. Aristides Agramonte, Acting Assistant Surgeons, U. S. Army, and the placing on the pedestal a bronze tablet in memory of the men who consented and assisted by the voluntary exposure of their persons in making the experiments which resulted in the discovery of the means whereby yellow fever is disseminated; the site to be selected and the pedestal and statue to be erected by and under the supervision of a commission composed of the President of the American Medical Association, the Secretary of War, Major-General Leonard Wood, U. S. Army, the Surgeon General, U. S. Army, and Colonel William C. Gorgas, Medical Corps, U. S. Army."

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[1] Science, October, 1909.

Congress has erected in the Capital City many statues to celebrated Americans, and the generous foreigners who assisted in our war for independence have not been forgotten. These have been chiefly men of the sword, and no man whose mission has been the saving of life, has been as yet so honored by our national legislature, although by private subscriptions statues have been raised to Rush, to Cross and to Hahnemann.

The time seems ripe for this action, as a decade has now passed since the commission published its findings to the world and all of them have been fully accepted by scientific men. Three of the members of the commission are dead; the fourth, Dr. Agramonte, is a distinguished professor in the university of Havana.[1]

It is pleasing to see that the proper interest of the American Medical Association in the erection of this monument is recognized by the naming of its president as the head of the commission to which the execution of the work is entrusted.

## COLLECTION AND VALUE OF STATE BOARD STATISTICS

We present this week tabulated statistics based on examinations conducted by State Medical Examining and Licensing Boards. With the exception of one report from Alabama, for which the list of failures could not be obtained, the returns are complete. The four large tables, A, B, C, and D, give the results in detail, while tables E to M, inclusive, give important deductions from these tables. Table M gives the totals registered by each board by all methods, examination, on credentials, through reciprocity and otherwise, while Table N shows the registrations by reciprocity.

Tables I, J and K give the various medical colleges classified according to the percentage of failures (below 10 per cent., between 10 and 20 per cent. or above 20 per cent.). Although no positive conclusion can be formed in regard to any college on the basis of these statistics alone, nevertheless the deductions which they invite are surprisingly in agreement with the conclusions resulting from the thorough investigation and inspection of medical colleges conducted during the past five years by the Council on Medical Education. The fact that a few medical colleges of inferior grade, conducted largely by quiz-class methods, succeed in obtaining low percentages of failures and appear in Table I, points towards the necessity of changing the character of the state license examination so that actual knowledge—not theoretical knowledge obtained by "cramming"—shall be necessary to pass it.

These statistics are of great value and throw much light on several factors in medical education and medical licensure. The publication of the failures of graduates of the colleges has stimulated the colleges to better work, and efforts have been made to find and strengthen the weak places in their courses of instruction. The very fact that the reports are called for regularly has tended to unify the various systems of records kept by state licensing boards, while in some states records are now kept whereas previously they were not.

Furthermore, from the official data regarding medical college graduates, the Council on Medical Education, which now has charge of the collection and tabulation of these statistics, has been able to check up the state board reports, thereby rendering the tabulated statistics more accurate, making it certain that failures at examinations are not charged against the wrong college, and insuring a greater accuracy of state records. These statistics, therefore, not only have helped in the betterment of medical education, but also have led to the adoption of more uniform methods of record-keeping in the various states. Before THE JOURNAL began the publication of these statistics the accurate information, which can now be readily obtained, concerning the number of physicians registered each year in each state or in the United States was not anywhere available.

Probably no one has recognized the value of these statistics more than the state licensing boards themselves, who, through the furnishing regularly of carefully prepared reports have made possible the publication of this valuable information.

## IMPROVED MEDICAL EDUCATION AT ST. LOUIS

Another evidence of the rapid improvement of medical education in this country is found in the action of the directors of Washington University, St. Louis, in reorganizing its medical department on a broad, strong basis. This action has been made possible by the union of a large general hospital and of a children's hospital with the medical school, and by gifts for medical, laboratory and clinical buildings aggregating, with the endowment, over six million dollars. The principal contributors to the endowment are Adolphus Busch, William K. Bixby, Edward Mallinckrodt and Robert S. Brookings.

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[1] Any one who is interested and desires to know all the facts relative to the work of the Yellow Fever Commission should obtain from his congressman or senator a copy of the document (Senate Document No. 520, 61st Congress, 2nd Session) which accompanied the introduction of the bill. This pamphlet contains the president's message and accompanying documents, including valuable official data.

A large tract of land at the east end of Forest Park has been secured, on or near which all the hospital and college buildings will be erected. In addition to the general hospital and the children's hospital it is proposed to erect laboratory and clinical buildings with dispensary facilities, and within a short time also a maternity hospital. It is stated that all hospitals are to be fully used for teaching purposes, the relation to be substantially the same as that which exists between the hospitals and the medical school of the Johns Hopkins University. New buildings throughout of modern construction and arrangement have been planned.

The university is to select the medical staffs of the hospitals and is seeking the ablest men for the leading chairs of the college. Among those already selected are: Dr. George Dock, formerly of the University of Michigan, now of Tulane University, New Orleans, for the chair of medicine; Dr. John Howland, of the University and Bellevue Hospital Medical College, New York, and a member of the Council on Pharmacy and Chemistry of the American Medical Association, the chair of pediatrics; Dr. Eugene L. Opie, pathologist at the Rockefeller Institute of Medical Research, the chair of pathology; and Dr. Joseph Erlanger, of the University of Wisconsin, the chair of physiology. The selection of men for the chairs of surgery, medical chemistry, preventive medicine and pharmacology is proposed in the near future and also of a number of able permanent assistants and a large and strong staff for supplementary teaching work and for the dispensary and hospital service. All the men who have been added to the faculty are to assume their duties within a year.

It is significant that the entrance requirements are not to be extreme. Beginning this fall one year of collegiate work will be required in addition to a four year high school education and this by the fall of 1912 will be further increased to two years of collegiate work. The plan to have all buildings, laboratory, clinical, hospitals and dispensaries, in one group and of easy access as well as the character of the men being selected to fill the various chairs give promise of a medical college of the first rank. Furthermore the location of a school of this character in St. Louis is sure to have a profound influence on medical education throughout the middle West and the South. Finally this generous provision for the development of medical education at Washington University is another encouraging indication that men of wealth are awakening to the necessity of endowments for medical education.

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**Prognosis in Appendicitis in Children.**—The prognosis of appendicitis in children is influenced very materially by a number of factors; *e. g.*, age, difficulty in diagnosis, rapidity of its progress, delayed operation, and the lessened resistance to bacterial invasion on the part of very young children. Next to delay, age, perhaps more than any other factor, determines the outcome. The younger the child, the worse the prognosis. —J. M. T. Finney, in *Old Dominion Journal of Medicine and Surgery*

# Medical News

## CALIFORNIA

**Cooper College Graduates.**—On May 5, the annual commencement exercises of Cooper Medical College, San Francisco, were held, and a class of seventeen was graduated. Dr. Henry Gibbons, Jr., dean of the college, introduced the president, Dr. Edward R. Taylor, who conferred the degrees.

**Personal.**—Dr. Charles V. Cross has been appointed president; Dr. Thurlow S. Miller, secretary, and Dr. Edwin C. Van Dyke, treasurer, of the reorganized Board of United States Examining Surgeons for San Francisco.——Dr. George L. Cole has been appointed a member of the board of health of Los Angeles, vice Dr. William J. Chambers, resigned.

**Hospital Notes.**—With the completion of the group of county hospital buildings, Los Angeles County will have expended $300,000 in this work. The completed buildings will contain an administration building, surgical ward, three medical wards, tuberculosis building, contagious ward, insane ward, nurses' quarters, superintendent's residence, etc. At present there are under construction an additional story to the lecture hall, a twenty-room additional building for nurses, and a new operating pavilion and a chapel.——The Mills heirs have given $1,000,000 for the endowment of St. Luke's Hospital, San Francisco.——Two hundred women of Oakland, Alameda and Berkeley, on May 2, began a ten-day campaign under the direction of the King's Daughters of California to raise $100,000 by popular subscription, with which to erect and equip a new building for the home for incurables.

## ILLINOIS

**Physician Goes to Prison.**—Dr. William H. Miller, convicted of the murder of John Saylor, Crescent City, and sentenced to twelve years' imprisonment in the state penitentiary, was taken to Joliet, May 10, to begin his sentence.

**Hospital Notes.**—Work on the annex of St. Vincent's Hospital, Taylorville, began April 28. The annex will contain a maternity ward of five rooms, and will increase the capacity of the hospital to a total of seventy.——Rockford Hospital, in its report for the year ended January 1, announces that it closed with a deficit of about $1,500, most of which was made up of outstanding obligations of patients.

### Chicago

**Personal.**—Dr. Henry R. Harrower, formerly editor of the *Medical Standard*, has severed his connection with that journal, and is now conducting a new periodical, the *American Journal of Physiologic Therapeutics*.

**College Merger.**—It is reported that a merger has been completed between the Bennett Medical College and the Illinois Medical College, the latter of which recently became the Medical Department of Loyola University. The new school will retain the name of the Bennett Medical College.

**Chicago Tuberculosis Institute.**—A new medical building has been opened at Edwards Sanatorium, Naperville, Ill., a department of the Chicago Tuberculosis Institute. The sanatorium at present consists of a forty-acre farm, with a general administration building, medical building, six open-air shacks and individual tents. The institution, at present, can accommodate sixty patients.

**More About the Diploma Mill.**—At the instance of the State Board of Health, Dr. Alexander Chittick, secretary of the "Chicago Medical University," E. J. Barnes, and N. O. Bourque, associated with Dr. Chittick in the "Crescent Medical University," were arrested, May 13, charged with fraudulent use of the mails. The defendants were taken before United States Commissioner Foote, their case was set for hearing May 23, and they were released on bail. It is claimed that these institutions, which are said to exist only on paper, sell diplomas in medicine, pharmacy, dentistry, osteopathy, etc., at prices ranging from $6 to $40.

**Ricketts Memorial Service.**—A memorial service for Dr. Howard Taylor Ricketts, assistant professor of pathology in the university, was held in the Leon Mandel Hall, University of Chicago, May 15. Dr. Henry Pratt Judson read a letter from the Bureau of Education of Mexico expressing appreciation of the work of Dr. Ricketts, and mentioning the honors conferred on him. He also made a brief address on the work of Dr. Ricketts, and the essential facts of his life and death were given by Dr. Russell M. Wilder, who was associated with Dr. Ricketts in his work in Mexico. Dr. Ludvig Hektoen delivered an address on the personality of Dr. Ricketts and the nature and value of the work. Prof. Charles Henderson of the University spoke on the humanitarian aspects of Dr. Ricketts' work and his death. The meeting was largely attended.

## IOWA

**Women's Medical Clinic.**—A free daily clinic has been estab-shed by women physicians and club women of Des Moines i the Century Building, under the charge of women physi-ans of the city.

**Society Meetings.**—At the annual meeting of Tama County edical Society, held in Toledo April 12, Dr. Walter J. cEvilly, Dysart, was elected president; Dr. Arthur A. Pace, lberon, vice-president; Dr. William C. Wagner, Traer, sec-tary-treasurer, and Dr. Thomas L. Thomson, Toledo, dele-ate to the state society.——At the annual meeting of the outheastern Linn Medical Association, held in Mount Vernon, pril 12, Dr. Calvin G. Stookey, Mechanicsville, was elected resident; Dr. Francis F. Ebersole, Mount Vernon, vice-presi-ent, and Dr. Kate Mason Hogle, Mount Vernon, secretary-easurer.

## KANSAS

**Personal.**—Dr. George L. A. Hamilton, Kansas City, has gone broad.——Dr. G. D. Pendell has located in Wellington.——Dr. arry A. Vincent, Perth, has gone to Florida for two months. —Dr. Edwin T. Shelly, Atchison, is reported to be seriously l with erysipelas.

**State Society Meeting.**—At the forty-fourth annual meeting f the Kansas Medical Society, held in Topeka, May 4-6, under he presidency of Dr. Oliver J. Furst, Peabody, the subject of hose address was "Public Knowledge of the Medical Profes-on." the following officers were elected: President, Dr. O. ortis Davis, Topeka; vice-presidents, Drs. Millard F. Jarrett, ort Scott; George W. Jones, Lawrence, and John T. Axtell, ewton; secretary, Dr. Charles S. Huffman, Columbus (re-lected), and treasurer, Dr. Lewis H. Munn, Topeka.

## KENTUCKY

**Personal.**—Dr. J. A. Boyd, Paducah, was shot in the arm and ainfully wounded by Dr. Charles E. Purcell during an alterca-ion recently.——Dr. John W. Pendley, Paducah, county physi-ian of McCracken county, was stricken with cerebral hemor-hage while attending his sister at Spencer, S. D.

**Wins Suit Against College.**—In the suit brought by Dr. Harry . Davidson against the Hospital College of Medicine, in hich he sought the cancellation of notes amounting to $3,000, hich he had pledged himself to pay, in consideration of eceiving the chair of physiology and diseases of women, and n interest in the property of the school, the judge is said to ave decided that the college must cancel the notes.

## LOUISIANA

**Permit for Hospital.**—The city council of New Orleans has ranted a permit to the Colored Baptist Sanitarium to operate hospital at 122 South Howard street.

**Asks Additonal Inspectors.**—Dr. William T. O'Reilly of the ity board of health of New Orleans, has asked for an appro-riation of $12,800 for the employment of more inspectors and o enable the board to enforce the mosquito screen ordinance.

**House of Delegates Meeting.**—The annual meeting of the ouse of Delegates of the State Medical Society was held May . A new constitution and by-laws was adopted. Dr. John allan, New Orleans, was elected president, and Dr. Joseph D. artin, New Orleans, secretary.

**State Medical Society Meeting.**—The thirty-first annual meet-ng of the Louisiana State Medical Society was held in New rleans, May 3-5. On the first day symposia on dysentery nd uncinariasis were held. At the evening session pellagra as discussed. The following officers were elected: Dr. Edwin . Graner, New Orleans, president; Drs. Allan C. Eustis, Abbe-ille, Homer Dupuy, New Orleans, and Samuel A. Ayo, Thibo-eaux, vice-presidents; Dr. Joseph D. Martin, New Orleans, ecretary; Dr. Charles C. Bass, New Orleans, treasurer (re-lected), and Dr. Isaac J. Newton, Monroe, councilor. The ext meeting will be held in Shreveport.

## MARYLAND

**State Board of Health Election.**—At the annual meeting of he State Board of Health, Dr. William H. Welch, Baltimore, nd all the other officers were reelected. Dr. Marshall L. Price, ecretary of the board, was selected as delegate to the Ameri-an Medical Association.

**Personal.**—Dr. Frederick N. Nichols, Denton, has been ap-ointed health officer of Caroline county.——Dr. Edward R. rippe has been appointed health officer of Easton, and Dr. hilip L. Travers, physician to the county jail, Easton.——Dr. ohn E. Legge, Oakland, while cranking his automobile recently, fractured his arm.——Dr. Charles F. Goodell, Frederick, has been reelected health officer of Frederick county.——Dr. Elmer C. Kefauver has been elected town physician of Thurmont.——Drs. Lewis K. Woodward and Jesse S. Meyers have been elected members of the city council of Westminster.

### Baltimore

**Hospital News.**—Through the efforts of the managers and auxiliary, $18,000 of the mortgage on the Johns Street Hospital for Women of Maryland have been paid off. An indebtedness of $22,000 still remains.

**Dispensary Election.**—At the annual meeting of the Baltimore Eastern Dispensary, May 9, Dr. Robert S. Kirk was elected superintendent for the twelfth time. Dr. John Roth was elected assistant superintendent, Dr. Daniel W. Cathell, vice-president, and Dr. Frank C. Bressler, a director.

**Personal.**—Lieutenant Howard E. Ashbury has been promoted to captain in the medical corps of the Maryland National Guard, and Drs. William P. Morrill and Lloyd P. Shippen have been appointed lieutenants and assistant surgeons.——Dr. Hugh H. Young has been elected secretary of the trustees of the new negro hospital for the indigent insane.

## MASSACHUSETTS

**Personal.**—Dr. Frederick L. Hills, superintendent of the Massachusetts State Sanatorium, Rutland, has resigned to accept the superintendency of the Eastern Maine Insane Hospital, Bangor.——Dr. Francis X. Mahoney, Dorchester, has been appointed health commissioner of Boston.

**State Society Meeting.**—The one hundred and twenty-fifth annual meeting of the Massachusetts Medical Society will be held in Boston, June 7 and 8. The Shattuck Lecture will be delivered by Dr. Frederick H. Gerrish, Portland, Maine, on the "Crusade Against Syphilis and Gonorrhea," and the annual discourse will be delivered by Dr. John C. Munro, Boston.

## MICHIGAN

**Personal.**—Dr. John L. Burkart, for a number of years acting assistant surgeon U. S. Army, with Philippine service, has opened an office in Big Rapids.——Dr. John A. Keho, Bay City, has been appointed a member of the board of health, vice Dr. William R. Ballard, resigned.——Dr. Clarence B. Wasson has been appointed health officer of Bellevue, vice Dr. Albert S. Wilson.——Dr. Perry M. Schurtz, retiring president of the board of health of Grand Rapids, was presented on May 5 with a diamond ring and set of cuff-links by the members of the board of health.——Dr. Earl V. McComb has been appointed health officer of Menominee.——Dr. A. Henri Cote has been elected city physician of Port Huron.——Dr. Victor C. Vaughan, dean of the Medical Department of the University of Michigan, was the guest of honor at a dinner of the University of Michigan Kansas City Club, May 2.

## MISSOURI

**Library for Medical Society.**—The library of the late Dr. Jonathan E. Tefft, Springfield, has been presented by Mrs. Tefft to the Greene County Medical Society.

**Southeastern Physicians Meet.**—The Southeastern Missouri Medical Association met in Morehouse, May 3 and 4, and elected the following officers: President, Dr. Oba Haley, Fredericktown; recording secretary, Dr. William S. Hutton, Illmo; corresponding secretary, Dr. Thomas C. Allen, Bernie, and treasurer, Dr. William R. Goodykoontz, Caledonia.

**Southwestern Physicians Elect.**—At the annual meeting of the Southwestern Missouri Medical Association, held in Springfield, April 28 and 29, the following officers were elected: President, Dr. William J. Rabenau, Fordland; vice-presidents, Drs. Oscar N. Carter, Republic, and James E. Dewey, Springfield; secretary, Dr. Herbert S. Hill, Springfield, and treasurer, Dr. Lee Cox, Springfield, the two latter being reelected. Dr. James E. Loafman, Bolivar, delivered the oration on medicine, and Dr. Benjamin F. Fortner, Springfield, the oration on surgery.

### St. Louis

**Commendatory Resolutions.**—The St. Louis Medical Society has adopted resolutions commending the council and house of delegates and mayor for the passage and signing of bills changing the management of the city eleemosynary institutions.

**Hospital Merger.**—The merger is announced of the Martha Parsons Hospital with the St. Louis Children's Hospital. The new institution will form part of the hospital group of Washington University Medical School, and will be housed in a new building on Kingshighway, valued at $125,000.

### MONTANA

**State Meeting.**—The thirty-second annual meeting of the Montana State Medical Association was held in Hunter's Hot Springs, May 11 and 12, under the presidency of Dr. Thomas D. Tuttle, Helena. The officers elected were: President, Dr. William F. Cogswell, Livingston; vice-presidents, Drs. Thomas C. Witherspoon, Butte; Irvin, Great Falls, and Oscar M. Lanstrum, Helena; secretary, Dr. Herbert D. Kistler, Butte (reelected; treasurer, Dr. Creswell T. Pigot, Butte (reelected); delegate to the American Medical Association, Dr. Thomas D. Tuttle, Helena, and alternate, Dr. Thomas C. Witherspoon, Butte. Butte was selected as the next meeting-place.

### NEW YORK

**Is Christian Science Healing Forbidden?**—An amendment to the New York state medical law which was rushed through the assembly May 5, is giving the Eddyites considerable alarm. The bill passed three years ago allowing only registered physicians to practice medicine had this exception, "This article shall not be construed to affect the practice of the religious tenets of any church." In the recent amendment introduced by Assemblyman Wilkie of Erie this exception is made to read, "This article shall not be construed to affect the practice of circumcision as the religious tenet of any church." The Eddyites are making strenuous efforts to stop this bill in the senate.

#### New York City

**Import Measles.**—The steamship *Carpathia* of the Cunard line recently arrived from the Mediterranean with 40 cases of well-developed measles among her 2,200 steerage passengers. Only the children in the steerage were affected. A few months ago a German steamer arrived with 130 cases of measles on board.

**Personal.**—The reception that was to have been given to Dr. John J. McPhee by the Canadian Society of New York has been indefinitely postponed on account of the death of King Edward.——Dr. Roswell Park, who has been ill with pneumonia in this city, has recovered sufficiently to return to his home in Buffalo.——Dr. and Mrs. George Woolsey and Dr. Howard S. Paine, Glens Falls, have gone to Europe.

**Resolutions Regarding Dr. Goelet.**—At the meeting of the Clinical Society of the New York School of Clinical Medicine, held May 3, resolutions were adopted regarding the death of Dr. Augustin H. Goelet, for more than twenty years a member of the faculty of the institution, setting forth the high qualities of Dr. Goelet, paying a last tribute to his memory, and extending to his bereaved family the sincere sympathy of the society.

#### Buffalo

**Fronczak to Go to Paris.**—Expenses not to exceed $350 were voted Health Commissioner Francis E. Fronczak by the board of aldermen to attend the International Congress on School Hygiene in Paris, August 2-7.

### NORTH DAKOTA

**State Society Meeting.**—The annual meeting of the North Dakota Medical Association was held in Grand Forks, May 10 and 11, under the presidency of Dr. John E. Countryman, Grafton. The following officers were elected: President, Dr. Henry H. Healy, Grand Forks; vice-presidents, Drs. Clinton E. Spicer, Litchville, Alexander J. McCannel, Minot, and Murdock MacGregor, Fargo; secretary, Dr. Hezekiah J. Rowe, Casselton (reelected); treasurer, Dr. Frank J. King, St. Thomas, and councilors, Drs. Paul Sorkness, Fargo; William F. Sihler, Devils Lake, and Robert D. Campbell, Grand Forks.

### OHIO

**State Association Meeting.**—The Ohio State Medical Association at its sixty-fifth annual meeting, held in Toledo, May 11-13, under the presidency of Dr. Walter H. Snyder, Toledo, who in his annual address, recommended greater participation of physicians in the general life of the community, education of the public in sanitation, and changes in the supervision of state hospitals for the insane. The following officers were elected: President, Dr. Arthur J. Skeel, Cleveland; vice-presidents, Drs. Samuel P. Fetter, Portsmouth; Edgar J. March, Canton; Anderson T. Spear, Newark, and James O. Starr, Pittsburg; member of the National Legislative Council, Dr. Benjamin R. McLellan, Xenia; councilor, Second District, Dr. Robert H. Grube, Xenia, and delegates to the American Medical Association, Drs. George M. Todd, Toledo; Benjamin H. Blair, Lebanon; Dana O. Weeks, Marion; B. Frank Barnes, Newark, and John W. Clemmer, Columbus. On the night of the eleventh, a one-act comedy written by Dr. Dan Millikin, Hamilton, was presented at Zenobia Theater before the association. This is commented on in the Correspondence Department in this issue. A resolution was adopted asking the state legislature to enact a law for the sterilization of habitual criminals. The next meeting of the association will be held in Cleveland. A report of the scientific proceedings will be commenced in The Journal next week.

### OKLAHOMA

**Graduation Exercises.**—The annual commencement exercises of Epworth College of Medicine, Oklahoma City, were held May 12, when a class of 7 was graduated.

**Public Drinking Cup Abolished.**—Beginning May 1, the State Board of Health abolishes the public drinking cup. Violation is made a misdemeanor punishable by a fine of from $10 to $30, or by imprisonment for thirty days in jail, or both.

**Faculty Election.**—At the meeting of the Board of Regents of the University of Oklahoma School of Medicine, Norman, April 13, Dr. Charles S. Bobo, Norman, was elected dean, and Drs. L. W. Curley, B. F. McLaren and Walter L. Capshaw, Norman, were elected members of the faculty.

**State Society Meeting.**—The eighteenth annual session of the Oklahoma State Medical Association was held in Tulsa, May 10-12, under the presidency of Dr. Walter C. Bradford, Shawnee. The following officers were elected: Dr. David A. Myers, Lawton, president; Drs. Charles L. Reeder, Tulsa, H. Marion Williams, Wellston, and James L. Shuler, Durant, vice-presidents; Dr. Claude A. Thompson, Muskogee, secretary (reelected), and Drs. W. E. Wright, Tulsa, and Charles R. Hume, Anadarko, delegates to the American Medical Association.

### PENNSYLVANIA

**Hospital Annex Opened.**—The Phoenixville Hospital opened its new $25,000 annex, April 30, thus increasing the hospital's capacity to 75 patients. The annex was made possible by the gift of $12,000 by the late Joseph Anderson, Toughkenamon.

**Milk Dealer Fined.**—O. H. Walters, a milk dealer of Lower Pottsgrove, was fined $75 and costs May 13, for violating the state quarantine laws during the prevalence of scarlet fever in his house. It was charged that 16 cases of the disease resulted because he sold milk before the quarantine was lifted.

**Antispitting Sign to be Used.**—Pennsylvania's recommendation, made through her Health Commissioner, Dr. Samuel G. Dixon, for a uniform antispitting sign to be used in railroad coaches passing through different states, was adopted April 29, by the Conference of State and Provincial Boards of Health at Washington, D. C.

#### Philadelphia

**Addition to Philadelphia Hospital.**—The first of the new additions to the equipment of the Philadelphia General Hospital, the annex to the Nurses' Training School, was opened May 12. It is of brick and has accommodation for 40 nurses.

**Chair of Surgery Endowed at Jefferson.**—The trustees of Jefferson Medical College announced, May 11, a gift of $60,000 from Mrs. Maria Gross Horwitz, daughter of the late Professor Samuel D. Gross, to endow the "Samuel D. Gross Chair of Surgery."

**Additions to University.**—May 12, ground was broken for a group of laboratory buildings for the University Hospital, on the university campus, south side of Pine street, east of Thirty-seventh street. The total cost will be $37,000. The plans provide for a series of one-story buildings.

**Fire in Laboratory.**—A fire in the chemical laboratory of the Medico-Chirurgical College caused great damage in three-quarters of an hour and frightened many patients. About $50,000 worth of apparatus was ruined by fire and water and the total damage will amount to more than $75,000.

**Gross Prize Awarded.**—The Samuel D. Gross Prize of the Philadelphia Academy of Surgery for 1910, amounting to $1,500, has been awarded to Dr. Astley Paston Cooper Ashhurst of Philadelphia for his essay entitled "An Anatomic and Surgical Study of Fractures of the Lower End of the Humerus."

**Tribute to Dr. Tyson.**—As a farewell tribute to Dr. James Tyson, professor of medicine at the University of Pennsylvania, 300 students of the medical department gathered in his lecture room on May 13, and presented him with a silver loving-cup and large silver platter, gifts of the members of the two upper classes. It was the occasion of Dr. Tyson's last lecture and instead of an everyday class room he found the place decorated with red and blue bunting.

**Personal.**—Dr. Albert Magnus-Levy, of Berlin, Germany, was the guest of honor at a banquet at the Bellevue-Stratford, May 13, following his address before the College of Physicians.

Dr. George E. de Schweinitz was the host of the occasion and covers were laid for twenty-eight guests.——Dr. R. Tait McKenzie has been appointed a representative of the United States at the Third International Congress on Physical Education to be held in Brussels, Belgium, from August 10 to 13.——Drs. F. Hirst Maier, Alfred Heineberg and P. Brooke Bland have been appointed associates in gynecology in Jefferson Medical College.

**Crusade Against Doped Medicines.**—Christopher Koch, vice-president of the State Pharmaceutical Board, announced, May 2, that the future activities of that board would be directed against "patent medicines" with dope in them. Soothing syrups will be one of the leading points of attack, and samples have already been sent to Professor Charles H. LeWall, chemist for the board, to be analyzed. To the general use of these soothing syrups (among babies) Dr. Koch attributes the craving for cocain and other drugs among adults, who have been indulged with these syrups during infancy. Samuel M. Clement, Jr., counsel for the board, says that the traffic in cocain in this city has now been practically annihilated and that the board would now turn its efforts to obtain federal regulation of the sale of cocain, morphin and other ruinous drugs. Five more cocain prisoners were arraigned before Magistrate Beaton in City Hall, May 2.

**Baby-Saving Campaign.**—To concentrate the charitable forces of the city into one big child-saving campaign, a conference of nearly 200 social workers was held in the mayor's office at City Hall on May 13. A movement was started by Dr. Jesse Burke, of the Bureau of Municipal Research, to form a central committee to report the scope, limits and activity of every charity in the city. This committee will form the nucleus of a centralized registration bureau leading to the formation of a municipal bureau of child hygiene. It was shown that lack of cooperation among the various charitable organizations resulted in the city's deserving poor not receiving the benefit of funds given for their relief and of the societies being imposed on. A little over a year ago there was organized an alliance for the care of babies under the auspices of the Department of Public Health and Charities, Board of Education, Mothers' Congress, Home and School League and allied societies, for the purpose of instituting lectures, and giving practical instruction and demonstration, by means of the lecture rooms in the schoolhouses, instituting milk depots, etc., but unfortunately public education through the newspapers did not reach the particular class of people desired. The circulars left at the home frequently remained unread and the lectures reached only comparatively few. Milk dispensaries cannot be attended by the mother who has many children. The keynote of the proposition lies in the visitation of the home by trained workers, and one object of the present crusade is the part to be played by the Bureau of Municipal Research, under the guidance of Dr. Burks, who has volunteered to supply a selected section of the city with a corps of trained nurses for the purpose of home instruction.

## TENNESSEE

**State Board Election.**—At a called meeting of the State Board of Health, May 1, Dr. Thomas E. Abernathy, Chattanooga, was elected president to fill the vacancy caused by the resignation of Dr. Heber Jones, Memphis, who had been a member of the State Health Department for 23 years. Dr. Louis Leroy, Memphis, was elected vice-president; Dr. William Litterer, Nashville, state bacteriologist; Dr. Olin West, Nashville, assistant secretary of the board in charge of the eradication of the hookworm disease, and Dr. Rufus E. Fort, Nashville, delegate to the American Medical Association.

**Colleges Close Session.**—The graduating exercises of the Medical Department of Vanderbilt University were held May 2, when a class of thirty-nine received diplomas from Chancellor J. H. Kirkland. The faculty address was delivered by Dr. William Litterer.——The University of Nashville Tennessee Medical Department held its annual commencement exercises May 2, when a class of sixty-five was graduated. Ex-Governor R. M. Cunningham, Alabama, delivered the annual address; Dr. Hazel Padgett, the faculty address, and President Brown Ayres of the University of Tennessee outlined the reasons prompting the combination of the two universities and its purpose for the future. Degrees were conferred by Prof. J. I. D. Hines on the graduates of the University of Nashville, and by Prof. Brown Ayres on the University of Tennessee.——The commencement exercises of the Medical School of the University of Chattanooga were held May 2, when a class of eighteen was graduated. The faculty address was delivered by Dr. S. B. Woolford. Hon. H. H. Ingersoll, Knoxville, delivered the commencement address, and Professor Race conferred the degrees.——Memphis Hospital Medical College graduated a class of 101, April 30. The commencement address was delivered by Hon. Earl Brewer of Clarksdale, Miss., Hon. W. H. Carroll, president of the board of directors, conferred the degrees, and Dr. William B. Rogers, dean of the college, delivered the diplomas to the graduates.——The College of Physicians and Surgeons, Memphis, held its annual graduating exercises May 2. Prof. Thomas P. Bailey delivered the commencement address, and degrees were conferred on a class of seventeen by Dr. Richard B. Maury, chancellor of the university.——A class of twenty was graduated from the Lincoln Memorial Medical College, Knoxville, May 4. Rev. J. F. Spence, LL.D., vice-president of the Medical Department, conferred the degrees.——Meharry Medical College, Nashville, graduated a class of fifty-five on April 14. The address to the graduates was delivered by Rev. R. E. Jones, D.D., New Orleans. Ground was broken for the George W. Hubbard Hospital, April 13. One wing of this structure is to be built at present, will accommodate about forty patients, and will cost about $15,000.

## TEXAS

**Personal.**—Drs. Edwin P. Becton, Will Cantrell, Charles T. Kennedy, Julius A. Smith, D. Richard Waddle and John W. Swindell have been elected members of the board of health of Greenville.——Dr. Gustave A. Weidemyer has been elected city physician of Taylor.

**Graduation Exercises.**—A class of twenty-eight received diplomas at the annual commencement exercises of the Medical Department of Fort Worth University, May 3. Dr. Charles W. Stiles, United States Public Health and Marine-Hospital Service, delivered the commencement address.——Baylor University, Dallas, held its commencement exercises April 26, graduating a class of ten. Dr. Edward H. Carey presented the medical class to President Brooks, who conferred the degrees.

**State Physicians Meet.**—The forty-second annual meeting of the State Medical Association of Texas was held in Dallas, May 10-12, under the presidency of Dr. Witten B. Russ, San Antonio, and the following officers were elected: President, Dr. John T. Moore, Houston; vice-presidents, Drs. Allen D. McReynolds, Stamford, and Washington A. Harper, Austin; secretary and editor of the state medical journal, Dr. Holman Taylor, Fort Worth; treasurer, Dr. Charles A. Smith, Texarkana; councilors, Third District, Dr. David R. Fly, Amarillo; Fifth District, Dr. William A. King, San Antonio; Sixth District, Dr. Henry J. Hamilton, Laredo; Ninth District, Dr. James A. Hill, Houston; Twelfth District, Dr. Arthur C. Scott, Temple; Fifteenth District, Dr. Levi Y. Turner, Daingerfield; and delegates to the American Medical Association, Drs. Witten B. Russ, San Antonio, and Turner, Dallas. The association adopted resolutions favoring the Owen bill to create a national department of health.

## VIRGINIA

**Commencement.**—The Medical College of Virginia held its annual commencement exercises at the Academy of Medicine, Richmond, May 18. President Lyon C. Tyler of William and Mary College delivered the commencement address. A class of forty-six was graduated.

**Personal.**—Dr. Alick T. Smith has succeeded Dr. Thomas G. Pretlow as city physician of Richmond.——Dr. Albert S. Priddy, formerly superintendent of the Southwestern State Hospital for the Insane, Marion, has been placed in charge of the construction of the state epileptic hospital, Lynchburg, for which an appropriation of $60,000 was made by the last legislature.——Dr. George E. Wiley has succeeded Dr. William R. Rogers, resigned, as city physician of Bristol.——Dr. James C. Bardin, Charlottesville, has accepted the chair of Portuguese in the department of romance languages in the University of Virginia. He will sail for Brazil June 5.

## WASHINGTON

**Antituberculosis League Formed.**—Whatcom County Antituberculosis League was organized at Bellingham, April 28. Dr. Edward C. Ruge was elected president, and Drs. Orville E. Beebe, Everson, and Spencer S. Howe, Lynden, were elected directors.

**Personal.**—Dr. Charles L. Dixon has been appointed health officer of Renton.——Dr. Grant Calhoun has been appointed chief of the surgical staff, and Dr. Samuel J. Holmes chief of the medical staff of the Seattle City Hospital.——Dr. Elmer M. Brown has been appointed health commissioner of Tacoma.

**Building for Antituberculosis League.**—A building is to be erected by Mr. Horace C. Henry, Seattle, recently elected president of King County Antituberculosis League, for the use of the organization. The building will contain a reception room, retiring rooms, an office and general committee rooms. Mr.

Henry has also given forty acres of land north of Seattle for a site for a sanatorium, and has made an unconditional promise to build a sanatorium on this site at an expense of from $25,000 to $30,000.

### WEST VIRGINIA

**Medical Society Library.**—The Ohio County Medical Society, Wheeling, has removed its medical library from the city hospital to its leased rooms on the sixth floor of the new Board of Trade Building.

**Will Build Sanatorium.**—The Ohio County Antituberculosis League, at a meeting recently held in Wheeling, decided to erect a sanatorium to be known as the Hospital for Curable Tuberculosis. The institution will be incorporated with a capital of $50,000. Decision as to the site has not yet been made.

**Society Election.**—Monongalia County Medical Society, at its annual meeting, held in Morgantown, April 12, elected Dr. Richard H. Edmondson, president; Dr. John N. Simpson, vice-president; Dr. Francisco T. Haught, secretary; Dr. William C. Moser, treasurer, and Dr. Robert W. Fisher, delegate to the state association, all of Morgantown.

### WISCONSIN

**New Health Commissioner for Milwaukee.**—Dr. William Colby Rucker, of the United States Public Health and Marine-Hospital Service, has been granted a leave of absence for one year to accept the position of health commissioner of Milwaukee.

**Personal.**—Dr. William H. Brown, Madison, has been made assistant professor of pathology in the University of Wisconsin, Madison, and Dr. W. J. Week, assistant professor of physiology.——Dr. George E. Thompson has succeeded Dr. F. B. Lansdowne as city physician of Kenosha.——The Madison General Hospital has appointed a medical staff with three divisions. The medical division is in charge of Dr. Louis R. Head; the surgical division is in charge of Dr. Reginald H. Jackson, and the laboratory division in charge of Dr. Charles H. Bunting.——Drs. George W. Nott and Frank W. Pope have declined to serve as members of the Racine Board of Health.——Dr. J. B. Richards has been appointed health officer of Janesville. ——At the annual election of the Kappa Chapter of the Alpha Kappa Kappa Medical Fraternity in Milwaukee recently, Dr. Daniel Hopkinson was elected primarius, and Dr. Fred C. Leifert, corresponding secretary.

## GENERAL NEWS AND COMMENT

**Meeting of Climatologists.**—At the twenty-seventh annual meeting of the American Climatological Association, held in Washington, May 3-5, the following officers were elected: Dr. John Winters Brannan, New York City, president; Drs. Will Howard Swan, Colorado Springs, and John H. Lowman, Cleveland, vice-presidents; and Dr. Guy Hinsdale, Hot Springs, Va., secretary-treasurer. The next meeting will be held in Montreal in June, 1911.

**Instructors in Children's Diseases to Meet.**—The fourth annual meeting of the Association of Teachers of Diseases of Children will be held at the Southern Hotel, St. Louis, June 6, under the presidency of Dr. Alfred C. Cotton, Chicago. The morning session will be devoted to business, the reports of committees, and a symposium on the teaching of pediatrics. At the afternoon session, a discussion of the papers read at the symposium will take place and papers will be read, and interesting cases will be presented by the St. Louis members of the association.

**Medical Museum Directors Meeting.**—At the annual meeting of the International Association of Medical Museums, held in Washington, May 3 and 4, the following officers were elected: President, Dr. Alfred S. Warthin, University of Michigan, Ann Arbor; vice-presidents, Prof. G. Sims Woodhead, Cambridge, Eng.; Dr. Edmond Souchon, New Orleans, and Prof. Ludvig Aschoff, Freiburg, Germany; secretary-treasurer, Dr. Maude E. Abbott, McGill University, Montreal; assistant secretary, Dr. H. W. Francis, McGill University, Montreal; and councilors, Drs. William G. MacCallum, Columbia University, New York City; Edwin R. LeCount, University of Chicago; Frank F. Wesbrook, University of Minnesota, Minneapolis; Daniel S. Lamb, Army Medical Museum, Washington; O. S. Woolley, University of Cincinnati; William Ophuls, San Francisco, and George H. Whipple, Baltimore.

**Experts in Tropical Medicine to Meet.**—The American Society of Tropical Medicine will hold its seventh annual meeting at the Medical School of St. Louis University, June 11, under the presidency of Col. William C. Gorgas, Medical Corps U. S. Army, Ancon, C. Z. The general discussion of hemoglobinuric fever will be opened by Dr. Allen J. Smith, Philadelphia, after the reading of papers by Drs. Charles F. Craig, Washington; George H. Whipple, Baltimore; William H. Deadrick, Helena, Ark.; Walter Brem, Cristobal, C. Z., and James Ewing, New York City. Among other interesting topics for papers and discussions will be filariasis, elephantiasis, uncinariasis, intestinal amebiasis, hookworm, and pellagra.

**Adulterated Macaroni Seized and Condemned.**—After a trial in the United States District Court at Chicago before Judge Landis May 16, five car-loads of macaroni manufactured by Chicago and St. Louis firms, which had been seized on account of adulteration under the Food and Drugs Act, were condemned and ordered destroyed. The testimony of the government expert chemists, including Dr. H. W. Wiley, showed that the macaroni had been colored by a coal tar dye known as Martius yellow, made by the action of nitric acid on alphanaphtylamin and which has been pronounced poisonous by all the authorities. Prof. Albert Matthews of the physiologic laboratory of Chicago University, by experiments on frogs, guinea-pigs and dogs with some of the drug obtained from this macaroni, found that it was deadly in small quantities. The defense claimed, but did not attempt to show by witnesses, that the dye was purchased from a firm who guaranteed to them that it was not poisonous and that it was one of the coloring matters permitted by the regulations of the Department of Agriculture.

**The Gnat the Conveyor of Pellagra?**—A press dispatch from London reports that Dr. Sambon announces from Rome that pellagra has been found to be caused by the bite of a species of midge or black fly and that it thus falls into the class of tropical or semitropical diseases of insect conveyance. Dr. L. W. Sambon, lecturer at the London School of Tropical Diseases and the Royal Institute of Public Health, London, is at present a member of the field committee investigating pellagra in Italy. If this announcement is verified it affords a possible explanation of the sudden occurrence of pellagra in this country, or at least its more general recognition in recent years. It has been a puzzle to some American alienists why they did not see such cases before. Some of them at least were more or less familiar with the disease from descriptions in Italian and other foreign literature and must have been on the lookout for it in the asylum population of the corn-raising districts. The assumption has been made by some students of the recent outbreaks that cases have existed unrecognized for a number of years in such parts of the country. This may be true but it is hard to see how so marked a disorder could have passed unnoticed, at least in its typical form, for any length of time. Dr. Sambon's announcement opens up a new lead for American investigators of the subject.

**New Medical Buildings at the University of Minnesota.**—It is reported that work has already been started at the University of Minnesota toward the erection on the new extension of the university campus of certain buildings which will constitute the new medical group. The buildings for which funds are available are the Elliott Hospital, Millard Hall and the Institute of Anatomy. The construction of the hospital has been already begun and it is expected that work on the other two buildings will follow within the next few weeks. The hospital will provide for 130 free beds, which will be available solely for patients from all over the state without financial resources. All the clinical material will be used for teaching purposes. The building will be of strictly modern construction and will cost $165,000, exclusive of equipment. Of this sum, $125,000 came from Mr. Walter J. Trask through a bequest from the late Dr. A. F. Elliott and $40,000 was appropriated by the last state legislature. Each of the other buildings is planned ultimately to cost $400,000, but only half of each will be completed at this time. The new Millard Hall will be occupied by the offices of the dean and secretary of the faculty, by record, faculty and committee rooms, and by the several laboratories and offices of the departments of medicine, surgery, obstetrics, physiology and pharmacology. The Institute of Anatomy will contain the laboratories of anatomy, histology and embryology and provide also for laboratories in operative and experimental surgery and surgical anatomy. These buildings will not only provide a hospital and the much needed larger quarters for the college of medicine, but they will constitute the begininning of a complete and compact group of strictly modern medical buildings. The erection of these new buildings is another step in the remarkable progress made during the past few years in medical education in Minnesota.

**Discuss Measures for Epileptics.**—The ninth annual meeting of the National Association for the Study of Epileptics was held in Baltimore, May 7. Dr. Arthur P. Herring, Baltimore, discussed the situation in Maryland, showing that a very large class of epileptics existed for whom under present conditions no adequate provision was made, and advocating special institutions for epileptics. Mr. Franklin Kirkbride, New York City, told about Letchworth Village now the new institution at West Haverstraw. The scope of the institution appears to be rather for the lower mental grades and feeble-minded rather than for the better class of epileptics. Reports from the various state institutions showed that Ohio had 1,412 in its state nstitution; New York, 1,339; Massachusetts, 900; Kansas, about 400; Texas, 375; New Jersey, 312; Pennsylvania, 138; Missouri, 108; and Indiana about 100. Connecticut and Virginia have established epileptic colonies, and in a few other states there are divisions in other institutions especially for epileptic classes. The president's address was on "The Utility of Organization." He urged that the efforts of the association should be to unite lofty ideals, common sense, well-directed energy, and well-organized effort, as these are the essentials to bring fruition. The following officers were elected: President, Dr. Middleton M. Perry, Parsons, Kan.; vice-presidents, Dr. William T. Shanahan, Sonyea, N. Y., and Charles H. Grasty, Baltimore; secretary-treasurer, Dr. James F. Munson, Sonyea, N. Y.; and editor of the transactions, Dr. William P. Spratling, Baltimore. On all sides, the necessity of more careful study of individual epilepsy was advocated. The time has passed when an individual who has "fits" is called at once an epileptic, and is consigned to the incurable class. It was emphasized that a most careful study of every case, by every method and from every standpoint is necessary since it is becoming more clearly understood that we have to deal not with "epilepsy" but with "epilepsies." Diverse factors in the ndividual cases must be discovered.

## LONDON LETTER

(*From Our Regular Correspondent*)

London, April 30, 1910.

### Prevalence of Adenoids

Adenoids are exceedingly prevalent in the children of Great Britain and their interference with education constitutes a problem in the schools. Mr. Macleod Yearsley of the Royal Ear Hospital has concluded an investigation into the occurrence f adenoids in three of the London elementary schools. He nds that about 37 per cent. of the children have adenoids and hat between 72 and 76 per cent. of these have also enlarged onsils. On an average 31.2 per cent. of these children are mouth-breathers, complete or partial, but hypertrophy of the ucial tonsils may give rise to mouth breathing in the absence f adenoids. Sex appears to have no influence on the incidence of denoids, and they are most common about the age of 8 and ext about the age of 12. True aprosexia occurs in about 4.7 er cent. of adenoid cases and is more frequent in girls and is ssociated with a marked degree of adenoids. Aprosexia is ften confounded with dulness due to defective hearing. The o-called adenoid facies is uncommon except in association with marked degree of adenoids. The association of an abnormally igh palate with adenoids is rather due to peculiarities of ranial formation than to extrauterine influences of nasal tenosis, and if there is any relation between a high, narrow alate and adenoids it is possible that the palate shape is ather a cause of adenoids than *vice versa*. The presence of denoids has more to do with the presence of carious teeth han have mouth-breathing and palate shape, and this is probably due to the increased tendency to oral sepsis in children ith adenoids. Irregularity of the upper incisors is less a esult of adenoids than palate shape. The percentage of ear omplications in adenoid children is about 10.8 and adenoids re probably by far the most important factor in the etiology f ear diseases in childhood.

### Scotland's Low Birth-Rate

The low birth-rate of England has from time to time been a bject in previous letters to The Journal. The fifty-fifth nnual report on births, deaths and marriages in Scotland hows that a similar decline has taken place in that country. or 1909, the birth-rate is 26.3 per thousand, the marriage-ate 6.17, and the death-rate 15.2. All these rates are the lowest recorded in the 55 years covered by the registrar-general's eturns. The marriage-rate is 0.14 less than the previous owest record which occurred in 1886. The death-rate is 0.64 ess than that of 1905, previously the lowest recorded. The accination Act of 1907, which made a conscientious objection f parents to vaccination a valid excuse for non-vaccination producing similar evil effect to that in England (previously escribed in The Journal). The number of children unvaccinated is now 20,000 more than before the passing of the act.

### Plague in India

The Indian plague returns for the week ending March 19 show a great increase of the number of cases in mortality in the Punjab in which the number is 10,787. The number for the whole of India is 27,642. The incidence of the disease from year to year varies in a very irregular fashion. Thus in 1905 the number of deaths was 126,000; in 1906 the number dropped to less than half of this; but in 1907 it again rose to 83,600. In 1908-09 the disease died down except in few localities and the number of deaths was less than 16,000. Inoculation against plague is still regarded with great distrust by the natives and not more than 5,000 or 6,000 submit themselves annually to prophylactic inoculation.

### Hospital Bed Endowed by the Emperor of Japan

At the Seamen's Hospital, Greenwich, the Japanese ambassador unveiled a tablet over a bed which had been endowed by the Emperor of Japan. He expressed the emperor's gratitude that such an institution as the Seamen's Hospital existed where so much care and attention were bestowed on Japanese seamen admitted to its wards.

## PARIS LETTER

(*From Our Regular Correspondent*)

Paris, May 6, 1910.

### Conference for the Welfare of the Blind

A conference for the welfare of the blind, organized by the cooperation of the Syndicat général des oculistes français, the Institution nationale des jeunes aveugles, the Hospice national des Quinze-Vingts, the Association Valentin-Haüy, etc., has just been held in Paris. M. Mirman, director of the public charities and hygiene, presented to the conference a report on the law of 1905 and relief for the blind. He proposed certain resolutions demanding especially that a campaign of propaganda be undertaken by means of circulars, pamphlets and the public press, to induce the municipal councils to grant assistance to every young blind person who is capable of being professionally educated—this assistance not to take the form of a monthly allowance, but of maintenance at a special professional school, or, in default of such school, with a person who should undertake to teach a trade to the blind pupil; that in each important center private initiative should found a residential institution, where in exchange for an amount equal to the monthly allowance which the blind receive in accordance with the law of 1905, blind persons capable of working or those whose wives and daughters are compelled to work outside, might be lodged and cared for under good hygienic conditions. Dr. Valude, physician of the ophthalmologic clinic of the Hospice des Quinze-Vingts, took up the especially interesting question of blindness caused by ophthalmia neonatorum and the means of combating it. He spoke of the circular that M. Clemenceau addressed last year to the prefects on this subject (The Journal, May 22, 1909, lii, 1676). Dr. Valude advocates making the Credé method of using nitrate of silver immediately after the birth of a child, an important compulsory part in the instruction of midwives. He also recommends that midwives be obliged, under penalty, not only to declare confirmed ophthalmia, but to have it immediately cared for by a physician; and that the public be informed of the dangers of ophthalmia by concise information distributed to parents, by notices posted up in the mayors' offices and in schools, by lectures given in neighborhoods where working people live; and that medical students be compelled to pass examinations on the elementary questions of ophthalmology.

### Zambaco Pasha Prize

Dr. Zambaco Pasha of Constantinople, associate member of the Académie de Médecine and corresponding member of the Académie des Sciences, has just endowed the Société de médecine et d'hygiène tropicales with three prizes, one of $200 (1,000 francs) and two of $100 (500 francs) for the three best memoirs on the question of the contagiousness of leprosy. The works are to be the result of personal research and of scientific observations made at first hand. The commission which is to award the prizes has just decided that the candidates shall discuss the following questions: 1. Is leprosy hereditary? 2. Is leprosy contagious among human beings? 3. Is leprosy transmissible to animals? If there is occasion, means of control, such as microscopic preparations and photographs, should be appended to the memoirs. The papers should be written in French, should be addressed to the Secrétaire général de la société de médecine et d'hygiène tropicales at 18 rue de Grenelle, Paris, and should reach him before April 1, 1911.

### Franco-Belgian Convention for the Declaration of Epidemic Diseases

The French and Belgian governments, by a series of agreements concluded since 1895, the last of which was signed recently, have decided on reciprocal notification of epidemic diseases by the authorities in the frontier zones. The diseases which affect human beings which are to be reported in these regions are Asiatic cholera, bubonic plague, typhus, typhoid fever, smallpox, scarlatina, diphtheria, measles, dysentery, contagious ophthalmia, puerperal fever, cerebrospinal meningitis and all epidemic and transmissible diseases. The diseases affecting animals which are to be reported are contagious typhus, contagious pleuropneumonia, aphthous stomatitis, glanders, farcy, sheep-rot, scabies and swine plague. Notification is to be given on the appearance of the first cases, whether confirmed or suspected.

## BERLIN LETTER

*(From Our Regular Correspondent)*

Berlin, April 28, 1910.

### Bill to Regulate Compulsory Insurance

The bill modifying the present legislation on compulsory insurance of wage-earners is having its first reading in the Reichstag (every bill must be considered three times in the parliament). It appears that the various parties are more favorable to the wishes of the medical profession than was to be expected. The repeated communications of physicians have plainly not been without effect on the legislators, and especially influential in this line was the extraordinary meeting of the medical association, the Aerztetag, April 17 in Berlin, at which about 24,000 physicians were represented by delegates. With a few exceptions the delegates were unanimous in the opinion that the new bill, in spite of some important improvements, is not calculated to secure the harmony in the Krankenkassen relations which is desirable in the interests of the social legislation and the economic interests of the medical profession, and that the demands voted at the regular Aerztetag, at Lübeck, must be maintained. Especially the free choice of physician must be legally guaranteed. In fact, at the recent discussions in the Reichstag, a representative of the social democratic party announced himself as an adherent to the principle of the free choice of physician, and thus it is to be hoped that this party, which includes the principal opponents in the Krankenkassen to the demands of the medical profession, will vote favorably to these demands. The government has indeed made provision for the management of the medical affairs of the Krankenkassen in both ways, by the so-called fixed physicians and by free choice. However, it will without doubt yield if the Reichstag votes differently. Possibly the government was favorably influenced by the petition presented by the medical faculties of practically all the German universities on the suggestion of the editor of the *Deutsche medizinische Wochenschrift.* In this petition 150 professors supported the demands of the practitioners for the improvement of the imperial insurance law and distinctly called attention to the dangers which threaten the independence of the medical profession if the bill in its present form shall be enacted into law.

### Centennial of the Berlin Medical University Policlinic

On May 2 our university policlinic for internal medicine will celebrate its centennial. It was founded by Hufeland, who delivered the first lecture in it. His successor in 1833 was his son-in-law, Professor Osann, who was a teacher of pharmacology in the university. Then followed, in 1842, the renowned neurologist, Professor Romberg (the discoverer of the so-called Romberg sign in tabes). He was followed, in 1865, by the distinguished psychiatrist, Professor Greisinger, who continued in office only two years because he was too much in demand at the newly-founded clinic for mental and nervous diseases at the Charité. Prof. J. Mayer, who was not distinguished in science but a good practitioner and teacher, succeeded him. After the death of Mayer, in 1887, Professor Senator became the director of the institute, and has retained this post for twenty-three years, but resigns now with the end of the summer semester. Although in the early years on the average only 700 patients were treated in the policlinic, their number of late years has risen to 10,000. In the beginning the patients were treated not only in the clinic but also by assistants and students in their own homes, but for a number of years this part of the policlinic work, so important for instruction, has been discontinued on account of lack of room. The number of students attending the policlinic is still relatively large, as Professor Senator, in spite of his advanced age, shows still a remarkable activity in teaching. No decision has been made as to his successor

# Pharmacology

[Contributions from the Chemical Laboratory of the American Medical Association.]

## NOITOL AND ANADOL

**W. A. Puckner and L. E. Warren**

### *NOITOL*

The Journal received an inquiry concerning the composition of Noitol, a preparation which is being advertised to the medical profession as a "specific" for the cure of eczema and certain other cutaneous diseases. The preparation is manufactured by the Wheeler Chemical Works, Chicago. Trade packages of Noitol were purchased and examined in the Association laboratory. On the label of the package, Noitol—an inversion of the word "lotion"—is described as follows:

> NOITOL
>
> (Dr. Bradbury's Eczema Lotion.)
>
> For External Application Only!
>
> Our Most Popular Specialty.
>
> A specific for the cure of Eczema, Scrofulous and Syphilitic Eruptions, Lupus, Salt Rheum, Tetter, Itch. This remedy is composed of valuable Oils, combined with Vegetable and Mineral Acids in such proportions as cause a rapid and permanent cure of the above complaints.

Noitol is a clear, nearly colorless, acid solution, the greater portion of which is water. Its specific gravity is 1.0097 at 25 C.

Qualitative tests demonstrated the presence of a chlorid, a nitrate, a mercuric salt, free acid and glycerin. No "oils" or "vegetable acids" could be found.

The analysis[1] of the preparation indicated that its composition is essentially as follows:

| | |
|---|---|
| Mercuric Chlorid ............... | 0.0463 gm. in 100 c.c. |
| Mercuric Nitrate ............... | 0.0450 gm. in 100 c.c. |
| Glycerin ....................... | 1.3021 gm. in 100 c.c. |
| Nitric Acid .................... | 1.0265 gm. in 100 c.c. |
| Water (by difference.).......... | 98.5545 gm. in 100 c.c. |

From the above it appears that Noitol is simply a weak, acid solution of mercury salts—the total being approximately equivalent to a 1 to 1,000 bichlorid of mercury solution—exploited under a meaningless name. It is but one more example of the old, old story of a well-known remedy being sold at a high price under a name which is in no way indicative of its composition, and under claims which are absurdly false.

The price of the mixture is $2.00 a pint; the estimated cost, exclusive of the container, is about 6 cents a gallon, or, put another way: the price of a pint bottle, it is estimated, would make a barrel (31 gallons) of the nostrum. The incorrect statement made concerning its components, the unwarranted therapeutic claims made for it, and the exorbitant price easily place Noitol in the front rank among the "patent medicine" frauds. Yet it is advertised to physicians as an ethical proprietary and is evidently being prescribed by them.

### *ANADOL*

In the circular matter accompanying the trade package of the preparation, "Noitol," described above, a preparation called "Anadol" is described. Anadol is claimed to be an analgesic and antipyretic. In the descriptive circular there is no information concerning the composition of the preparation but from the general therapeutic description the physician might easily be led to believe that "Anadol" is a distinct chemical substance.

To reduce temperature the physician is advised to push the administration of Anadol in 10 grain doses until the febrile condition is under control or until a maximum of 70 grains of the preparation has been ingested. The circular further states:

> ". . . in this lies the special value of ANADOL; there are no annoying by-effects; the stomach bears the remedy well and neither circulation, respiration, nor the nerve centers show the least disturbance."

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[1] The details of the analysis will be sent on receipt of a stamped, addressed envelope; they will also be published in the annual report of the Chemical Laboratory.

As no evidence could be obtained concerning the composi-.ion of Anadol and, as the preparation is being brought to he attention of physicians by means of circulars in connection vith the distribution of Noitol, it seemed worth while to take ıp its examination in the Association laboratory. Accordingly ι trade package of the material which had passed into inter-state commerce was purchased.

Qualitative tests demonstrated the presence of sodium, a arbonate, caffein and acetanilid, the latter in considerable uantities. Analysis[2] indicated that the composition of the pecimen examined is essentially as follows:

| | |
|---|---|
| Acetanilid | 79 per cent. |
| Caffein | 1 per cent. |
| Sodium bicarbonate | 20 per cent. |

Since, according to the circular, it is permissible to pre-cribe 70 grains of this preparation within 2½ hours, a atient thus treated would receive no less than 55 grains of cetanilid! In view of the numerous cases of poisoning due o the misuse of acetanilid ("The Harmful Effects of Acetan-lid, Antipyrin and Phenacetin," U. S. Dept. Agric., Bur. hem., Bull. No. 126) the physician should be apprised of the omposition of Anadol.

Editorial Note: The chemical investigations reported bove emphasize once more the need of such an institution as he Association's laboratory and again demonstrate the value f its work. At first sight it seems disheartening to find that hysicians are so easily humbugged. Yet when it is remem-ered that it is impracticable for physicians either to analyze uch products themselves or to go to the expense of having hemists do it for them, it is evident that the fault lies not o much with the physician as with the conditions that makes he exploitations of such frauds possible. It is on the public hat the burden ultimately falls, for it is the layman who as to pay two dollars for a few cents worth of medicine. ut—and this is far more serious—that the physician should e urged to dose his patient with an insidiously dangerous rug to a point far beyond the limits of safety, is little less han criminal. Yet so long as unknown medicinal products re prescribed just so long will this danger be a very real one.

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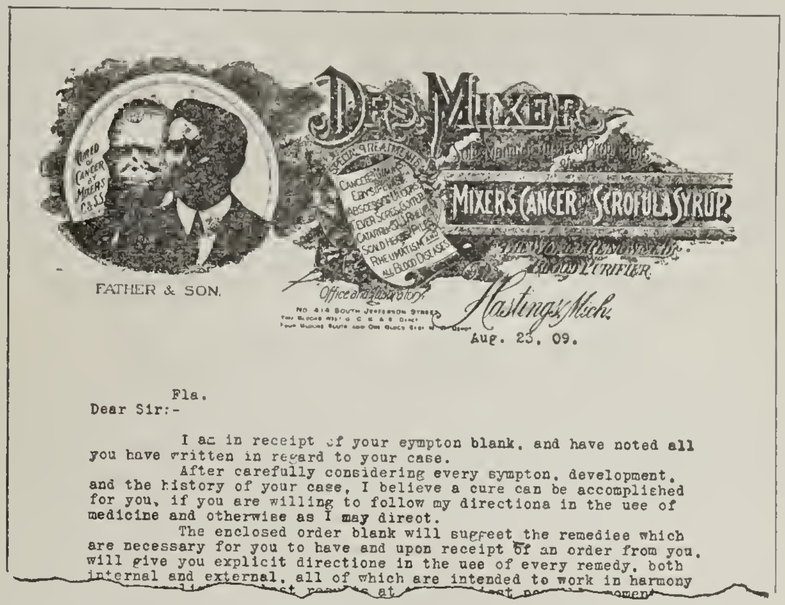
## DRS. MIXER

### .nother Cancer Cure Concern Declared Fraudulent by the Postoffice Authorities

[The postal authorities have done the public great service during the past year or two in declaring fraudulent and denying the use of the United States mails to a number of "cancer cure" concerns. The facts brought out by the federal investigations have appeared in abstract form in the pages of The Journal and more complete accounts have been published as pamphlets. The following case is one of the latest in which a fraud-order was issued. It will appear in more extended form as a pamphlet.]

Drs. Mixer was the name under which C. W. Mixer of Has-ngs, Mich., conducted a mail-order "cancer cure" concern. here were no Drs. Mixer, C. W. Mixer being neither a gradu-e in medicine nor licensed to practice medicine. His methods iffered but little from those of similar concerns. About the ıly variation from the stereotyped claims and ways of the ancer cure" fraternity was in the representation that C. W. ixer's father (who, by the way, had been dead many years) ıd a cancer that the "best physicians in America" could not ıre. He—Mixer, senior—then "discovered the great remedy ıat cured him," and, of course, the same "remedy" was the ıe now sold by Drs. Mixer.

In other respects the methods of this concern did not differ om those of the other "cancer cure" frauds which have been posed. The claims were equally extravagant and the system follow-up letters in no wise original. The "remedy" was aimed to have cured 86 per cent. of those who had taken it and equal success was said to have attended the treatment of either internal or external cancer. The usual symptom blank was to be filled out by the victim and on payment of the required fee a batch of medicines would be sent:


CURED OF CANCER BY MIXER'S C.&S.S.

FATHER & SON.

DRS. MIXER

Sole Manufacturers and Proprietors of

SPECIAL TREATMENT FOR CANCERS, TUMORS, ERYSIPELAS, ABSCESSES, ULCERS, FEVER SORES, GOITRE, CATARRH, SALT RHEUM, SCALD HEAD, PILES, RHEUMATISM AND ALL BLOOD DISEASES

MIXER'S CANCER AND SCROFULA SYRUP

THE WORLD'S RENOWNED BLOOD PURIFIER.

Office and Laboratory
No. 414 South Jefferson Street

Hastings, Mich.
Aug. 23, 09.

Fla.
Dear Sir:-

I am in receipt of your sympton blank, and have noted all you have written in regard to your case.

After carefully considering every sympton, development, and the history of your case, I believe a cure can be accomplished for you, if you are willing to follow my directions in the use of medicine and otherwise as I may direct.

The enclosed order blank will suggest the remedies which are necessary for you to have and upon receipt of an order from you, will give you explicit directions in the use of every remedy, both internal and external, all of which are intended to work in harmony

Photographic reproduction of part of the circular letter which the victims received after sending in the "symptom blank."

Dr. F. P. Morgan of the Department of Agriculture opened correspondence with Drs. Mixer under an assumed name and on filling out a symptom blank he was told that the case described was one of cancer. Mixer perceived "no reason why you can not be cured" and on the receipt of $11.80 sent the "treatment" which consisted of seven medicines. These nostrums were analyzed in the government laboratories and were found to be composed, respectively, as follows:

1. "Mixer's Cancer and Scrofula Syrup": A syrup containing potassium iodid, 6 per cent., alcohol and a small amount of vegetable ingredient similar to sarsaparilla flavored with methyl salicylate.
2. "No. 1 Wash": Solution of hydrogen peroxid.
3. "No. 1 Alterative": A mixture of alcohol and water containing a large amount of glycerin and a small amount of what appeared to be gentian.
4. "Cancer Reducer": A strong alcoholic solution of camphoraceous oils, with considerable glycerin.
5. "Cancer Paste": Vaselin (petrolatum) containing a large amount of ground flaxseed and some camphoraceous substance with what appeared to be hyoscyamus.
6. "Cancer Salve": A mixture of vaselin (petrolatum) and lanolin (wool-fat) with powdered opium and tannin.
7. "Cleanoine Soap Powder": Powdered soap containing borax and thymol.

In the advertising matter sent out by Mixer every effort was made to impress prospective victims with the idea that the concern was conducted by physicians. Nor was this the only element of fraud. Part of the "literature" contained a reprint of an article entitled "Palliatives and Curatives in the Treatment of Cancer and Scrofula," by C. H. Brown, M.D., from the *American Journal of Health*. This was prefaced with the statement: "The following is reprinted from one of the leading journals of the country." As a matter of fact, the *American Journal of Health* was not a "leading journal" but a fraudulent publication, printed to sell laudatory notices to mail-order medical concerns. These concerns then used such notices as being the indorsement of a medical publication. At the hearing Mixer admitted that he paid five or ten dollars—he could not recall the exact amount—for the article.

The usual defense was offered—testimonials. There was no satisfactory evidence adduced to show that the individuals claiming to have been cured of cancer by the Drs. Mixer treatment ever had cancer. As the assistant attorney-general said in recommending that a fraud-order be issued: "It is to be expected that out of the multitude of cases that this advertiser treats each year there should be a certain number of instances in which persons do not have cancer at all but are afflicted with some non-malignant sores which are amenable to treatment [Especially to treatment with potassium iodid, which Mixer used!—Ed.] and which in some instances do yield to treatment." After hearing all the evidence against Mixer as well as the defence offered by his attorney, together with some remarks in behalf of the "cancer curer" by the congressman from his district—E. L. Hamilton—the assistant attorney general reported: "I find that this is a scheme for obtaining money through the mails by means of false and fraudulent pretenses, representations and promises, and I therefore recommend that a fraud order be issued against Drs. Mixer." And it was issued.

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[2] The details of the analyses will be sent on receipt of a amped self-addressed envelope.

## REPORT OF PHARMACOPEIAL CONVENTION

*Held in Washington, D. C., May 10-13, 1910*

While the medical profession was not so well represented at this convention as it should have been, nevertheless there were more medical men in attendance than at the last convention. As is well known, the main business of the convention is to provide for the revision of the Pharmacopeia and the principal part of this is the election of the revision committee. Heretofore, the revision committee has consisted of twenty-five, but this number was considered too large for practical work and too small to be representative. A radical change was made in that the committee of revision was enlarged to fifty; this large committee selects from its number fifteen who are to be known as the executive revision committee. While the whole committee of fifty has general supervisory functions the smaller committee will be responsible for the work.

It will be noted that the medical men on the revision committee are in an extreme minority, only three or four practicing physicians being in the list. While this is true, the medical profession is much better represented than heretofore for the reason that a considerable number of the revision committee represent medical interests and the medical profession. The Council on Pharmacy and Chemistry is well represented, having eight of its members on the committee of revision.

### Officers Elected

A decided compliment was paid Dr. H. W. Wiley by the convention when it selected him as its president. The following officers were elected: President, Dr. H. W. Wiley, Washington, D. C.; first vice-president, Dr. N. S. Davis, Chicago; second vice-president, Prof. Charles Caspari, Jr., Baltimore; third vice-president, Dr. Oliver T. Osborne, New Haven, Conn.; fourth vice-president, Mr. Leo Eliel, South Bend, Ind.; fifth vice-president, Dr. W. A. Bastedo, New York; secretary, Dr. M. G. Motter, Washington, D. C.; assistant secretary, Dr. Noble P. Barnes, Washington, D. C.; treasurer, Mr. S. L. Hilton, Washington, D. C.

### GENERAL COMMITTEE OF REVISION

Alpers, William C., Retail Druggist, New York.
Anderson, John F., Director, Hygienic Laboratory, United States Public Health and Marine-Hospital Service.
Arny, Harry V., Professor of Theory and Practice of Pharmacy, Cleveland School of Pharmacy.
Bartley, Elias H., Professor of Chemistry, Toxicology and Pediatrics, Long Island College Hospital, Brooklyn, N. Y.
Beringer, George M., Retail Druggist, Camden, N. J.
Bodemann, Wilhelm, Retail Druggist, Chicago.
Caspari, Charles, Jr., Professor of Theory and Practice of Pharmacy, University of Maryland, Department of Pharmacy.
Caspari, Charles E., Professor of Chemistry, St. Louis College of Pharmacy.
Coblentz, Virgil, Professor of Chemistry, College of Pharmacy of the City of New York.
Davis, Nathan S., Professor of Principles and Practice of Medicine and Clinical Medicine, Northwestern University Medical School.
Diehl, C. Lewis, Professor of Practical Pharmacy, Louisville College of Pharmacy.
Dickman, George C., Professor of Theory and Practice of Pharmacy, College of Pharmacy of the City of New York.
Dohme, Alfred R. L., Chemist, Sharp & Dohme, Baltimore, Md.
Eberle, Eugene G., Editor, The Southern Pharmaceutical Journal, Dallas, Tex.
Edmunds, Charles Wallis, Professor of Therapeutics and Materia Medica, University of Michigan, Department of Medicine and Surgery.
England, Joseph W., Director Scientific Department, Smith, Kline & French Company, Philadelphia.
Francis, John M., Chemist, Parke, Davis & Company, Detroit.
Good, James M., Professor of Theory and Practice of Pharmacy, St. Louis College of Pharmacy.
Gordin, Harry M., Professor of Chemistry, Northwestern University, Department of Pharmacy.
Gregory, Willis G., Buffalo College of Pharmacy.
Haines, Walter S., Professor of Chemistry, Materia Medica and Toxicology, Rush Medical College, Chicago.
Hallberg, Carl S. N., Professor of Theory and Practice of Pharmacy, University of Illiuois, School of Pharmacy.
Hatcher, Robert A., Professor of Pharmacology, Cornell University, Medical Department, New York.
Hopp, Lewis C., Retail Druggist, Cleveland.
Hunt, Reid, Chief, Division of Pharmacology, Hygienic Laboratory, United States Public Health and Marine-Hospital Service.
Kebler, Lyman F., Chief of Drug Laboratory, Bureau of Chemistry, U. S. Department of Agriculture.
Koch, Julius A., Professor of Chemistry, University of Pittsburgh, Department of Pharmacy.
Kraemer, Henry, Professor of Botany and Pharmacognosy, Philadelphia College of Pharmacy.
Kremers, Edward, Professor of Chemistry, University of Wisconsin, School of Pharmacy.
LaWall, Charles H., Associate Professor of Theory and Practice of Pharmacy, Philadelphia College of Pharmacy.
Long, John H., Professor of Chemistry, Northwestern University Medical School, Chicago.
Lyons, Albert B., Chemist, Nelson, Baker & Company, Detroit.
Marvel, Philip, Physician, Atlantic City, N. J.
Nixon, Charles F., Retail Druggist, Leominster, Mass.
Osborne, Oliver T., Professor of Therapeutics and Materia Medica, Yale Medical School.
Plaut, Albert, Wholesale Druggist (Lehn & Fink), New York.
Puckner, W. A., Director of Chemical Laboratory, American Medical Association, Chicago.
Raubenheimer, Otto, Retail Druggist, Brooklyn, N. Y.
Remington, Joseph P., Professor of Theory and Practice of Pharmacy, Philadelphia College of Pharmacy.
Rosengarten, George D., Chemist, Powers-Weightman-Rosengarten Company, Philadelphia.
Rusby, Henry H., Professor of Botany and Materia Medica, College of Pharmacy of the City of New York.
Sadtler, Samuel P., Professor of Chemistry, Philadelphia College of Pharmacy.
Sayre, Lucius E., Professor of Materia Medica, University of Kansas, School of Pharmacy.
Schlotterbeck, Julius O., Professor of Pharmacognosy and Materia Medica, University of Michigan, School of Pharmacy.
Sollmann, Torald, Professor of Pharmacy and Materia Medica, Western Reserve University Medical Department.
Stevens, A. B., Professor of Theory and Practice of Pharmacy, University of Michigan, School of Pharmacy.
True, Rodney H., Physiologist, Bureau of Plant Industry, U. S. Department of Agriculture.
Vanderkleed, Charles E., Chemist, H. K. Mulford Company, Philadelphia.
Wilbert, M. I., Assistant Pharmacologist, Hygienic Laboratory, United States Public Health and Marine-Hospital Service.
Wood, Horatio C., Jr., Associate Professor of Pharmacology, University of Pennsylvania.

# Correspondence

## A Medical Play by a Medical Man at a Medical Society Meeting

*To the Editor:*—Dr. Dan Millikin is not only an honored practitioner, having been president of the Ohio State Medical Society in 1895 and being a descendant of a long line of physicians, himself and son Dr. Mark Millikin representing respectively the fourth and fifth generations practicing in their native city, but he is also a playwright and actor of local and state fame. At the meeting of the Ohio State Medical Society in Toledo, May 11, an audience of 800 physicians and their wives greeted Dr. Millikin and his talented company from Hamilton in a way that left no doubt about the attractiveness of this particular play, and the merits of this style of entertainment of medical men. The medical comedy entitled "What Would Mrs. MacThinkar say?" is brilliant and clever and the players showed talent and excellent training.

But it is not to call attention to this play or to the artists in particular but rather to comment on entertainments that this letter is written. We should break away from the conventional vaudeville and punch affairs and cultivate a line of amusements that have characteristic, and educational qualities. Professional experience is overflowing with material ready for the touch of the playwright, and at the same time, as our experience shows, a medical audience is especially "sensitized" to appreciate the humor and pathos characteristic of a well-presented medical comedy.

Thomas Hubbard.

# The Public Service

## Medical Department, U. S. Army

Changes for the week ended May 14, 1910:

The following named officers of the Medical Corps are detailed s instructors in the subjects specified after their respective names t the school for officers of the Medical Corps of the National Guard f Ohio, to be held in Columbus, Ohio, June 8 and 9, 1910:

Munson, Edward L., major, Camp Sanitation and Medical Organization in the Field.
Reynolds, Charles R., major, Manual, Medical Department, and Field Service Regulations.
Fisher, Henry C., major, Physical Examination of Recruits.
Pipes, Henry F., capt., Papers and Records.

Morgan, Norman D., C. S., reported for duty at Presidio of San rancisco.

Hallett, H. J., 1st lieut., M. R. C., reported for temporary duty at ort Hamilton, New York.

Pulver, A. L., 1st lieut., M. R. C., reported for temporary duty at ort Jay, N. Y.

Brownlie, James W., C. S., ordered to proceed from San Fransco, to the Presidio of San Francisco, and report to the commandg officer, detachment of Company M, 3rd Battalion of Engineers, r duty with and to accompany that command to Ataccadero, Cal.

Stephenson, William, lieut. col., ordered to proceed from Fort eavenworth, Kan., to Fort D. A. Russell, Wyo., for duty with Batry C, 2nd Field Artillery from that post to San Francisco, then turn to his station.

Woodall, William P., capt., ordered to Fort D. A. Russell, Wyo., r duty.

Bierbower, H. C., 1st lieut., M. R. C., on expiration of leave of sence ordered to Fort Robinson, Neb., for duty.

Boyer, Perry L., capt., ordered to Fort Mason, Cal., for temporary ty, and for temporary duty as attending surgeon, San Francisco, addition to his duties at Fort Mason, Cal.

Eastman, William R., capt., on expiration of leave of absence dered to Fort Mason, Cal., for duty, and attending surgeon at n Francisco.

Keefer, Frank R., lieut. Col., promoted to, with rank from April , 1910.

Grubbs, Robert B., major, promoted to, with rank from April 14, 10.

Ekwurzel, George M., major, on the expiration of his present leave absence ordered to Fort Mackenzie, Wyo,, for duty.

Brooks, William H., major, ordered to accompany 35th Company oast Artillery from San Francisco, to Fort Monroe, Va., then return his proper station.

Delacroix, A. C., 1st lieut., M. R. C., on arrival at San Francisco, dered to accompany troops to Fort Sill, Okla., on completion this duty to proceed to Boise Barracks, Idaho, for duty, as herefore ordered.

Peck, Luke B., 1st lieut., M. R. C., granted leave of absence for month and 10 days.

Miller, Reuben B., capt., granted 15 days' leave of absence.

Mason, D. S., the leave of absence heretofore granted is extended months and 20 days.

Sweazey, Verge E., capt., granted 4 months' leave of absence.

Billingslea, C. C., capt., leave of absence extended 1 month.

Pulver, Arthur L., 1st lieut, M. R. C., relieved from temporary ty at Fort Jay, N. Y., and ordered to Fort Wood, N. Y., for mporary duty.

Little, William L., capt., relieved from temporary duty at Fort ood, N. Y., and ordered to return to station, Fort Adams, R. I.

Sharpe, Herbert H., 1st lieut., M. R. C., relieved from temporary ty at Fort Adams, R. I., and ordered to return to station, Fort y, N. Y.

Tefft, William H., capt., granted leave of absence for 1 month.

Straub, Paul F., major, detailed as a member of the General Staff orps.

## Medical Corps, U. S. Navy

Changes during the week ended May 14, 1910:

Bogan, F. M., surgeon, detached from the *Wisconsin*, and ordered the *Nebraska*.

Heiner, R. G., P. A. surgeon, detached from the *Independence* and dered home to wait orders.

Bogan, F. M., surgeon, orders of May 6, detaching from the *isconsin* and ordering to the *Nebraska*, revoked.

Cather, D. C., P. A. surgeon, ordered to the Naval Academy.

Kaufman, J. B., asst.-surgeon, ordered to the Navy Yard, Norfolk, a.

Ely, C. F., P. A. surgeon, detached from the Naval Station, ongapo, P. I., and ordered to the *Wilmington*.

Higgins, S. L., P. A. surgeon, detached from the *Wilmington* and dered home.

Higgins, M. E., asst.-surgeon, detached from the *Charleston* and dered home.

## U. S. Public Health and Marine-Hospital Service

Changes for the week ended May 11, 1910:

Carter, H. R., surgeon, granted 5 days' leave of absence from ay 29, 1910.

Carmichael, D. A., surgeon, granted 14 days' leave of absence om May 27, 1910:

Cobb, J. O., surgeon, granted 7 days' leave of absence from May 7, 10.

Wertenbaker, C. P., surgeon, granted 4 days' leave of absence from ay 4, 1910.

Goldberger, Joseph, P. A. surgeon, granted 7 days' leave of sence from April 29, 1910, under paragraph 191, Service Regulaons. Granted 14 days' leave of absence from May 6, 1910.

Bahrenburg, L. P. H., P. A. surgeon, granted 14 days' leave of sence from April 22, 1910, on account of sickness.

Rucker, W. C., P. A. surgeon, granted 1 month's leave of absence om May 4, 1910.

Warner, H. J., asst.-surgeon, granted 9 days' leave of absence om May 16, 1910.

Ridlon, J. R., asst.-surgeon, directed to report at Bureau for special temporary duty.

Leake, James P., asst.-surgeon, granted 7 days' leave of absence from April 12, 1910, under paragraph 191, Service Regulations.

Hallett, E. B., acting asst.-surgeon, granted 1 day's leave of absence, May 7, 1910.

Lawhorn, C. C., acting asst.-surgeon, granted 13 days' leave of absence from May 11, 1910.

Onuf, B, acting asst.-surgeon, granted 2 days' extension of leave of absence from April 26, 1910, on account of sickness.

Board of medical officers convened to meet at Montreal, Canada, May 3, 1910, for the purpose of examining an alien. Detail for the board: Passed Assistant Surgeon E. H. Mullan, chairman; Acting Asst.-Surgeon George Mathewson; Acting Asst.-Surgeon Fred Tooke, recorder.

Board of medical officers convened to meet at the Marine Hospital, San Francisco, May 16, 1910, for the purpose of conducting a physical examination of an officer of the U. S. Revenue-Cutter Service. Detail for the board: Surgeon J. M. Gassaway, chairman; Passed Assistant Surgeon R. E. Ebersole, recorder.

# Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

### THE LOCAL ANESTHETIC EFFECT OF QUININ: A CLAIM OF PRIORITY

*To the Editor:*—Allow me to state, in answer to the letter of Dr. W. S. Hoy on this subject (The Journal, May 14, 1910, p. 1628) that my experimental work resulting in the discovery of the local anesthetic effect of quinin was done in 1885, more than ten years prior to my published report in 1896. This, I believe, establishes the matter of priority as far as this is shown by any published claims to date. According to Dr. Hoy's statement, Dr. Sylvester began the use of quinin as a local anesthetic endermically (not hypodermically) about twenty-two years ago.

V. M. Griswold, M.D., Fredonia, N. Y.

### TRIPLE KIDNEY

*To the Editor:*—Please let me know how many cases of triple kidney have been reported, when and by whom, and the location of the third kidney. E. S. Lauzer, Rock Springs, Wyo.

Answer.—This anomaly is very rare and its existence has been doubted by some authors. The following are all the distinct references to cases that we have been able to find.

Beauchêne fils: Description de trois reins réunis trouvés dans le cadavre d'une jeune femme, *Bull. Fac. de méd. de Paris,* 1810, ii, 30.

Renaud: Des reins réunis par une espèce de bande à la forme d' un troisième rein, *Bull. Soc. anat. de Paris,* 1835, x, 2

Supernumerary Kidney, *London Med. Gaz.,* 1838, new series, ii, 127.

Hyrtl: Ein wahrer Ren tertius, *Oestcr. med. Wchnschr.,* 1841, p. 995.

Amick: Four Kidneys, *Cincinnati Med. Reports,* 1871, iv, 551-554.

Morris: Rep. Surgeon-General Marine-Hospital Service, U. S. A., 1885, p. 148.

Cheyne, W.: *Lancet,* London, 1899, i, 215.

Rep. Supervising Surgeon Marine Hospital, Washington, 1884-5, pp. 148-150.

Jump, R. L.: Supernumerary Kidneys, *Occidental Med. Times,* 1894, viii, 173.

Von Hansemann: Double Kidney, *Berl. klin. Wchnschr.,* 1897, No. 4.

Barlet, J. M.: A Pathologic Curiosity (Supernumerary Kidney), *Lancet,* London, 1904, i, 124.

Calabrese: Rein supernuméraire constaté pendant la vie, *Ann. d. mal. d. org. génito-urin.,* 1908, ii, 1841.

Calabrese: Encore un rein supernuméraire constaté pendant la vie, *Ann. d. mal. d. org. génito-urin.,* 1909, i, 749.

Desnot and Minet: ("Maladies des voies urinaires," p. 1044) say: This anomaly is exceedingly rare. The supernumerary kidney may be fused with the two others, in which case it has been classed as a trilobate kidney.

H. Kümmel says that supernumerary kidneys occur. Four kidneys were present twice; three were found once ("Ergänzungsbuch des Handbuch der praktischen Medizin," Edition 2, 1907; Ebstein, W., and Schwalbe, J.: Chirurgie des praktischen Arztes, p. 602).

As to the location of the third kidney, we find in Rauber-Kopsch "Lehrbuch der Anatomie," Edition 7, Part 4, The Intestines, p. 211, the statement: "The third kidney lies usually in front of the vertebral column or at one side of it or in the pelvis."

Reference may also be made to Rayer: "Maladies des reins," and to Cadoré, F. L.: "Les anomalies congénitales du rein," published by Masson, Lille, 1903, p. 205.

## Marriages

SIMON WENDKOS, M.D., to Miss Sarah Seidman, both of Philadelphia, May 8.

JULIAN A. HIELSCHER, M.D., to HELEN HUGHES, M.D., both of Mankato, Minn., May 2.

JACOB MYERS, M.D., Chicago, to Miss Gertrude Myers, of Mount Pulaski, Ill., April 20.

HAYDEN LYLE FISCHER, M.D., Kewanee, Ill., to Miss Georgia Elizabeth Poole, of Chicago, May 18.

HARLOW V. WILSON, M.D., to Mrs. Daisy Jones, both of Champaign, Ill., at Chicago, April 30.

ALVA V. MCCURRY, M.D., Baltimore, Md., to Miss Frances Varina Robertson, at Baltimore, January 3.

JOHN G. BICKLEY, M.D., to Miss Tina M. Stewart, both of Waterloo, Iowa, at Morrelton, Ark., April 29.

CHARLES FISHER ANDREW, M.D., Longmont, Colo., to Mrs. Sadie Whitney, of Denver, at Chicago, recently.

LUCIUS WARREN JOHNSON, M.D., U. S. Navy, to Miss Margaret Crosby Cranston, of Washington, D. C., May 17.

## Deaths

**Howard H. Barker, M.D.** Georgetown University, Washington, D. C., 1870; a member of the American Medical Association; formerly president of the American Therapeutic Society, Medical Association of the District of Columbia, and Washington Therapeutic Society; professor of obstetrics and gynecology and dean of the Medical Department of Georgetown University; surgeon to the Columbia and Sibley Memorial hospitals, surgeon in charge of diseases of women in the Central Dispensary and Emergency Hospital; and consulting gynecologist to the Eastern Dispensary; died at his home in Washington, May 8, from uremia, aged 61.

**James Decker Spencer, M.D.** Bellevue Hospital Medical College, 1870; a member of the Medical Society of the State of New York, and president in 1896; formerly president of the Jefferson County Medical Society; a member of the American Public Health Association, and New York Academy of Medicine; local surgeon for the Rome, Watertown and Ogdensburg Railroad; surgeon to the Jefferson County Hospital; and president of the medical board and consulting surgeon to the Watertown City Hospital; died at his home, May 5, from cerebral hemorrhage, aged 60.

**George Arnold Bellows, M.D.** Detroit Medical College, 1881; a member of the American Medical Association; physician to the Seneca County (N. Y.) Almshouse from 1884 to 1892; health officer of Waterloo from 1882 to 1883; U. S. pension examining surgeon from 1887 to 1895; coroner of Seneca county for several years, and since 1891, a member and secretary of the board of trustees of Waterloo Academy; died at his home in Seneca Falls, May 10, from acute nephritis, aged 53.

**Charles S. Martin, M.D.** University of Pennsylvania, Philadelphia, 1890; a member of the Medical Society of the State of Pennsylvania; recently appointed postmaster of Allentown; for ten years a member of the board of health; since 1897 a member of the board of trustees of the Allentown Hospital; secretary of the Hospital Association since 1892, and a member of the City Park Commission; died at his home, May 4, from heart disease, following pneumonia, aged 43.

**Charles Austin Devendorf, M.D.** Bellevue Hospital Medical College, 1866; for many years a practitioner of Detroit; a medical cadet, assistant surgeon and major of the line during the Civil War; professor and emeritus professor in the Detroit College of Medicine; one of the organizers and for several years chief of the medical staff of the Children's Free Hospital; died at his country home near Sandwich, Ont., May 3, from cerebral hemorrhage, aged 70.

**John Joseph Gilhuley, M.D.** Bellevue Hospital Medical College, 1894; of Bridgeport, Conn.; acting assistant surgeon in the Army during and after the Spanish-American War, with service in Porto Rico and the Philippine Islands; formerly city physician and fire department surgeon of Waterbury, Conn.; and later physician to the charities department of Bridgeport; died in Norwich, Conn., April 25, from acute nephritis, aged 36.

**Elijah W. Jay, M.D.** Cleveland College of Physicians and Surgeons, 1893; a member of the Iowa State Medical Society; coroner of Marshall county; member of the Marshalltown city council in 1897; who, while making an emergency run in an ambulance to a hospital with one of the victims of the Rock Island wreck at Green Mountain, March 21, was thrown from the ambulance, the fall resulting in a severe hernia, died in a hospital in Marshalltown, May 5, from pneumonia, aged 47

**Samuel T. Haffner, M.D.** College of Physicians and Surgeons Baltimore, 1874; a member of the American Medical Association, and once president of the Frederick County Medical Society; for several terms health officer of Frederick county and physician of Montevue Hospital, Frederick; elected clerk of the court in 1903; died at his home in Frederick, May 6 from angina pectoris, aged 61.

**George W. Rohr, M.D.** Northwestern University Medical School, 1862; Illinois Army Board, 1864; a member of the Illinois State Medical Society; surgeon of the Fifty-secon Illinois Volunteer Infantry throughout the Civil War; local pension examiner; for more than forty years a practitioner o Rockford; died at his home, May 5, from heart disease aged 76.

**Jesse Lyman Conant, Jr., M.D.** University of Vermont, Burlington, 1885; of Boise, Idaho; secretary of the Idaho State Board of Health; first lieutenant and assistant surgeon Firs Idaho Infantry, U. S. V. during the Spanish-American War with service in the Philippine Islands; died in the Josephine Hospital, Weiser, May 2, from cerebral hemorrhage, aged 54.

**Francis Joseph Hilger, M.D.** St. Louis College of Physicians and Surgeons, 1902; a member of the Iowa State Medical Society; lecturer on diseases of children in the training school for nurses at St. Joseph's Mercy Hospital, Dubuque and a member of the medical staff of the hospital; died at his home in that city, May 3, from tuberculosis, aged 32.

**John MacCurdy, M.D.** Western Reserve University, Cleveland, 1858; Jefferson Medical College, 1859; a member of the Ohio State Medical Association; assistant surgeon of the Twenty-third Ohio Volunteer Infantry and a prisoner in Libby Prison during the Civil War; died at his home in Youngstown, May 4, from cancer, aged 74.

**Benjamin R. Davidson, M.D.** University of Maryland, Baltimore, 1867; for many years a practitioner of Anne Arundel county, Md.; and a resident of Davidsonville; physician to the county almshouse; treasurer of the county and register o wills; died in the Hebrew Hospital, Baltimore, May 1, from cerebral hemorrhage, aged 63.

**George Briggs Richardson, M.D.** Hospital College of Medicine Louisville, 1890; formerly of Paradise, Ariz.; a member o the American Medical Association, and local surgeon for the El Paso and Southwestern Railroad; died at his home in Rodeo, N. M., May 2, from pneumonia, aged 48.

**Henry Belt, M.D.** Bellevue Hospital Medical College, 1898 a member of the American Medical Association, New York Academy of Medicine, and Medical Jurisprudence Society o New York; a specialist on neurology; died at his home in New York City, May 6, from pleurisy, aged 43.

**William Troup Bell, M.D.** University of Pennsylvania, Philadelphia, 1863; for several years superintendent of the City and County Hospital, San Francisco, and superintendent of the Masonic Home, Decoto, Cal.; died at his home in Lake Providence, La., April 30, aged 73.

**James J. Linn** (license, years of practice, Minn., 1887) for 52 years a practitioner of Minneapolis; one of the founders of St. Barnabas Hospital; and builder of the firs isolation hospital in Minneapolis; died at his home, April 28 from heart disease, aged 83.

**Cynthia Maria Nordstrom, M.D.** Boston University School o Medicine, 1883; for sixteen years a member of the Malden (Mass.) School Board, and secretary of the medical board of the Malden Hospital; died at her home, May 4, from cerebra hemorrhage, aged 77.

**Richard E. Garnett, M.D.** University of Louisville, 1880; a member of the American Medical Association; physician o Barren county, Ky.; and secretary of the Glasgow Board o Health; died at his home in Glasgow, May 2, from heart disease, aged 54.

**Robert S. McMurdy, M.D.** Albany (N. Y.) Medical College 1846; a member of the Minnesota State Medical Association for 37 years a practitioner of Minneapolis; died at the hom of his son in that city, April 29, from senile debility, aged 8

**Marshall P. Robinson, M.D.** Eclectic Medical Institute, Cincinnati, 1876; formerly physician of Fayette county, Ky., an pension examining surgeon; died at the home of his sister i Lexington, May 6, from nephritis, aged 63.

**Alvin Ephraim Wing, M.D.** University of Colorado, Boulder 1905; health officer of Rich county, and surgeon to the Uta and Wyoming Telephone Company; died at his home in Randolph, Utah, April 28, from erysipelas, aged 33.

**James B. Robertson, M.D.** University of Pennsylvania, Philadelphia, 1861; a surgeon in the Confederate service during the Civil War; died suddenly at his home in Clayton, N. C., April 28, from cerebral hemorrhage, aged 73.

**Thomas Grant, M.D.** Philadelphia University of Medicine and Surgery, 1876; of Liberty, N. Y.; died suddenly at the home of his sister in New York City, Dec. 30, 1909, from disease of the heart and kidneys, aged 73.

**George Maxson Lamb, M.D.** Hahnemann Medical College, Philadelphia, 1879; town physician and health officer of Hoosick Falls, N. Y., for twenty years; died at his home, May 3, from sarcoma of the throat, aged 52.

**Samuel Charles Weeks, M.D.** Tulane University, New Orleans, 1893; a member of the Louisiana State Medical Society; died at his home in New Orleans, April 28, from tuberculosis, aged 43.

**James A. Ogden, M.D.** University of Pennsylvania, Philadelphia, 1874; of Deadwood, S. D.; formerly of Parchalville, Philadelphia; died in Bunker Hill, Kan., April 24, from erysipelas, aged 61.

**Edwin G. Keifer, M.D.** Cincinnati College of Medicine and Surgery, 1869; a member of the Illinois State Medical Society; died at his home in Harvey, April 29, from arteriosclerosis, aged 66.

**Louis Gustav Bauer, M.D.** University of Pennsylvania, 1872; a member of the American Medical Association; died at his home in Germantown, Philadelphia, May 5, from cancer, aged 64.

**Robert Martin, M.D.** Starling Medical College, Columbus, Ohio, 1875; from 1881-1890, health commissioner of Milwaukee; died at his home in that city, May 2, from nephritis, aged 69.

**Andrew J. Pennington, M.D.** University of Alabama, Mobile, 1878; a member of the Louisiana State Medical Society; died at his home in Gibsland, April 26, from heart disease, aged 62.

**William B. Robbins, M.D.** Jefferson Medical College, 1873; of Catawissa, Pa.; died in the Jefferson Hospital, Philadelphia, April 29, after an operation for mastoiditis, aged 56.

**Robert D. Gwin, M.D.** Jefferson Medical College, 1855; surgeon in the Confederate service during the Civil War; died at his home near McKenzie, Tenn., April 29, aged 83.

**George Washington Greaves, M.D.** Rush Medical College, 1874; of Spencer, Iowa; died at the home of his son in Sturgeon Bay, Wis., April 22, from dropsy, aged 58.

**John M. McKeage, M.D.** University of Pennsylvania, Philadelphia, 1847; formerly an employee of the St. Louis health department; died in St. Louis, May 1, aged 85.

**Severn M. Kelly, M.D.** University of Minnesota, Minneapolis, 1905; formerly of Canby, Minn.; died at the home of his sister in Mankato, Minn., April 25, aged 30.

**Hardy Murfrees Banks, M.D.** New York University, New York City, 1851; of Englewood, N. J.; died at the home of his daughter in New York City, May 5, aged 79.

**Tunis Housel Fisher, M.D.** New York University, New York City, 1889; died at his home in South Brooklyn, May 7, from cerebral hemorrhage, aged 57.

**John Henry Stemple, M.D.** University of Maryland, Baltimore, 1901; died at his home in Conshohocken, Pa., April 19, after a short illness, aged 33.

**Maurice Henry Walsh, M.D.** Yale; formerly a practitioner of New Haven, Conn.; died in Fort Worth, Texas, April 4, from heart disease, aged 45.

**Ernest Hamilton Smith, M.D.** Tulane University, New Orleans, 1880; died at his home in Lacour, La., March 18, from heart disease, aged 54.

**Frederick Castle, M.D.** University of Michigan, Ann Arbor, 1869; died at his home in Lowell, Ind., April 19, from cerebral hemorrhage, aged 69.

**Thomas F. Williams, M.D.** Eclectic Medical Institute, Cincinnati, 1888; died at his home in Des Moines, April 25, from pneumonia, aged 46.

**Joseph Goffin Bailey, M.D.** University of Buffalo, N. Y., 1871; died at his home in Santa Ana, Cal., April 29, from heart disease, aged 65.

**Alonzo Edson Robertson, M.D.** Rush Medical College, 1893; died at his home in Mason City, Neb., May 3, from pneumonia, aged 38.

**Edward James Rothe, M.D.** Dublin; died at his home in Harison, N. J., April 21, from nephritis, aged 50.

**Walter S. Dick** (registration, Okla., 1908); died at his home in Baum, April 18, 1909, from pneumonia.

# *Society Proceedings*

## COMING MEETINGS

American Medical Association, St. Louis, June 7-10.

American Academy of Medicine, St. Louis, June 4-6.
American Assn. of Medical Milk Commissions, St. Louis, June 6.
American Association of Medical Examiners, St. Louis, June 5-6.
American Gastro-Enterological Association, St. Louis, June 6-7.
American Proctologic Society, St. Louis, June 6
American Society of Tropical Medicine, St. Louis, June 11.
American Urological Society, St. Louis, June 6-7.
Assn. of Amer. Teachers of Diseases of Children, St. Louis, June 6.
Connecticut State Medical Society, New Haven, May 25-26.
Maine Medical Association, Bar Harbor, June 29-30.
Massachusetts Medical Society, Boston, June 7-8.
Nat. Con. State Med. Exam. and Licensing Bds., St. Louis, June 6.
New Jersey Medical Society, Atlantic City, June 28-30.
North Carolina, Med. Soc. of State of, Wrightsville Beach, June 21.
Rhode Island Medical Society, Providence, May 31.
Wisconsin, State Medical Soc. of, Milwaukee, June 22-24.

## AMERICAN PEDIATRIC SOCIETY

*Annual Meeting, held in Washington, D. C., May 3-5, 1910*

The President, Dr. D. L. Edsall, in the Chair

### Officers Elected

The following officers were elected for the ensuing year: President, Dr. Henry D. Chapin, New York; vice-president, Dr. J. Mason Knox, Baltimore; secretary, Dr. Samuel S. Adams, Washington, D. C. (reelected); treasurer, Dr. Charles Hunter Dunn, Boston; recorder and editor, Dr. L. E. La Fetra, New York; member of council, Dr. Isaac A. Abt, Chicago.

Lake Mohonk was selected as the next place of meeting.

### President's Address: Importance of Pediatrics

Dr. David L. Edsall, Philadelphia: The honor of serving for a year as the president of a group of men who are the highest representatives of their type of work in this country imposes on one the duty not merely of giving expression to complacent satisfaction, but also of devoting serious thought to the activities that may be open to the members of the society, as individuals or as a group of men, by which they might still further advance the honorable standing of the work that is their chief concern in life. Proper dignity and regard are not yet accredited in this country to a subject which has proved to me unquestionably the broadest, most complex, and most important division of general medicine; and proper standing will not be generally given to pediatrics in this country until better things are demanded for it by concerted action and by a large group of those who are the recognized leaders. The dignity of the intellectual results are determined by two things: first, by the opportunities offered those who teach the subject and by the manner in which these opportunities are made use of; second, by the extent to which those who follow that pursuit engage in matters that vitally affect the welfare not only of individuals with whom they come in immediate contact but rather of the public at large. There are ways in which great usefulness can be secured for pediatrics in both of these directions and the society, by the strength of carefully planned concerted action, could rapidly and greatly benefit the position of the work which it represents. The methods pursued by the teachers determine the standards demanded in the subject and the quality of the future exponents of the subject. Among the teachers of this subject there are men who have in certain ways no superiors in any part of the world. Concerning the provisions made for their teaching, however, there are points which may be justly commented on and not wholly favorably. Pediatrics is probably more inadequately provided for in most medical schools than any other important subject. This criticism is of the general group of schools, not of individual schools. In some the system of teaching is relatively excellent; but nowhere is such good provision made for the subject as that which is made for general medicine, surgery and obstetrics. Neurology, I think, has much more actual standing and recognition in the best medical schools than has pediatrics. Yet the problems of infancy and early childhood are much more distinct from general medicine than are the problems of neurology and more properly demand generous provision for instruction. At present, there are in this country at least twice the number of men of recognized distinction in neurology than there are in pediatrics. The explanation is patent: while the responsibility may be properly thrown in part on the shoulders of the administrators of medical schools it cannot be put wholly on them but must be shouldered by pediatrists themselves. It is a common and seemingly just statement that the clinical branches have in this country in the past generation by no means kept pace with the medical sciences in methods of teaching and investigation.

There should be better general conditions in teaching; it is a well-recognized fact among educators that unless a man does some kind of research, more or less continuously, he does not make, or at any rate does not long remain, a sound teacher; because the teacher, in order to make the student search for knowledge, must search continuously and diligently himself. The kind of research work done in any particular department is commonly accepted, and rightly so, as the best criterion of the character that the teaching in that department will exhibit. The chief essentials for making well-trained men and for attracting first-class men into a subject are that the men shall do most of the work themselves and not be merely told about it; that they shall be made precise and critical in their methods and that the craving for a sound understanding for the reason of things be satisfied by having them clearly comprehend the relation between the fundamental and the practical things. In these ways general medicine and general surgery have been transformed within two decades and now students do most of the work in the wards and dispensaries; in pediatrics the changes have been less distinctive. Cases are less frequently seen as problems to be worked out by the student himself. The propriety of studying pediatrics as a special subject rather than as a mere part of general medicine is based essentially on the fact that the infant and young child differ from adults enormously in degree and almost equally in kind, in susceptibility to infections and especially in liability to derangements of nutrition. This gives a greater justification for specialization than any based on difference in the organs of the body.

The difficulty in regard to the studying of cases can be overcome only by demanding that the clinical work in pediatrics shall be put on the same basis as that which is being struggled for and increasingly secured in medicine and surgery. The society could wisely take on itself a serious consideration of the manner in which teaching and investigation in this branch may be benefited and by individual and concerted action further whatever appears to be wise. In this way he thought results could be rapidly accomplished. Among other ways in which the society could take a useful part is a study of school conditions, and the industrial conditions among children, which should be studied by persons of calm and judicial temperament so that we may be informed on the actual state of affairs by those whose opinion would be more reliable than that of perhaps over-enthusiastic philanthropists.

### Experimental Study of the Food Reactions in the Infant Stomach, Compared with Those in Vitro

DRS. D. M. COWIE and WILLIAM D. LYONS, Ann Arbor, Mich.: Because of the many discordant views as to disturbances of infant digestion we have endeavored to ascertain how food reactions in the infant stomach compare with those *in vitro*. We determined first the stimulating effect of normal food; how it is altered by certain chemical substances and how that compared with results obtained in test tubes. We found that the stomach is capable of stimulation from the first day of life; that all the ferments are secreted at that time. The secretion of acid was represented by curves which gradually rise. Taking samples of stomach contents from time to time a curve characteristic of the majority of infants was obtained. We made from 150 to 200 analyses on 28 or 29 infants and rarely found free hydrochloric acid present in the stomach. It is not necessary in order for the stomach to perform all its physiologic functions. After fasting for 6 or 8 hours we found hydrochloric acid, but at the end of the feeding period or in the middle we rarely got free hydrochloric acid. We determined that the basic condition of calcium casein must be overcome before the rennin precipitate rennin curds. Conditions are different from those in test tubes. The statement that basic calcium chlorid hastens evacuation of the stomach is not true. Taking out fats and anything that would inhibit motility of the stomach we found that in 45 minutes the change had taken place producing the ordinary curd. Basic calcium chlorid did not prevent formation of curds in the stomach in the majority of cases. We also showed that acidity hastened the opening of the pylorus, and we believe that this had more to do with the evacuation of the stomach than the curds. The curds were easily crushed and large curds did not occur in normal conditions of the stomach. Calcium chlorid curds were easily precipitated. We concluded that it was not necessary to produce a perfectly soft curd, but to learn what chemical changes actually go on in the stomach. The acid control of the pylorus is of great importance.

### Estimation of Chlorids in the Stomach Contents from Normal and from Atrophic Infants

DR. A. H. WENTWORTH, Boston: This paper is a continuation of work alluded to in a previous article, the principle of the research being the discovery that hydrochloric acid is diminished in the stomach contents of atrophic infants. The secreting power in cases of infantile atrophy was much diminished. The stomach of atrophic infants probably fails to secrete sufficient hydrochloric acid to stimulate the duodenum. In the first series of cases the stomach contents were obtained one hour after eating and determination was made. Results showed diminished secretion of hydrochloric acid in every case. The same experiment was made with healthy infants with variable results; in 4 cases it was greater and in 3 cases it approximated that of the atrophic infants. The results were not conclusive and a second series of observations were made. This article gives the results of the second series and certain conclusions that may be drawn from them. Unfiltered stomach contents were used in every case; soft rubber No. 19 French catheters were used; the stomach contents being obtained with the infant lying on its side. The diagnosis of infantile atrophy was made from clinical evidence alone. The possible relation of stomach contents to degree of acidity appeared not to be present in this series. A few infants showed marked gain in weight with only a trace of hydrochloric acid in the gastric juice. There was rarely more than a trace of hydrochloric acid from the stomach of atrophic infants fed on cow's milk. The results corresponded closely with those of the experiments previously made. The stomach contents of well-nourished infants fed on cow's milk showed diminished amount of hydrochloric acid, corresponding closely to about one-half of the atrophic infants. Although the diminution was marked, it was never so extreme as in the atrophic infants. The results tend to prove that marked diminution of hydrochloric acid occurs in infantile atrophy. It was also shown that these infants can gain markedly in weight without hydrochloric acid in the gastric juice, and that there is greater variation in hydrochloric acid in the stomach contents of these infants than in normal infants.

### A Study of the Gastric Contents and Motility in Breast-Fed and Bottle-Fed Infants

DR. HENRY HEIMAN, New York, exhibited charts showing the experiments that were conducted in the childrens' ward at Mount Sinai Hospital, the study having been for the purpose of adding to the data on the subject of gastric digestion in infants. The first group consisted of 20 normal infants from 3 to 7 days old; in the second group were 13 artificially fed infants from 3 weeks to 7 months old. In all the temperature was normal for at least a week and the condition good. The method of procedure was, with the new-born, to weigh the baby before and after nursing. At the end of one hour the stomach contents were removed with a French catheter. No preliminary lavage was performed. In the second group 4 examinations were made for each case. The stomach contents received in a glass jar and measured in graduate, then filtered and the filtrate used for the tests. In the first group 30 specimens were examined. The quantity of milk consumed at each feeding was from 30 to 200 grams—considerably above the figures usually assumed at that time of life. In general, the pepticaction was more at the end of one hour than at the end of a half hour. The work showed in new-born infants the large amount of milk taken at one nursing; that total acidity was practically the same at the end of one hour as at the end of a half hour;

absence of free hydrochloric acid in all cases; presence of rennin in two-thirds; presence of lactic acid in one-half of the cases. In the second group pepsin was present in only 6 cases; rennin in but 2. I think that it remains for future study to place the matter of gastric analysis of infants on as firm a basis as that of adults.

### Studies of the Effect of Varying Quantities of Fat and of the Presence of Various Salts on Digestion and Metabolism

Drs. Charles F. Fife and B. S. Veeder, Philadelphia, undertook studies to determine the absorption of fat in cases of chronic intestinal disease in infants. The infants were placed on definite formulas for some days and the urine and feces completely collected. Case 1, infant nine months, weight 10 pounds 9 ounces. Case 2, aged 10 months, weight 11 pounds 10 ounces. Tables and charts were exhibited to show the varying formulæ. The work showed in both cases that fat absorption was below that of healthy infants. The total amount was less the less fat ingested. When little fat was given the percentage of absorption was much less. The amount of carbohydrate present had no influence on fat absorption. Evidence pointed to the necessity of the splitting of fats before digestion. They found that in the low fat periods the actual amount of soaps in the feces was higher than in the high fat periods. The lower the fat ingestion the higher the amount of soaps. The work showed lowered fat absorption in these two cases of chronic intestinal disease while most writers claim that there is not much difference. They did not find any definite relation between the calcium, in the fat, the calcium in relation to the total amount of fat, or relation to the soaps in the feces.

### Results of Substitute Feeding in Premature Infants

Dr. Maynard Ladd, Boston, concludes from a study of 125 cases of infants, in which the total mortality was 65.6, no infant under 6 months surviving, that modified milk must be considered as unsatisfactory food for premature infants and should be used only when breast milk connot be obtained. Incubators were not employed.

### Effect of High-Fat and Low-Fat Diet on the Nitrogenous Metabolism of Infants

Drs. John Howland and Robert A. Cooke, New York, presented the results obtained with 3 infants put in a metabolic apparatus:

On a fat-free diet all the calories could not be supplied. On a high fat diet the caloric value rises. The protein given represented 6/10 gm. nitrogen per kilo. The first boy began with practically fat-free diet which was increased gradually until he was taking 76 gms. a day of food containing over 7 per cent. of fat; he was kept on this 2½ months, then reduced to fat-free diet. When on fat-free diet the stools were brownish, frequent and thin; as it increased they became light, and on high-fat diet whitish. A second child, boy of 6 months, badly nourished with ischiorectal abscess, had stools brownish and of very foul odor, as the fat intake was increased they became light and finally white and almost dry. The ammonium output was relatively high throughout. On medium-fat diet the child did best. In Case 3 the child was a small badly nourished infant of 5 months; the investigation lasted 3 weeks. At first he took fat-free food, then it was increased rapidly. He never did well at any time; showed definite reaction to all fat feeding. The first child showed only benefit; the second with excessive amount of fat showed disturbance and the last child was upset by a moderate intake of fat. The results showed the danger of trying to draw definite conclusions from limited material. We do not advise the use of too much fat, but the individual tolerance of some infants is so great that the greatest variation may not produce any harmful results. The best diet is one containing fat and sugar both in moderation.

### Nutrition of the Feeble Infant: (a) Motility of the Stomach; (b) Results of a Trial of Finkelstein's Method

Dr. Henry D. Chapin, New York: The proper nourishment of feeble infants is a problem that taxes the resources of the most skilful pediatrist. Digestion and assimilation may be poor, either by inheritance or from faulty feeding, and when from any cause, the general vitality of the infant is lowered, the digestive tract is usually the first to suffer and the last to recover tone. Improved diet and hygiene offered the only successful treatment; drugs are of little or no avail. In normal infants during health no great difficulty is encountered in reference to the kind and quantity of food. In feeble and badly nourished infants, however, the weak action of the stomach, especially in its muscular power, is the source of much trouble. With this in mind, a series of 21 infants were studied with regard to gastric motility. The ages were as follows: Two weeks, 1; three weeks, 1; six weeks, 1; two months, 1; three months, 6; four months, 4; five months, 2; six months, 1; seven months, 1; twelve months, 3. These infants were taken from the wards of the hospital and represented all grades of malnutrition from the begining cases to those in the last stages of atrophy. It was not possible to form any definite conclusions as to gastric motility based on the age of the child from these cases. Of 19 examined at the end of 3 hours, only 6 could be shown to have approximately empty stomachs, and these 6, with one exception, were holding their own and in no case could free hydrochloric acid be determined. In 13 out of the 19 it was absolutely demonstrated that there was a considerable residual amount of food still remaining in the stomach. Butyric acid fermentation was marked in 6 and in 2 in which the stomach was apparently empty there was found a trace of butyric acid. In 7 cases examined at the end of 3½ to 4 hours 5 were surely empty; of the remaining 2 cases one showed many curds at the end of 4½ hours, while the other showed only a few small curds. Few if any of the children were normal and conclusions drawn from the cases had value only as a study in the nourishment of a feeble child. There is little doubt that in a large majority of cases the feeble infant with digestive disturbance is fed at too frequent intervals; too often a second feeding being given before the previous meal has passed through the pylorus, with the result that each successive feeding is contaminated; in the feeble infant gastric motility is greatly decreased and it is often necessary to increase the intervals between feedings. There is an analogy between this state in the infant and the condition known as myasthenia gastrica in the adult, an important element in the treatment of which is to make certain that the stomach is never overloaded. The form of the protein has frequently an important place in the management of infants and changing the form of the carbohydrates also frequently shows a marked effect in the infant's progress.

In 20 cases I tried Finkelstein's method of feeding, based on the idea that instead of the fat or protein being the usual cause of trouble most digestive disturbances are due to the sugar of milk, and the principle of the new method being cutting down of the amount of milk sugar and of the salts, adding in place of this casein and fat, and substituting other forms of carbohydrates for the milk sugar. They were all hospital cases and presented the usual difficulties of infants previously badly fed. The stools generally became grey, homogeneous, with putty-like consistence; there was usually a tendency to constipation. The results were not very promising. Eight gained slightly in weight while twelve lost. I believe that when benefits follow this method of feeding the results are due more to the form in which the protein is given than to the lessened amount of sugar in the mixture. Judging from the character of the stools it might act well in certain forms of diarrhea.

### Discussion on Infant Stomach

Dr. F. S. Meara, New York: Has Dr. Wentworth taken into consideration the relation of the fat to the quantity of hydrochloric acid? Does Dr. Cowie attribute the opening of the pylorus to the action of the acid on the gastric or duodenal side?

Dr. A. H. Wentworth, Boston: In Dr. Veeder's cases were the periods of feeding continuous or not and did one period run into another? Also, was the percentage of fat per gram ascertained? Is the greater percentage of all the fats excreted in the form of soap?

Dr. Henry D. Chapin, New York: So far as the incubators or padded cribs are concerned, I prefer the cribs as I have found that the best incubators are not as good as the crib. I prefer a varying temperature to the steady temperature of the incubators. I have never saved a premature infant without breast milk.

Dr. Isaac Abt, Chicago: I have been impressed with the discrepancy in results and various interpretations of those doing the chemical research work, though I believe that there would be important definite results ultimately. The dogmatic methods used in some quarters in making interpretations and attempting to make clinical deductions based on chemical results so far obtained is somewhat premature. Besides the chemistry of digestion there is a biology of digestion; the ultimate appropriation of the molecule and its combination with the cell is of more importance perhaps than the chemical details.

Dr. Samuel L. Bernstein, Cleveland: I agree with Dr. Chapin in regard to the advantages of the crib over the incubator; the electric heating pad with maternal feeding has been the means of saving a number of these premature infants.

Dr. D. M. Cowie, Ann Arbor: I am inclined to believe that it is the action of the acidity on the duodenal side that has to do with the retention of food in the stomach.

Dr. B. S. Veeder, Philadelphia: The experiments extended over 7 or 8 weeks—the child being first put on a formula for 3 or 4 days. Soaps were not tested for separately, but we did compute the percentage of soaps.

Dr. Henry D. Chapin, New York: It is of the utmost importance to have the meals properly spaced, as otherwise there remains a residuum of food in the stomach to contaminate each successive addition of food. This constantly recurring contamination and over-burdening of the stomach resulted in fermentation and in time gastric dilatation with loss in tone of the muscular coats of the stomach, thus explaining how a chronic digestive disturbance may lead to the condition known as atrophy. I am in sympathy with Dr. Abt in regard to studying these questions along the idea of biology.

Dr. John Howland, New York: The biologic question is largely hypothetical; it cannot be expressed in figures or in charts, and while very interesting it leads no further than to saying that in each individual there is an individual variation. Until the work was done in terms that could be expressed in figures there had not been a beginning.

### Amyotonia Congenita

Dr. J. P. Crozer Griffith, Philadelphia: Ten years ago, Oppenheim in Berlin noticed a peculiar symptom-complex and reported a few cases but not in detail. These patients had a condition of flaccid palsy, which appeared to be congenital, varying up to complete paralysis, but no actual atrophy. He called this myotonia congenita. As the symptoms were so similar to myatonic congenita, I have called the condition described in this paper amyotonia congenita. I found in all 48 cases besides my own. In December, a child of 15 months was brought to me; no family history, except intemperance in both father and mother. A diagnosis of myolitis had been made. The mother said that the child had never been able to do anything with its hands; the position of the hands suggested tetany. Electric reactions did not give reaction for poliomyelitis or tetany, in fact no reactions could be obtained. Dr. Mills suggested that it was a case of myotonia and further investigation corroborated that. The child could not turn itself in bed; when seated in bed it flopped about in any direction; the head fell forward or backward, anywhere gravity took it. There was affection of sensation. Tendon reflexes were abolished; respirations were almost entirely abdominal, the respiratory muscles being affected. The child was thought at first to be very weak-minded. In four and a half months it has improved wonderfully. It can now take a biscuit in the hand and slowly lift it to the mouth and bite at it.

There seems to be reason to believe that the condition is congenital either in its manifestation or in its origin. It is an affection of the muscles not controlled by the cranial nerves. As to the pathology, there have been 8 observations more or less complete but no one has come to any positive conclusion. There was in most every instance loss of striation of muscles or less of nuclei. In some there was involvement of the anterior horns of the cord but this is not yet certain because the changes described were so slight. Spiller maintained that there was no change in the nerve centers. The disease must be distinguished from poliomyelitis and from hypertonia. Nothing much could be said as to prognosis. A number of patients have died from respiratory involvement. Treatment is hygienic, with electricity and massage. No Wassermann reaction was made in my case, but so far as I could learn there was no history or symptom of syphilis.

### A Study of the Value of Brudzinski's "Neck Sign" and Contralateral Reflex in the Diagnosis of Meningitis in Infancy and Childhood

Dr. J. Lovett Morse, Boston: Brudzinski in a paper on "the contralateral reflexes in the legs in childhood," published in 1908, drew attention to a sign which he found in tuberculous and epidemic meningitis, and occasionally in other conditions but never in healthy children. This sign was a concomitant reflex of the leg on one side when passive flexion of the leg on the other side was made. He concluded that in connection with other signs such as Kernig's and Babinski's, it was useful in the differential diagnosis of meningitis. In a later paper, he stated that further study had confirmed him in his conviction of the value of this sign. In 1909, Brudzinski published another paper in which he stated that in meningitis passive flexion of the neck forward causes flexion of the legs at the hips and knees and a marked flexion of the legs on the pelvis. He found this sign in 20 of 21 cases of tuberculous, in all of 11 of cerebrospinal, and in 2 of pneumococcus meningitis. I examined 400 children, either well, or ill, with diseases other than meningitis, as to the presence of this sign; 90 were well; 150 suffered from disease of the respiratory tract; 90 had various diseases of the gastroenteric tract; 31 had diseases of the nervous system other than meningitis; the remainder had a variety of diseases, typhoid, nephritis, influenza, heart disease, rickets, purpura, scarlet fever, measles, etc. Neither the neck sign, nor the contralateral reflex was elicited in any instance. I concluded from the study of these 400 cases that Brudzinski and his followers are correct in their statements that neither the neck nor the contralateral reflex are present in well children or in those ill with diseases other than of the nervous system, and that these signs are very seldom seen in diseases of the nervous system other than meningitis. Their presence in an acute disease is strong evidence of meningitis; their absence does not exclude it. The diagnostic value of the contralateral reflex is less than that of the neck sign. They occur in all types of meningitis and so are of no importance in differentiation.

#### DISCUSSION

Dr. Mathias Nicoll, New York, three weeks ago had a case in which he found the sign positive. When left an hour the child would give a decided contralateral reflex reaction, but if it was induced several times in succession there was much less marked reaction. He had also had an opportunity of trying it in a case of cerebrospinal meningitis in which he had been able to get a very positive response, though it varies in intensity.

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## AMERICAN GYNECOLOGICAL SOCIETY

*Thirty-fifth Annual Meeting, held in Washington, D. C., May 3-5, 1910*

*(Continued from page 1630)*

### Officers Elected

The following officers were elected for the ensuing year: President, Dr. Reuben Peterson, Ann Arbor, Mich.; vice-presidents, Dr. John F. Thompson, Portland, Maine; Dr. John G. Clark, Philadelphia; treasurer, Dr. J. Wesley Bovée, Washington, D. C.; secretary, Dr. LeRoy Broun, New York.

Atlantic City, N. J., was selected as the place for holding the next meting.

### Primary Carcinoma of the Female Urethra; Hematoma of the Broad Ligament Recurring with Pregnancy; Fibroid Tumor of the Ovarian Ligament

Dr. Walter P. Manton, Detroit: Primary carcinoma of the female urethra is among the rarest of malignant manifestations; a careful search of the literature up to 1910 gives the reports of but thirty-five cases, including my own, and failed to reveal the report of a similar case of hematoma of the broad ligament recurring with pregnancy. The only references to the occurrence of fibroids of the ovarian ligament which I have been able to find are the two cases reported by Doran in 1896. In both of these cystic cavities existed.

### DISCUSSION

**Dr. Reuben Peterson**, Ann Arbor, Mich.: I have had two cases of this rare affection, one of which I have previously reported. A woman on whom I operated four or five years ago had a carcinoma of the meatus which extended up into the urethra about half an inch. I removed it so radically that incontinence followed with subsequent prolapse of the bladder mucosa through the remainder of the urethra. The woman complained of this, and so I sewed up the opening and made an opening from the bladder into the vagina. Then she complained of incontinence. I did a colpocleisis and made an opening into the rectum. I reported this case at a meeting of the American Medical Association, but do so again now in order to give the subsequent history of the patient. That woman has passed her urine through the rectum ever since, and to-day she is as well and contented as one can be in that condition. I examined the urine two and a half years ago and she had no ascending pyelonephritis, which is interesting because it has been contended that where this communication is established with the rectum pyelonephritis will take place; but it has not occurred in this case. The second case of primary carcinoma of the urethra happened a short time ago. It looked like urethral caruncle. However, microscopic examination showed it to be primary carcinoma. In this case I removed about one-third of the urethra, and there has been no recurrence of the condition for two years.

**Dr. Clement Cleveland**, New York: I have had two cases of primary cancer of the meatus, in one of which I did a radical operation, and the disease returned. In the second case I resorted to the use of the actual cautery, and I believe that this treatment will afford permanent relief of such a condition when surgery is of little value. I have seen such positive results from radium in the hands of Dr. Abbe, not only in cases of cancer of the vagina, fascial cancer, cancer on the lip, gum, nose and ear, that I believe its application to cancer of the urethra would be of great importance. I feel very positive that if the radium is used in such cases we would see as good results in cancer of the urethra as in cancer of the lip, nose or the ear.

**Dr. J. Riddle Goffe**, New York: Did Dr. Peterson use the cautery in the removal of these growths?

**Dr. Peterson**: I did not.

**Dr. Goffe**: I have had one remarkable case of malignant urethral caruncle or primary carcinoma of the urethra. This was a number of years ago. The woman gave a history of having been operated on by Dr. William Lusk six years previously. She stated that Dr. Lusk told her at the time that she had cancer and he did not dare remove it, but that he would make a button-hole in the urethra to save it from irritation, and that this was the best he could do. For six years she was comparatively comfortable. She had control of the urine, but passed it through the button-hole in the urethra. At the time she came to me there was a cauliflower excrescence protruding from the meatus, which was of bright cherry-red color, exquisitely sensitive, and the source of constant pain. With the cautery I removed all the urethra and the surrounding tissue from the posterior angle of the urethra, taking all but one-fourth of the urethra at the neck of the bladder. She made a comfortable recovery from the interference, but inside of a year the disease returned with the greatest violence, involving all surrounding structures and becoming constitutional. She died with great suffering about a year after the procedure I had instituted.

**Dr. Frederick J. Taussig**, St. Louis: In a case of carcinoma of the urethra, that occurred in the practice of Dr. Dorsett and myself, the patient was kept under observation for a long time. I saw her in 1900, and at that time there was a caruncle, chronic urethritis, a retroverted uterus, and a relaxed pelvic floor. I operated for the retroversion and for repair of the pelvic floor, but did nothing further to the urethra. Three years later she returned with a history of bloody discharge for three weeks. She had been examined two months previously by an experienced man and nothing had been detected so far as the urethra was concerned. I found an infiltrating cancer involving the lower part of the urethra. Operation consisted in removing the entire urethra to the point of its entrance in the bladder, putting a purse-string suture around the opening that was left in the bladder so as to strengthen the muscular tissue there, and then, as a further precaution, removing the external inguinal glands on both sides, although there was no glandular enlargement at the time. The patient made a good recovery from the operation; there was slight partial incontinence. She was kept under observation for 9 months, and then small nodules were noticed in the inguinal region and also about the internal iliac vessels, the triangle between the external and internal iliac vessels. A second operation was done, removing these affected glands, although difficulty was experienced in removing the disease about the iliac vessels on account of adhesions. A year and a half after the primary operation the patient returned with recurrence in both inguinal regions and higher up about the aorta. She was kept at the Skin and Cancer Hospital 2 or 3 months under trypsin treatment, which at that time seemed to offer a possible excuse for its use, and with no benefit. She died, and at autopsy there was absolutely no recurrence at the primary site. The tissues about the urethra and bladder were absolutely free from carcinoma; but the glandular involvement was not merely confined to the lymphatics; it involved also the liver and spleen.

**Dr. Seth C. Gordon**, Portland, Maine: A woman of 70 had a growth for nearly a year about the urethra, and at the time she came under my care she had been treated by caustics for 6 or 8 months. The growth was as large as a walunt and bled on the slightest touch; I removed it with three-quarters of an inch of the urethra, bringing the remainder down and attaching it. The operation was done 4 years ago and there has been no return. Examination showed the growth to be carcinoma.

**Dr. Hiram N. Vineberg**, New York: Some years ago I had a case of primary carcinoma of the urethra involving the anterior third of the urethra. I did a thorough operation, went close to the vesical sphincter, and as a result there was slight incontinence. Prior to operation the woman had no pain or bleeding. Microscopic examination proved the growth to be carcinoma. I did a plastic operation later and in trying to build up the artificial urethra and bringing the stump of the urethra forward was only partially successful. The woman could retain urine while in bed for an hour or so. She was under observation three years and during that time there was no recurrence. I have not heard from her since. At that time I collected eleven cases of primary carcinoma of the urethra.

**Dr. Francis H. Davenport**, Boston: I saw a patient who had been under the care of a woman practitioner, who had tried the injection of serum for this condition of the urethra, and with some comfort to the patient, but not an arrest of the disease. When I saw the patient nearly one-quarter of the urethra was involved, so that it seemed absolutely impossible to remove everything radically. Radium was tried for several months, but not so thoroughly as the surgeon would like to have used it, owing to the fact that it could not be applied in the urethra itself on account of severe pain, but only externally from the vaginal side. Finally the growth became so large that there was retention of urine and a suprapubic fistula had to be made, which relieved the immediate symptoms, but within three months she died from exhaustion.

**Dr. I. S. Stone**, Washington, D. C.: Next to the report of individual cases it is essential to know something about how wide the excision should extend, and how far the malignant process extends when we begin to operate on patients with early manifestations of carcinoma of the urethra. All the cases of cancer in this region in my experience have ultimately resulted fatally.

**Dr. Joseph Brettauer**, New York: I have repeatedly had patients sent to me with a diagnosis of carcinoma of the urethra, in whom microscopic examination showed the lesion to be urethral caruncle. At times it is very difficult to decide whether the growth is malignant or not; as a rule, the younger the patient, the more malignant the growth.

**Dr. Edward L. Duer**, Philadelphia: Recently I did an extensive operation for a carcinomatous growth of the urethra which extended well into the end of the vagina. It was difficult to operate without enlarging the opening nearly into the rectum. I removed the growth and the wound healed. The condition returned in a short time after the operation, and I applied the *x*-ray to the external parts, but in the course of a few months the disease returned, and radium was tried. I commenced with a weak preparation, and it seemed to have little or no impression. The strength was then increased 100 per cent., and the patient improved and has continued to improve. Previous to this treatment she had been confined to bed for nearly a year. She had to be carried to the country and could not walk. She now goes shopping, and seemingly is perfectly well so far as the last examination showed.

Dr. W. P. Manton: I wonder whether or not all the cases so reported are really cases of primary carcinoma of the urethra. There are many cases of periurethral carcinoma that are mistaken for urethral cancer, and no doubt some of them belong to this class.

### Improved Operation for Extreme Cases of Procidentia and Cystocele

Dr. J. Riddle Goffe, New York: Procidentia and cystocele are the results of three lesions: first, a descent or relaxation of the supports above; second, laceration of the perineum to the second degree; third, stretching and tearing of the fascia at the base of the bladder, producing a hernia. The support below is only indirect and of secondary importance. The true principle of support is that of suspension, and in order to secure a permanent result after operation the organs must be suspended or hung from above. The broad and round ligaments and the fascia lata are the proper tissues to utilize for this support. As a rule, these conditions obtain in patients at or beyond the menopause. In child-bearing women, especially if they desire children, the uterus should be carried into normal position and retained there by shortening the uterosacral and round ligaments. The bladder is then freed from all attachments to the vagina and lateral structures and carried up and spread out over the face of the uterus and broad ligaments. The vaginal sheath and wall are then cut away in the median line sufficiently to bring it up snug against the base of the bladder when stitched from side to side. If the perineum is torn to the second degree and a rectocele is present, the floor of the pelvis is restored. In patients at or beyond the menopause the uterus is removed, the broad ligaments beginning with the round ligaments at their upper borders are then stitched together across the pelvis from side to side, from the round ligaments down to the cardinal ligaments, thus turning the raw edges of the broad ligaments posteriorly. On the plane of tissue thus constructed, the bladder is spread out and stitched in such a way as to carry the organ high in the pelvis, thus restoring the base of the bladder as it is originally to a comparatively immobile foundation, and restoring the hinges and the cornua of the bladder as so graphically described by Dr. Kelly. The upper end of the vagina is also stitched to the broad ligament, bringing it up taut against the base of the bladder, the fascia lata is cut away and stitched as previously described and the perineum repaired. To accomplish this work it is necessary at the beginning of the operation to make a longitudinal incision in the vagina along its anterior wall throughout its entire length and dissect the bladder freely from all its attachments. The results in my opinion are satisfactory and permanent.

#### DISCUSSION

Dr. Charles Jewett, Brooklyn, N. Y.: I have had the privilege and pleasure of watching Dr. Goffe do this work, and his technic is the most complete and perfect of any I know. He concludes the operation by securely building up the perineal buttress beneath the bladder.

Dr. I. S. Stone, Washington, D. C.: This method, or a slight modification of it, has given me the utmost satisfaction. I have no knowledge of any case of cystocele or prolapse having recurred if the work has been properly done.

Dr. Henry T. Byford, Chicago, described a modified operation which he does in these cases.

Dr. Seth C. Gordon, Portland, Maine: I am satisfied that all of the work we have done heretofore in the effort to fix the uterus, after complete procidentia, has been of little avail. The uterus gives way after a while. Recently I have been removing the uterus in every case and stitching up remnants of the vagina to the broad ligaments, and fixing it as well as possible. I believe that we open a new line of work in that direction when we begin by removing the uterus.

Dr. Clement Cleveland, New York: I have followed the operation described by Dr. Goffe for some years. In my hands it has been successful in the majority of cases.

Dr. C. C. Frederick, Buffalo, N. Y.: I have been doing this operation for 4 or 5 years, and I have taken the position that in case of advanced procidentia the removal of the uterus, as a part of the operation, is the *sine qua non* to success. I have done 75 or 78 of these operation for procidentia, and have invariably used catgut for suture material and have not had any ill results from it.

Dr. J. M. Baldy, Philadelphia: This operation is so extensive in its denudative qualities and so dangerous in its possible results as to be absolutely unwarranted as a simple cystocele operation.

Dr. Leroy Broun, New York: I have often seen Dr. Goffe do this operation. I have done it myself, and I have had the privilege of seeing one of the patients on whom Dr. Goffe operated, and a more ideally perfect result I have never seen. The uterus was in excellent position.

Dr. George Gray Ward, Jr., New York: Dr. Goffe taught me this operation five or six years ago, and since then I have done it in several instances. The results speak for themselves; I have not seen a failure from the operation when it has been properly done. The patient is satisfied, and that is the best part after all.

### Intramural Sequestration and Fixation of Uterus for Prolapse When Pregnancy Is Not Possible

Dr. Philander A. Harris, Paterson, N. J.: I have subjected six women to a possibly novel procedure for the cure of procidentia uteri, and since these operations have been followed by gratifying results, I wish to describe the operation for whatever value it may possess for others. A median abdominal incision is made from one inch beneath the umbilicus for three or four inches, and through it the uterus is delivered. While an assistant grasps and draws the uterus well out of the incision, the cut edges of the parietal peritoneum are sewn to and around the uterus at the junction of the cervix with its corpus. This sewing crosses the broad ligament at either side about two inches away from the fundus uteri. After thus attaching the opposing cut edges of the peritoneum to the uterus and the broad ligaments, the suturing is carried upward to the top of the incision, thus closing the peritoneal cavity with the corpus and fundus still held in the grasp of the assistant, and, of course, outside of the peritoneal cavity. While the assistant continues to hold the uterus outside of the incision, a 5/16-inch iodoform gauze and rubber tissue drain is placed on top of the muscle and beneath the fascia to a point two or three inches to one side of the incision, at which point it is made to emerge from a small stab wound. The tapering tail of this drain is placed in the wound between the peritoneum and fascia. The anterior surface of the corpus and fundus uteri are next denuded with a knife, after which the fundus is seized with a hook or volsellum forceps, with which it is dragged upward as far as possible toward the umbilicus, and made to nestle in the incision anterior to the peritoneum and between the recti muscles. The fascia is next sewn from the umbilicus downward with running stitches of chromicized catgut. Wherever the corpus and fundus uteri are in contact with the fascia as it is being closed, the stitches are made to include sufficient musculature of the uterus to fix it in its sequestered position. The sewing of the skin with a running catgut suture completes the operation unless the patient is obese, in which case a small drain is placed between the fascia and the skin and made to emerge from a stab wound two inches or more to one side of the incision. The application of the usual gauze dressing and adhesive straps completes the operation. The draining tubes are partly withdrawn in two or three days, but generally not removed until ten days or more after operation.

(*To be continued*)

## AMERICAN GYNECOLOGIC SOCIETY AND AMERICAN SURGICAL ASSOCIATION

*Joint Meeting, held in Washington, D. C., May 5, 1910*

### What Are the End-Results of Surgery for Relief of Neurasthenic Conditions Associated with Various Visceral Ptoses? To What Extent Do They Improve the Neurasthenic State Itself?

DR. EDWARD REYNOLDS, Boston, in opening the discussion took up the etiology of the ptoses and their relation to neurasthenia. Satisfactory end-results depend on a successful initial study of the causation of the individual ptosis, and of its consequent relation to the neurasthenia. Technic is a subordinate matter. Ptosis is never a primary affection, but is always secondary to some other condition. The causes of ptosis are (a) local anatomic or developmental anomalies, and (b) general systemic mechanical conditions. The local causes of ptoses of pelvic viscera are inflammatory lesions, trauma, high rectovaginal septum, persistent ileolumbar ligament, and antiflexion of the cervix. Operations should be adapted to these causes. The general predisposing causes of all ptoses are (1) general muscular relaxation, and (2) static abnormalities, such as the round shouldered, hollow-backed position, pendulous abdomen, the over-feminine figure, and the habitual use of bad corsets. All these static variations are characterized by a forward displacement of the center of gravity. The mechanics of adjustment of posture are comprised in the use of therapeutic shoes and corsets. Mechanical therapeutics is always necessary in static cases. Ptosis is sometimes the result of neurasthenia, sometimes its cause. The main guide is the relative chronologic sequence of local and general symptoms. It is important to avoid operation in neurasthenics unless complete relief of the local symptoms can be expected. Subsequent care is important.

DR. JOSEPH A. BLAKE, New York: Patients suffering from visceral ptosis and neurasthenia should be divided into two classes. First, those in which ptosis of the organ or organs contributes to the neurasthenic state simply by the effect produced on the organs themselves. In this category we have displacements of the kidney, uterus, colon, stomach, etc. The results of operations on this class are dependent on the degree in which the condition affected the neurasthenic state. In the second class of cases a vicious circle is established, and ptosis increases the neurasthenic state if it is not the underlying cause. Operations undertaken on patients of this class must have in view the relief of the autointoxication, otherwise they will only be productive of harm. Partial or total exclusion of the colon is a rational procedure in certain cases and good results may be expected, but the greatest care should be exercised in the selection of cases for applying this operation.

DR. JOHN G. CLARK, Philadelphia: We have a defective individual, as a rule, to deal with from the start, and as the result of this defect we cannot hope for the same surgical results as we would get from operating on patients with acute diseases. The individual perhaps has had autointoxication from the beginning, or was imperfectly developed from the start, and therefore a bad surgical subject for immediate or ultimate results, and it is particularly in this class of cases where surgeons should make haste slowly. In the last five or ten years I have tried various types of suspension operations in visceral ptoses, such as the Coffey or the Deyea type of operation, and have not had more than 75 per cent. of functional relief after following these cases carefully. In those cases in which there is a structural defect, as shown by obstructive and retention symptoms, one does not hope to get more than 50 per cent. of functional relief.

DR. MAURICE H. RICHARDSON, Boston: I approach the treatment of the neurasthenic for whatever cause, whether a definite, unmistakable pathologic lesion, or a ptosis, or a slight lesion, like a displacement of the kidney, with the utmost discouragement. One of my recent cases was a woman whose abdomen was covered with scars from repeated operations that had been performed without relief, her last state being worse than the first. Finally, it was found that this woman's gall-bladder was full of gall-stones, which were removed, followed by relief. As to enteroptosis and operations for large dilatations of the intestine, I can recall examples of cases in which I was driven to operation after these patients had gone to the neurologist, the gynecologist, and the general surgeon, and had been treated by them without relief, but with the same general results of discouragement. In one instance, 8 or 10 years ago, I resected the large intestine 2 or 3 times with the hope of affording relief, but the patient was in the same neurasthenic condition as in the first place. In addition to the operation on the intestine she had developed a large ovarian cyst, which was removed. Before operating on these patients we should be sure, in the first place, that there is a lesion; second, that it is the chief cause of the neurasthenia; third, we should see if it canont be cured without operation, but if operation is to be done, we should see to it that it does not subject the patient to too great a danger. I believe that neurasthenia is more of a disease than we give it credit for; that it is some central, organic or nervous condition on which operative surgery will have about as much effect as the surgical treatment of epilepsy, and Dr. Wood once said that it would do just as much good to amputate a toe as to resect the motor area of the brain for the relief of this condition.

DR. RICHARD R. SMITH, Grand Rapids, Mich., restricted his remarks to a general consideration of the etiologic factors to be considered in connection with visceral prolapse and accompanying neurasthenia in women who present themselves to the gynecologist for the relief of symptoms.

DR. LEWIS S. MCMURTRY, Louisville, Ky.: How often, after difficult manipulations in the abdomen in normal individuals, so to speak, do we leave in the haste of an operation the viscera disposed in every possible irregular manner, and yet these things correct themselves in normal individuals, and they necessarily have no connection with neurasthenia, so that we must have a little more evidence than we have at present that visceral ptoses are the principal factors in the production of this condition of the nervous system and metabolism of the body known as neurasthenia. As to the clinical side of the subject, my experience is like that which has been related by other surgeons. Operative procedures for all these ptoses, whether of the pelvic organs, the kidney, or the alimentary tract, have been unsatisfactory. Neurasthenia occurs in both sexes in all stations and all conditions of life, among the rich and the poor, and its exact nature or its pathology is as yet unknown, and until it is more definitely known the results are going to be as we see them reported at present. What we need is a definite statement as to the origin or cause of this condition which we know as neurasthenia.

DR. WILLIAM M. POLK, New York: In patients who present themselves with ptoses that have been described as belonging to the upper abdominal cavity, we have conditions that unquestionably we balk before, but here I am convinced that orthopedics furnishes a most efficient aid, and the lines laid down by Dr. Reynolds and by Dr. Lovett of Boston, who has been associated with him, will be the means of benefiting many of the conditions for which surgery heretofore has been considered the only means of relief. But the psychoneurologist should not be forgotten in connection with these cases. There is no reason why we as gynecologists and surgeons should bear all the burden in these cases. I have come to the conclusion that there is a conspiracy on the part of the neurologist to land on us a class of cases which he knows full well will test every particle of his acumen, and here is a brilliant opportunity for the psychoneurologist to exploit himself to the fullest extent. When these neurasthenics come to us we should say to them, first pass through the hands of a competent orthopedist; pass next through the hands of a conscientious self-doubting neurologist, but beware of the over-confident neurologist, and then you can say, madam, or sir, as the case may be, as you have reached the end of all things, so far as medical investigation is concerned, I am now more than willing to command all the resources of my refinement of the surgical art.

DR. A. J. OCHSNER, Chicago: I wish to subscribe to the axiomatic statements made by Dr. Blake in regard to the surgical treatment of these patients. There is no doubt but that neurasthenia can be greatly exaggerated or possibly caused by the results of enteroptosis, when these results produce obstruction either to the alimentary canal and interfere with nutrition and cause autointoxication, or when the condition gives rise to obstruction of the ureter, or causes an accumulation of mucus in the gall-bladder, and secondarily causes gall-stones. The relief, after an operation in such cases, even though the neurasthenia was possibly caused by this condition, must be in most cases exceedingly unsatisfactory, and due to two causes. We do not mechanically relieve the condition, no matter how perfect the operation may be, except in a few instances, as, for instance, in draining and suspending the gall-bladder in removing a hydronephrotic kidney. Dr. Reynolds' presentation is along the line of observations I have made and which caused me to suggest prophylaxis rather than treatment in this way. Many years ago, in studying the treatment of hernia in children, I found that they were cured spontaneously, provided conditions were secured in which there was absence of abnormal intra-abdominal pressure and traction, by placing these children in a position with the foot of the bed elevated at from 15 to 30 degrees. I found that in children with pendulous bellies the recti muscles came together if they were shortened, that the oblique muscles were strengthened, and that the intestines, instead of hanging at the bottom of the pelvis, after a few months' treatment would be in normal position. I found that this enteroptosis had resulted from improper feeding, from gaseous distention, and from other sources of abnormal intra-abdominal pressure. In some of the cases the increased abdominal pressure was due to severe straining from constipation, and with the relief of this the enteroptosis was decreased to a marked extent. I believe that by overcoming the causes of enteroptosis in children, we will prevent its occurrence in many adults.

Dr. Howard A. Kelly, Baltimore: I am convinced from the conclusive demonstration of Dr. Clark, Dr. Richardson and Dr. Lovett, that they have found the key to some of the underlying causes of these conditions, and that rational therapy is to be adopted on such general and orthopedic lines as they have outlined. I shall restrict my remarks to the various types of nervous systems associated with movable kidney.

Movable kidney is frequently found in neurasthenics. Movable kidney, associated with renal pain, may exist to such a marked extent as to bring on the neurasthenic state. The symptoms connected with movable kidney sufficient to justify operative procedure, are, as a rule, definite, and of a local mechanical nature. Psychotherapy is of little use as an adjuvant in treating neurasthenics and in relieving either local or general ptoses so long as a displacement of the kidney persists. On the other hand, psychotherapy and other forms of treatment which aim at building up the patient's general condition may seemingly effect a cure. In an analysis of 245 patients with nephroptosis, 78 or 31.4 per cent. had neurasthenia of varying degrees. I never operate on neurasthenic patients without definite local symptoms.

Dr. Willis G. Macdonald, Albany: Not all patients who suffer from ptoses are neurasthenic. A large proportion of them do not present symptoms. In a number of these cases of neurasthenia associated with ptoses the responsible conditions are autointoxication from the intestinal tract and peripheral irritations from movable organs. I divide patients suffering from neurasthenia and ptoses into two classes. In the first class, we have those patients who travel from rest cure to rest cure, from one climate to another, and who are battle-scarred from their conflict with surgery. For this class surgery has no potency. There is no hope for relief from surgical intervention in such cases. On the other hand, there is a considerable group of cases in which the condition can be traced to an overloaded cecum and sigmoid—a constant filling of the intestinal tube, with a large, dilated myasthenic stomach lying on the symphysis pubis. Operation will relieve successfully a large number of such patients; yet unfortunately our clinical methods are not sufficient to determine always just which patients will be favorably influenced by surgical intervention and which will not, and in making statements to physicians and friends of such patients we should, as a matter of common honesty, express some doubt as to the ultimate results in this particular class of cases.

Dr. John K. Mitchell, Philadelphia: The whole causation of neurasthenia seems to be bound up in a kind of vicious circle where one symptom produces another until one positively cannot disentangle the chain. What do we know about the normal relations of the abdominal organs? What do we know about the position in which the various organs in the belly ought to be in the ordinary upright posture which we maintain a large part of the time? How much mobility should such organs as the kidney and liver have? Apparently, from the manner in which the intestines are distributed in the belly, they are not placed there like articles on a shelf to be maintained in one position, but they possess a certain amount of mobility. I see few neurasthenics in whom the kidney does not have more or less play, and slightly movable kidneys sometimes give worse symptoms and cause more trouble than freely movable ones, and a floating kidney, unless it results in a twisting of the ureter and stoppage of flow of urine, causing pain in the ureter and in other portions of that neighborhood, does not produce so much symptoms as the kidney that is only slightly movable, one in which it would be difficult for the surgeon to determine whether it is movable or not. Before operating on a neurasthenic patient the surgeon should have a definite idea as to whether or not a pathologic condition exists, what he is going to do and what he hopes to accomplish by the operation; otherwise the results from surgical intervention will be unsatisfactory.

Dr. William J. Mayo, Rochester, Minn.: I agree with Dr. Clark that the patients we have under discussion are wrong from the beginning, and my own feeling is that but a small number of them should be treated surgically. For some years at Rochester we have made a careful examination of all patients who presented themselves, no matter whether they had cancer of the breast or gall-stones, or what not, and to our surprise we find that about 25 per cent. of the women had retroposition of the uterus. We did not find that retroposition of the uterus was more frequent in the latter decades of life. Even young girls who came to us, in whom pelvic examinations were made through the rectum, had retroversion of the uterus in about the same proportion of cases as those women who had reached the menopause. Again, we found that 20 per cent. of the patients who came to us had movable kidney, and a very large majority of them did not have any symptom whatever. I think the neurasthenics, from a surgical standpoint, should be treated like the insane, in that we should take no cognizance whatever of their general complaints, but if they have sufficient local pathology to warrant operation we should operate on them, as we have no right to deny them the relief that comes from surgery. Doubtless many of these patients would be benefited by the Emmanuel movement or by Christian science, and many of us would gladly turn them over to a Christian scientist if we were convinced that the Christian scientists were really Christians, because it takes a Christian to handle these patients.

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## FLORIDA MEDICAL ASSOCIATION

*Thirty-seventh Annual Session, held at Jacksonville, April 6-8, 1910*

*(Concluded from page 1632)*

### Diagnosis, Clinical Types and Treatment of Uncinariasis

Dr. D. L. McSwain, Arcadia, discussed in his paper particularly those marginal cases of uncinariasis which are easily mistaken for other diseases, resembling many times acute malaria; those cases complicated with malaria; the value of the stethoscope in diagnosis; the danger from pulmonary edema following the administration of thymol in acute nephritic cases. An infant 11 months old, with no history of ground-itch, four months previous to treatment showed indications of anemia accompanied by occasional ileo-colitis. Microscopic examination for uncinaria ova was negative. With the aid of the stethoscope a diagnosis of uncinariasis was made. Hemoglobin less than 15 per cent., respirations 80 to 100 per minute. Three courses of thymol were given and at the end of six weeks the child was normal. A point of interest under the head of prophylaxis that should be settled by the pathologist is whether the *Uncinaria radiata* pronces in the human the local manifestation of the disease, and if so, whether or not it is carried to the intestines, producing the systemic symptoms. It is a well known fact to every one who spent his childhood in the country that about low lots is the greatest danger of becoming infected with ground itch.

DISCUSSION

Mr. Ramseur, Ph. G.: In the infant of 6 months, what was the source of infection by hookworms?

Dr. D. L. McSwain, Arcadia: In my opinion the infection was acquired by the child crawling on the floor. In the family where this case occurred the grandfather was sixty-five years old and the entire family were hookworm sufferers. I don't think for a moment that ground itch is the only source of infestation. There are too many evidences that it is not so.

Dr. Hiram Byrd, Jacksonville: A feature of the case cited especially interesting was the fact that it did not show any evidence of hookworm on microscopic examination. When we remember that the larva finds its way into the intestinal tract either directly or through the circulation it is from six to ten days before the eggs appear in the stools. I wonder if that is not an adequate explanation of the absence of ova in an acute case of hookworm infestation.

### Occurrence of Intestinal Parasitic Infections Among the White Patients at the Florida Hospital for the Insane

Dr. Ralph N. Greene, Chief Physician, Florida Hospital for the Insane, Chattahoochee, reported in his paper, that "among 220 white men there were found 92 cases of uncinariasis, or a percentage of nearly 42. The 187 women examined showed a total of 87 cases of hookworm infection, or a percentage of nearly 47. Four per cent. more women than men show hookworm infection in this series. These results show for the total number of cases in the white departments of the hospital, a percentage of nearly 44. . . . It may not be inappropriate to state that 42 cases not showing hookworm infection, or a percentage of even ten, were infected with other forms of intestinal parasites, namely, *Trichocephalus trichiurius, Oxyurius vermicularis,* and *Ascaris lumbricoides.* Taking these other forms of intestinal parasites into consideration, in the computation of percentages, would reveal the surprising result that among the 407 cases examined, were found 221 cases of intestinal worm infection, or a percentage of 54. Roundworms were found associated with hookworms in two cases, one of these being in each sex. *Trichocephalus dispar* infection was noted with uncinariasis in 26 cases; sixteen among the women and 10 among the men. Triple infection was noted in three cases, all of whom were men, the parasites present being *Uncinaria americana, Ascaris lumbricoides* and *Trichocephalus trichiurius.* . . . Among the patients in this series are noted an actor, mechanic, housewife, educator, farmer, congenital deficient and several graduates from leading colleges and universities. . . . Cases are to be found in the different types of insanities, from the lowest to the highest form of psychosis. The congenital idiot, the simple dement, the precocious dement, the senile dement, manial-depressive cases, the morphinomaniac, the paretic and the paranoiac, all show a fairly equal distribution of the infection. It has been noted among the cases infected that no matter what the form of mental disease may be, depression exists, and those cases which ordinarily should show evidences of excitability and elation, are depressed and melancholy."

### A Plea for a More Vigorous Campaign Against Malaria

Dr. Graham E. Henson, Crescent City, under the above title, addressed the Association with a desire to "stimulate an interest that will result in a decrease of the scourge that constitutes such a large percentage of the morbidity in our Southern states." The education of the public, the destruction of the mosquito in larval and adult stages, the prevention of the development of the plasmodium in man, and the entire eradication of the parasite from an infected blood stream with isolation of the individual in so far as possible, were the classified prophylactic measures and methods stated as being necessary in a campaign to stamp out the infection.

DISCUSSION

Dr. J. H. Pierpont, Pensacola: In regard to the destruction of mosquitoes: During the yellow fever epidemic at Pensacola in 1905 I was city health officer and war was waged against the mosquito, primarily, of course, to stop the yellow fever. We found mosquitoes breeding in every conceivable place: little cups of water in the trees; in vases of broken crockery used in cemeteries for flowers; in roof gutters where limbs of trees had fallen and made dams, and only a few teaspoonfuls of water were necessary to breed many mosquitoes. We could find them everywhere. The war against them was waged successfully. That fall we destroyed practically all the mosquitoes and breeding-places in Pensacola. The city had charge of the work. We oiled large pools of water. In the ensuing summer Pensacola was practically free of mosquitoes. The people who had screened their houses the summer before and who screened them the next summr, who had mosquito bars put in in great numbers, in the middle of the summer of 1906 found no need for them. The screening around many of the porches was removed. But I am sorry and ashamed to speak of the blunder made in the following years in not continuing the work. Only $200 a year would be necessary to keep Pensacola free from mosquitoes; the city was urged to make the appropriation, and I urged it, but nothing was done. The next year (1907) we had mosquitoes, and there are more now. We had no malarial fever during the yellow fever epidemic, nor within the following two or three years, but it is now beginning to show up in the city and suburbs.

## SYMPOSIUM ON PELLAGRA

Dr. J. H. Randolph, Tallahassee: "The Nervous and Mental Symptoms of Pellagrins and What Can Be Done for Them."

Drs. G. J. Winthrop and H. P. Cole, Mobile, Ala. (by invitation): "The Value of Transfusion in Pellagra."

Dr. Raymond C. Turck, Jacksonville: "Pellagra Complicating a Laparotomy."

Dr. G. J. Winthrop presented the conclusions of himself and Dr. Cole based on studies by Lombroso, Babes, Tizzoni, Antonini and Gatti, and Marianni, that (1) Pellagra is an intoxication; (2) the toxic principles of pellagra exist in the blood of pellagrins and will produce pellagrous symptoms when transferred to other animals; (3) pellagrous serum exhibits definite precipitative, hemolytic and antitoxic properties; (4) an active immunity exists in cured pellagrins and an immunity can be artificially produced in animals.

"Our employment of transfusion in pellagra followed a series of laboratory experiments on blood transfusion in surgical shock in animals and was undertaken with the idea of combating the severe anemia noted in terminal pellagra cases and perhaps of transferring specific antibodies. The results obtained in this first transfusion, performed at the Mt. Vernon Hospital for the Insane, were so gratifying that we were led to try its value in other cases. The histories of twelve cases so far transfused are briefly cited. We would note that in a number of these cases we have been unable to secure donors recovered from pellagra, and healthy individuals, usually close relatives, have been employed. We believe that these non-pellagrous donors, chosen from individuals living under the same environment, eating the same food, and subject to the same possibilities of contagion, probably possess a certain amount of natural or acquired immunity.

"Of the 12 cases transfused six are dead and six are apparently recovered for periods of from five to twenty months. It must be considered that in these transfused cases every possible medical measure had been fully tried, and only continued downward course finally impelled transfusion. A mortality of 50 per cent. in such cases we consider low. It may be noted that of the six fatal cases three were evidently hopeless before transfusion. The seemingly remarkable results obtained in some cases have led us to attempt the operation in all cases, even though considered hopeless. We believe that earlier employment of transfusion would yield decidedly better results, at least it would furnish more reliable data on which to base an opinion as to the true value of transfusion.

"Feeling that transfusion is as yet in an experimental stage, we make no claim as to its final value. Our clinical and experimental experience suggests the following conclusions:

"1. A serum therapy will finally be established in pellagra. Until the perfection of this serum therapy transfusion may be offered to combat the existing anemia and possibly may be the means of transferring a degree of natural or acquired immunity.

"2. In certain selected cases, not benefited by medicinal agents, transfusion has been followed by immediate temporary and possibly permanent recovery.

"3. Without a thorough knowledge of the technic and dangers of the operation, or if the procedure is applied without careful selection of cases and donors, it will certainly be brought into an undeserved ill repute."

### DISCUSSION

**Dr. G. L. Winthrop**, Mobile: In a large number of cases the nervous manifestations seem to appear first. With the average case I believe the extraordinary intestinal symptoms first show, then the characteristic dermatitis and then the terminal stage of the disease showing the poisoning of the nerve cells themselves. In a certain number of cases nervous symptoms do show first and prior to the characteristic dermatitis. In these cases I think we should observe particular care in diagnosis. In the early cases where the patient has been gradually losing strength and weight for a month or more these nervous symptoms may be neurasthenic. I have noticed one particularly in which the patient, a woman, was sent to us as a possible pellagrin. The nervous symptoms were present. She was treated first as a purely neurasthenic or nervous patient and confined to bed for a while, but one morning she was put on the porch for the fresh air treatment and was exposed to the direct rays of the sun; the next morning there was noticed on the dorsal surface of the hand the characteristic dermatitis, the earliest eruption in pellagra I had seen. That made us rather positive of the diagnosis, and shortly afterward she developed other typical symptoms of the disease. All of our cases exhibited nervous symptoms. Attention has been called to the number of cases which are called *sine* pellagra; that is, without the pellagrous eruption. I believe there are cases which we should diagnose pellagra without the typical secondary symptoms, the nervous symptoms or the extraordinary intestinal symptoms. Particularly in those case which have been confined to the house and not exposed to the direct rays of the sunlight which seems to be necessary to bring out this pellagrous dermatitis. I believe that if we observe these cases which come to us showing nervous manifestations first we will be able to show that a large number of them are cases of true pellagra and not cases of that indefinite neurasthenic diagnosis.

**Dr. R. L. Harris**, Jacksonville: I had occasion to examine a patient the other day, over the abdomen, and breast, and found a number of brown, distinct spots; the woman was afraid of pellagra. These spots had been appearing for years; none have disappeared; she is absolutely well, not nervous, no intestinal symptoms. What is thought about this development?

**Dr. J. H. Randolph**, Chattahoochee: Without other symptoms, I would not feel justified in making a diagnosis of pellagra in that case. I think it better to look for some other explanation of the condition. Dr. Turck's paper was interesting to me because of the question of operations among the insane. It is a question that has agitated the mind of those having the care of the insane, more or less, at different times, and I feel that it probably shows the utility of resorting to operations to those presenting symptoms, with the hope of effecting relief from harmful abdominal or pelvic disorders. Cases have occurred in which such operations have been of good effect and the symptoms found to be quite resistent to any other means of relief. Some one has asked me whether in these cases of transfusion it is customary to operate more than once. Some of the cases which did not have such favorable results apparently gave variable symptoms after the first operation, and the question naturally arises whether further operative procedure was taken with the view of adding to the benefits already derived. I go a little further than Dr. Winthrop and am inclined to think that these nervous symptoms are almost always among the first presented. The treatment by transfusion appeals to me as the treatment *par excellence* in such cases, not only in the later stages, which, as I have said, is the only procedure of benefit, but in the earlier stages. Of course, I feel we should appreciate the fact that it is an operation or procedure which should not be undertaken by inexperienced hands.

**Dr. G. J. Winthrop**, Mobile: In two cases referred to in my paper, one, a male, aged 42, very little blood transfused, showed slight improvement, but this did not continue and patient died a month later. The other, a woman, aged 22, showed some improvement after first transfusion. We did second transfusion because we believed she had not received a sufficient quantity of blood. At the time of the second operation some time had intervened and her condition was such that we noted no improvement afterward. Very few of the patients have been transfused more than once, because the cases were so severe when we saw them that they either began to improve in a few days or were in such condition that transfusion absolutely afforded no help. On several occasions there has been marked edema after the operation. In the cases in which improvement was noticed by gain in weight, there was a disappearance of anemia and general better attitude of the patient. We have found that unless this change for the better takes place within the first week, that the case usually goes on to fatal termination. The question of donors has given no end of trouble. When only a few patients recover from the disease out of a large number, it is difficult to get donors. At present we have but two cured individuals who act as donors and we have nearly used up the strain from these patients and have to go elsewhere for blood. Usually relatives of the patients do as well. We undertake the operation willingly with healthy adults, being careful of the history of other communicable diseases, and have found the results in those cases to be very good. Transfusion in pellagra is in the experimental stage. We make no positive claims for the operation. We intend following up the subject and whatever conclusions we come to will be given to the profession and we will acknowledge publicly either the mistake or the success of the transfusion method.

**Dr. J. H. Colson**: I wish to mention a case which might perhaps throw some light on the etiology of pellagra. We have had some interesting discussions on hookworm disease, and I refer to that in order to convey the idea that I wish to express in this instance. About a year ago a German, aged 20, from a poor family, poorly nourished, hygienic conditions bad, was placed in the hospital. When I first saw the boy he was anemic, abdomen distended, edematous. I thought he had Bright's disease. His urine was tested for albumin with negative results. A microscopic examination revealed nothing of consequence. I next thought of uncinariasis and put him on treatment for that. He responded readily and began to improve materially. After I had given two or three courses of hookworm treatment, I put him on a supporting tonic. Color began to return, his strength increased, and he was discharged in six weeks as cured. He could take care of himself and do considerable light work incident to farm life. He was out of the hospital only a short while when he developed an eruption on his hand, back of his neck and face; in fact, on all surfaces exposed to the sunlight, very much like a burn of the first degree. That condition prevailed for some days and became intensified, and his color changed to more of a dark or leathery tint. After a month or six weeks' treatment, he again became normal. What was this eruption? I was of the opinion that it might be a kindred disease to pellagra. Will hookworm disease superinduce pellagra or will it be a contributing factor in the disease? I simply state this to show that in my experience hookworm disease and pellagra may be associated or that the two can exist simultaneously. There is no question in my mind but that this was a case of pellagra associated with hookworms. There were no nervous symptoms to any noticeable extent.

**Dr. J. H. Randolph**, Chattahoochee: I think Dr. Colson is on the right line. At the Hospital for the Insane we have made a similar diagnosis of a case of pellagra associated with hookworm disease. Many of us no doubt have failed to recognize pellagra in the past. The reference to sunburned condition recalls some cases reported at the Illinois State Hospital. I heard an address at the Pellagra Conference last fall in which he physician in charge there spoke of a condition existing mong his patients and having not recognized it he first ttributed it to burns for which he had discharged several of is hospital attendants, thinking they had been careless with he patients. Particular remedies applied in the early stages f pellagra bring magnificent results; whereas, if it is left ntil the last stages there are no such good results.

Dr. E. Porter Webb, Ponce de Leon: Less than two years go a patient came from Alabama to my office in the western art of the state, showing typical symptoms of hookworm isease. I put him on treatment and rid him of uncinaria, ut in about a month he too had developed a case similar to hat Dr. Colson reported; hands and face appeared as if urned, or as if iodin had been used on them; in fact, all urfaces exposed to the sun were in this condition. He had een kept in the house for a while, and then when he got utside this eruption developed. Not being acquainted with ellagra, I made no diagnosis, and the patient died. It seems hat pellagra is inclined to follow hookworm disease.

Dr. Hiram Byrd, Jacksonville: To some extent transfusion as been employed elsewhere, and it seems a thoroughly ational method of treatment; probably when we arrive at a omplete and satisfactory method, it will be in that direction. f not, some light will have been thrown on the subject nevertheless, and we will be aided in reaching the disease. But he phase of pellagra which is perhaps most interesting and n which most people keep silent, is the etiology. While the ornbread theory has popped up all over the country, still I ear it has put the profession in a wrong light before the eople in general. There had been enough said about cornbread and pellagra in the public press and in a general way o give everybody the one idea, or to give the laity, with few xceptions, the idea that the whole medical profession attributes pellagra to the use of cornbread. So far as I understand, t the present time the evidence is totally inadequate to fix he etiology in any direction, and I think it is a serious mistake for the medical profession to commit itself at the present ime to any theory. There is no conclusive evidence in that irection, and it appeals to me as a mistake which may have o be regretted and one which we may have to back down rom.

Dr. G. J. Winthrop, Mobile, Ala.: Lavinder, in one of the ublications of the U. S. Public Health and Marine-Hospital ervice, has, I believe, rather concisely stated the existing heories as to etiology. He accepts the old classification, the road one, of two groups: the zeists and antizeists; one claiming a definite relation between Indian corn and pellagra; the ther denying this connection and believing that pellagra is imply a symptom-complex occurring in various alcoholics, nsane persons and chronic diseases. I cannot but believe that ndian corn bears some relation to pellagra, and I believe that he general opinion of the country is in favor of some relation etween Indian corn and pellagra. The work of the Illinois tate Board of Health along this line promises a great deal f good. They went to work in a scientific manner, worked n it a number of months during the summer season, made areful blood examinations, examined the supplies of corn, nd out of this came the conclusion that Indian corn bears ome relation to the disease. I gather from some correspondence with the Italian physicians that there is a feeling mong them that pellagra is a specific infection due to some icroscopic organism, probably. I agree with Dr. Byrd, however, that the cornbread theory cannot be positively accepted ow. I have had one or two patients who positively deny ating cornbread at all. One was a boy of 8, a definite case, ith eruption on the dorsum of both hands, severe stomatitis nd diarrhea; he had the disease three years. In Mexico, here cornbread is very common as an article of food and ellagra is almost unknown, the people keep the cornmeal ovens before eating, thereby killing any organism present. n Italy ovens have been established where the disease is more revalent, and a decrease in the number of cases is claimed ince this method has been instituted.

Dr. Hiram Byrd, Jacksonville: Dr. Louis W. Sambon has ecently presented evidence that to his mind excludes corn aving anything to do with pellagra. A committee was ppointed by the British Medical Association, composed of such men as Lauder Brunton, William Osler, Patrick Manson, Leishman, Ross, Sanwith, Simpson, Dawson and Williams, to investigate pellagra. After hearing Sambon's discussion of the subject, they passed a resolution that his idea was worthy of consideration, and proceeded to gather funds for investigating the disease. Sambon was appointed to have charge of the work. The investigation is to look into the question of the sand-fly as serving as a transmitter of the disease.

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## MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND

*One Hundred and Twelfth Annual Meeting, held at Baltimore, April 26-28, 1910*

*(Concluded from page 1639)*

### The Importance of Thorough Teaching of Infectious Diseases of Childhood in the Medical Curriculum

Dr. Clemens F. von Pirquet, Baltimore: The average student leaves our medical schools without having seen many of the infectious diseases of childhood. Several reasons may be assigned for this apparent neglect of a thorough instruction in these diseases. A large number of medical schools have no hospitals of their own in which such teaching can be carried on in a satisfactory manner. Those schools which are more intimately connected with well-equipped hospitals labor under the disadvantage that these institutions do not admit cases of infectious disease. One of the most prominent reasons for this is the expense entailed by a proper care of these cases. Many communities insist that a hospital for infectious diseases ought to be removed from the city limits. This is certainly true of those infectious diseases which do not occur regularly in a community such as plague, cholera, smallpox. But there is absolutely no necessity for this in the case of those infectious diseases which occur constantly, many foci of which still persist within the city limits. Particularly in severe cases of diphtheria is it important to be within as easy reach as possible of the hospital. In the teaching of infectious diseases, we must again make the separation into two main groups. In the one belong the sporadic infections not endemic in a community; in the other, the common infectious diseases. With regard to the former, we must demand of the practitioner that he be well enough acquainted with the usual infectious diseases to realize that a case of such sporadic disease, if he happens to meet it, presents features which do not belong to the common infections. With regard to the teaching of the second group, it is not sufficient to have read the text-books or to have seen as many cases as even a man with a large practice encounters. Only a special training in a hospital for infectious diseases can give the teacher sufficient experience to instruct the student properly. To sum up, we come to the conclusion that the medical student should get a good training in the ordinary infectious diseases of childhood, in order to make the diagnosis with certainty, even in somewhat atypical cases, in order to apply the right therapy, to be able to make a prognosis, and in order to take the proper prophylactic measure; and, finally, in order to distinguish a case of the dangerous, unusual infections which involve a real danger to the community. For this purpose, it is not sufficient for the student to get a theoretical course or to see a case in the dispensary now and then, but he should be taught at the bedside by a teacher who has himself a thorough training in infectious diseases. To this effect wards for the common endemic infections should be attached to the hospitals of the medical schools. From the hygienic standpoint, this is not only not objectionable, but has many advantages. I hope that this body will endorse the importance of these demands, and that the American Medical Association will take up the matter and bring it to the general consideration of the profession.

## SYMPOSIUM ON UNCINARIASIS

### Introductory Address: Importance of Uncinariasis

Dr. William H. Welch, Baltimore: Both the profession and the laity are interested in this important topic. One of the most remarkable things about the disease is the mode of infection. Even though the parasite is an entozoan it enters the body through the skin. The possibility of infection through the alimentary canal, however, cannot be excluded. In general, the more severe the infection the graver the symptoms, though there are exceptions to this rule. A point of dispute is as to whether or not the anemia of the disease is the result of the suctorial activities of the worm. The Porto Ricans claim that the parasite does not suck blood, but Whipple and others have shown that it does. The toxic theory of the disease is still in a hypothetical stage. The disease has received an odium, especially in the South, making difficult the campaign against its suppression. The work of the Rockefeller Commission, with the establishment of which Dr. Stiles had much to do, will be carried on in large measure through the medium of the local health departments. Success in the fight against the hookworm means a general improvement of living conditions in the South.

### General Consideration of Uncinariasis

Dr. Charles W. Stiles, Washington, D. C.: The problem of uncinariasis involves practically the entire public health question in the South. In this country four different races are trying to live side by side—the white, black, yellow and red. It is impossible for four different species of animal to live together in this way. In 15 of the southern states the blacks form 34.44 per cent. of the entire population. In 8 of these states there are 833 blacks to each 1,000 of the whites. The cause of uncinariasis is the *Necator americanus,* on which the title of hookworm was originally bestowed by Fröhlich, who believed that the tail of the worm possesses hooks, though this is not true. In from 80 to 90 per cent. of all cases, and in all of the severe cases, infection takes place through the skin. A small proportion, including especially light cases, are the result of alimentary infection. The worms unquestionably suck blood, although this may not be observed if the cold worm is studied. The toxic theory deserves serious consideration. Among the common symptoms are anemia, prominent abdomen, the characteristic position of the hands due to the drooping of the shoulders, absence of the pubic hair, puffiness under the eyes, etc. The prevalence of the disease in the South is due (1) to the presence of the negro, and (2) to hygienic conditions; 61 per cent. of all the farms investigated in the South have not even a privy. The campaign against the disease must be one of cleaning up and of erecting sanitary closets throughout the South.

### Uncinariasis: Its Frequency, Distribution and Importance in North Carolina

Dr. W. S. Rankin, Raleigh, N. C.: Uncinariasis is by far the commonest and most important disease of the South. Of 104 college students examined by Nicholson and Rankin, 52, or 37 per cent., were infected. These students represented 25 counties in the state. In the eastern counties the disease is certainly more severe and probably more frequent than in the western counties. It is most frequent on a soil composed of an upper layer of fine, gray, compact sand with a substratum of clay about 6 or 10 inches below the surface. It is almost entirely absent on a soil of coarse sand, 6 or 8 feet deep. When the two races are together the disease is far more frequent in the white. It is a disease of the barefoot period of life, and rural rather than urban in its distribution. The importance of the disease rests on its frequency and its far-reaching effects. As a direct cause of death in the South, it is rare compared to the number of those who have it. The indirect effect of uncinariasis, however, usually places its victim among those who "rarely die of the disease with which they suffer."

### Climatic, Soil and General Conditions in Maryland with Reference to Uncinariasis

Dr. Marshall L. Price, Baltimore, based his paper on an exhaustive study of climatic, soil and hygienic conditions in Maryland, as a result of which he concluded (1) that uncinariasis is not now a prevalent disease in Maryland, and (2) that there is little probability of its becoming so in the future. This Dr. Price attributes especially to the general employment of the sanitary privy, and to the fact that practically all the people wear shoes.

### Clinical History and Pathology of Pellagra

Drs. William F. Lockwood, Harvey G. Beck and Caleb W. G. Rohrer, Baltimore: One of the earliest descriptions of the disease was by Thierry in 1775, at which time the disease prevailed in the Asturias in Spain. Later it appeared in France and Italy and at present it is found in almost all the provinces which limit the upper zone of the corn belt in Europe. Owing to the short season, corn is cut unripe and becomes diseased, and the prevalence of pellagra in these localities is attributed to the eating of this affected corn. The disease is also found in certain regions of Africa and South America. Pellagra was first recognized in the United States only a few years ago by Searcy, who reported an epidemic in the insane asylum at Mt. Vernon, Alabama; since then the disease has been found to prevail in a number of southern localities. So far 7 cases have been recognized in Maryland, 4 of which have been treated at the Mercy Hospital and form the basis of this report. Clinically, pellagra is characterized by 3 well-defined groups of symptoms, viz.: (1) gastrointestinal; (2) cutaneous; (3) nervous. The gastrointestinal symptoms are anorexia, nausea and vomiting, burning sensation in epigastrium, diarrhea, stomatitis and salivation. The stomatitis is perhaps the most characteristic of these symptoms. The tongue has been termed the "cardinal" tongue because of its color and diagnostic value. The oral mucous membrane, as well as the anal, shows the same degree of congestion and redness. The most characteristic group of symptoms are the cutaneous. These appear symmetrically as an erythema resembling a simple sunburn on parts exposed, as the dorsa of the hands and the face or on pressure points in bed-ridden patients. Bullæ may form within a few days. The skin becomes dry and rough and assumes a characteristic chocolate color. Exfoliation takes place either in small bran-like scales or large masses of skin which frequently leave bleeding surfaces. After exfoliation the skin remains atrophied and has a smooth and glistening appearance. These lesions usually appear in the spring and frequently pass through all stages successively two or three times. The nervous and psychic symptoms are marked. Mental dulness and apathy are distinctive features. The expression is serious, the memory is poor and the patients are slow to comprehend. Melancholia is common and insanity develops in a considerable number of cases. Vertigo is frequently complained of. Reflexes may be disturbed and the gait affected by degenerative changes in the cervico-dorsal part of the cord. Pain and tactile sense may be entirely lost over the lesion. There are two forms of pellagra described: (a) acute typhoidal, (b) chronic recurrent. The pathology of pellagra is not constant. Different observers have described different pathologic findings. These, however, are usually discussed under three heads: (1) the changes in the intestinal tract; (2) changes in the nervous system; (3) changes in the skin. The changes in the intestinal tract consist of atrophy of the muscular coat, with intense hyperemia and occasionally ulceration. The most constant post-mortem change is alleged to be degeneration of the lateral columns of the spinal cord, most pronounced in the dorsal region. The skin changes are erythematous in type. At first there is congestion, followed later by pigmentation, and finally by desquamation. Our first autopsy showed an additional feature, namely, the presence of granulomatous bodies in the walls of the superficial blood vessels of the lungs and brain, and also in the stomach, intestines, spleen, kidney and uterus.

### The Soy Bean as a Food in Diabetes

Drs. Julius Friedenwald and John Ruhräh, Baltimore: The soy bean (*Glycine hispida*), sometimes incorrectly called the soja bean, is an annual leguminous plant which originally grew in a wild state from Cochin China to the south of Japan and to Java. The soy bean has been known in the United States for many years, but until the last 15 or 20 years, only as a curiosity. A full account of the plant will be found in Farmers' Bulletin No. 58 of the U. S. Dept. Agriculture, and of the different varieties in the Bureau of Plant Industry Bulletin No. 98. The bean has been put to many uses. The yellow variety, grown in America, has the following composition: Water, 10.13 per cent.; protein, 34.63 per cent.; fat, 17.98 per cent.; nitrogen free extract, 30.50 per cent.; fiber, 3.69 per cent.; ash, 3.07 per cent. The most striking thing about the bean is the fact that it contains no starch, or, at least, a very small quantity, which is strange when one considers that it resembles the various beans very closely and that all other varieties of beans are extremely rich in starchy materials. The fact that the soy bean contains little or no starch suggests its use in certain diseases. One of us (Ruhräh) has already called attention to the use of the bean in infant feeding. It may be prepared in the form of gruel flour, gruels, broths, muffins, etc. In the eight cases of diabetes which we report the patients were placed first, on an unlimited diet, second, on the usual diabetic diet, third, on the usual diabetic diet together with the soy bean, the latter replacing largely the gluten or wheat bread. The percentage of sugar in the urine in these 8 patients with the 3 different diets, respectively, was as follows: Case 1, 1.5 per cent., 1.1 per cent., 9 per cent.; Case 2, 3.5 per cent., 2.1 per cent., 1.5 per cent.; Case 3, 3.2 per cent., 2.5 per cent., 2 per cent.; Case 4, 3.5 per cent., 2.4 per cent., 2.1 per cent.; Case 5, 2.2 per cent., 0.0 per cent.. 0.0 per cent.; Case 6, 4.1 per cent., 3 per cent., 2.5 per cent.: Case 7, 3.8 per cent., 3.1 per cent., 2.6 per cent.; Case 8, 4.3 per cent., 3.4 per cent., 1.9 per cent. We conclude: 1. The soy bean is a valuable addition to the dietary of the diabetic on account of ts palatability and the numerous ways in which it can be prepared. 2. The soy bean in some ways causes a reduction in percentage and total quantity of sugar passed in diabetic subjects on the usual dietary restrictions.

### Diagnosis of Ulcer of the Stomach and Duodenum by the Roentgen Ray

Drs. Harry Adler and H. E. Ashbury, Baltimore: The recognition of ulcer of the stomach and duodenum is always so important and at times so difficult that any method must be welcomed which promises aid in those atypical cases in which he absence of the cardinal symptoms permits only a suspicion or at most a presumption. The finding of blood in the stool, either occult or visible, has proved of great importance, but since even occult blood is often absent for weeks at a ime, this means of diagnosis is frequently unavailable. Murdock's orthoform test is usually untrustworthy. Our purpose s simply to call attention to the valuable aid the *x*-ray has urnished in a number of cases. There was little in the iterature to aid us. Hemmeter in 1906 spoke of the diagnosis of gastric ulcer by means of the *x*-ray, and referred to successful results in cases of artificial ulcer produced experimentally n dogs and cats. Our method is to give a single dose of bismuth and wait a time sufficient for the stomach to get rid of t, having determined in advance the motility. The picture is aken usually from four to six hours after the bismuth, which s given on an empty stomach. We have not found that the pinal column or ribs interfered with the demonstration. Of he 6 cases we report, 3 were undoubted cases of ulcer clinically; 1 was proved by operation. In 2 the diagnosis could be but presumptive without the *x*-ray examination. In 3 of he cases radiographs were made again, after carrying out ulcer treatment. In 2 the ulcer shadow had disappeared, in 1 t persisted. While the number of cases presented is small, he results are such as to lead us to believe that radioscopy s an extremely valuable aid to diagnosis, second in importance probably only to hematemesis or melena.

### Deductions from Ten Years' Experience with Local Anesthesia for the Operative Treatment of Ano-Rectal Affections

Dr. S. G. Gant, New York: This paper was based on an xperience with over 2,800 cases of anorectal disease in which local anesthesia had been used.

### ndications for and Relative Merits of Appendicostomy, Appendicocecostomy, Cecostomy, and Cecostomy with a Provision for Irrigating Both the Large and Small Intestine

Dr. S. G. Gant, New York, after an exhaustive consideration f these various operations, laid especial stress on his method f performing cecostomy, with a provision for irrigating both he large and small intestine. The apparatus used in this method was exhibited

## Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

### A National Department of Public Health

Since the last mention in this department the following bodies have passed resolutions endorsing the principles of the Owen bill (S. 6049) providing for a department of public health:

Ripley County (Ind.) Medical Society.
Columbia County (Pa.) Medical Society.
Lawrence County (Pa.) Medical Society.
Marion County (Iowa) Medical Society.
Gentry County (Mo.) Medical Society.
Washoe County (Nev.) Medical Society.
Winona County (Minn.) Medical Society.
Rutherford County (Tenn.) Medical Society.
Larimer County (Colo.) Medical Society.
Grafton County (N. H.) Medical Society.
Schenectady County (N. Y.) Medical Society.
Essex County (N. J.) Medical Society.
Worcester District (Mass.) Medical Society.
Wabash County (Ill.) Medical Society.
Nodaway County (Mo.) Medical Society.
Southeast Missouri Medical Association.
Tipton County (Ind.) Medical Society.
Camden County (N. J.) Medical Society.
Middlesex South District (Mass.) Medical Society.
Oklahoma County (Okla.) Medical Society.
Jefferson County (Ill.) Medical Society.
Parker-Palo-Pinto County (Texas) Medical Society.
Mercer County (Ill.) Medical Society.
Northern Iowa Medical Society.
Dekalb County (Tenn.) Medical Society.
Dover (N. H.) Medical Society.
Defiance County (Ohio) Medical Society.
Cass County (Ind.) Medical Society.
Nye County (Nev.) Medical Society.
Jefferson County (Ala.) Medical Society.
Philadelphia County (Pa.) Medical Society.
Genesee County (Mich.) Medical Society.
Washington County (Ill.) Medical Society.
Mahoning (Pa.) Presbyterian Men's Club.
New Hampshire Conference on Charities and Corrections.
Public Meeting of Citizens of Sydney, Ohio.
Physicians of Mandan, N. Dak.
Public Meeting of Citizens of Aledo, Ill.
Detroit Board of Commerce.
Oklahoma City Chamber of Commerce.
Physicians of Mason City, Iowa.
Citizens of Albany, Mo.
Citizens of Leadville, Colo.
Odd Fellows of Leadville, Colo.
Leadville (Colo.) Improvement Association.

NEWSPAPER COMMENTS

The following are a few of the editorial comments received:

The Natchez *News* says: "It needs no full elaboration of arguments to show that the health of approximately one hundred million inhabitants of the country is of equal importance with that of other matters of administration by the several departments. Laws as to sanitation, hygiene, prevention of disease, handling of epidemics, etc., can be carried out more successfully when the different bureaus now scattered in the several departments are consolidated into one in charge of a cabinet officer. . . . That the agricultural and industrial development of the country is possible only when the health of the country is good and that unnecessary waste of life and health are as injurious as the wasteful abuse of material resources is readily admitted by all. There is no doubt that if the bill is given careful consideration it will ere long become a law, to the lasting benefit of the country."

The Bellingham (Wash.) *Sunday Herald* says editorially: "Of all the plans of doctors and laymen none has in it greater merit and promise than that proposed by Senator Owen for the creation of a national department of public health. . . . We have been wasteful of our greatest national asset, the health of the nation, as we have been wasteful of our great natural resources. It is time to stop and take count—to notice what price we are paying—to see whether industrial supremacy is not costing too much, not only in wasted lives and in needless sorry and suffering but in cold, bare dollars and cents. It is a case not for sentimentality and theorizing but for hard common sense and the application of such knowledge as we now have. Every public health officer in the land, from the official in whose keeping is the health of the smallest town to the commissioners of health of our greatest states, should be able to turn to a full-fledged, properly equipped and widely experienced department in Washington for advice, support and relief. In many cases the health of whole communities is now endangered for lack of a central department able to advise with authority and of sufficient prestige to have its requests listened to with attention. . . . As the national Department of Agriculture has been of incalculable benefit to the farmer and the state departments of agriculture, so will a national department of health help the state and municipal governments to carry into every household and factory in the land the new gospel of fresh air, of decent housing, of factory legislation and of wages sufficient to enable the wage earner to maintain what we regard as an American standard of comfort. Senator Owen has performed a great public service in proposing this first adequate solution of our difficulties. If Congress would realize the change that has taken place in public sentiment during the last few years and the weight of the public demand for this bill, of which evidences are at hand at every turn, it is possible that congressmen would hasten at the present session to heed the wishes and united demand for a thoroughgoing reform of our outgrown and inadequate public health ligislation."

The Flint (Mich.) *Journal* says: "We must agree that it is quite as necessary to save men, women and children as pigs, lambs and goats, yet our national expression, disclosed in the present cabinet arrangements, would hardly indicate this to be true. It is not so long ago that Michigan passed through a siege of foot and mouth disease, at which time several cases of suspected animals were placed in quarantine in Wayne county. Immediately an embargo was placed on the entire state and the shipment of live stock of all kinds prohibited for a period of thirty days. There is no doubt but that action is quick and prompt and effective under federal control, as was evidenced in this case. But consumptives are still passing up and down our highways, coughing up their sputum, to await a favorable opportunity on pavement or street to be picked up in a whirling cloud of dust and carried into the noses and mouths of innocent victims. . . . Uniform regulation is of as much importance in matters of health, surely, as in railroad control or legal decisions. A department like the one in contemplation could gather accurate data on all questions of health and sanitation throughout the entire country and conditions and causes regarding all diseases could be carefully studied with the end in view that the chief causes of preventable diseases and unnecessary ill health could be established and the information widely distributed."

The Garland (Utah) *Globe* says: "The establishment of a department to carry on a war against the ravages of preventable diseases would be a godsend to the nation. . . . If this bill should fail to become a law the people would be to blame. . . . Let us unite in asking our legislators to vote for the passage of the bill. We have a Department of Agriculture that looks after the lives and health of plants and animals—why not have a national department of health to aid in saving the lives of the people?"

## Resolutions on Optometry

The following resolution was adopted at a meeting of the American Ophthalmological Society, May 4:

WHEREAS, The American Ophthalmological Society is strongly opposed to the so-called "optometry" bills, which are now being brought before our state legislatures; and

WHEREAS, This legislation is unnecessary, unwise and involves a lowering of medical standards; and

WHEREAS, There can be no compromise with its advocates from the medical profession.

*Resolved*, That if opticians must be recognized, it should be as opticians, and not under the new name of "optometrists;" that if there must be recognition, it should be legal only, and not medical, and that the medical profession should not lend its sanction by serving on optometry boards, or by taking "optometry" boards under the supervision of state boards of medical registration.

## POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

### Tenth Month—Second Weekly Meeting

### HYSTERIA

ETIOLOGY: Age, sex, race, heredity, neuropathic tendencies in antecedents, emotions, trauma, infections and toxic agents. Association with organic disorders, imitation.

SYMPTOMS: A, Stigmata and, B, accidents of hysteria.

STIGMATA: A. Sensory stigmata, (a) anesthesia, cutaneous anesthesia, perversion of taste and smell, diminished hearing, contracted visual field, dyschromatopsia, amblyopia. Distribution of anesthesia, one-half of body, geometrical areas and islets. Movable anesthetic zones. Condition of reflexes in anesthesia. (b) Hyperesthesia. Neuralgic pains. Sensitive areas, clavus, Brodie's joints, tender breasts, etc. Hystogenic zones. B. Motor stigmata. Retarded movements, inco-ordinate movements, weakened voluntary movements, "Diathesis of contracture." C. Mental stigmata. Amnesia, localized, systematized or total, aboulia, suggestibility, simulation.

ACCIDENTS OF HYSTERIA: A. Convulsive attacks; (a) grand attacks, prodromal stage, epileptoid period, period of clownism, of passional attitudes, of delirium; (b) modified attacks, vertiginous, globus, epileptoid, tetanic, ecstatic, syncopal, somnolent or somnambulic attacks. B. Motor accidents. Paralysis, hemiplegia, monoplegia, ptosis, torticollis. Contractures. Astasia abasia. Rhythmical spasms, tremors, tics. C. Sensory accidents, neuralgias, cephalalgias, pseudomeningitis, irritable spine, pseudoangina. D. Visceral accidents, (a) respiratory, aphonia, cough, noises, etc., dyspnea, hemoptysis, (b) digestive, anorexia, dysphagia, vomiting, tympanites, (c) urinary, polyuria, anuria, frequent urination, variations in constituents, (d) trophic and vasomotor, erythema and vesicular rash, bloody tears and sweats, dermographism, edema. Contractures and muscular atrophy. Hysterical breast. Hysterical fever.

## Book Notices

SURGERY OF THE BRAIN AND SPINAL CORD. By Prof. Fedor Krause, M.D., Geh. Medizinalrat Dirigierender Arzt am Augusta Hospital zu Berlin. Translated by Prof. Herman A. Haubold, M.D., Clinical Professor in Surgery, Bellevue Hospital and New York University Medical College. Vol. I. Pp. 282, with illustrations. Price, $6.00. New York: Rebman Co.

The first portion of this book is devoted to a brief description of the various methods of opening the cranium and of the instruments used for that purpose. The author manifests a distinct preference for the osteoplastic method by use of the Dahlgren forceps (which is of the type known in this country as Devilbis). Emphasis is placed on the dangers of hemorrhage from various structures, and the compression methods of Haidenhain and Kredel for control of scalp hemorrhage, and of crushing and packing for that from the bone, are given preference. The advantages of different methods of opening the posterior fossæ are discussed.

Following the mechanical procedure of exposing the brain, the decription of the surgery of each of the conditions calling for surgical treatment is fully presented. Chronic leptomeningitis, arachnoid cysts and cysts of the brain of various characters and their causes, are considered in order. Naturally, a considerable space is devoted to tumors. The surgery of brain tumors comprises a large part of the real progress made in brain surgery in the last decade. Greater accuracy in diagnosis, and especially in localization, together with the advantages of extensive exposures have made nearly all regions of the brain accessible and many of the heretofore unapproachable lesions are now removable.

The various forms of tumor and conditions involving the meninges and cortex, including tuberculosis and syphilis, are considered, and then follows a lengthy presentation of the surgery of the base of the brain, including that of the pituitary body and the nerves. The various details of operative procedures and of wound treatment are given in minutiæ, and the various possible complications and their prevention and treatment are fully discussed. The indications for and technic of decompression trephining are satisfactorily presented.

One of the shortest and most practical sections of the work, for the general surgeon, is that devoted to closure of large cranial defects. Cranio-cerebral topography and puncture of the brain and ventricles are also considered, and the last chapter is devoted to a very brief consideration of radiography.

The terse, clear and forceful text is illustrated by many drawings and fairly illumined by numerous colored plates, which accurately portray the appearances presented by the various pathologic processes and the operative measures.

American physicians are to be congratulated on being now ible to obtain in translation Krause's justly celebrated monograph, in which has been preserved, as far as possible, the uthor's peculiarly effective method of expression.

A System of Syphilis . Edited by D'Arcy Power, M.B., F.R.C.S., nd J. Keogh Murphy, M.D., M.C., F.R.C.S. In Six Volumes Vol. II. With an Introduction by Sir Jonathan Hutchinson, F.R.S. loth. Pp. 267, with illustrations. Price, $13.50. New York: xford University Press, 1909.

This volume contains 250 pages. In it Osler and Gibson of xford write on "Visceral Syphilis;" Mercier of Charing Cross lospital, London, on "The Clinical Aspects of General Paralsis:" Castellani of Colombo, on "Yaws;" S. B. Atkinson of the nner Temple, London, on "Medicolegal Aspects of Syphilis;" . M. Brockbank, London, on "Syphilis and Life Assurance;" laldin Davis of Paddington Green Children's Hospital, Lonlon, on "Serum Diagnosis of Syphilis." This volume is thus listinctly a British statement of the subjects considered; for ll of the writers on syphilis are Britons except Osler, and sler, to our loss, the British have appropriated.

Osler and Gibson's contribution constitutes a good brief nonograph on syphilis of the viscera. It gives a summary of ur knowledge of this subject, but we miss the complete consideration of the topics which their importance justifies. The ubjects, however, are covered fully, if briefly, and with its bundant references to the literature the monograph makes an dmirable beginning point for one desiring to make a full study f any topic embraced within its scope. Its value is greatly nhanced by twenty-four very instructive illustrations, those f microscopic objects being in color and beautifully reprouced. Mercier's article on general paralysis is admirable. It s detailed, logically developed, and forms a most readable rochure on the subject.

A chapter is given to yaws. Yaws is not syphilis, but the onsideration of yaws in a system of syphilis is pertinent ecause of the many close relations between the two diseases. he article is by Castellani, who, by virtue of his large experience with the disease in Ceylon and particularly by virtue of is discovery of the *Spirochæta pertenuis* as the specific organsm of yaws, is perhaps of all men the one best entitled to rite with authority on the subject. The interest of his rticle is much increased by a large number of illustrations lowing the *Spirochæta pertenuis*, experimental yaws in moneys, primary lesions of yaws in men, and various stages and pes of the later lesions of the disease in men. Aside from its terest as one of the important tropical diseases, yaws has a eculiar interest because of its many resemblances to syphilis nd Castellani's article is a welcome addition to the volume.

The article on some medicolegal relations of syphilis and on e one on syphilis and life assurance are good. Brockbank's rticle in particular on syphilis and life assurance is suggesve. It is full, with copious bibliography, and contains a rge mass of important facts bearing on the influence of syphis on life-expectancy. All of his facts indicate that syphilis an appreciable shortener of life. The last article in the lume is on serum diagnosis by Haldin Davis. His descripon of the technic is a clear description of a very complicated ubject and the article as a whole is satisfactory and up to te.

Taking this volume at large it is a useful statement of our owledge of the phases of syphilis of which it treats and it n be fully commended.

The International Medical Annual. A Year-Book of Treatent and Practitioner's Index. Twenty-Eighth Year, 1910. Cloth. ice, $3.50. Pp. 762, with 108 illustrations. New York: E. B. eat & Co.

This British publication under the editorial supervision of a mber of British and American physicians and surgeons corsponds with the year-books published in this country, but is one volume instead of in separate volumes for various groups subjects or time of year. The whole field of medicine and rgery is reviewed briefly, more space being given, of course, the important subjects, and considerable to the newer topics experimental medicine, with editorial comment, approving or sapproving certain theories, plans of treatment or operative ocedures. The book is well illustrated and offers a compreensive review of the year's work.

## *Medicolegal*

### Liability of Employer for Communication of Contagious Disease

The Court of Civil Appeals of Texas says that the case of Mellody vs. Missouri, Kansas and Texas Railway Co., of Texas, 124 S. W. R., 702, was brought to recover damages sustained by the plaintiff through the alleged negligence of the company in permitting one of its section houses to become infected with smallpox, which was communicated to him, destroying his eyesight. That the railway company would be liable for the spread of a contagious disease through the negligence of its servants acting within the scope of their authority, whereby another was injured as the proximate result of such negligence, was not at all questioned.

At the section house referred to, the plaintiff's father, a section foreman, resided with his family, and one Bryers, another section foreman, boarded. Bryers, it appeared, had gone to Palestine at the time there was an epidemic of what was called "black measles" in the city, talked at a distance of some 50 feet through an open window to his wife, who was quarantined, and arranged to take away their child, who was at another house some 50 feet away, obtaining for both himself and child health certificates from the city health officer. While on the train his child went near another one, whose mother said it had fever, and, as she had but recently lost her husband as a result of black measles, she feared the little one was afflicted in the same way. After being advised of this, Bryers did not permit his boy to go near the sick child any more. Some 15 days after he was brought to the section house he was taken sick with what proved to be smallpox, and it was learned that his mother died of smallpox. Two or three days after the boy was taken sick the roadmaster was at the section house, and the circumstances under which the boy was obtained, etc., were explained to him. Under such circumstances, the court does not consider that there was any liability on the part of the company in these cases.

A careful examination of all the testimony utterly failed, it says, to show actionable negligence on the part of either Bryers or the roadmaster in respect to placing or allowing Bryers' child to remain in the section house until its death, and therefore the railway company could not be required to respond in damages for the injuries sustained by the plaintiff on account of the house becoming infected with smallpox by the presence of Bryers' afflicted child, or because said disease may have been communicated to the plaintiff by actual contact with said child. Clearly, Bryers was not acting within the scope of his authority so as to bind the company up to the time of placing his child in the section house, and, in permitting the child to remain therein the short time which elapsed from the time he discovered the child was probably afflicted with smallpox and the time of its death, he could not fairly be charged with a failure to do what an ordinarily prudent person would have done under the circumstances of the situation.

## *Current Medical Literature*

### AMERICAN

Titles marked with an asterisk (*) are abstracted below.

### Boston Medical and Surgical Journal

*May 5*

1 *Exophthalmic Goiter. W. H. Robey, Boston.
2 *Recent Advances in Treatment of Exophthalmic Goiter. C. Frothingham, Boston.
3 *Need of Instruction and Experience in Nursing as Part of Medical Education. F. P. Denny, Brookline, Mass.
4 Physiology Versus Anatomy. G. V. N. Dearborn, Cambridge, Mass.

1. **Exophthalmic Goiter.**—Robey advises that the patient should be given first the advantage of medical treatment by whatever methods the physician can suggest and the patient has the means to adopt. The physician should, however, keep in close touch with his patient and should be watchful for

constantly increasing benefit from treatment. He should not allow his patient to grow worse nor to stand still in a condition of invalidism without the advice of an experienced surgical adviser and operator. It is unsafe to allow an exophthalmic goiter with distressing symptoms to continue without improvement because the toxemia sometimes exerts a sudden and alarming influence on the heart. Again, persons with well-developed exophthalmic goiter do not stand ordinary intercurrent infections which would hardly trouble a normal individual.

2. **Treatment of Exophthalmic Goiter.**—Frothingham gives a splendid review of all forms of treatment employed in this disease, and asks for more complete statistics. They should, he says, be classified according to the number of years since treatment was instituted. The same authors should compare simple medical treatment with that plus the special forms of treatment, such as operation, serum, etc.

3. **Instruction in Nursing as Part of Medical Education.**—Attention is called by Denny to the importance of nursing in therapeutics, because ignorance of nursing renders the physician's work less effective. He says that physicians need to have personal experience in nursing in order to prescribe treatment intelligently. His plan is as follows: Experience in nursing could be given men medical students in the male wards of a hospital. The students would do the nursing in the wards, under very careful and close supervision, the expense of the supervision being borne by the students' fees. The discipline should be very strict, military in character and good conduct and good work in the wards would be essential for a medical degree. As few patients as possible should be assigned to each student, so that the service rendered would be individual and personal. The students should be made to feel that they are responsible for the comfort of their patients. A nursing service of at least a month, preferably two months, should be required of each student. A part of the service should include night duty, as conditions are very different at night from the patient's point of view and a physician's knowledge of sickness is incomplete unless he has spent a number of nights at a patient's bedside. Combined with the experience in nursing there should be instruction in the various therapeutic measures which a nurse carries out. It could probably be arranged that most of the students should do their nursing during the summer, just as the engineering students have their "field work" at that time. During his nursing service the student will get closer to his patients than he ever has before or ever will again. Pictures of disease, expressions, posture, types of respiration, knowledge which cannot be obtained from books or lectures become impressed on the student's mind in a way that years of clinics would not do. For training in practical therapeutics, there is nothing in the present course to compare with it. Students will become familiar with the appearance, smell, taste, mode of administration and action of drugs. In no other way can the student so well learn the wealth of simple measures, which in the hands of an intelligent nurse, can be of the greatest comfort; for example, moist and dry heat, cold compresses, ice bags, packs, baths, rubbing, counter-irritants, etc. As a means of learning practical dietetics, this experience would have no equal.

### Medical Record, New York

*May 7*

5 Cellular Activity: The Epitome of Rational Medicine. M. A. Cleaves, New York.
6 Action of Intermittent X-Rays on General Metabolism and Chronic Degenerative Diseases of the Eye. F. R. Cook, New York.
7 The Significance of Leucorrhea. A. H. Goelet, New York.
8 Diagnosis of Lesions of the Abdominal Viscera: Special Reference to Their Functional Integrity. H. S. Carter, New York.
9 Streptococcus Infections of the Throat. R. McKinney, Memphis.
10 Abstraction of the Calcium Salts of the Lipoids Circulating in the Blood, for the Purpose of the Neutralization of the Organic Acids: Cause of Lipemia in Diabetes Mellitus. J. G. Drennan, Chicago.
11 *Practical Method of Anesthesia for Removal of Enlarged Tonsils and Adenoids and Other Operations on the Head. M. E. Jutte, New York.

11. **Anesthesia for Operations on Head.**—A wide-mouthed bottle with a double perforated rubber stopper, which holds two tubes, is used by Jutte. One tube reaches the bottom of the bottle, the other just passing through the stopper. The long tube is connected with a double bulb, the short one with a metal mouthpiece, such as is used by dentists. Narcosis is induced by the drop method, until the patient is well under. The metal mouthpiece is hooked around the mouth gag and ether vapor is forced into the mouth of the patient by a rubber bulb. Jutte says that narcosis can be kept up for a long time.

### New York Medical Journal

*May 7*

12 *The Significance of the Various Enlargements of the Thyroid: Especially Exophthalmic Goiter.. C. Beck, New York.
13 Norway for Neurasthenia. C. E. Nammack, New York.
14 Serodiagnosis of Syphilis. V. C. Pedersen, New York.
15 Heredity as a Factor in the Etiology of Tuberculosis. E. L. Shurley, Detroit.
16 Interesting Points in Gastrointestinal Surgery. T. C. Witherspoon, Butte, Mont.
17 Fibroid Tumors Complicating Pregnancy. E. G. Torrance, Birmingham, Ala.
18 *Where Shall the Pharmacopeia Draw the Line of Demarcation? S. S. Cohen, Philadelphia.

12. Abstracted in THE JOURNAL, Oct. 23, 1909, p. 1426.

18. **Revision of Pharmacopeia.**—The Pharmacopeia, says Cohen, is a book of pharmacal standards and neither an advisory nor a minatory work on therapeutics. Admission or rejection should depend on the voice of the whole profession, and not on the voice of teachers or leaders only, whether pharmacologists, clinicians or therapeutists. Many preparations of one drug are permissible, when desired by physicians in general. Many drugs of similar action are permissible and even necessary. Active principles should not displace the crude drug and galenical preparations, unless physicians in general all agree that the active principle is the only necessary or desirable preparation. Monopolization by patent or trademark should not exclude a drug otherwise proper to be admitted. In the case of trademarked names legal advice should be taken as to the best method of procedure. In the case of process patents and product patents, the effort should be made to use pharmacopeial control and standardization to the mitigation of the evils of high price and uncertainty of product possible under the present bad system. A determined effort should be made to modify the laws of the United States so that in the case of medicines, processes only, and not products, can be patented. Trademarks can only be manufacturers' brands, and hence the common name of a medicine cannot be used as such. If this is not good law at present, it should be made such by statute.

### Medical Fortnightly, St. Louis

*April 25*

19 Treatment of Diseases of Skin Pigmentation. A. S. Ashmead, Canadensis, Pa.
20 Are Elections in the American Medical Association and Its Constituent Associations Fair and Legal? G. F. Lydston, Chicago.
21 Progressive Muscular Dystrophy of the Juvenile Type. J. M. Bradley, St. Louis.

### American Journal of Urology, New York

*April*

22 Diagnosis of Essential Hematuria. R. L. Rigdon, San Francisco.
23 Acute Fulminating Gangrene of the Penis and Scrotum, with Known Port of Entry, ending Fatally. J. A. Gardner, Buffalo.
24 Influence of Resection of the Kidney on the Function of the Organ: When Kidney Wound is Closed by Sutures; When the Kidney Wound is Drained (a) by a Rubber Tube, (b) by Gauze. J. H. Cunningham, Boston.
25 Use of Collargol in Genitourinary Surgery. O. Pasteau, Paris.

### Illinois Medical Journal, Springfield

*April*

26 *Indications for Herniotomy in Inguinal Hernia. E. S. Judd, Rochester, Minn.
27 Bad Nauheim: Its Treatment and Therapeutic Value. J. H. Honan, Berlin, Germany.
28 Recognition of Extrauterine Pregnancy. A. M. Miller, Danville.
29 *The Baby-Tent Idea. F. W. Allin, Chicago.
30 Diagnosis of Rachitis. J. W. Van Derslice, Chicago.
31 Survey of the International Movement Concerning Infant Welfare. I. A. Abt, Chicago.
32 Complete Excision of the Tonsil. J. W. Smith, Bloomington.

33 Arteriosclerosis of the Urinary Bladder. G. Kolischer and H. Kraus, Chicago.
34 Vesicovaginal Fistula. C. J. Drueck, Chicago.
35 Nervous Symptoms in Diabetes. L. H. Mettler, Chicago.
36 The Ten-Hour Law. E. Freund, Chicago.
37 Compressed-Air Illness. P. Bassoe, Chicago.

26. **Herniotomy in Inguinal Hernia.**—The simplest and most tisfactory way of treating inguinal hernia in children, cording to Judd, is by operation, and the chief indication for rforming it is the trouble and consequent anxiety to the other in caring for the child in this condition. Herniotomy, says, is the only safe method of treating inguinal hernias adults. The operation can be done with much better satisction and more safety in old people than was formerly lieved.

29. **The Baby-Tent Idea.**—The equipment of the tents used Chicago consists of a hospital tent about 12 by 16 feet, ith a double roof, board floor and sides, and screen sides oove the chair rail. Each contains 8 iron beds, a hammock, ectric lights, 2 electric fans and a telephone. There is also receiving tent, about the same size, for examining, bathing nd temporary care of the baby. Milk-commission milk has een used almost exclusively, as a milk depot was maintained each tent. The tents are opened about July 1 and closed about eptember 15. The tents are kept open nights and Sundays ly in extreme emergency of either very sick patients, or verely hot weather, to prevent the usual "blue Monday," r it was noted Monday was the worst day of the week. A siting nurse is in charge of each tent, with one or two ssistants. When the work justifies, an intern spends all y at the tent. Every day some physician visits the tent. he arrangements are such that each physician visits a tent vice a week. Only patients under about 2 years of age are ceived, as those older could not be kept in the beds. Only bies of the poor are taken. When it can be determined rough the visiting nurse of the district that the parents are ble to pay they are referred to their family physician. A rge proportion of these little sufferers are brought in or sent by the district visiting nurse. When patients fail to return ey are investigated by the visiting nurse.

### Journal Missouri State Medical Association, St. Louis

*April*

38 Plea for an Early and More Careful Diagnosis in Joint Tuberculosis in Children. A. O'Reilly, St. Louis.
39 Intestinal Obstruction: Especially Intestinal Paresis. T. E. Potter, St. Joseph.
40 Excision with Immediate Suture Operation for Fistula-in-Ano. E. H. Thrailkill, Kansas City.
41 Dystocia Due to Cesarean Section. G. Gellhorn, St. Louis.
42 Human Tuberculosis Considered from Several Viewpoints. G. Homan, St. Louis.
43 The State Laboratory as a Safeguard to Public Health. G. McConnell, St. Louis.
44 The Early Diagnosis and Surgical Treatment of Cancer of the Stomach. C. R. Dudley, Hannibal.
45 Excision of the Rectum. W. H. Coffey, Kansas City.
46 Ovarian Tumor Complicating Pregnancy: Recovery after Operation. D. Forester, St. Louis.
47 Tumors of the Parotid Gland. F. Reder, St. Louis.
48 The Missouri State Sanatorium. O. H. Brown, St. Louis.
49 Ophthalmologic Experience. B. Pitts, St. Joseph.

### Archives of Internal Medicine, Chicago

*April*

50 *Sexual Forms of Malarial Plasmodia Occurring in the Blood of Man. C. W. Craig, Washington, D. C.
51 The Comparative Value of Vasomotor Drugs in Renal Hemorrhage. C. J. Wiggers, Ann Arbor.
52 *Relation of Typhus Fever (Tabardillo) to Rocky Mountain Spotted Fever. H. T. Ricketts and R. M. Wilder, Chicago.
53 Perforating Ulcer of the Foot in Alcoholic Neuritis. R. M. Van Wart, New Orleans.
54 *Influence of Scopolamin-Morphin Narcosis on Metabolism. F. M. Barnes, Baltimore.
55 Physiologic and Pathologic Effects of Severe Exertion (Marathon Race) on the Circulatory and Renal Systems. J. H. Barach, Pittsburg, Pa.
56 *Protein Metabolism in Pneumonia. C. G. L. Wolf and A. Lambert, New York.

50. **Sexual Forms of Malarial Plasmodia.**—From what is id by Craig regarding the action of quinin on the malarial ametes it is evident that if we thoroughly treat our malarial atients during the initial attack of the disease we shall preent the formation of these bodies, and, therefore, the transission of the infection to the mosquito. A great deal of the alaria prevalent in every malarial locality is directly traceble to improperly treated patients, and the prophylaxis of e disease will be immensely helped by the thorough treatment of every infection. The practice of regarding such infections as cured because the active symptoms have disappeared is a most common and a most pernicious one and one that is responsible for the transmission of a very large proportion of malarial disease. Every malarial patient, he asserts, should be kept on quinin for at least a week or two after the disappearance of symptoms, and should take the drug, in 10-grain doses, once a week for 2 months after the acute attack.

52. **Typhus and Rocky Mountain Spotted Fever.**—The serum of typhus convalescents drawn within a week to 10 days, after the subsidence of fever, Ricketts and Wilder found did not exert any more protective effect against spotted fever than normal serum does. Also, such serums show little or no more agglutinating effect for the bacilli which appear to be associated with spotted fever than do normal serums. A monkey which had been rendered immune to typhus was not immune to spotted fever. These experiments, the authors believe, substantiate the clinical evidence and that obtained by animal inoculations, that spotted fever and typhus fever are not identical, and they seem also to indicate that the organisms of the two diseases are not closely related biologically, whatever the morphologic conditions may be. The fact also that the serum of a disease (typhus) which is roughly similar to spotted fever, has no unusual agglutinating power for the bacilli mentioned, as compared with the high agglutinating power of immune spotted fever serum, supports the contention that this bacillus bears a causal relation to spotted fever.

54. **Scopolamin-Morphin Narcosis in Metabolism.**—Barnes believes that the points brought out by his observations justify the following conclusions:

1. Scopolamin-morphin when given together in sufficient quantity and when leading to a depression of activities cause a decrease in the absolute amounts of nearly all of the normal constitutents of the urine.
2. Scopolamin alone, when it leads to an elevation of activities, causes an increase of such constituents.
3. The increase or decrease affects all constituents about equally.
4. The effect of both drugs together or of the scopolamin alone is shown transiently not more than 12 hours and perhaps less, and on the day following the administration of the drugs the variation is partly counterbalanced by an increase or decrease, as the case may be.
5. Repeated doses of both drugs together over a long period of time will lead to a form of tolerance.
6. The influence on metabolism, as indicated by the variations in the urinary secretion, seems due to an indirect and secondary action of the drugs. The retardation of absorption from the alimentary tract is considered the prime cause for the variations found in the urine during these studies.

56. **Protein Metabolism in Pneumonia.**—Wolf and Lambert examined the nitrogen and sulphur metabolism in 19 cases of pneumonia of varying degrees of severity. They found that the cases of milder type show a smaller loss in nitrogen and sulphur than do those of a more severe grade. The daily loss in nitrogen on a diet adequate to protect a resting individual from nitrogen loss may be from 20 to 25 gm. The relative desamidating capacity, as shown by the ratio of urea nitrogen to total nitrogen, is comparable to that of a normal subject. The capacity for the oxidation of the cystin group, as exhibited by the ration of total sulphate sulphur, is quite as high, if not higher than normal. During the period of hyperpyrexia excessive amounts of creatinin are eliminated. This is followed during convalescence by a subnormal excretion of creatinin. This is taken to indicate the endeavor on the part of the organism to repair the losses sustained during the height of the toxemia.

In the severe cases of pneumonia large amounts of creatin are also excreted. This is seen particularly during the time of greatest nitrogen loss. During convalescence the creatin disappears from the urine. In some of the lethal cases the amount of creatin excreted on the day terminating the illness is as high as the amount of creatinin excreted. During hyperpyrexia, especially in cases severely toxic in type, unusually high amounts of undetermined nitrogen are excreted. In some cases over 5 gm. of nitrogen derived from uninvestigated substances are found in the urine. The nitrogen is not derived from albumoses, as the search for these substances revealed quantities which in no way could account for the large amount of rest nitrogen. The sulphur excretion runs more or less parallel with that of the nitrogen; but it appears in some of the cases that the catabolism of proteins rich in sulphur is not so marked as those in which the content of sulphur is small. On the other hand, cases progressing unfavorably seem to show an excessive destruction of proteins containing much sulphur. This is made out from the increased ratio of total sulphur to total nitrogen.

### Iowa Medical Journal, Des Moines

*April*

57 Etiology, Pathology and Symptomatology of Cholecystitis. E. W. Meis, Sioux City.
58 Complications, Sequelæ and Diagnosis of Cholelithiasis. J. L. Klein, Muscatine.
59 Treatment of Cholelithiasis. C. E. Dakin, Mason City.
60 Malignant Disease of the Biliary Tract. E. H. Robb, Detroit Harbor, Wis.
61 Cerebrospinal Meningitis. G. M. Johnson, Marshalltown.
62 An Epidemic of Infantile Paralysis. J. W. McCreery, Whittemore.
63 Plea for Better Supervision in the Treatment of Acute Exanthemata. C. S. Grant, Iowa City.
64 Plea for the Revival of Venesection. J. H. Schrup, Dubuque.

### Western Medical Review, Omaha

*April*

65 Syphilis of Bone. A. C. Stokes, Omaha.
66 Determination of Eyestrain by the General Practitioner. H. B. Lemere, Omaha.
67 Hematuria. R. R. Hollister.
68 Rubella. F. W. Phifer, Wheatland, Wyo.

### United States Naval Bulletin, Washington, D. C.

*April*

69 The Commissary Department in Naval Hospitals. P. A. Lovering, U. S. Navy.
70 *The Presence of the Lepra Bacillus in the Circulating Blood. G. B. Crow, U. S. Navy.
71 The Finding of Hookworm in American Samoa. P. S. Rossiter, U. S. Navy.
72 Prevention of Venereal Diseases in the Navy. R. Spear, U. S. Navy.
73 Rational Treatment of Arteriosclerosis. C. H. T. Lowndes, U. S. Navy.
74 Treatment of Syphilis at Hot Springs, Ark. W. S. Hoen, U. S. Navy.
75 A Portable Sanitary Scuttle-Butt. E. G. Parker, U. S. Navy.
76 Suggestions for Diet-Kitchen Equipment. S. Wierzbicki, U. S. Navy.
77 Colonic Anesthesia. W. S. Pugh, U. S. Navy.

70. **Lepra Bacillus in the Circulating Blood.**—After satisfying himself of the diagnostic value of Rosenberger's method of demonstrating the tubercle bacillus in the circulating blood, Crow began an examination of the blood of the patients in the leper colony here in Guam. The technic used is practically that of Rosenberger. Sixteen cases were examined. In 15 the blood contained a bacillus which morphologically and in staining reactions is identical with the lepra bacillus. In some cases only a few were found and then only after prolonged search; in other cases they were quite numerous. They occurred singly and in groups with varying frequency, and did not appear within leucocytes as often as did the tubercle bacillus; many were beaded. In almost every case some of the organisms, but not all, showed the long, slender, spindle-shaped outline characteristic of those found in the nasal discharges and in leprous nodules. The negative case shows clinical evidence of the disease.

### Denver Medical Times and Utah Medical Journal

*April*

78 The Complement Fixation Test for Syphilis (Wassermann Reaction) by the Bauer-Hecht-Fleming Method. B. Oettinger, Denver.
79 Quinin and Urea Hydrochlorate as a Local Anesthetic. F. M. McCartney, Denver.
80 Is Alcohol Necessary in Medicine? F. G. Byles, Denver.
81 A Substitute for Belocq's Application of Tampon and a very Rare Case of Sarcoma Ossis Turbinalis. Z. V. Dworzak, Denver.
82 Moral and Physical Advantages to be Derived Under the Library and Gymnasium Act, 1909. E. E. Hinckley, Provo, Utah.
83 Mistakes in Tabes Dorsalis. W. B. Ewing, Salt Lake City.

### New Orleans Medical and Surgical Journal

*April*

84 Beck's Bismuth Paste for Diagnosis and Therapeutics. H. B. Gessner, New Orleans.
85 Etiology of Infantile Diarrhea. C. W. Duval, New Orleans.
86 Pulse Tracings—Their Application and Value in Practice. I. I. Lemann, New Orleans.
87 Plea for Enforced Vaccination in the State. R. O. Simmons, Alexandria, La.
88 Vital Statistics. B. A. Ledbetter, New Orleans.
89 Work of the Louisiana Antituberculosis League. E. L. McGehee, New Orleans.
90 The Symptomatology of Empyema of the Frontal Sinus. G. W. Robinson, Shreveport, La.
91 Pathologic Relations Between the Frontal Sinus and Diseases of the Eye. H. Dupuy, New Orleans.
92 Etiology of Frontal Sinusites. G. King, New Orleans.
93 Treatment of Empyema of Frontal Sinuses. R. F. Harrell Alexandria, La.
94 Ethyl Chlorid as a Local Anesthetic. H. B. Gessner, Nev Orleans.

### American Journal of Orthopedic Surgery, Philadelphia

*May*

95 *Operative Remodeling of the Tarsus for Immediate Correctio of Severe and Relapsed Forms of Club-Foot. B. Bartow Buffalo.
96 Experimental Work with Materials for Plugging Sinuses an Bone Cavities. P. Le Breton, Buffalo.
97 Spina Bifida: Its Relation to Orthopedic Surgery. D. La Ferte, Detroit.
98 Static Foot Error in Private Practice. A. H. Williams Hartford, Conn.
99 The Rôle of the Foot and Leg Muscles in Flat-foot. H. W Orr, Lincoln, Neb.
100 *Tendon Transplantation in Flat-foot. E. W. Ryerson, Chicago
101 Modifying Injections in Treatment of Tuberculous Osteo arthritis. P. Redard, Paris.
102 The Epiphysis: Especially Retardation and Stimulation o Growth. W. R. MacAusland, Boston.
103 *Two Unusual Results Following Fracture of the Shaft of th Femur. J. Ridlon, Chicago.
104 Congenital Pronation of the Forearms. C. F. Painter Boston.
105 Bone Wiring: Retroversion of Upper Extremity with Operation for Correction; Interpelvic Exfoliation with Remova through Suprapubic Cystotomy. S. L. McCurdy, Pittsburg
106 Congenital Absence of Vertebræ Below the First Sacral, an Malformation of the Lower Cervical and Upper Dorsa Vertebræ. R. R. Fitch, Rochester.

95, 100. Abstracted in The Journal, Aug. 7, 1909, pp. 478 479.

103. **Results Following Fracture of Femur.**—Five years ag a well-grown, healthy girl, aged 8 years, was thrown from a horse and suffered a fracture of the left femur near the junction of the middle and upper thirds of the shaft of that bone It being impossible to adjust the fragments satisfactorily, an there apparently being no union at the end of two weeks, th fractured bone was set by an open operation. The operatio wound healed under the first dressing. A pressure sore developed on the heel and another on the dorsum of the foot of th injured limb as a result of the traction. About two month after the operation keloids began to develop in the scars o the pressure sores and the operation wound. At that tim the limbs were of the same length as measured by the operating surgeon and the consulting orthopedic surgeon. But afte a year it was found that the fractured limb was longer tha the other. Two and one half years after the accident, th limb measured an inch longer than the other. Five years afte the accident the limb measured two and one-quarters inche more than the uninjured limb. The girl is large, well an active, and, except for the elevation on the shoe of the uninjured side, is unconscious of her disability. In this case ther was never any evidence of any injury at any of the epiphyseal junctions; and the appearance of the femur in the *x*-ray picture appears to be conclusive evidence that the increased growth has taken place in the shaft of the bone at the point where it was broken.

The other patient was a boy of average height and slende build, 14 years old. On Nov. 27, 1908, while playing foot-bal he sustained a fracture of the right femur in the upper par of the shaft. Five and one-half weeks after the accident union appeared to be firm, but the thigh was bowed outwar and forward in its upper part, and the limb was 2¼ inche short. Six weeks after the accident Ridlon applied hi stretching machine, refractured the femur, made the limb straight, and put it up in full normal abduction, extendin from the plaster boot a spica well up on to the ribs. Afte 2 or 3 days the patient complaining of his heel, a hole wa cut and a blister found which ultimately became a pressur sore. There being complaints of the dorsum of the foot, th plaster boot was soon removed. From time to time th plaster spica was shortened at the top and at the botton until the knee was free, also the ribs on the right side. Afte 6 weeks the boy was allowed up on crutches, and encourage to bear some weight on the limb, but it was 12 or 14 week before he could walk without his crutches and without pai or weakness. Sixteen weeks after the operation, and 2 weeks after the accident, the splint was removed. The lim was straight and measured ¾ inch less than the other, th gain in length having been 1½ inches. The *x*-ray pictur made at this time shows that the lengthening resulted mainl perhaps wholly, from the pulling downward of the lower fragent. Instead of overlapping the upper fragment 2 inches or ore it overlaps it a half-inch or less. Although the *x*-ray cture shows great deformity still present in the bone, the nb as a whole is straight, and the long period of full abducon more than compensates for the ¾ inch of real shortening, d the limb is still practically so long as to be in his way hen walking without an elevation to the shoe of the uninred leg. The results in this case demonstrate the usefulness the stretching machine in fracture of the shaft of the mur, Ridlon says, when it is desired to treat such fractures ith a plaster splint.

### Yale Medical Journal, New Haven

*April*

7 The Army Medical Service. C. F. Craig, U. S. Army.
8 *Fifty Cases Treated by Bacterial Vaccines. J. W. Fisher, Middletown, Conn.
9 Problem of Finding Employment for Tuberculous Individuals. M. G. Markham, New Haven.

108. **Bacterial Vaccines.**—The 50 cases reported by Fisher curred in the services of the physicians of the Connecticut ospital for the Insane and the adjoining city. Fisher preired vaccines for all of them. They included 18 different contions and 7 different types of bacteria. Of the 50 patients, recovered much more rapidly than would be expected under sual treatment. One left the hospital after one injection; 2 ed; both the latter were practically moribund when treatent was begun. The cases included one of appendical oscess; a suppurating sinus of the leg; two cases of metritis, idometritis and pyosalpinx; 1 case each of hay fever; bronchial sthma; abscess of the gall-bladder; pyelonephritis; infection the hand; 6 cases of pneumonia; 3 cases of coryza; 4 cases acne.

### West Virginia Medical Journal, Wheeling

*April*

10 The Early Recognition of Tuberculosis. E. Cummings, Hinton.
11 Appendicitis and the General Practitioner. W. W. Golden, Elkins.
12 Institutional Specialism. T. L. Barber, Charleston.
13 Abortifacient Drugs Simulating Frequently Observed Diseases. G. R. Davis, Price Hill.

### The Ohio State Medical Journal, Columbus

*April*

14 Major Smith's Operation for Cataract. J. W. Millette, Dayton.
15 Clinical Aspects of Visceral Arteriosclerosis. J. H. Schroeder, Cincinnati.
16 Treatment of Clubfoot in Infancy. A. H. Freiberg, Cincinnati.
17 Fistula-in-Ano with Special Reference to Tuberculosis. G. B. Evans, Dayton.
18 Adenoids. G. C. Schaeffer, Columbus.
19 Causation of Extrauterine Pregnancy. J. W. Rowe, Cincinnati.
20 The After-Care of the Insaue. G. H. Williams, Columbus.

### Bulletin Johns Hopkins Hospital, Baltimore

*April*

21 The Occurrence of Goiter (Active Thyroid Hyperplasia) in Fish. D. Marine and C. H. Lenhart, Cleveland, Ohio.
22 Presentation of a Portrait of Dr. Ferdinand Edme Chatard to the Medical and Chirurgical Faculty of Maryland. J. W. Williams, Baltimore.
23 Cutaneous Distribution of the Superficial Ramus of the Radial Nerve and its Compensatory Extension. I. Hardesty, Berkeley, Cal.
24 Primary Union after Mastoidectomy. H. O. Reik, Baltimore.
25 Present Attitude of the Tuberculosis Nurse Toward Her Work. E. N. La Motte, Baltimore.

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## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical ctures, single case reports and trials of new drugs and artificial oods are omitted unless of exceptional general interest.

### Lancet, London

*April 23*

1 Treatment of Chronic Disease. R. F. Fox.
2 Diagnostic Value of the Chemical Analysis of the Gastric Contents After a Test Meal. W. H. Willcox.
3 Acute Arthritis of Doubtful Origin. G. B. Buchanan.
4 *A New Method of Treating Acute Pulmonary Tuberculosis by the Alternate Use of Human and Bovine Tuberculin. H. W. Crowe.
5 *Treatment of Exophthalmic Goiter with the Milk of Thyroidless Goats. W. Edmunds.
6 Case of Typhoid Spine. E. R. Carling and L. R. King.
7 *The Minute Structure of the Thyroid. D. C. Watson.

4. **New Method of Treating Acute Phthisis.**—Crowe has found hat a prolonged reaction resulting from the use of either human or bovine tuberculin can be cut short by a dose of the other, provided that there has been developed some degree of hypersensitiveness to the form of tuberculin which excites the reaction. A start is made by an inoculation of 1/100,000 milligram of T. R. (or the bovine tuberculin—P. T. R.—in the most acute cases, as it appears slightly less liable than the former to cause acute reactions). This dose is repeated and gradually increased once in from 7 to 10 days until a definite febrile reaction is provoked, accompanied by signs of an exacerbation in the disease, malaise, etc. The reaction may not appear for 3 or even 6 days after an inoculation, hence the interval between the doses.

This rise of temperature is allowed to continue until it seems to be steady at the higher level or until the physical condition of the patient causes alarm, when a dose of P. T. R., half the quantity of the exciting dose of T. R. (but not as a rule less than 1/100,000 milligram) is inoculated. The next day the temperature may remain up, but the day after, at latest, it will fall, and after a few days there will be found to be a definite improvement in the physical condition of the patient and also in the local lesion. This inhibitory dose is the exception above referred to. It is now advisable to rest for a time, say a fortnight, or until the temperature has again risen, when the same dose of P. T. R. must be repeated and gradually increased, until for a second time a febrile reaction is induced, when it will be found that a dose of T. R. will not have the effect of cutting short the P. T. R. reaction.

Crowe maintains that on general principles autoinoculations should have a greater effect in influencing the course of phthisis for good, than artificial tuberculin; that is, regarding tuberculin merely as an agent which stimulates the system to produce antibodies. But tuberculin itself causes autoinoculation. The power to stop an autoinoculation at will diminishes this danger. By using T. R. and P. T. R. in an alternating fashion, while the patient becomes sensitized to the one form, the power to prevent mischief is vested in the other, and on a continuance of inoculation of that other the inhibitory action is transferred to the former. For a full development of this inhibitory action hypersensibility should be developed, hence small doses should be used because an autoinoculation effect after the first dose or two is not desirable.

5. **Treatment of Exophthalmic Goiter.**—To the 15 cases previously reported Edmunds adds 4; 3 of the patients were benefited by the milk. Few of the first 15 patients could be traced—and only one of these is in good health.

7. **Minute Structure of Thyroid Gland.**—The examination of the thyroid by Watson in a series of wild rats, all apparently healthy, has shown wide variations in the histologic appearances of this gland. The source from which the animals were obtained was noted in all instances. Watson is of the opinion that the effects observed indicate that modifications in structure and function of the thyroid occur in association with different environmental conditions. Diet may have been the chief factor in inducing the modifications of structure. In this connection it is of interest to note that it was observed that the thyroid of all the animals from any one source invariably presented the same general characters.

### British Medical Journal, London

*April 23*

8 *Surgical Treatment of Certain Cases of Glycosuria. A. W. M. Robson.
9 Activity of Cells and Fluids of the Body in Prevention and Cure of Disease. J. M. Beattie.
10 *Paleogenesis as Explanatory of Certain Forms of Disease. J. Hutchinson.
11 *Fecal Vomiting During Anesthesia: Method of Obviating its Danger. D. W. Buxton.
12 Postoperative Suppression of Urine. L. R. Braithwaite.
13 Hemolysis by Weever Venom. H. M. Evans.
14 Malarial Fevers and Quinin. J. H. Whelan.
15 Cowpox in Man. R. W. Cruickshank.
16 Complete Transposition of the Viscera: Postmortem Report. G. A. Allan.
17 Defective Nipples. H. B. Billups.
18 Perforation of a Gastrojejunal Ulcer—Operation: Recovery. W. H. Battle.
19 Recurring Jaundice in Mother and Infant. E. N. Nason.

8. **Surgical Treatment of Glycosuria.**—Robson holds that certain patients with diabetes may be materially benefited, and some even may be cured if the glycosuria be of pancreatic origin; and that a fairly accurate prognosis of the onset of

diabetes may be made by a careful examination of the urine and feces in certain cases at a period long antecedent to the appearance of glycosuria, and that in this early stage the onset of diabetes may be averted by timely surgical treatment. In his review of the subject, he shows that we cannot hope to cure or even materially to relieve, except temporarily, pancreatic diabetes depending on extensive destruction of the gland by organic disease, whether that be dependent on growth or on chronic inflammation, if either class of disease has extensively involved the islands of Langerhans; nor can we hope to benefit that form of inflammation that singles out the cell islets—interacinar pancreatitis. But, unfortunately, by far the greater number of cases of glycosuria due to pancreatitis are dependent on inflammation of the catarrhal type in which the gland is invaded by way of the ducts from varying causes, such as gall-stones, pancreatic calculi, duodenal catarrh (often associated with duodenal ulcer), typhoid fever, etc., and a considerable proportion of these patients, Robson believes, are curable by surgical measures. At a later stage an interstitial inflammation is produced, which may be arrested and decided relief given by surgical means, though the damage already done to the pancreas cannot be repaired. At a still later stage, cirrhosis of the gland takes place, and if the cell eyelets become involved extensively surgical means are quite useless.

The early recognition and treatment of interstitial pancreatitis, or of pancreatic catarrh, by drainage of the bile ducts, and thus indirectly of the pancreatic ducts, and the removal of the cause, whether that be gall-stones, duodenal ulcer or other conditions, may be the means of averting diabetes. In certain diseases of the pancreas, even after the appearance of glycosuria, surgical treatment is well worth considering, as in a number of cases it has led to a complete disappearance of sugar from the urine, and in others to an arrest in the disease causing glycosuria. Every case of diabetes should be considered from its etiologic point of view, seeing that certain cases of glycosuria of pancreatic origin are curable, and in others the progress of the disease may be arrested by suitable surgical methods that can be carried out with very small risk.

10. **Paleogenesis.**—The term "paleogenetic" employed by Hutchinson is applicable to all conditions supposed to be due, wholly or in part, to inheritance from ancestry extremely remote, so much so that in the majority of cases all history of such association has been lost. The possibilities of paleogenesis are not limited by species or genus, but may be recognized in the most distantly related animals. Thus the condition known as the "dappled" skin occurring both in deer and horses Hutchinson now claims for human beings. It is simply a spotted skin in which the spots become visible only under certain conditions. He also holds that we may recognize paleogenetic structural peculiarities in the dappled skin of leucoderma colli, but a similar predisposition is to be traced in xanthelasma palpebrarum, in the common form of leucoderma, and the very curious congenital conditions which have been recognized under the names of linear ichthyosis, ichthyosis herpetiformis, or Biett's bands. The simplest example of paleogenesis is the "linea fusca," which used to be regarded as a symptom attending a first pregnancy, but which obviously is "the abdominal line" conspicuous in many quadrupeds, made visible in most women by the pigment disturbance which often attends pregnancy.

11. **Fecal Vomiting During Anesthesia.**—It is suggested by Buxton that the following method may prove useful in preventing such an occurrence. Lavage may be employed to clean out the stomach and esophagus with boric-acid solution and hot water. The next step is to perform laryngotomy under local analgesia, or even under light anesthesia, but it is essential in the latter case that the laryngeal reflex should remain active, because vomiting or regurgitation may occur while the larynx is being opened and the stomach tube may be expelled, or vomitus travel beside it into the pharynx. As soon as the larynx is opened and a cocain spray used to lessen spasm, chloroform is to be administered through the laryngeal tube to full anesthesia. The mouth is opened by a gag as soon as the patient is analgesic, and a full-sized esophageal tube introduced into the stomach. If the preliminary lavage has been carried out by means of a large tube, and if it ha not been expelled, the only further step necessary is to pac very carefully both the upper opening of the larynx and th pharynx around the esophageal tube. As soon as this is don the free end of the esophageal tube must be allowed to drai into a vessel containing a deodorant and antiseptic. It i essential that the tube be introduced and maintained in th stomach, and that the packing round it be tight. The packin of the larynx is done in exactly the same way as that carrie out before an excision of the maxilla, when a preliminar laryngotomy is performed. Packing round the esophagea tube is rendered more easy by cocainizing the pharynx, as i is essential that there shall be no leak of fluid around the tub

### Medical Press and Circular, London

*April 13*

20 Suppuration in the Maxillary Antrum. J. Donelan.
21 Workmen's Compensation Act as it Affects the Medical Profession. T. S. Kirk.
22 More Recent Conceptions Regarding Hysteria and their Relation to the Traumatic Neurosis. T. A. Williams.
23 Suppurating Appendicitis. A. C. A. Rabagliati.
24 Heat: "Sensible," "Latent" and Pathologic. J. Knott.

### Australasian Medical Gazette, Sydney

*February*

25 Necessity for Organization in the Profession. R. Worrall.
26 Contract Work. E. P. Thurstan.
27 Treatment of Gall-Stone Disease. F. Hinrichsen.
28 Treatment of Trigeminal Neuralgia by Injections of Alcohol A. W. Campbell.
29 Exclusion of the Skin in Surgery. A. S. Vallack.
30 Intestinal Perforation in an Ambulatory Case of Typhoid Recovery. H. G. Loughran.
31 An Unusual Form of Intestinal Ulceration Following Abdominal Section. W. C. R. Mainwaring.
32 Bilharzia Hematobia. J. Morton.

### Bulletin de l'Académie de Médecine, Paris

*April 12, LXXIV, No. 14, pp. 341-351*

33 *Intracranial Dermoid Cysts. Differentiation by Adherence o Skin to Bone. O. M. Lannelongue.
34 *Test of Purity of Milk by Estimation of Catalytic Power (Détermination indirecte de la richesse bactérienne de laits de vache: Epreuve catalasimétrique.) J. Sarthou.

33. **Intracranial Dermoid Cysts.**—Lannelongue describes a case in which the adherence of the scalp to the occipital bon confirmed the diagnosis of a dermoid cyst in the cerebellum He discusses the development of such cysts, seeking to sustain their ectodermic origin.

34. **Catalytic Test for Purity of Milk.**—The catalytic action of milk in respect to a solution of hydrogen dioxid is a index of the number of bacteria it contains, and this test is currently applied, it is stated, in the Netherlands. The intensity of the reaction is gaged by the volume of oxygen liberated in 40 c.c. of milk treated with 10 c.c. of solution of hydrogen dioxid at from 20 to 25 C. (from 68 to 77 F.).

### Presse Médicale, Paris

*April 13, XVIII, No. 30, pp. 265-272*

35 *Local Anesthesia and Major Operations. H. Chaput.
36 Cancer Metastasis by Retrograde Invasion of the Lymphatics. (Les métastases cancéreuses par envahissement lymphatique rétrograde.) E. Geraudel.

*April 16, No. 31, pp. 273-288*

37 *Malformations of Syphilitic Origin. (La syphilis dysplasique.) P. Delbet.
38 *Serodiagnosis of Syphilis. (Séro-diagnostic de la syphilis d' après les résultats enregistrés à l'institut Pasteur au cour de l'année 1909). C. Levaditi and A. Latapie.
39 *Pathogenic Treatment of Tabes and Paresis. (Traitement pathogénique des affections nerveuses parasyphilitiques) A. Sézary.

35. **Local Anesthesia for Major Operations.**—Chaput has performed 37 major operations lately under local anesthesia, including amputation of the breast or arm, resection of the shoulder, hysterectomy and 25 laparotomies. His technic is somewhat similar to the Schleich method, but he uses large amounts of a weak solution of the anesthetic, injected with large syringes, thus infiltrating the tissues extensively step by step with the operation. Much of the fluid escapes again as the incision is made.

37. **Disturbances in Development.**—Delbet is convinced that syphilis is responsible for more evil than it generally is credited with. He obtained a positive Wassermann reaction in 7 children with a congenital affection of the nervous system, Little's syndrome, contractures, etc., although there was

nothing otherwise to suggest syphilis. The reaction was positive also in a case of cleft palate and one of diffuse angioma.

38. **The Wassermann Reaction at the Paris Pasteur Institute.**—This article tabulates the results of the Wassermann test applied to 821 persons during 1909. The findings were positive in 92 per cent. of the patients with syphilis of less than two years' duration, in 63 per cent. of those of over two years, and 0 per cent. in 18 cases in which syphilis could be excluded; they were also positive in 70 per cent. of the cases of paresis and in 60 per cent. of tabes. The method proved valuable for the retrospective diagnosis of syphilis.

39. **Pathogenic Treatment of Syphilitic Nervous Disease.**—Sézary explains tabes and general paresis as the result of an early reaction in the meninges to the syphilitic infection. It does not manifest itself at the time in any way except by a leucocytosis in the cerebrospinal fluid. Given mercurial treatment at this stage it is readily cured, and he consequently advises prompt mercurial treatment when lumbar puncture reveals evidences of the specific irritation of the meninges persisting after subsidence of the superficial manifestations. The inconvenience of the explorative lumbar puncture is far outweighed, he asserts, by the danger from the ignored meningeal trouble which is liable to progress to tabes or general paresis but which it is thus possible to nip in the bud.

### Semaine Médicale, Paris

*April 20, XXX, No. 16, pp. 181-192*

40 Characteristics of the Venous Jugular Pulse in Asystole of the Left Side of the Heart. (Les caractères du pouls veineux jugulaire dans l'asystolie du cœur gauche.) L. Bard.

### Archiv für Verdauungs-Krankheiten, Berlin

*XVI, No. 2, pp. 121-266*

41 *The Misleading Evidences of Radiology of the Stomach (Kritische Glossen eines Klinikers zur Radiologie des Magens.) B. Stiller.
42 *Changes in the Gastric Mucosa after Exclusion of the Pylorus. (Veränderungen der Magenschleimhaut nach Pylorusausschaltung.) A. Jianu and J. Grossman.
43 *Intermittent Spasm of Both Pylorus and Cardia as Reflex Neurosis with Gall-Stone Disease. (Intermittierender Spasmus der beiden Magenpforten als Reflexneurose bei Cholelithiasis.) W. Buettner.
44 Experiences with Radiology of the Esophagus, Stomach and Intestines. (Unsere Erfahrungen in der Radiologie des Digestionstraktus.) J. Hürter. Commenced in No. 1.

41. **The Misleading Findings with Radioscopy of the Stomach.**—Stiller says that at first he meekly accepted as beyond appeal the dictum of the radiologists that the cylindrical or steer's horn shape of the shadow cast by the bismuth emulsion in the stomach represented the normal shape of the stomach. This finding was entirely at variance with his thousands of examinations of the stomach by other means and with those of physiologists the world around, but the radiologists merely pointed to their radiographs and facts seemed to speak louder than words. But now he raises his voice in protest and describes experimental and clinical research which has demonstrated that the peculiar steer's horn shape is not the normal shape of the stomach but is the specific reaction of the stomach walls to the action of the clinging particles of metal in the emulsion. The shadow cast is instructive as to the effect of bismuth on the stomach, but it throws no light on the shape and behavior of the stomach in the absence of bismuth. The stomach walls contract under the influence of the bismuth quite differently from the contraction with ordinary food. Artificial distention of the stomach with air or gas is, he declares, by far the most reliable means of determining the normal shape of the stomach.

42. **Behavior of the Gastric Mucosa After Exclusion of the Pylorus.**—The history of this operation and experiences with it to date in various clinics are reviewed and also the results of experiments on dogs to show the changes in the gastric mucosa after the operation. It is far preferable to gastroenterostomy alone, the writers conclude, if pylorectomy is impossible for any reason. Cutting the pylorus away from the stomach and suturing each stump to make a blind pouch of it removes the ulcer from the action of the digestive juices, etc., while the excluded stomach mucosa rapidly develops vacuolar degeneration, thus providing conditions, they state, that favor the healing of the ulcer and ward off hemorrhage, perforation and cancerous degeneration later.

43. **Intermittent Spasm of the Stomach as Reflex Neurosis with Gall-Stones.**—Buettner's patient was a man of 38 who had no suspicion of his tendency to cholelithiasis and his recurring gastric spasms had long been supposed to be a primary neurosis. The attacks commenced with severe oppression and pain in the stomach region and the stomach was seen to be distended with gas, but the pulse was regular and not faster than usual and there was no tendency to labored breathing. The attacks sometimes lasted for hours but there was never any vomiting. The motor functioning was also much exaggerated during the attack. The development of jaundice finally led to examination of the stools when it was found that gall-stones could be discovered in the stool sooner or later after each of the spasmodic attacks. If there had been no jaundice the mystery might never have been cleared up as the functional tests showed during the attacks various anomalies which were assumed at first to be the cause instead of the result. The pain in the stomach was so severe that it masked any possible gall-stone colic. He was unable to find any similar case on record in which the well-defined gastric syndrome was exclusively the result of a reflex neurosis, but he thinks that this may occur more frequently, unrecognized. After passing 238 gall-stones his patient seemed to be permanently relieved and has been free from jaundice and from all gastric disturbances to date.

### Berliner klinische Wochenschrift

*April 11, XLVII, No. 15, pp. 661-708*

45 Importance of Chlamydozoa in Trachoma and Gonorrhea. L. Halberstaedter and S. v. Prowazek.
46 *Prowazek's Bodies in Conjunctival and Genital Secretions. (Fundorte der Prowazek'schen Körperchen.) B. Heymann.
47 Rupture of the Aorta in Pyemia. H. Scheuer.
48 Extraperitoneal Cesarean Section. (Extraperitonealer Kaiserschnitt: Solms'sche Methode.) H. Töpfer.
49 *"Thirst Fever" in Infants. (Durstfieber bei Säuglingen.) E. Müller.
50 Treatment of Habitual Dislocation of the Shoulder. (Zur Behandlung der habituellen Schulterluxation.) E. Marcuse.
51 Dislocation of Tarsometatarsal Joint. (Luxation im Lisfranc'schen Gelenk.) P. Ewald.
52 Alcohol-Soluble Hemolysins in Acute Yellow Atrophy of the Liver. M. Jacoby.
53 Ease and Importance of Direct Visual Inspection of Upper Air Passages. (Direkte Untersuchungsmethoden der oberen Luftwege.) E. Meyer.

46. **The Prowazek Trachoma Bodies in Conjunctivitis and Gonorrhea.**—Heymann has examined the conjunctival secretion from 235 human beings and from 25 animals of 5 different species, including monkeys, but was never able to find the Prowazek bodies except in cases of trachoma and eye affections resembling trachoma, and in conjunctivitis in infants, and he also discovered the bodies in question in 2 cases of urogenital gonorrhea; these patients were the parents of twins each of which had severe conjunctivitis containing numerous gonococci and these bodies. Prowazek has reported similar findings in another family. This throws light on the nature of the bodies, especially as inoculation of monkeys and guinea-pigs with the conjunctival or urogenital secretions containing the bodies induced a conjunctivitis of gonorrheal type at first but later more of a follicular catarrhal form. In the animals thus inoculated the Prowazek bodies were found in large numbers in the conjunctivitis secretions. He found further that inoculation of genital secretions from patients with a history of conjunctivitis suggesting trachoma induced the same effects in the animals as inoculation of secretions containing the Prowazek bodies. [An editorial note on another page of the *Wochenschrift* states that Herzog, who has been making a special study of these bodies at Budapest, now announces that the Prowazek bodies are merely an involution form of the gonococcus.—Ed.]

49. **Thirst Fever in Infants.**—Müller reports that fever developed in some infants who were resisting a change of diet and whom he was trying to accustom to the bottle or the breast by starving them to it. He describes two cases in detail, calling attention to the reciprocal relations between the weight and the temperature; whenever the weight showed that the children were suffering from insufficient intake of fluids, the temperature rose, while it declined again when tea was given. He is inclined to regard this thirst fever as the direct result of the concentration of the body juices, an alimentary, or rather negative alimentary fever, analogous to the "salt

fever" observed in infants. These experiences suggest that the custom of compelling a change of food by starving the children to it may have serious consequences; and also that salt fever may occur without any lesion of the intestines. Possibly the reduced elimination of water through lungs and skin may be partly responsible for the higher temperature. Müller refers to Crandell's report in 1899 of similar cases of fever, in which the temperature rose during abstention from fluids. It was first called "starvation fever," but Müller prefers the term "thirst fever."

### Deutsche medizinische Wochenschrift, Berlin

*April 14, XXXVI, No. 15, pp. 689-736*

54 Treatment of Pneumothorax. G. Treupel.
55 Experimental Research on Epidemic Poliomyelitis. (Experimentelle Untersuchungen über akute epidemische Kinderlähmung.) E. Meinicke.
56 Shape of Stomach with Atony, Ptosis or Ectasia. (Form des pathologischen Magens.) F. M. Groedel.
57 Importance of the Colloids for Formation of Concrements and for Calcification. (Bedeutung der Kolloide für die Konkrementbildung und die Verkalkung.) L. Lichtwitz.
58 *Influencing the Pulse by External Pressure on the Blood Vessels. (Bradycardie und Beeinflussung des Pulses durch äusseren Druck auf die Blutgefässe.) E. Homberger.
59 Epicondylitis of the Humerus. G. Preiser.
60 Relations between Alcoholism and Nursing Capacity, Pulmonary Tuberculosis and Dental Caries. H. J. Greff.

58. **Changes in the Pulse Curve by Changes in External Pressure.**—Homberger gives the tracings in the case of a man of 50 complaining of dyspnea. The apex beat and heart sounds were not perceptible; the area of dulness was unusually wide. The pressure of the cuff altered the features of the pulse in one arm while the pulse in the other arm showed no such change. Homberger accepts these and similar findings in other cases as sustaining his assumption that the circulation of the blood does not depend on the heart alone but that the task is shared equally by the heart and the blood vessels.

### Jahrbuch für Kinderheilkunde, Berlin

*April, LXXI, No. 4, pp. 379-524*

61 Metabolism in Course of Alimentary Decomposition. (Ueber den Stoffwechsel bei der alimentären Dekomposition.) L. F. Meyer.
62 *Orthostatic Albuminuria. F. Götzky.

62. **Orthostatic Albuminuria.**—Götzky has examined for albuminuria 346 children between the ages of 5 and 13. He found that 14.5 per cent. showed signs of orthostatic albuminuria, that is, 189 girls and 157 boys. There did not seem to be any more pronounced tendency to neuropathies among these children than among their mates, although enlarged tonsils or chronic pharyngitis were more frequent among them. He found no trace of pathologic lordosis among a large number of the children, while true lordosis was quite frequent among children free from any tendency to albuminuria. He discusses the diagnosis of orthostatic albuminuria, the favorable prognosis, etc., emphasizing the necessity for prophylaxis as the main point in treatment. The children should be protected against chilling, especially against getting their feet wet. The albuminuria itself should be left untreated. Overexertion should be guarded against but ordinary play and sports in moderation are to be encouraged. Heubner warns against bicycling, horseback riding and rowing as liable to be too violent exercise in such cases.

### Medizinische Klinik, Berlin

*April 10, VI, No. 15, pp. 571-612*

63 Roentgen-Rays, Radium and Carbon Dioxid Snow in Treatment of Skin Diseases. (Neuere Methoden der Dermatotherapie.) W. Piek.
64 *Pathology of Banti's Disease. H. Luce. Commenced in No. 14.
65 *Serotherapy of Cerebrospinal Meningitis. M. Lateiner.
66 Tuberculin-Quinin Treatment of Kidney and Bladder Tuberculosis. W. Karo.
67 Permanent Action of Carbonated Brine Baths in Circulatory Disturbances. B. Schuster.
68 Importance of Systematic Weighing in Medical Treatment. J. G. Siebelt.
69 Sterilization of Drinking Water by Ultraviolet Rays from Quartz Mercury Vapor Lamp. (Sterilisation des Trinkwassers durch ultraviolette Strahlen.) J. Courmont and C. Nogier. (Apparat zur Sterilisierung von Trinkwasser durch die ultravioletten Strahlen.) C. Nogier.

*April 17, No. 16, pp. 613-652*

70 Research on Radium Emanations. W. His.
71 *Management of Narrow Pelvis in Obstetric Cases in the Home. (Behandlung des engen Beckens in der Aussenpraxis.) O. von Franqué.
72 *Active Immunization by Killed Vaccine Virus. (Aktiv Immunisierung des Menschen mittels abgetöteter Pocke vakzine.) W. Knöpfelmacher.
73 Contents in Purin Bases of Various Articles of Food in Relation to Gout. (Zum Wesen und zur Behandlung der Gich Ueber den Purinbasengehalt der Nahrungsmittel.) T. Brugsch and A. Hesse.
74 *Autoserotherapy of Tuberculous Peritonitis by Autodrainag (Autoserotherapie bei Bauchfelltuberkulose durch Daue drainage des Aszites unter die Haut.) K. Evler.
75 Importance of Wassermann Reaction for Balneologists an Physicians at Health Resorts. M. Friedlaender.
76 Research on and Application of Radium Emanations. (Demonstrationen zur Emanationstherapie.) S. Loewentha (Ungeregelte Verhältnisse bei Bestimmung und Bewertun der Radiumemanation.) E. Weisz.

64. **Banti's Disease.**—Luce gives the details of a typica case and discusses the history and literature of the subject He is inclined to admit that the disease is similar to true pseudoleucemia and other pathologic processes originating i the spleen. The spleen process may be idiopathic, tuberculou or syphilitic or of other origin. The demonstration of a tuberculous etiology has not yet been made, but such probabl exists, similar to the tuberculous form of pseudoleucemi described by Sternberg and the data presented by Fischer Sabrazès and others in regard to certain forms of pseudoleucemia in which no tubercle bacilli could be discovered in th lymphomas and yet inoculation of animals with lymphom tissue gave positive results. He thinks it probable that th spleen, serving as a filter for the blood may become injured b any severe infection of the blood or repeated mild infections and that this may be the origin of the development of th Banti syndrome. The peculiar vulnerability of the lymphati system in the young explains, he says, the frequency of th Banti syndrome before the age of 30.

65. **Serotherapy of Epidemic Cerebrospinal Meningitis.**—Lateiner reports 26 cases with encouraging results of serotherapy.

71. **Treatment of Narrow Pelvis in the Home.**—The advantages of institutional management of obstetric narrow pelvis are emphasized by von Franqué but he also outlines the measures that should be advised for use by the general practitioner when this is impossible. In regard to perforation he remarks that if any one has conscientious scruples against it he should not attempt obstetric practice. Not until every parturient with a narrow pelvis is delivered in a maternity can this operation be spared.

72. **Active Immunization by Killed Vaccine.**—Knöpfelmacher reports successful subcutaneous injection of vaccine which rendered the individual immune thereafter to ordinary vaccination. This immunity was realized without development of a pustule. He tabulates the findings in 20 cases. The research reported shows that human beings as well as animals can be rendered immune by subcutaneous injection of killed germs. The vaccine was heated to 58 C. 30 minutes to "kill" it.

74. **Serotherapy in Tuberculous Peritonitis: Autodrainage.**—Evler has applied to tuberculous ascites the principle of autodrainage recently introduced in treatment of hydrocephalus. In a patient with recurring ascites from tuberculous peritonitis he found the peritoneum studded with nodules. He separated the recti muscles and sutured the peritoneum in the opening thus made, producing a permanent fistula opening into the subcutaneous tissue. The skin was sutured completely above. The ascites was thus drained away while the diversion of the ascitic fluid induced an autoserotherapy. Improvement was marked from the start; the ascites did not recur and the patient rapidly regained 25 pounds in weight. He was a man of 32 and the peritoneal affection seems to be entirely cured, Evler says, although there is still some cough and the man complains of pains in the chest and back as before the operation.

### Münchener medizinische Wochenschrift

*April 12, LVII, No. 15, pp. 777-832*

77 Effectual Action of Single Large Dose of Arsobenzol in Relapsing Fever. (Wirkung des neuen Arsenpräparates (606) Ehrlichs bei Rekurrens.) J. Iversen.
78 *Treatment of Diffuse Peritonitis with 1 per cent. Camphorated Oil. G. Hirschel.
79 Advantages of the Mirror Sphygmograph for Study of the Pulse. (Vorzüge des O. Frankschen Spiegelsphygmographen für die Aufzeichnung der Pulsform.) E. Veiel and B. Noltenius. (Vergleich des O. Frankschen Spiegelsphygmographen mit dem Jaquetschen Kardiosphygmographen bei Aenderungen des Pulsrhythmus.) H. Schmid.

80 Albumin Reaction in the Blood of the Insane. (Eine Elweissreaktion im Blute Geisteskranker.) W. Geissler.
81 *Iron Splinters in the Crystalline Lens. (Zur Therapie der Eisensplitterverletzungen der Linse.) A. Elschnig.
82 *Serotherapy of Tetanus. (Tetanus traumaticus mit Antitoxin "Hochst" und Blutserum eines geheilten Tetanuskranken geheilt.) A. Wiedemann.
83 Improved Technic for Obtaining Blood for the Wassermann Reaction. (Ein schonendes Verfahren der Entblutung von Tieren zu Zwecken der W. Reaktion.) J. Wetterer.
84 Indications and Contraindications for Ergot in Obstetrics. (Zur Anwendung der Ergotinpräparate in der Geburtshilfe.) H. Walther.
85 *Adherent Pericardium and Cardiolysis. (Ueber adhäsive Perikardobliteration und Kardiolyse.) K. Schlayer.

**78. Treatment of Diffuse Purulent Peritonitis with 1 Per Cent. Camphorated Oil.**—Hirschel reports 9 additional cases, supplementary to 3 reported in 1907, in which from 100 to 300 gm. of 1 per cent. camphorated oil were introduced into the abdominal cavity and spread over the intestines and walls by the hand wrapped in gauze. A counter incision was then made and small drains inserted at various points and the abdomen closed almost completely. The oil seems to prevent absorption by the peritoneum, while the addition of the camphor has a tonic action. This procedure was not attempted except in the desperate cases, and the recovery of 55 per cent. in the last series confirms the favorable action of the measure. The main benefit is probably mechanical, either by stopping the efferent lymphatics or by clogging the bacteria in the oil, similar to the action of Peruvian balsam in infective wounds. He adds that Hoehne has reported good results in 42 cases with introduction of 30 c.c. of 10 per cent. camphorated oil as a prophylactic measure before extensive gynecologic operations.

**81. Treatment of Iron Splinter in the Crystalline Lens.**—Elschnig reports several cases of splinter of iron in the transparent lens and four in which the splinter had induced cataract. In one in the first group the perforation in the anterior capsule had already closed up entirely but he succeeded in opening the capsule and extracting the foreign body without impairing the transparency of the lens. It has been his experience that the cataract from an iron splinter is not hard, as generally supposed, and that up to the age of 40 the foreign body may be successfully extracted.

**82. Serotherapy of Tetanus.**—Wiedemann injected in a child with threatening traumatic tetanus about 35 c.c. of serum from 100 c.c. of blood taken from a healthy boy of 14, who two years before had recovered from very severe tetanus. This serotherapy was supplemented by antitetanic serum. The patient promptly recovered and the sudden improvement after the human serum had been injected seems to indicate, he thinks, that it had special efficacy. There have been 3 cases in Wiedemann's district in the last thirty years in which persons just after death from tetanus made sudden movements, the convulsive contraction thus being arrested by beginning decomposition which evidently nullified the action of the tetanus toxin. This suggests that possibly blood serum taken from a tetanus patient (or possibly from a healthy person) after being left a few hours outside of the body, might prove effectual in treatment of tetanus; the condition of the serum then would approximate that directly after death from tetanus.

**85. Adherent Pericardium and Cardiolysis.**—Schlayer knows of only 9 cases in which Brauer's technic of cardiolysis has been applied outside the Tübingen clinic where the operation has been done also in 3 cases, all in the year 1906. The results in these 3 cases are not very encouraging; the operation was followed by sudden paralysis of the heart in one case and no benefit was observed in the second and but transient in the third. He analyzes 12 cases of polyserositis at the clinic with or without weakness of the heart, his final conclusions being that the indications for operative treatment of adherent pericardium depend more on the general tendency to polyserositis than on the involvement of the heart. When the polyserositis is extensive and progressive, little benefit can be anticipated from cardiolysis. In one of his cases a simple laparotomy was followed by retrogression of the main disturbances, the ascites no longer recurring. He adds that the ultimate outcome in the cases of cardiolysis in the literature has not been reported, although great benefit was derived at once from the operation which released the adherent heart from its extra work in moving the chest wall.

### Therapeutische Monatshefte, Berlin

*April, XXIV, No. 4, pp. 169-224*

86 *Medical Reprints and the Advertising of Proprietaries. (Reklame durch Sonderabdrücke.) W. Heubner.
87 *Hot Gelatin Injections in Chronic Catarrh of the Large Intestine. L. von Aldor.
88 Cholelithiasis Generally a Disturbance in the Metabolism of the Liver. (Ist die Cholelithiasis eine Stoffwechselkrankheit der Leber, oder ist sie eine Infektionskrankheit?) C. B. Schürmayer. Commenced in No. 3.
89 Elimination of Bromin by the Urine. II. (Ausscheidung von anorganischem und organisch gebundenem Brom durch den Urin nach, Einfuhr organischer Brompräparate.) E. Bermann.

**86. Medical Reprints and the Advertising of Proprietaries.**—Heubner comments with approval on the step taken by the *Therapeutische Monatshefte* in refusing to give manufacturing chemists reprints of articles that have appeared in its columns. The manufacturers have hitherto been using reprints of this kind to distribute as literature on their products. Heubner remarks on the credulity with which physicians are impressed with the alleged virtues of new drugs, saying that they are unable to judge new drugs for themselves as they can judge fakes of other kinds. The true value of the drug, he continues, cannot be estimated from the first few laudatory reports on its action. Any physician giving the drug during this tentative stage should appreciate that he is merely giving it a trial, and should watch its effects with the closest care and in the most critical spirit. The physician under these circumstances must be strictly impartial, free from any bias in favor of the drug. But the interests of the manufacturing chemists are all against this impartial study of a new drug. They want to push the drug into prominence and general use at once, and seek by every means to influence the physician's mind. The suggestive name, the way the preparation is put up, the profuse advertising, the alluring prospectus and distribution of free samples—all combine to arouse interest in the drug. Medical men are not so readily influenced by suggestions from patients and the general public, but they are swayed by what other physicians have to say in regard to a new drug. Hence it has long been the custom for pharmaceutic firms to send with their advertising matter reprints giving a favorable opinion on a new drug. Heubner remarks that it has happened that such articles have been written to order. But, as a rule, he continues, they are the honest expression of the authors' opinion. They can only rejoice that wide circles are thus enabled to benefit by the fruit of their labors. The business end of the medical journal profits by it, and the editorial department has become habituated to regard the custom as a matter of course. Heubner asserts, however, that the custom is not the expression of a healthy interrelation between the medical profession, the medical press and the manufacturing chemists. Logical as it may seem to post physicians in regard to the qualities of new drugs, the impression produced by this custom is a false one. It leads to exclusively favorable impressions as it is manifest that only articles containing a favorable verdict on the drug are distributed by the manufacturers. Critical or denunciatory articles are not included in the literature sent out. The information which the physician receives from the manufacturers by means of the reprints is thus one-sided and false. Not only do the contents of the reprints serve to sustain the claims made for new drugs but the names of well-known writers and, with unknown names, the prestige of the medical journal from which the reprint is taken—all help in the advertising campaign. It is thus evident that by supplying reprints to manufacturing firms, authors and editors, consciously or unconsciously, Heubner says, are working in the interests of the commercial houses, while they are working against the interests of physicians seeking to obtain an unprejudiced, objective impression of the new drug. A journal which strives to keep its readers informed in the most comprehensive, non-partisan manner on the special field of science to which it is devoted annuls the ideal uses which it cherishes by giving to outsiders a selection from its articles and permitting their distribution in the form of reprints outside the sphere of its responsibility. The physician trusting to the guidance of the journal is thus led astray. Heubner thus regards it as impossible for a high-class medical journal to continue this custom of supplying reprints to commercial firms. He adds that it must gradually penetrate deeper into the consciousness of medical men that the present-day influence of pharmaceutical industry on medico-therapeutic thought and action is in many ways more powerful than conducive to the interests of the sick and of science. A reduction of this influence will rather promote than check true progress in therapeutics.

87. **Treatment of Chronic Intestinal Catarrh with Hot Gelatin.**—The large intestine is favorably influenced in catarrhal conditions by injection of a very hot solution of gelatin, says von Aldor. He reports 7 cases in detail in which this treatment was followed by a complete cure of severe chronic catarrh of the large intestine, with diarrhea, which had resisted all other measures. The sphincter and a short distance above are extremely sensitive to heat, and consequently the solution is injected through a tube about 5 inches long, with the patient reclining on the left side. From 40 to 80 c.c. (1 or 2 ounces) of a 10 per cent. solution of gelatin dissolved in water at a temperature of 45 or 52 C. (113 to 125 F.) are injected. The patient lies still for two hours afterward with heat applied to the abdomen; von Aldor has always used for the solvent water Carlsbad sprudel thermal water, as he practices at Carlsbad. Gelatin is a valuable food in gastrointestinal disturbances with intolerance of meat, etc., and it has a local soothing action on inflamed mucosa, while the heat induces a healing hyperemia; the lime content may have also a favorable influence on the local repair. It is further possible, he thinks, that the gelatin may check the secretion by the intestine walls of the readily putrefying fluid to which Schmidt ascribes diarrhea. This assumption is sustained by the prompt arrest of diarrhea and rapid transformation of a strongly positive into a negative response to the fermentation test. In the cases reported the course of daily injections lasted from 18 to 28 days; in the one case with complicating cholecystitis he alternated the gelatin with simple hot thermal water injections. Michaelis has applied hot gelatin injections to arrest typhoid hemorrhage and found them entirely harmless. Weil and two other French writers have reported that gelatin by the mouth and subcutaneously proved more effectual than bismuth and tannin in the diarrhea of infants.

### Wiener klinische Wochenschrift, Vienna

*April 14, XXIII, No. 15, pp. 529-572*

90 *Treatment of Pulmonary Tuberculosis with Artificially Induced Pneumothorax. A. Baer and H. Kraus.
91 Mercury and the Wassermann Reaction. (Quecksilberwirkung und Syphilisreaktion.) C. Bruck and M. Stern.
92 Clinical Trials of Radium Emanations. K. v. Klecki.
93 Ultramicroscopic Examination of Spermatic Fluid. (Männliche Geschlechtsdrüsensekrete in der Dunkelfeldbeleuchtung.) H. Königstein.
94 *Special Dispensary for Leg Ulcers. (Bericht über das erste Halbjahr der Spezialstation zur Behandlung von Unterschenkelgeschwüren.) R. L. Grünfeld.

90. **Treatment of Pulmonary Tuberculosis with Artificially Induced Pneumothorax.**—Baer and Kraus give an illustrated description of the technic applied to induce therapeutic immobilization of the lung in 6 cases. The results showed that this method of treatment may prove successful in a certain class of severe cases in which the physician is otherwise disarmed.

94. **Treatment of Leg Ulcer.**—Grünfeld describes the experiences at the special leg ulcer dispensary opened six months ago by the Vienna Krankenkassen exclusively for treatment of this class of patients. In the majority of cases a zinc oxid stiff dressing was applied in the form of Unna's "Zinkleim." This is a mixture of 75 parts white gelatin dissolved in 250 parts boiling water with 75 parts zinc oxid and 125 parts glycerin.

### Gazzetta degli Ospedali e delle Cliniche, Milan

*March 31, XXXI, No. 39, pp. 409-416*

95 Staining Technic for Spores. (Del comportamento dei batteri e delle spore uccise di fronte alle sostanze coloranti e di un metodo rapido di colorazione delle spore.) A. Missiroli.

*April 3, No. 40, pp. 417-432*

96 Pain in the Celiac Plexus. (Il dolore celiaco.) A. De Giovanni.
97 *Pseudoleucemia and Inheritance of Cancer. P. Melloni.

*April 5, No. 41, pp. 433-440*

98 Cancer with Cirrhosis of the Liver. (Cancro cirrosi fegato.) G. Fabiani.

*April 7, No. 42, pp. 441-448*

99 Differing Etiology of Rachitis and Osteomalacia. (La clini e sfavorevole all'unita etiologica della rachitide ed oste malacia.) T. Silvestri.

97. **Pseudoleucemia and Inheritance of Cancer.**—The patien was a boy of 7 with fatal pseudoleucemia; his great uncl grandmother and an uncle had died of cancer. A second cousi also had a lymphosarcoma of the neck.

### Policlinico, Rome

*April 17, XVII, No. 16, pp. 483-514*

100 Epidemic of Mild Typhoid. (Ricerche batteriologiche nell attuale epidemia di Albano Laziale.) D. De Blasi.

### Riforma Medica, Naples

*April 4, XXVI, No. 14, pp. 367-392*

101 *Effect on Blood Serum of Experimental, Long-Continued Sma Doses of Quinin. (Il siero di sangue negli animali chini zati.) D. De Sandro.
102 Technic for Showing the Capsule of Anthrax Bacilli. (Dimo trazione della capsula del bacillo del carbonchio nelle cu ture.) G. Fusco.
103 Senile Appendicitis. E. Martini.

*April 11, No. 15, pp. 393-420*

104 Seroreaction in the Healthy to the Colon and Typhoid Grou of Bacteria. S. P. Tria.
105 Operative Treatment of Stab Wounds of the Lungs: Tw Cases. (Cura delle ferite penetranti del torace con lesion polmonare.) A. Fontana.
106 Case of Primary Sarcoma of the Tongue, Supposed Thirty second on Record. (Sarcoma della lingua.) G. Serafini.

101. **Effect on the Blood of Long-Continued Quinin Proph ylaxis.**—De Sandro reports research on dogs given 40 c.c. o quinin for each 70 kilograms of weight, the administratio being kept up for from 2 to 4 months. None of the proper ties of the blood serum seemed to be altered, neither th color, transparency, toxicity, freezing point, proportion o chlorids, sulphates, nitrogen, ash, etc., showed any modifica tion. The only change detected was finally a slight increase in the specific gravity and of the quantity of organic elements so that the dry residuum rose from 0.239 to 0.664 per cent. by the close of the fourth month.

### Hygiea, Stockholm

*February, LXXII, No. 2, pp. 97-224*

107 Ovarian-Tubal Pregnancy. (Ett ovanligt fall af extrauteringraviditet.) A. O. Lindfors and T. J. Hellman.
108 *Five Cases of Latent Stenosis of the Pylorus. R. Dahl.

*Supplement to Vol. LXXI, pp. 1378-1406*

109 *Conclusion of Monograph on Tuberculin Diagnosis of Pulmonary Tuberculosis. (Om Koch's gamla tuberkulin vid kronisk lungtuberkulos ur praktisk-diagnostisk synpunkt enligt nyare erfarenhet.) J. Tillman.

108. **Latent Stenosis of the Pylorus.**—This condition is liable to be mistaken for a gastric neurosis as the symptoms may all subside after the attack and the patient may feel entirely well during the intervals. The lack of any history of gastric ulcer in some cases is also misleading. The attack of cramplike pain in the epigastrium resembled the gastric crises of tabes in 2 of Dahl's 5 cases reported in detail. Hyperacidity is the rule for a time at least afterward and some degree of motor insufficiency, but conditions in regard to motor functioning may soon return entirely to normal. The intermittent, periodical character of the attacks and the lack of tenderness in the stomach region during the intervals are characteristic. Oettinger has published a case of the kind entitling it "unrecognized stenosis of the pylorus," but Dahl declares that it is easy to recognize if the above characteristics are borne in mind. The patients have been free from all disturbances since operative treatment, pylorectomy or gastroenterostomy. Three of his patients were 30 or 32 years old, the others were 56 and 70. The attacks had recurred with increasing frequency during from 1 to 9 years before an operation was decided on. In every case, he asserts, cure was instantaneous and complete. One of the younger patients seems to have been cured at the same time of incipient pulmonary tuberculosis.

109. **Tuberculin in Diagnosis of Pulmonary Tuberculosis.**—Tillman's article is accompanied by the tabulated details of 100 cases of chronic pulmonary tuberculosis in all of which the course confirmed the findings of the "old" tuberculin test.

# STATE BOARD STATISTICS FOR 1909

## HE ANNUAL PRESENTATION OF RESULTS OF STATE BOARD EXAMINATIONS WITH ANALYSES AND DEDUCTIONS

On pages 1740 to 1755 will be found four tables, A, B, C nd D, giving in detail the results of the various state medical cense examinations held during 1909. Complete reports from labama were received for only one of the two examinations eld; otherwise our returns are complete.

These tables have been arranged so that, read from left to ight, they give the results by colleges, showing how many raduates appeared for examination in each state and whether hey passed or failed, as well as the total number examined uring the year, the number who passed, the number who ailed, the percentage of failures and the number of states in hich graduates of each school appeared for examination. ead from above downward, they give the results by states, howing the number registered and rejected from each college, he total number examined, the total number registered, the tal number rejected and the percentage of rejections. The ct that the majority of graduates take the license examination in the state in which the college is located is shown by he dark diagonal zone made by the grouping of figures, passg from the left upper to the right lower corner of each table. hese tables are worthy of much careful study and many nportant deductions are possible.

### Caution in Forming Conclusions

In making comparisons on the basis of these statistics sevral factors should be carefully considered. The number examed is important since, if all other conditions are equal, the rger the number of graduates examined, the more accurate is e finding. But other conditions are seldom equal. The number of states in which a school's graduates have been examined important. The larger this number the more accurate will e the conclusions. Again, the character of the board makg the examination and the methods employed are impornt factors to be considered, since some boards mark severely hile others, especially partisan boards, may be very lenient. inally, in this connection it should be stated that the character of the license examination as usually conducted at the present time is such that graduates of colleges conducted largely y quiz-class methods may easily be successful in passing hem. Therefore, the statistics herewith presented should be ken only as part of any investigation of medical schools, lthough it is an important part.

### Graduates of all Years Examined in 1909

Table A shows the results for all candidates who took examations in 1909 regardless of the years in which they graduted. This shows that altogether 7,287 were examined last ear as compared with 7,770 in 1908 and 7,271 in 1907. Of hose examined 19.6 per cent. failed, as compared with 21.7 per nt. in 1908, 21.3 per cent. in 1907, and 20.7 per cent. in 1906.

There were 134 of the medical colleges in the United States hich had graduates examined. Foreign graduates were examed in 22 states, the total number being 101. The largest umber examined in any state was 44 in New York, doubtless ecause that state has the leading port of immigration. Gradutes of Canadian schools were examined in 27 states, more ppearing naturally in the border-line states.

### Graduates of 1909 Examined During 1909

Table B gives the results for the graduates of 1909 who were xamined during the year by state boards and shows that 4,011 r 55 per cent. of all candidates examined during the year raduated in 1909. Educational statistics show that the medal colleges of the United States graduated 4,464 students last ear; therefore, about 90 per cent. of all graduates in 1909 ook examinations for license during the year. In some of the tates graduates in medicine are allowed to serve their hosital internships without first becoming licensed practitioners, which doubtless accounts for some of the remaining 10 per cent. Of those examined 425 or 10.6 per cent. failed. An analysis of this table shows that of all the graduates of 1909 examined, 2,758, or 68.8 per cent., were examined in the states in which the colleges from which they graduated were located. This shows that states which sanction low-grade colleges are not only responsible for the ill-prepared output of such colleges, but are themselves the recipients of the greater portion of such output.

### Recent Graduates Examined During 1909

Table C gives the results for graduates of 1905 to 1909 inclusive which were examined during 1909. It includes, therefore, the figures given in Table B. This table is particularly important, since it deals with recent graduates and is, therefore, the fairest basis for comparison between colleges. Any classification of medical colleges from the standpoint of failures at state board examinations should be based on this table. Of all candidates examined in 1909, 5,891 or 80.7 per cent. were recent graduates, and of this number 15.4 per cent. failed, as compared with 19.6 per cent. for all candidates.

### Old Practitioners Examined in 1909

Table D is interesting because it shows the results for old practitioners or for those who graduated in 1904 or previously. Of the total number examined in 1909, 958 or 19.3 per cent. were of those who had graduated more than five years previously. This year, of those examined, 288 or 30 per cent. failed, as compared with 15.4 per cent. of failures for recent graduates. This high percentage of failures is probably due chiefly to the long time these candidates have been out of college and to the fact that they are required to take the same examination as recent graduates. Justice to these candidates, most of whom have already been licensed but who for probably good reasons desire to change their locations, is the strongest argument for interstate reciprocity in medical licensure, or for special percentage allowances at the examinations for years of practice. The total number of these candidates will naturally diminish each year as increased reciprocal relations are established, since, as a rule, the states which do not have reciprocal relations with other states (e. g., California, Florida, Washington) examine the largest numbers of old practitioners. A comparison with Table N will be of interest in this connection.

### Undergraduates Examined During 1909

Line 138 of Table A shows the number of undergraduates examined in eight states during 1909. Omitting one report from Alabama, for which complete returns were not received, there were 438 non-graduates examined in 1909, of which number 237, or 54.1 per cent., failed. An unusually large number, 153, appeared for examination in Arkansas since it was the last year when non-graduates could appear for the license examination in that state. The same was true in Alabama although unfortunately the complete figures could not be obtained. North Carolina is required by an amendment to its practice act to register non-graduates, who are permitted to practice only in the sparsely settled mountain districts. The open door for these candidates still remains only in Massachusetts, Mississippi and Tennessee, and the percentages of failures in these states this year for non-graduates were respectively, 86.1, 60.0, and 5.0. The largest number registered was 76 in Tennessee.

### Study of Totals and Percentages

A study of totals and percentages as compared with previous years is of interest. The totals of those examined show a decrease from last year and the percentage of failures for all candidates is the lowest since 1904.

### Total Results
Comparison with Previous Years

| | Table A | | | | C | | D | | A | | M | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year. | Examined. | Total Examined—Passed. | Examined—Failed. | Percentage Failed. | Recent Grads. Examined. | Percentage Failed. | Older Pract. Examined. | Percentage Failed. | Non-Grads. Examined. | Percentage Failed. | Regist'd Without Written Examination. | Total Registered. |
| 1904 | 7035 | 5672 | 1363 | 19.3 | 4773 | 14.1 | 579 | 29.7 | 515 | 52.6 | 999 | 6671 |
| 1905 | 7170 | 5680 | 1490 | 20.8 | 6054 | 16.2 | 690 | 37.7 | 472 | 61.9 | 394 | 6074 |
| 1906 | 8035 | 6368 | 1667 | 20.7 | 6520 | 16.4 | 793 | 27.1 | 703 | 51.3 | 1497 | 7865 |
| 1907 | 7271 | 5723 | 1548 | 21.3 | 5922 | 15.1 | 675 | 27.7 | 674 | 69.6 | 1426 | 7149 |
| 1908 | 7770 | 6084 | 1686 | 21.7 | 6477 | 17.8 | 796 | 31.5 | 494 | 56.8 | 1276 | 7360 |
| 1909 | 7287 | 5856 | 1430 | 19.6 | 5891 | 15.4 | 958 | 30.0 | 438 | 54.1 | 1374 | 7230 |

Other deductions from the larger tables have been made and are presented in Tables E to N which are worthy of careful study.

### Study of Colleges by State Groups

Table E is based on the first four large tables and gives data regarding the group of colleges located in each state. It shows what states are furnishing the largest numbers of physicians and the failure percentages indicate what kind of training these colleges are furnishing, so far as may be judged from the failures of their graduates before state boards. By comparing the percentages of the first column with the other columns it can be seen whether there has been any reduction in failures for graduates of recent years. Of the 34 states having complete medical colleges, 17 furnished 100 or more candidates examined. Of these 17 groups of colleges, 7 had failure percentages of less than 10 per cent.; 7 had failure percentages between 10 and 20, and 3 had over 20 per cent. of failures. The highest failure percentage was obtained by the Mississippi group. Of the states having 100 or more examined, however, the highest failure percentage was obtained by the Tennessee group, which had 31.0 followed by the Missouri group, with 26.3 per cent. Other deductions are given with the table.

TABLE E.—Colleges Grouped by States
Showing Number Examined and Percentage of Failures

| All Colleges of | Graduates. Of 1909. | | Of 1905 to 1909. | | Of 1904 and Previous. | | Of all years. | | State Rank According to Number Examined. | Rank According to Success at Examinations. |
|---|---|---|---|---|---|---|---|---|---|---|
| | Number Examined. | Per Cent. Failed. | Number Examined. | Per Cent. Failed. | Number Examined. | Per Cent. Failed. | Number Examined. | Per Cent. Failed. | | |
| Alabama | 6 | 0. | 16 | 6.3 | 6 | 0. | 22 | 4.5 | 30 | 5 |
| Arkansas | 18 | 61.1 | 23 | 52.2 | 7 | 28.6 | 30 | 46.7 | 27 | 30 |
| California | 61 | 13.1 | 128 | 19.5 | 14 | 21.4 | 142 | 19.8 | 12 | 21 |
| Colorado | 23 | 4.4 | 41 | 3.2 | 5 | 40.0 | 46 | 6.5 | 26 | 7 |
| Connecticut | 9 | 11.1 | 26 | 3.8 | 2 | 0. | 28 | 3.6 | 29 | 4 |
| District of Columbia | 41 | 12.2 | 128 | 21.9 | 13 | 23.1 | 141 | 22.0 | 13 | 22 |
| Georgia | 125 | 9.6 | 149 | 16.8 | 15 | 26.7 | 164 | 17.7 | 11 | 18 |
| Illinois | 594 | 9.4 | 779 | 13.5 | 125 | 32.0 | 904 | 16.0 | 1 | 16 |
| Indiana | 59 | 0. | 60 | 0. | .... | .... | 60 | 0. | 21 | 1 |
| Iowa | 76 | 3.9 | 100 | 6.0 | 14 | 28.6 | 114 | 9.6 | 16 | 12 |
| Kansas | 33 | 3.0 | 53 | 15.1 | 6 | 16.7 | 59 | 15.3 | 22 | 14 |
| Kentucky | 170 | 11.2 | 262 | 17.2 | 30 | 33.3 | 292 | 18.9 | 7 | 19 |
| Louisiana | 93 | 7.5 | 104 | 7.7 | 17 | 11.8 | 121 | 8.3 | 15 | 9 |
| Maine | 19 | 0. | 28 | 3.6 | 1 | 0. | 29 | 3.4 | 28 | 3 |
| Maryland | 247 | 15.8 | 442 | 19.7 | 41 | 19.5 | 483 | 19.7 | 6 | 20 |
| Massachusetts | 100 | 14.0 | 190 | 15.3 | 36 | 16.7 | 226 | 15.5 | 9 | 15 |
| Michigan | 139 | 0.7 | 163 | 4.3 | 32 | 31.2 | 195 | 8.7 | 10 | 10 |
| Minnesota | 61 | 13.1 | 98 | 16.3 | 12 | 16.7 | 110 | 16.4 | 17 | 17 |
| Mississippi | 16 | 56.2 | 21 | 66.7 | .... | .... | 21 | 66.7 | 31 | 31 |
| Missouri | 417 | 17.3 | 527 | 24.3 | 48 | 47.9 | 575 | 26.3 | 3 | 26 |
| Nebraska | 46 | 0. | 67 | 5.9 | 6 | 50.0 | 73 | 9.6 | 20 | 12 |
| New Hampshire | 6 | 0. | 11 | 9.1 | 6 | 50.0 | 17 | 23.5 | 32 | 25 |
| New York | 306 | 3.6 | 504 | 4.2 | 43 | 21.0 | 547 | 5.5 | 5 | 6 |
| North Carolina | 63 | 14.3 | 89 | 22.5 | .... | .... | 89 | 22.5 | 18 | 23 |
| Ohio | 178 | 5.6 | 192 | 5.7 | 37 | 16.2 | 229 | 7.4 | 8 | 8 |
| Oklahoma | 2 | 0. | 3 | 0. | .... | .... | 3 | 0. | 33 | 1 |
| Oregon | 23 | 21.8 | 53 | 26.4 | 4 | 75.0 | 57 | 29.8 | 23 | 27 |
| Pennsylvania | 448 | 3.4 | 591 | 5.1 | 67 | 19.3 | 658 | 6.5 | 2 | 7 |
| South Carolina | 36 | 30.6 | 40 | 35.0 | 6 | 33.3 | 46 | 34.8 | 26 | 29 |
| Tennessee | 311 | 21.5 | 472 | 30.1 | 79 | 40.5 | 551 | 31.0 | 4 | 28 |
| Texas | 66 | 1.5 | 71 | 1.4 | 3 | 33.3 | 74 | 2.7 | 19 | 2 |
| Vermont | 24 | 4.2 | 40 | 12.5 | 16 | 18.7 | 56 | 14.3 | 24 | 13 |
| Virginia | 96 | 4.2 | 123 | 8.9 | 3 | 33.3 | 126 | 9.5 | 14 | 11 |
| Wisconsin | 35 | 20.0 | 50 | 22.0 | 3 | 33.3 | 53 | 22.6 | 25 | 24 |
| Totals Ex'd 1909 | 3947 | 10.3 | 5644 | 14.7 | 697 | 26.5 | 6341 | 16.2 | .. | .. |

This table gives data relating to the group of colleges in each state. For example, it shows that of all the medical schools in Illinois 904 graduates of various years were examined by state boards during 1909, of which number 16 per cent. failed; of the 779 who graduated in recent years (1905 to 1909, inclusive), 13.5 per cent. failed, and of the 125 who graduated previous to 1905, 32 per cent. failed.

The fifth column gives the rank of each state group of colleges according to the number of applicants. The Illinois group of colleges leads, having 904 graduates examined by state boards during 1909, followed by Pennsylvania with 658, Missouri with 575, Tennessee with 551, and New York with 547.

The sixth column gives the rank of each state group of colleges according to the success of the graduates at state board examinations. It is interesting to compare the figures of the last two columns. While the Illinois group ranks first according to the number examined, it ranks sixteenth in the success of its graduates at examinations. While the Missouri group ranks third in the number examined, it ranks as the twenty-sixth in the success of the graduates

### Study of Larger Colleges

Table F is also based on the four large tables and gives the results of state board examinations as they affect the 44 largest medical colleges. Although these schools represent less than one-third of the medical schools in the United States they furnish nearly two-thirds of all the candidates for license. This table shows that the graduation of large classes by a medical college does not prove excellence of teaching since several colleges having 100 or more examined have very high failure percentages, which holds true even for the graduates of 1909. In fact, the larger the college from the standpoint of the number of students and graduates the more serious is inferior teaching ability, indicated by a high failure percentage. In fairness to the medical student, and in the interests of the public, such schools should greatly strengthen their teaching facilities or reduce the size of their classes.

Results for Larger Colleges
Comparison with Previous Years (Table F).

| Year. | Colleges Represented. | Total Examined. | Per Cent. Failed. | Colleges, 100 or More Examined. | Total Examined. | Per Cent. Failed. | Colleges, 50 to 100 Examined. | Total Examined. | Per Cent. Failed. | Colleges, Less than 50 Examined. | Total Examined. | Per Cent. Failed. | Foreign and Undergrads. Examined. | Per Cent. Failed. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1904 | 149 | 6241 | 16.4 | 14 | 2271 | 11.7 | 28 | 1817 | 16.9 | 107 | 2153 | 21.0 | 794 | 43.1 |
| 1905 | 153 | 6411 | 18.3 | 14 | 2350 | 12.4 | 37 | 2543 | 17.7 | 102 | 1518 | 28.9 | 759 | 51.1 |
| 1906 | 146 | 6938 | 17.3 | 16 | 2504 | 14.5 | 34 | 2381 | 16.9 | 96 | 2043 | 21.3 | 1097 | 42.5 |
| 1907 | 146 | 6207 | 13.8 | 12 | 1626 | 12.7 | 36 | 2578 | 14.7 | 98 | 2003 | 13.6 | 1064 | 55.5 |
| 1908 | 137 | 6491 | 17.2 | 19 | 2596 | 15.6 | 26 | 1825 | 15.5 | 92 | 2070 | 20.8 | 1279 | 14.6 |
| 1909 | 149 | 6341 | 16.2 | 17 | 2476 | 16.9 | 27 | 1920 | 12.3 | 90 | 1945 | 19.2 | 946 | 42.6 |

Altogether for these schools 653 or 14.9 per cent. failed, as compared with 19.2 per cent. of failures for the 1,945 candidates from the 90 colleges having less than 50 each examined.

Besides the graduates of the medical colleges of the United States, 946 candidates were examined, made up of foreign college graduates, graduates of miscellaneous colleges and nongraduates, of which number 42.6 per cent. failed.

### Results in Home States and Elsewhere

Table G is of much interest because it shows the results for each college of examinations in the state where the college is located as compared with the results of examinations in other states where there is no possibility of local influence. Of all recent graduates examined in 1909, 3,347 or about 60 per cent. took their license examinations in the state where the colleges from which they graduated were located. Of this number only 10.6 per cent. failed on the average, whereas, of the 2,297 candidates examined in other states, 20.8 per cent. failed. This would indicate that as a rule the students' chances of passing the license examinations are better if he stays in the college's home state. In this connection it is interesting to note that not a single graduate of any one of the Tennessee colleges failed in the Tennessee examinations although of the graduates of these colleges who were examined in other states the failures varied from 18.5 per cent. to 77.7 per cent. or an average of 45.2. The chances for success at home and elsewhere were equal or nearly so in 6 instances while the graduates' chances were better in other than the home state in 12 instances.

### TOTAL RESULTS FOR FIVE YEARS

Table H shows, so far as reports were obtainable, the number egistered and the number rejected in each state for each of he past five years. A comparison of this table with the statistics in the last educational number of THE JOURNAL (Aug. 4, 1909, p. 546), shows what would be expected, that the tates having the largest number of medical graduates xamine the largest numbers of physicians. In 1905 several tates registered all or the majority of their applicants on the resentation of satisfactory credentials without written examinations. Now only one state, New Mexico, will register canidates on presentation of a diploma, without examination. his table shows only those registered by examination. Another table (M) shows the total registration by all methods.

### CLASSIFICATION OF COLLEGES

Tables, I, J, K and L give a classification of the medical coleges of the United States on the basis of the failures of their raduates at state board examinations during the past year. his classification is based on the examination of *recent raduates* as shown in Table C. In forming conclusions, the aution already given should be observed, of noting the number examined, the number of states in which representatives appeared and the character of the boards making the examination. To form a more exact judgment one should compare the percentage of failures received by any college this year with those received in the classifications published in previous years. Careful investigation shows that a college cannot be considered a high-grade medical school merely because its graduates occasionally show a low percentage of failures at state board examinations. The fact is that several poorly equipped and low-standard colleges appear in the first list. On the other hand, some good schools appear in the second list. For the majority of colleges, however, the classification is fairly accurate.

Table I gives a list of 58 colleges which obtained failure percentages below 10 per cent., 21 of which had no failures whatsoever and 40 had only 5 per cent. or less. The failure percentage for the entire group was 4.3. Table J shows 31 colleges whose failure percentages were between 10 and 20 per cent., of which number 19 had percentages below that for the group, which was 14.4. Table K includes 38 colleges having failure percentages of 20 per cent. and above, of which number 25 had above 30 per cent., 12 had above 40 per cent., and 6 had percentages of 50 per cent. or higher. The average percentage for all candidates from this group of colleges was 35.5.

TABLE F.—COLLEGES HAVING 50 OR MORE EXAMINED

TABLE SHOWS TOTAL NUMBER EXAMINED, PERCENTAGE OF FAILURES AND NUMBER OF STATES IN WHICH EACH COLLEGE HAD REPRESENTATIVES

| College. | Graduates, All Years. | | | Graduates of 1905-1909. | | | Graduates of 1904 and previous. | | | Graduates of 1909. | | | Margin Number. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. Examined. | Per Cent. Failed. | No. States. | No. Examined. | Per Cent. Failed. | No. States. | No. Examined. | Per Cent. Failed. | No. States. | No. Examined. | Per Cent. Failed. | No. States. | |
| University of Louisville, Medical Department | 288 | 19.1 | 33 | 260 | 17.3 | 32 | 28 | 35.7 | 14 | 168 | 11.3 | 18 | 45 |
| Northwestern University Medical School | 229 | 6.6 | 23 | 203 | 5.4 | 21 | 26 | 15.4 | 13 | 160 | 3.1 | 18 | 34 |
| Jefferson Medical School | 202 | 7.9 | 39 | 173 | 4.6 | 33 | 29 | 27.6 | 15 | 123 | 4.9 | 23 | 108 |
| College of Physicians and Surgeons | 170 | 14.7 | 25 | 141 | 11.3 | 22 | 29 | 31.0 | 14 | 114 | 8.8 | 13 | 28 |
| University of Pennsylvania, Department of Medicine | 155 | 1.9 | 25 | 138 | 0.7 | 22 | 17 | 11.8 | 13 | 101 | 1.0 | 11 | 111 |
| Rush Medical College | 142 | 7.0 | 21 | 105 | 1.0 | 17 | 37 | 24.3 | 15 | 74 | 0. | 9 | 36 |
| Meharry Medical College | 136 | 50.0 | 18 | 129 | 49.5 | 17 | 7 | 57.1 | 6 | 69 | 37.7 | 12 | 119 |
| Memphis Hospital Medical College | 133 | 27.8 | 10 | 108 | 27.8 | 10 | 25 | 28.0 | 7 | 89 | 23.6 | 8 | 118 |
| Baltimore Medical College | 127 | 30.7 | 22 | 124 | 29.8 | 21 | 3 | 66.7 | 3 | 52 | 19.2 | 11 | 50 |
| University of Michigan, Department of Medicine and Surgery | 119 | 8.4 | 26 | 92 | 1.1 | 17 | 27 | 33.3 | 14 | 79 | 1.3 | 12 | 62 |
| Barnes Medical College | 117 | 35.0 | 17 | 103 | 33.0 | 14 | 14 | 50.0 | 6 | 80 | 22.5 | 9 | 68 |
| Columbia University, College of Physicians and Surgeons | 113 | 4.4 | 19 | 103 | 3.9 | 18 | 10 | 10.0 | 6 | 46 | 2.2 | 8 | 82 |
| Tulane University of Louisiana, Medical Department | 112 | 4.5 | 18 | 97 | 4.1 | 13 | 15 | 6.7 | 9 | 86 | 3.4 | 10 | 47 |
| St. Louis College of Physicians and Surgeons | 112 | 44.6 | 17 | 101 | 43.6 | 14 | 11 | 54.5 | 8 | 75 | 32.0 | 8 | 72 |
| University of Maryland, School of Medicine | 111 | 9.9 | 20 | 101 | 8.9 | 18 | 10 | 20.0 | 8 | 76 | 10.5 | 13 | 54 |
| Chicago College of Medicine and Surgery | 110 | 15.5 | 17 | 107 | 13.1 | 15 | 3 | 100.0 | 3 | 97 | 8.2 | 10 | 26 |
| Long Island College Hospital | 100 | 11.0 | 6 | 96 | 9.4 | 4 | 4 | 50.0 | 4 | 47 | 10.6 | 2 | 86 |
| Medico-Chirurgical College of Philadelphia | 98 | 5.1 | 14 | 89 | 2.2 | 11 | 9 | 33.3 | 5 | 77 | 2.6 | 8 | 109 |
| University and Bellevue Hospital Medical College | 97 | 3.1 | 15 | 86 | 1.2 | 8 | 11 | 18.1 | 8 | 53 | 0. | 2 | 90 |
| Tufts College Medical School | 90 | 13.3 | 10 | 83 | 13.3 | 8 | 7 | 14.3 | 5 | 46 | 13.0 | 3 | 59 |
| St. Louis University School of Medicine | 89 | 10.1 | 12 | 88 | 10.2 | 12 | 1 | 0. | 1 | 67 | 3.0 | 6 | 71 |
| Washington University Medical Department | 87 | 8.0 | 9 | 82 | 6.1 | 7 | 5 | 40.0 | 3 | 74 | 5.4 | 4 | 76 |
| University Medical College, Kansas City | 86 | 22.1 | 15 | 76 | 19.7 | 11 | 10 | 40.0 | 5 | 58 | 15.5 | 5 | 74 |
| University of Nashville, Medical Department | 83 | 22.9 | 19 | 70 | 17.1 | 17 | 13 | 53.8 | 10 | 47 | 10.6 | 13 | 121 |
| State University of Iowa, College of Medicine | 81 | 7.3 | 10 | 70 | 4.3 | 8 | 11 | 27.3 | 5 | 51 | 2.0 | 4 | 39 |
| Maryland Medical College | 78 | 38.5 | 19 | 69 | 39.1 | 16 | 9 | 33.3 | 6 | 39 | 35.9 | 6 | 53 |
| Western Pennsylvania Medical College | 77 | 9.1 | 7 | 74 | 9.5 | 5 | 3 | 0. | 3 | 56 | 5.4 | 3 | 112 |
| Hahnemann Medical College and Hospital, Philadelphia | 75 | 13.3 | 17 | 70 | 14.3 | 15 | 5 | 0. | 5 | 53 | 5.7 | 9 | 107 |
| University of Minnesota, College of Medicine and Surgery | 74 | 8.1 | 10 | 67 | 8.9 | 8 | 7 | 0. | 5 | 46 | 6.5 | 4 | 64 |
| Harvard Medical School | 73 | 4.1 | 12 | 59 | 3.4 | 10 | 14 | 7.2 | 5 | 27 | 3.7 | 4 | 58 |
| Cornell University Medical College | 71 | 0. | 9 | 66 | 0. | 7 | 5 | 0. | 3 | 46 | 0. | 6 | 83 |
| Atlanta School of Medicine | 68 | 8.8 | 4 | 68 | 8.8 | 4 | .. | .... | .. | 62 | 9.7 | 3 | 20 |
| College of Physicians and Surgeons, Baltimore | 68 | 8.8 | 18 | 58 | 10.3 | 16 | 10 | 0. | 7 | 32 | 6.2 | 10 | 51 |
| Johns Hopkins University, Medical Department | 65 | 1.5 | 20 | 58 | 1.7 | 20 | 7 | 0. | 5 | 27 | 3.7 | 12 | 52 |
| George Washington University, Department of Medicine | 62 | 16.1 | 22 | 57 | 17.5 | 20 | 5 | 0. | 5 | 17 | 5.9 | 4 | 16 |
| Starling-Ohio Medical College | 62 | 8.1 | 9 | 53 | 7.5 | 4 | 9 | 11.1 | 9 | 51 | 5.9 | 2 | 101 |
| Indiana University School of Medicine | 60 | 0. | 4 | 60 | 0. | 4 | .. | .... | .. | 59 | 0. | 3 | 37 |
| Bennett Medical College | 56 | 28.6 | 16 | 48 | 25.0 | 10 | 8 | 50.0 | 7 | 42 | 26.2 | 6 | 25 |
| University of Vermont, College of Medicine | 56 | 14.3 | 14 | 40 | 12.5 | 9 | 16 | 18.7 | 12 | 24 | 4.2 | 6 | 125 |
| University College of Medicine, Richmond | 55 | 7.3 | 7 | 54 | 7.4 | 6 | 1 | 0. | 1 | 48 | 4.2 | 5 | 132 |
| Howard University, Medical Department | 54 | 33.3 | 15 | 48 | 31.2 | 13 | 6 | 50.0 | 4 | 16 | 18.7 | 7 | 18 |
| Hahnemann Medical College and Hospital, Chicago | 53 | 26.4 | 15 | 41 | 22.0 | 13 | 12 | 41.7 | 6 | 21 | 23.8 | 6 | 29 |
| Atlanta College of Physicians and Surgeons | 51 | 13.7 | 11 | 43 | 10.4 | 5 | 8 | 25.0 | 8 | 40 | 10.0 | 4 | 19 |
| Creighton Medical College | 51 | 7.8 | 14 | 46 | 2.2 | 12 | 5 | 60.0 | 3 | 29 | 0. | 5 | 77 |
| Totals | 4396 | 14.9 | 16 | 3904 | 13.3 | 13 | 492 | 27.0 | 7 | 2744 | 9.4 | 8 | |

This table is especially interesting, since it gives data relating to the 44 larger medical colleges arranged according to the number of graduates examined. This allows of comparisons between colleges having classes of nearly equal size. This time the University f Louisville Medical Department had the largest number examined, which place was held in 1908 by Jefferson Medical College and n the three previous years by the College of Physicians and Surgeons of Chicago.

Of the 17 colleges having 100 or more examined, only 8 have failure percentages of less than 10, while 5 stand out prominently vith large failure percentages of 27.8, 30.7, 35.0, 44.6 and 50.0. This marked difference holds even in respect to recent graduates (of 1905 to 1909, inclusive).

Of the 27 colleges having between 50 and 100 graduates examined, 15 had failure percentages less than 10; 6 had failure percentages between 10 and 20 and 6 had failure percentages above 20, the 3 highest having 28.6, 33.3 and 38.5 per cent.

The average percentage of failures for these larger colleges for graduates of 1904 and previous years, was 27.0; for graduates of 905 to 1909 inclusive (recent graduates), 13.3; for graduates of 1909, 9.4 and for graduates of all years, 14.9. Of the 44 colleges, 29 obtained failure percentages below the average. Of the 6,849 college graduates examined by state boards in 1909, these larger schools furnished 4,396, or 64.2 per cent.

TABLE G—Comparison of Results in Home States and Elsewhere. Based on Table C.

| College | Total Examined. | Results in Home State. | | | Results in Other States. | | |
|---|---|---|---|---|---|---|---|
| | | Passed. | Failed. | Per Cent. Failed. | Passed. | Failed. | Per Cent. Failed. |
| ALABAMA | 16 | .... | .... | .... | 15 | 1 | 6.3 |
| Birmingham Medical College | 6 | .... | .... | .... | 5 | 1 | 16.7 |
| University of Alabama | 10 | .... | .... | .... | 10 | 0 | 0. |
| ARKANSAS + 7.8 | 23 | 4 | 7 | 63.6 | 7 | 5 | 71.4 |
| Coll. of Physicians and Surgeons | 7 | 1 | 2 | 66.7 | 2 | 2 | 50.0 |
| University of Arkansas | 16 | 3 | 5 | 62.5 | 5 | 3 | 37.5 |
| CALIFORNIA — 5.4 | 128 | 86 | 22 | 20.4 | 17 | 3 | 15.0 |
| California Eclectic Medical College | 2 | 1 | 1 | 50.0 | .... | .... | .... |
| College of Phys. and Surgs., Los Angeles | 9 | 4 | 2 | 33.3 | 3 | 0 | 0. |
| Coll. of Phys. and Surgs., San Francisco | 25 | 13 | 6 | 30.0 | 5 | 1 | 16.7 |
| Cooper Medical College | 29 | 24 | 2 | 7.7 | 3 | 0 | 0. |
| Hahnemann Medical College | 13 | 7 | 5 | 41.7 | 1 | 0 | 0. |
| Oakland College of Medicine and Surgery | 3 | 3 | 0 | 0. | .... | .... | .... |
| University of California | 14 | 9 | 0 | 0. | 3 | 2 | 40.0 |
| University of Southern California | 33 | 25 | 6 | 19.4 | 2 | 0 | 0. |
| COLORADO — 4.2 | 41 | 23 | 1 | 4.2 | 17 | 0 | 0. |
| Denver and Gross College of Medicine | 31 | 18 | 1 | 5.3 | 12 | 0 | 0. |
| University of Colorado | 10 | 5 | 0 | 0. | 5 | 0 | 0. |
| CONNECTICUT —11.1 | 26 | 8 | 1 | 11.1 | 17 | 0 | 0. |
| Yale Medical School | 26 | 8 | 1 | 11.1 | 17 | 0 | 0. |
| DISTRICT OF COLUMBIA —20.2 | 128 | 30 | 16 | 34.8 | 70 | 12 | 14.6 |
| George Washington University | 57 | 20 | 9 | 31.0 | 27 | 1 | 3.6 |
| Georgetown University | 23 | 2 | 1 | 33.3 | 18 | 2 | 10.0 |
| Howard University | 48 | 8 | 6 | 42.8 | 25 | 9 | 26.5 |
| GEORGIA +17.4 | 149 | 92 | 12 | 11.5 | 32 | 13 | 28.9 |
| Atlanta College of Phys. and Surg | 43 | 30 | 4 | 11.8 | 8 | 1 | 11.1 |
| Atlanta School of Medicine | 68 | 43 | 5 | 10.4 | 19 | 1 | 5.0 |
| Georgia Coll. of Eclectic Med. and Surg. | 1 | .... | .... | .... | 0 | 1 | 100.0 |
| Medical College of Georgia | 37 | 19 | 3 | 13.6 | 5 | 10 | 66.7 |
| ILLINOIS + 5.7 | 779 | 475 | 63 | 11.7 | 199 | 42 | 17.4 |
| American Medical Missionary College | 10 | .... | .... | .... | 10 | 0 | 0. |
| Bennett Medical College | 48 | 29 | 9 | 23.7 | 7 | 3 | 30.0 |
| Chicago College of Medicine and Surg. | 107 | 81 | 7 | 8.0 | 12 | 7 | 36.8 |
| Coll. of Med. and Surg., Physio-Medical | 9 | 4 | 5 | 55.6 | .... | .... | .... |
| College of Phys. and Surg., Chicago | 141 | 91 | 6 | 6.2 | 34 | 10 | 22.7 |
| Hahnemann Medical College and Hosp. | 41 | 16 | 5 | 23.8 | 16 | 4 | 20.0 |
| Hering Medical College | 7 | 6 | 0 | 0. | 1 | 0 | 0. |
| Illinois Medical College | 40 | 22 | 7 | 24.1 | 7 | 4 | 36.3 |
| Jenner Medical College | 29 | 17 | 10 | 37.0 | 0 | 2 | 100.0 |
| National Medical University | 19 | 8 | 6 | 42.8 | 3 | 2 | 40.0 |
| Northwestern University Medical School | 203 | 121 | 2 | 1.6 | 71 | 9 | 11.2 |
| Reliance Medical College | 20 | 14 | 6 | 30.0 | .... | .... | .... |
| Rush Medical College | 105 | 66 | 0 | 0. | 38 | 1 | 2.6 |
| INDIANA | 60 | 55 | 0 | 0. | 5 | 0 | 0. |
| Indiana University | 60 | 55 | 0 | 0. | 5 | 0 | 0. |
| IOWA + 0.3 | 100 | 64 | 4 | 5.9 | 30 | 2 | 6.2 |
| Drake University | 22 | 18 | 2 | 10.0 | 1 | 1 | 50.0 |
| University of Iowa (R) | 70 | 43 | 2 | 4.4 | 24 | 1 | 4.0 |
| University of Iowa (H) | 8 | 3 | 0 | 0. | 5 | 0 | 0. |
| KANSAS +27.1 | 53 | 29 | 1 | 3.3 | 16 | 7 | 30.4 |
| Kansas Medical College | 25 | 20 | 1 | 4.8 | 2 | 2 | 50.0 |
| University of Kansas | 28 | 9 | 0 | 0. | 14 | 5 | 26.3 |
| KENTUCKY + 6.4 | 262 | 91 | 14 | 13.3 | 126 | 31 | 19.7 |
| Louisville National Medical College | 1 | .... | .... | .... | 1 | 0 | 0. |
| Southern Homeopathic Medical College | 1 | 1 | 0 | 0. | .... | .... | .... |
| University of Louisville | 260 | 90 | 14 | 13.5 | 125 | 31 | 19.9 |
| LOUISIANA + 6.4 | 104 | 57 | 3 | 5.0 | 39 | 5 | 11.4 |
| Flint Medical College | 7 | 2 | 2 | 50.0 | 1 | 2 | 66.7 |
| Tulane University of Louisiana | 97 | 55 | 1 | 1.8 | 38 | 3 | 7.3 |
| MAINE — 5.3 | 28 | 18 | 1 | 5.3 | 9 | 0 | 0. |
| Medical School of Maine | 28 | 18 | 1 | 5.3 | 9 | 0 | 0. |
| MARYLAND — 2.6 | 442 | 91 | 25 | 21.6 | 264 | 62 | 19.0 |
| Atlantic Medical College | 23 | .... | .... | .... | 19 | 4 | 17.4 |
| Baltimore Medical College | 124 | 13 | 7 | 35.0 | 74 | 30 | 28.8 |
| College of Phys. and Surg., Baltimore | 58 | 13 | 0 | 0. | 39 | 6 | 13.3 |
| Johns Hopkins University | 58 | 15 | 0 | 0. | 42 | 1 | 2.3 |
| Maryland Medical College | 69 | 8 | 11 | 57.9 | 34 | 16 | 32.0 |
| University of Maryland | 101 | 40 | 4 | 9.1 | 52 | 5 | 8.8 |
| Woman's Medical College | 9 | 2 | 3 | 60.0 | 4 | 0 | 0. |
| MASSACHUSETTS — 2.9 | 190 | 109 | 21 | 16.2 | 52 | 8 | 13.3 |
| Boston University | 23 | 14 | 1 | 6.7 | 7 | 1 | 12.5 |
| College of Phys. and Surg., Boston | 25 | 4 | 11 | 73.3 | 7 | 3 | 30.0 |
| Harvard Medical School | 59 | 38 | 1 | 2.6 | 19 | 1 | 5.0 |
| Tufts College Medical School | 83 | 53 | 8 | 13.1 | 19 | 3 | 13.6 |
| MICHIGAN +12.8 | 163 | 118 | 1 | 0.8 | 38 | 6 | 13.6 |
| Detroit College of Medicine | 43 | 36 | 0 | 0. | 4 | 3 | 42.9 |
| Detroit Homeopathic College | 6 | 5 | 0 | 0. | 0 | 1 | 100.0 |
| University of Michigan (R) | 92 | 62 | 0 | 0. | 29 | 1 | 3.3 |
| University of Michigan (H) | 22 | 15 | 1 | 6.3 | 5 | 1 | 16.7 |
| MINNESOTA — 2.8 | 98 | 58 | 12 | 17.1 | 24 | 4 | 14.3 |
| University of Minnesota (R) | 67 | 46 | 3 | 6.1 | 15 | 3 | 16.7 |
| Hamline University | 31 | 12 | 9 | 42.9 | 9 | 1 | 10.0 |
| MISSISSIPPI —73.7 | 21 | 5 | 14 | 73.7 | 2 | 0 | 0. |
| Mississippi Medical College | 21 | 5 | 14 | 73.7 | 2 | 0 | 0. |
| MISSOURI + 3.2 | 527 | 170 | 49 | 22.4 | 229 | 79 | 25.6 |
| American Medical College | 4 | 3 | 0 | 0. | 1 | 0 | 0. |
| Barnes Medical College | 103 | 31 | 14 | 31.1 | 38 | 20 | 34.5 |
| Ensworth Medical College | 42 | 7 | 3 | 30.0 | 21 | 11 | 34.4 |
| Kansas City Hahnemann Medical Coll. | 20 | 1 | 2 | 66.7 | 13 | 4 | 23.5 |
| St. Louis University | 88 | 40 | 1 | 2.4 | 39 | 8 | 17.0 |
| St. Louis College of Phys. and Surg. | 101 | 16 | 14 | 46.7 | 41 | 30 | 42.3 |
| University of Missouri | 6 | 3 | 0 | 0. | 3 | 0 | 0. |
| University Medical College, Kansas City | 76 | 26 | 12 | 31.6 | 35 | 3 | 7.9 |
| Western Eclectic Coll. of Med. and Surg. | 5 | .... | .... | .... | 4 | 1 | 20.0 |
| Washington University | 82 | 43 | 3 | 6.5 | 34 | 2 | 5.6 |
| NEBRASKA +10.7 | 67 | 43 | 1 | 2.3 | 20 | 3 | 13.0 |
| Creighton Medical College | 46 | 26 | 1 | 3.7 | 19 | 0 | 0. |
| Lincoln Medical College | 11 | 8 | 0 | 0. | 0 | 3 | 100.0 |
| University of Nebraska | 10 | 9 | 0 | 0. | 1 | 0 | 0. |
| NEW HAMPSHIRE —16.7 | 11 | 5 | 1 | 16.7 | 5 | 0 | 0. |
| Dartmouth Medical School | 11 | 5 | 1 | 16.7 | 5 | 0 | 0. |
| NEW YORK + 0.4 | 504 | 420 | 18 | 4.1 | 63 | 3 | 4.5 |
| Albany Medical College | 37 | 31 | 3 | 8.8 | 3 | 0 | 0. |
| Columbia University, Coll. of P. and S. | 103 | 78 | 2 | 2.5 | 21 | 2 | 8.7 |
| Cornell University Medical College | 66 | 55 | 0 | 0. | 11 | 0 | 0. |
| Eclectic Medical College, New York | 12 | 10 | 1 | 9.1 | 1 | 0 | 0. |
| Fordham University, School of Medicine. | 10 | 10 | 0 | 0. | .... | .... | .... |
| Long Island College Hospital | 96 | 82 | 9 | 9.9 | 5 | 0 | 0. |
| New York Homeo. Med. Coll. and Hosp. | 20 | 11 | 1 | 8.3 | 7 | 1 | 12.5 |
| N. Y. Med. Coll. and Hosp. for Women | 4 | 4 | 0 | 0. | .... | .... | .... |
| Syracuse University | 39 | 33 | 1 | 2.9 | 5 | 0 | 0. |
| University and Bellevue Hosp. Med. Coll. | 86 | 77 | 1 | 1.3 | 8 | 0 | 0. |
| University of Buffalo | 31 | 29 | 0 | 0. | 2 | 0 | 0. |
| NORTH CAROLINA +22.7 | 89 | 36 | 4 | 10.0 | 33 | 16 | 32.7 |
| Leonard School of Medicine | 47 | 10 | 3 | 23.1 | 21 | 13 | 38.2 |
| North Carolina Medical College | 25 | 14 | 0 | 0. | 9 | 2 | 18.1 |
| University of North Carolina | 17 | 12 | 1 | 7.7 | 3 | 1 | 25.0 |
| OHIO + 0.4 | 192 | 150 | 9 | 5.7 | 31 | 2 | 6.1 |
| Cleveland College of Phys. and Surg. | 19 | 16 | 0 | 0. | 3 | 0 | 0. |
| Cleveland Homeopathic Medical College. | 10 | 7 | 0 | 0. | 3 | 0 | 0. |
| Eclectic Medical College | 14 | 4 | 1 | 20.0 | 8 | 1 | 11.1 |
| Medical College of Ohio | 32 | 28 | 0 | 0. | 4 | 0 | 0. |
| Miami Medical College | 22 | 14 | 4 | 22.2 | 4 | 0 | 0. |
| Pulte Medical College | 6 | 4 | 0 | 0. | 2 | 0 | 0. |
| Starling-Ohio Medical College | 53 | 47 | 3 | 6.0 | 2 | 1 | 33.3 |
| Toledo Medical College | 6 | 5 | 1 | 16.7 | .... | .... | .... |
| Western Reserve University | 30 | 25 | 0 | 0. | 5 | 0 | 0. |
| OKLAHOMA | 3 | 3 | 0 | 0. | .... | .... | .... |
| Epworth College of Medicine | 3 | 3 | 0 | 0. | .... | .... | .... |
| OREGON —24.8 | 53 | 27 | 13 | 32.5 | 12 | 1 | 7.7 |
| Willamette University | 26 | 11 | 7 | 38.9 | 8 | 0 | 0. |
| University of Oregon | 27 | 16 | 6 | 27.3 | 4 | 1 | 20.0 |
| PENNSYLVANIA + 5.3 | 591 | 351 | 11 | 3.0 | 210 | 19 | 8.3 |
| Hahnemann Medical College and Hosp. | 70 | 39 | 2 | 4.9 | 21 | 8 | 26.7 |
| Jefferson Medical College | 173 | 80 | 1 | 1.2 | 85 | 7 | 7.6 |
| Medico-Chirurgical Coll. of Philadelphia. | 89 | 68 | 1 | 1.4 | 19 | 1 | 5.0 |
| Temple University, Medical Department. | 22 | 19 | 1 | 5.0 | 2 | 0 | 0. |
| University of Pennsylvania | 138 | 73 | 0 | 0. | 64 | 1 | 1.5 |
| Western Pennsylvania Medical College | 74 | 57 | 6 | 9.5 | 10 | 1 | 9.1 |
| Woman's Med. College of Pennsylvania. | 25 | 15 | 0 | 0. | 9 | 1 | 10.0 |
| SOUTH CAROLINA — 1.8 | 40 | 24 | 13 | 35.1 | 2 | 1 | 33.3 |
| Medical College of South Carolina | 40 | 24 | 13 | 35.1 | 2 | 1 | 33.3 |
| TENNESSEE +45.2 | 472 | 158 | 0 | 0. | 172 | 142 | 45.2 |
| Chattanooga Medical College | 33 | 19 | 0 | 0. | 5 | 9 | 64.3 |
| College of Phys. and Surg., Memphis | 11 | 5 | 0 | 0. | 3 | 3 | 50.0 |
| Knoxville Medical College | 15 | 6 | 0 | 0. | 2 | 7 | 77.7 |
| Memphis Hospital Medical College | 108 | 28 | 0 | 0. | 50 | 30 | 37.5 |
| Meharry Medical College | 129 | 28 | 0 | 0. | 37 | 64 | 63.4 |
| Tennessee Medical College | 22 | 17 | 0 | 0. | 2 | 3 | 60.0 |
| University of Nashville | 70 | 26 | 0 | 0. | 32 | 12 | 27.3 |
| University of Tenessee | 31 | 9 | 0 | 0. | 18 | 4 | 18.2 |
| University of West Tennessee | 12 | 6 | 0 | 0. | 1 | 5 | 83.3 |
| Vanderbilt University | 41 | 14 | 0 | 0. | 22 | 5 | 18.5 |
| TEXAS — 1.4 | 71 | 68 | 1 | 1.4 | 2 | 0 | 0. |
| Baylor University | 13 | 13 | 0 | 0. | .... | .... | .... |
| Fort Worth University | 12 | 12 | 0 | 0. | .... | .... | .... |
| Southwestern University | 9 | 8 | 1 | 11.1 | .... | .... | .... |
| University of Texas | 37 | 35 | 0 | 0. | 2 | 0 | 0. |
| VERMONT +23.8 | 40 | 19 | 0 | 0. | 16 | 5 | 23.8 |
| University of Vermont | 40 | 19 | 0 | 0. | 16 | 5 | 23.8 |
| VIRGINIA + 2.3 | 123 | 78 | 7 | 8.2 | 34 | 4 | 10.5 |
| Medical College of Virginia | 42 | 31 | 3 | 8.8 | 8 | 0 | 0. |
| University of Virginia | 27 | 13 | 3 | 18.7 | 10 | 1 | 9.1 |
| University College of Medicine | 54 | 34 | 1 | 2.9 | 16 | 3 | 15.8 |
| WISCONSIN — 9.3 | 50 | 27 | 10 | 27.0 | 12 | 1 | 7.7 |
| Marquette University | 30 | 14 | 9 | 39.1 | 6 | 1 | 14.3 |
| Wisconsin College of Phys. and Surg. | 20 | 13 | 1 | 7.2 | 6 | 0 | 0. |
| Totals +10.2 | 5644 | 2992 | 355 | 10.6 | 1820 | 477 | 20.8 |

In this table the number of graduates examined in the state in which the college is located are grouped in one column, while graduates of that college examined in other states are in another column. This shows frequently that the graduates of certain schools have a better chance of passing the examination in the state in which they are located than they have elsewhere. This should always be considered in making comparisons between colleges. A college having an exceedingly low standard, by having all its graduates examined in the home state, may thus show a lower percentage of failures than a college of much higher grade which has graduates examined by several states.

The heavy-faced figures give the results by states. The first column of heavy-faced figures shows the differences between the percentages of examinations in the home state and the examinations elsewhere. The plus sign indicates that graduates have better chances of success in the state where the college is located; the minus sign indicates that the chances are better elsewhere. The most marked variation this year is seen in the results for the Tennessee colleges.

n Table L have been placed a number of colleges in regard to hich data were insufficient to allow of fair comparison.

A comparison of the classification this year with those of revious years shows an increase in the number of colleges aving less than 10 per cent. of failures and a decrease in those aving above 20 per cent.

### Classification of Colleges

Comparison with Previous Years (Tables I, J, K, L)

| | Colleges Having Less than 10 Per Cent. | Colleges Having 10 to 20 Per Cent. | Colleges Having Above 20 Per Cent. | Unclassified Colleges. | Total Colleges. |
|---|---|---|---|---|---|
| 904 | 47 | 27 | 38 | 37 | 149 |
| 905 | 45 | 22 | 40 | 46 | 153 |
| 906 | 62 | 24 | 43 | 20 | 149 |
| 907 | 64 | 27 | 39 | 18 | 148 |
| 908 | 48 | 29 | 46 | 15 | 138 |
| 909 | 58 | 31 | 38 | 7 | 134 |

### ABLE II.—Physicians Examined by State Boards, 1905 to 1909, Inclusive

| State. | 1905 | | 1906 | | 1907 | | 1908 | | 1909 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Registered. | Rejected. | Registered. | Rejected. | Registered. | Rejected. | Registered. | Rejected. | Registered. | Rejected. | Total Examined. | Registered. | Rejected. | Percentage Rejected. |
| labama* | 131 | 22 | 138 | 22 | 142 | 38 | 66 | 66 | 7 | 20 | 652 | 484 | 168 | 25.8 |
| rizona | 35 | 7 | 35 | 4 | 29 | 2 | 36 | 4 | 19 | 6 | 177 | 154 | 23 | 13.0 |
| rkansas* | 88 | 58 | 152 | 73 | 72 | 106 | 120 | 85 | 111 | 131 | 996 | 543 | 453 | 45.5 |
| alifornia | 144 | 127 | 190 | 44 | 118 | 84 | 145 | 96 | 184 | 73 | 1,205 | 781 | 424 | 35.2 |
| olorado | 283 | 54 | ... | ... | 50 | 6 | 52 | 14 | 36 | 15 | 510 | 421 | 89 | 17.5 |
| onnecticut | 66 | 17 | 84 | 28 | 64 | 17 | 67 | 16 | 52 | 13 | 424 | 333 | 91 | 21.4 |
| elaware | 20 | 8 | 11 | 1 | 4 | 2 | 11 | 0 | 19 | 2 | 78 | 65 | 13 | 16.7 |
| ist. of Columbia | 67 | 23 | 63 | 34 | 59 | 37 | 53 | 36 | 46 | 21 | 439 | 288 | 151 | 34.4 |
| lorida | 24 | 3 | 66 | 7 | 72 | 8 | 79 | 10 | 70 | 12 | 351 | 311 | 40 | 11.4 |
| eorgia | ... | ... | 164 | 5 | 139 | 22 | 150 | 14 | 143 | 28 | 665 | 596 | 69 | 10.4 |
| laho | 46 | 15 | 42 | 12 | 38 | 7 | 52 | 16 | 54 | 23 | 305 | 232 | 73 | 23.9 |
| linois | 759 | 36 | 748 | 69 | 580 | 52 | 646 | 96 | 645 | 117 | 3,748 | 3,378 | 370 | 9.9 |
| ıdiana | 249 | 63 | 228 | 12 | 172 | 17 | 172 | 7 | 102 | 3 | 1,025 | 923 | 102 | 10.0 |
| wa | 205 | 30 | 166 | 29 | 146 | 26 | 139 | 43 | 98 | 14 | 896 | 754 | 142 | 15.7 |
| ansas | 163 | 29 | 180 | 27 | 125 | 14 | 116 | 18 | 121 | 20 | 813 | 705 | 108 | 13.3 |
| entucky | 38 | 4 | 52 | 13 | 48 | 19 | 107 | 61 | 120 | 18 | 480 | 365 | 115 | 24.0 |
| ouisiana | 105 | 15 | 133 | 14 | 153 | 7 | 145 | 29 | 121 | 33 | 755 | 657 | 98 | 13.0 |
| aine | 68 | 3 | 80 | 8 | 74 | 4 | 92 | 11 | 55 | 10 | 405 | 369 | 36 | 8.9 |
| aryland | 120 | 75 | 112 | 44 | 139 | 41 | 132 | 71 | 130 | 33 | 897 | 633 | 264 | 29.4 |
| assachusetts | 274 | 63 | 270 | 120 | 226 | 118 | 238 | 108 | 213 | 95 | 1,725 | 1,221 | 504 | 29.2 |
| ichigan | 82 | 5 | 162 | 6 | 150 | 8 | 113 | 6 | 140 | 2 | 674 | 647 | 27 | 4.0 |
| innesota | 124 | 39 | 104 | 31 | 80 | 35 | 76 | 25 | 90 | 25 | 629 | 474 | 155 | 24.3 |
| ississippi* | 113 | 138 | 156 | 144 | 157 | 191 | 138 | 184 | 130 | 154 | 1,505 | 694 | 811 | 53.9 |
| issouri | ... | ... | 249 | 193 | 186 | 86 | 181 | 50 | 212 | 70 | 1,227 | 828 | 399 | 32.5 |
| ontana | 31 | 17 | 24 | 25 | 34 | 14 | 51 | 27 | 68 | 23 | 314 | 208 | 106 | 33.7 |
| ebraska | 87 | 29 | 58 | 25 | 68 | 14 | 103 | 16 | 74 | 8 | 482 | 390 | 92 | 19.1 |
| evada | ... | ... | 2 | 0 | 10 | 1 | 17 | 0 | 9 | 0 | 39 | 38 | 1 | 2.6 |
| ew Hampshire | 15 | 5 | 34 | 17 | 19 | 11 | 37 | 16 | 20 | 10 | 184 | 125 | 59 | 32.1 |
| ew Jersey | 55 | 17 | 80 | 13 | 73 | 15 | 89 | 17 | 76 | 12 | 447 | 373 | 74 | 16.5 |
| ew Mexico | ... | ... | ... | ... | 5 | 3 | 30 | 2 | 11 | 4 | 55 | 46 | 9 | 16.4 |
| ew York | 705 | 51 | 629 | 56 | 691 | 54 | 679 | 73 | 566 | 72 | 3,576 | 3,270 | 306 | 8.6 |
| orth Carolina | 92 | 40 | 87 | 41 | 111 | 20 | 95 | 26 | 111 | 18 | 641 | 496 | 145 | 22.6 |
| orth Dakota | 72 | 7 | 60 | 10 | 49 | 4 | 52 | 10 | 41 | 6 | 311 | 274 | 37 | 11.9 |
| hio | 213 | 8 | 222 | 16 | 179 | 9 | 182 | 6 | 192 | 13 | 1,040 | 988 | 52 | 5.0 |
| klahoma | 53 | 28 | 95 | 28 | ... | ... | 34 | 10 | 92 | 44 | 384 | 274 | 110 | 28.6 |
| regon | 68 | 66 | 65 | 56 | 62 | 56 | 43 | 63 | 95 | 50 | 624 | 333 | 291 | 46.7 |
| ennsylvania | 540 | 98 | 519 | 73 | 465 | 54 | 485 | 49 | 474 | 27 | 2,784 | 2,483 | 301 | 10.8 |
| hode Island | 47 | 19 | 54 | 30 | 36 | 23 | 29 | 17 | 23 | 10 | 288 | 189 | 99 | 34.4 |
| outh Carolina | 44 | 22 | 39 | 13 | 41 | 17 | 47 | 21 | 46 | 33 | 323 | 217 | 106 | 32.8 |
| outh Dakota | 41 | 11 | 26 | 11 | 23 | 5 | 58 | 6 | 60 | 21 | 262 | 208 | 54 | 20.6 |
| ennessee* | 86 | 35 | 150 | 96 | 133 | 140 | 213 | 87 | 277 | 4 | 1,221 | 859 | 362 | 29.6 |
| exas | 117 | 73 | 159 | 53 | 187 | 64 | 143 | 23 | 181 | 19 | 1,019 | 787 | 232 | 22.8 |
| tah | 32 | 8 | 37 | 7 | 26 | 0 | 27 | 5 | 28 | 4 | 174 | 150 | 24 | 13.8 |
| ermont | 43 | 1 | 35 | 0 | 40 | 7 | 45 | 6 | 38 | 2 | 217 | 201 | 16 | 7.4 |
| irginia | 140 | 50 | 123 | 35 | 124 | 33 | 128 | 53 | 136 | 40 | 862 | 651 | 211 | 24.5 |
| ashington | 141 | 34 | 137 | 45 | 163 | 38 | 182 | 60 | 148 | 49 | 997 | 771 | 226 | 22.7 |
| est Virginia | 109 | 95 | 84 | 72 | 92 | 9 | 102 | 18 | 105 | 10 | 696 | 492 | 204 | 29.3 |
| isconsin | 95 | 5 | 52 | 2 | 62 | 5 | 80 | 7 | 56 | 13 | 377 | 345 | 32 | 8.5 |
| yoming | 12 | 1 | 12 | 3 | 7 | 5 | 7 | 2 | 12 | 0 | 61 | 50 | 11 | 18.0 |
| Totals | 7,596 | | 8,035 | | 7,271 | | 7,770 | | 7,287 | | 37,959 | ...... | .... | .... |
| Registered | 6,042 | | 6,368 | | 5,723 | | 6,084 | | 5,857 | | ...... | 30,074 | ..... | .... |
| Rejected | 1,554 | | 1,667 | | 1,548 | | 1,686 | | 1,430 | | ...... | ...... | 7,885 | .... |
| Percent. Rej | 20.5 | | 20.7 | | 21.3 | | 21.7 | | 19.6 | | ...... | ...... | ..... | 20.8 |

This table gives the number of candidates registered by examination y each state during each of the last five years, as well as the number jected. The last four columns give the totals for the five years and e percentage rejected by each state. One 1909 report for Alabama as incomplete, so the figures could not be included.

Four states registered over 1,000 candidates by examination, these ing Illinois, Massachusetts, New York and Pennsylvania. Over 3,000 ere registered in Illinois and New York.

The highest percentage of rejections was 53.9 in Mississippi, followed y Oregon, Arkansas and California, with 46.7, 45.5 and 35.2, respecvely. The states marked with an asterisk (*) included non-graduates nong those examined, and for that reason would be expected to have gher percentages rejected.

The lowest failure percentages were in Nevada, 2.6; Michigan, 4.0; hio, 5.0; Vermont, 7.4 and Wisconsin, 6.9.

### Table I.*—Colleges Having Less Than 10 Per Cent. of Failures Before State Boards in 1909. Based on Table C.

| College | Total Examined. | Number Passed. | Number Failed. | Per Cent. Failed. | No. of States. |
|---|---|---|---|---|---|
| ALABAMA | | | | | |
| University of Alabama, Medical Department | 10 | 10 | 0 | 0. | 4 |
| CALIFORNIA | | | | | |
| Cooper Medical College | 29 | 27 | 2 | 6.9 | 2 |
| Oakland College of Medicine and Surgery | 3 | 3 | 0 | 0. | 1 |
| COLORADO | | | | | |
| Denver and Gross College of Medicine | 31 | 30 | 1 | 3.2 | 9 |
| University of Colorado, School of Medicine | 10 | 10 | 0 | 0. | 4 |
| CONNECTICUT | | | | | |
| Yale Medical School | 26 | 25 | 1 | 3.8 | 7 |
| GEORGIA | | | | | |
| Atlanta School of Medicine | 68 | 62 | 6 | 8.8 | 4 |
| ILLINOIS | | | | | |
| American Medical Missionary College | 10 | 10 | 0 | 0. | 4 |
| Hering Medical College | 7 | 7 | 0 | 0. | 2 |
| Northwestern University Medical School | 203 | 192 | 11 | 5.4 | 21 |
| Rush Medical College | 105 | 104 | 1 | 1.0 | 17 |
| INDIANA | | | | | |
| Indiana University, School of Medicine | 60 | 60 | 0 | 0. | 4 |
| IOWA | | | | | |
| State University of Iowa, College of Med. | 70 | 67 | 3 | 4.3 | 8 |
| State University of Iowa, Homeo. Dept. | 8 | 8 | 0 | 0. | 5 |
| LOUISIANA | | | | | |
| Tulane University, Medical Department | 97 | 93 | 4 | 4.1 | 13 |
| MAINE | | | | | |
| Medical School of Maine | 28 | 27 | 1 | 3.6 | 3 |
| MARYLAND | | | | | |
| Johns Hopkins University, Medical Dept. | 58 | 57 | 1 | 1.7 | 20 |
| University of Maryland, School of Med. | 101 | 92 | 9 | 8.9 | 18 |
| MASSACHUSETTS | | | | | |
| Boston University, School of Medicine | 23 | 21 | 2 | 8.7 | 8 |
| Harvard Medical School | 59 | 57 | 2 | 3.4 | 10 |
| MICHIGAN | | | | | |
| Detroit College of Medicine | 43 | 40 | 3 | 7.0 | 5 |
| Univ. of Michigan, Dept. of Med. and Surg. | 92 | 91 | 1 | 1.1 | 17 |
| University of Michigan, Homeopathic Dept. | 22 | 20 | 2 | 9.1 | 5 |
| MINNESOTA | | | | | |
| Univ. of Minnesota, Coll. of Med. and Surg. | 67 | 61 | 6 | 8.9 | 8 |
| MISSOURI | | | | | |
| American Medical College | 4 | 4 | 0 | 0. | 2 |
| University of Missouri, Medical Department. | 6 | 6 | 0 | 0. | 4 |
| Washington University, Medical Department. | 82 | 77 | 5 | 6.1 | 7 |
| NEBRASKA | | | | | |
| John A. Creighton Medical College | 46 | 45 | 1 | 2.2 | 12 |
| University of Nebraska, College of Medicine | 10 | 10 | 0 | 0. | 2 |
| NEW HAMPSHIRE | | | | | |
| Dartmouth Medical School | 11 | 10 | 1 | 9.1 | 5 |
| NEW YORK | | | | | |
| Albany Medical College | 37 | 34 | 3 | 8.1 | 4 |
| Columbia Univ., Coll. of Phys. and Surg. | 103 | 99 | 4 | 3.9 | 18 |
| Cornell University Medical College | 66 | 66 | 0 | 0. | 7 |
| Eclectic Medical College of New York | 12 | 11 | 1 | 8.3 | 2 |
| Fordham University School of Medicine | 10 | 10 | 0 | 0. | 1 |
| Long Island College Hospital | 96 | 87 | 9 | 9.4 | 4 |
| Syracuse University, College of Medicine | 39 | 38 | 1 | 2.6 | 6 |
| University and Bellevue Hospital Med. Coll. | 86 | 85 | 1 | 1.2 | 8 |
| University of Buffalo, Medical Department | 31 | 31 | 0 | 0. | 2 |
| NORTH CAROLINA | | | | | |
| North Carolina Medical College | 25 | 23 | 2 | 8.0 | 6 |
| OHIO | | | | | |
| Cleveland College of Phys. and Surg. | 19 | 19 | 0 | 0. | 4 |
| Cleveland Homeopathic Medical College | 10 | 10 | 0 | 0. | 4 |
| Medical College of Ohio | 32 | 32 | 0 | 0. | 4 |
| Pulte Medical College | 6 | 6 | 0 | 0. | 2 |
| Starling-Ohio Medical College | 53 | 49 | 4 | 7.5 | 4 |
| Western Reserve University, Medical Dept. | 30 | 30 | 0 | 0. | 3 |
| PENNSYLVANIA | | | | | |
| Jefferson Medical College | 173 | 165 | 8 | 4.6 | 33 |
| Medico-Chirurgical College of Philadelphia | 89 | 87 | 2 | 2.2 | 11 |
| Temple University, Medical Department | 22 | 21 | 1 | 4.5 | 3 |
| University of Pennsylvania, Dept. of Med. | 138 | 137 | 1 | 0.7 | 22 |
| Western Pennsylvania Medical College | 74 | 67 | 7 | 9.5 | 5 |
| Woman's Medical College of Pennsylvania | 25 | 24 | 1 | 4.0 | 9 |
| TEXAS | | | | | |
| Baylor University, College of Medicine | 13 | 13 | 0 | 0. | 1 |
| Fort Worth University, Medical Department | 12 | 12 | 0 | 0. | 1 |
| University of Texas, Department of Med. | 37 | 37 | 0 | 0. | 2 |
| VIRGINIA | | | | | |
| Medical College of Virginia | 42 | 39 | 3 | 7.1 | 5 |
| University College of Medicine | 54 | 50 | 4 | 7.4 | 6 |
| WISCONSIN | | | | | |
| Wisconsin College of Physicians and Surg. | 20 | 19 | 1 | 5.0 | 5 |
| Totals | 2743 | 2627 | 116 | 4.3 | |

* See remarks in the text regarding this classification of colleges.

### Total Registration in 1909

The tables thus far described have referred to candidates registered by examination only. Table M, however, shows the totale number registered in each state, including those registered by examination, by reciprocity, and under various exemption clauses. Above 100 were registered in 28 different states, above 200 in 9 and above 400 in 3, the largest numbers being registered in Illinois with 686, in New York with 616 and in Pennsylvania with 474 and in Tennessee with 311. Nongraduates were registered in eight states, the largest numbers being 76 in Tennessee, 57 in Mississippi and 52 in Arkansas. Altogether 7,230 candidates were licensed during 1909.

TABLE J.—Colleges Having Between 10 and 20 Per Cent. of Failures Before State Boards in 1909
Based on Table C.

| College | Total Examined. | Number Passed. | Number Failed. | Per Cent. Failed. | No. of States. |
|---|---|---|---|---|---|
| ALABAMA | | | | | |
| Birmingham Medical College | 6 | 5 | 1 | 16.7 | 5 |
| CALIFORNIA | | | | | |
| University of California, Medical Dept | 14 | 12 | 2 | 14.3 | 5 |
| Univ. of Southern California, Coll. of Med. | 33 | 27 | 6 | 18.2 | 3 |
| DISTRICT OF COLUMBIA | | | | | |
| George Washington University | 57 | 47 | 10 | 17.5 | 20 |
| Georgetown University, School of Medicine | 23 | 20 | 3 | 13.0 | 11 |
| GEORGIA | | | | | |
| Atlanta College of Physicians and Surg | 43 | 38 | 5 | 10.4 | 5 |
| ILLINOIS | | | | | |
| Chicago College of Medicine and Surgery | 107 | 93 | 14 | 13.1 | 15 |
| College of Physicians and Surgeons | 141 | 125 | 16 | 11.3 | 22 |
| IOWA | | | | | |
| Drake University, College of Medicine | 22 | 19 | 3 | 13.6 | 3 |
| KANSAS | | | | | |
| Kansas Medical College | 25 | 22 | 3 | 12.0 | 4 |
| University of Kansas, School of Medicine | 28 | 23 | 5 | 17.9 | 6 |
| KENTUCKY | | | | | |
| University of Louisville Medical Department | 260 | 215 | 45 | 17.3 | 32 |
| MARYLAND | | | | | |
| Atlantic Medical College | 23 | 19 | 4 | 17.4 | 6 |
| College of Physicians and Surgeons | 58 | 52 | 6 | 10.3 | 16 |
| MASSACHUSETTS | | | | | |
| Tufts College Medical School | 83 | 72 | 11 | 13.3 | 8 |
| MICHIGAN | | | | | |
| Detroit Homeopathic College | 6 | 5 | 1 | 16.7 | 2 |
| MISSOURI | | | | | |
| St. Louis University, School of Medicine | 88 | 79 | 9 | 10.2 | 12 |
| University Medical College | 76 | 61 | 15 | 19.7 | 11 |
| NEW YORK | | | | | |
| New York Homeo. Med. Coll. and Hosp | 20 | 18 | 2 | 10.0 | 5 |
| NORTH CAROLINA | | | | | |
| University of North Carolina, Med. Dept | 17 | 15 | 2 | 11.8 | 4 |
| OHIO | | | | | |
| Eclectic Medical Institute | 14 | 12 | 2 | 14.3 | 5 |
| Miami Medical College | 22 | 18 | 4 | 18.2 | 3 |
| Toledo Medical College | 6 | 5 | 1 | 16.7 | 1 |
| PENNSYLVANIA | | | | | |
| Hahnemann Medical College | 70 | 60 | 10 | 14.3 | 15 |
| TENNESSEE | | | | | |
| Tennessee Medical College | 22 | 19 | 3 | 13.6 | 5 |
| University of Nashville, Medical Department | 70 | 58 | 12 | 17.1 | 17 |
| University of Tennessee, Dept. of Medicine | 31 | 27 | 4 | 12.9 | 9 |
| Vanderbilt University, Medical Department. | 41 | 36 | 5 | 12.2 | 14 |
| TEXAS | | | | | |
| Southwestern University, Medical College | 9 | 8 | 1 | 11.1 | 1 |
| VERMONT | | | | | |
| University of Vermont, College of Med | 40 | 35 | 5 | 12.5 | 9 |
| VIRGINIA | | | | | |
| University of Virginia, Dept. of Medicine | 27 | 23 | 4 | 14.8 | 9 |
| Totals | 1482 | 1268 | 214 | 14.4 | |

TABLE L.—Unclassified Colleges

| College | Total Examined. | Number Passed. | Number Failed. | Per Cent. Failed. | No. of States. |
|---|---|---|---|---|---|
| California Eclectic Medical College | 2 | 1 | 1 | 50.0 | 1 |
| Georgia College of Eclectic Med. and Surg | 1 | 0 | 1 | 100.0 | 1 |
| Hospital Medical College, Eclectic, Atlanta | .. | .. | ... | ..... | ... |
| Louisville National Medical College | 1 | 1 | 0 | 0. | 1 |
| Southwestern Homeopathic Medical College | 1 | 1 | 0 | 0. | 1 |
| New York Med. Coll. and Hosp. for Women | 4 | 4 | 0 | 0. | 1 |
| Epworth College of Medicine | 3 | 3 | 0 | 0. | 1 |
| Totals | 12 | 10 | 2 | 16.7 | |

Table N gives those registered without examination on presentation of satisfactory credentials, which included a license issued by some other state. This is usually described by the term "reciprocity," which conveys the idea that the state which accepts the license of another must be granted the same courtesy by the state issuing the original license. The term does not well describe this method of registration, however, since some state boards consider it more fair to the physician to accept his credentials, if satisfactory, whether the state board issuing the original license returns the favor or not. Had not reciprocal relations been established by the 33 states shown in the table, 1,167 physicians, the majority of whom have been in practice for many years, would have been compelled to undergo the ordeal of a second trying examination.

### In Conclusion

In the publication of these statistics, our endeavor has been to give an absolutely fair presentation of facts, a knowledge of which is always beneficial. Without question this annual presentation of the results of state licensing examinations has had a most helpful influence on medical education and medical licensure in this country. We reiterate our acknowledgements to the state licensing boards whose ready cooperation and complete reports have made the publication of these data possible.

TABLE K.—Colleges Having Over 20 Per Cent. of Failures Before State Boards in 1909. Based on Table C.

| College | Total Examined. | Number Passed. | Number Failed. | Per Cent. Failed. | No. of States. |
|---|---|---|---|---|---|
| ARKANSAS | | | | | |
| College of Physicians and Surgeons | 7 | 3 | 4 | 57.1 | 3 |
| University of Arkansas, Medical Dept | 16 | 8 | 8 | 50.0 | 4 |
| CALIFORNIA | | | | | |
| College of Phys. and Surg., Los Angeles | 9 | 7 | 2 | 22.2 | 4 |
| College of Phys.and Surg., San Francisco | 25 | 18 | 7 | 28.0 | 4 |
| Hahnemann Medical College of the Pacific. | 13 | 8 | 5 | 38.4 | 2 |
| DISTRICT OF COLUMBIA | | | | | |
| Howard University, Medical Department | 48 | 33 | 15 | 31.2 | 13 |
| GEORGIA | | | | | |
| Medical College of Georgia | 37 | 24 | 13 | 35.1 | 7 |
| ILLINOIS | | | | | |
| Bennett Medical College | 48 | 36 | 12 | 25.0 | 10 |
| College of Medicine and Surgery—Ph.M | 9 | 4 | 5 | 55.6 | 1 |
| Hahnemann Medical College | 41 | 32 | 9 | 22.0 | 13 |
| Illinois Medical College | 40 | 29 | 11 | 27.5 | 9 |
| Jenner Medical College | 29 | 17 | 12 | 41.4 | 3 |
| National Medical University | 19 | 11 | 8 | 42.1 | 6 |
| Reliance Medical College | 20 | 14 | 6 | 30.0 | 1 |
| LOUISIANA | | | | | |
| Flint Medical College | 7 | 3 | 4 | 57.1 | 3 |
| MARYLAND | | | | | |
| Baltimore Medical College | 124 | 87 | 37 | 29.8 | 21 |
| Maryland Medical College | 69 | 42 | 27 | 39.1 | 16 |
| Woman's Medical College of Baltimore | 9 | 6 | 3 | 33.3 | 5 |
| MASSACHUSETTS | | | | | |
| College of Physicians and Surgeons | 25 | 11 | 14 | 56.0 | 6 |
| MINNESOTA | | | | | |
| Hamline University, Medical Department | 31 | 21 | 10 | 32.3 | 6 |
| MISSISSIPPI | | | | | |
| Mississippi Medical College | 21 | 7 | 14 | 66.7 | 3 |
| MISSOURI | | | | | |
| Barnes Medical College | 103 | 69 | 34 | 33.0 | 14 |
| Ensworth Medical College | 42 | 28 | 14 | 33.3 | 8 |
| Kansas City Hahnemann Medical College | 20 | 14 | 6 | 30.0 | 8 |
| St. Louis College of Physicians and Surg | 101 | 57 | 44 | 43.6 | 14 |
| Western Eclectic College of Med. and Surg. | 5 | 4 | 1 | 20.0 | 1 |
| NEBRASKA | | | | | |
| Lincoln Medical College | 11 | 8 | 3 | 27.3 | 4 |
| NORTH CAROLINA | | | | | |
| Leonard Medical College | 47 | 31 | 16 | 34.0 | 12 |
| OREGON | | | | | |
| Willamette University, Medical Department | 26 | 19 | 7 | 26.9 | 4 |
| University of Oregon, Medical Department | 27 | 20 | 7 | 25.9 | 4 |
| SOUTH CAROLINA | | | | | |
| Medical College of State of South Carolina | 40 | 26 | 14 | 35.0 | 3 |
| TENNESSEE | | | | | |
| Chattanooga Medical College | 33 | 24 | 9 | 27.3 | 8 |
| College of Physicians and Surg., Memphis | 11 | 8 | 3 | 27.3 | 5 |
| Knoxville Medical College | 15 | 8 | 7 | 46.7 | 5 |
| Memphis Hospital Medical College | 108 | 78 | 30 | 27.8 | 10 |
| Meharry Medical College | 129 | 65 | 64 | 49.5 | 17 |
| University of West Tennessee, Med. Dept | 12 | 7 | 5 | 41.7 | 5 |
| WISCONSIN | | | | | |
| Marquette University, Medical Department | 30 | 20 | 10 | 33.3 | 7 |
| Totals | 1407 | 907 | 500 | 35.5 | |

TABLE M.—REGISTRATION BY STATE BOARDS DURING 1908

| States. | By Examination. | | | By Reciprocity. | Without Written Exam. or Under Exemption. | Total Registered. |
|---|---|---|---|---|---|---|
| | Graduates, 1905-1909. | Graduates, 1904 and Previous. | Non-Graduates. | | | |
| Alabama | 64 | 5 | 10 | ... | ... | 79 |
| Arizona | 8 | 11 | ... | ... | ... | 19 |
| Arkansas | 37 | 22 | 52 | 2 | 12 | 125 |
| California | 132 | 52 | ... | ... | ... | 184 |
| Colorado | 34 | 2 | ... | 140 | ... | 176 |
| Connecticut | 40 | 12 | ... | 2 | ... | 54 |
| Delaware | 17 | 2 | ... | 1 | ... | 20 |
| District of Columbia | 39 | 7 | ... | 11 | ... | 57 |
| Florida | 50 | 20 | ... | ... | ... | 70 |
| Georgia | 134 | 9 | ... | 6 | ... | 149 |
| Idaho | 26 | 28 | ... | ... | ... | 54 |
| Illinois | 624 | 21 | ... | 41 | ... | 686 |
| Indiana | 96 | 6 | ... | 42 | ... | 144 |
| Iowa | 96 | 2 | ... | 83 | ... | 181 |
| Kansas | 108 | 13 | ... | 98 | ... | 219 |
| Kentucky | 113 | 7 | ... | 17 | ... | 137 |
| Louisiana | 107 | 14 | ... | 11 | ... | 132 |
| Maine | 47 | 8 | ... | 12 | ... | 67 |
| Maryland | 126 | 4 | ... | 31 | 7 | 168 |
| Massachusetts | 182 | 26 | 5 | ... | ... | 213 |
| Michigan | 135 | 5 | ... | 43 | 5 | 188 |
| Minnesota | 86 | 4 | ... | 68 | ... | 158 |
| Mississippi | 60 | 13 | 57 | ... | ... | 130 |
| Missouri | 206 | 6 | ... | ... | ... | 212 |
| Montana | 39 | 29 | ... | ... | ... | 68 |
| Nebraska | 70 | 4 | ... | 54 | ... | 128 |
| Nevada | 8 | 1 | ... | 8 | ... | 17 |
| New Hampshire | 15 | 5 | ... | 2 | ... | 22 |
| New Jersey | 65 | 11 | ... | 40 | ... | 116 |
| New Mexico | 4 | 7 | ... | ... | 84 | 95 |
| New York | 524 | 42 | ... | 42 | 8 | 616 |
| North Carolina | 96 | 8 | 7 | 13 | ... | 124 |
| North Dakota | 27 | 14 | ... | 34 | ... | 75 |
| Ohio | 186 | 6 | ... | 55 | ... | 247 |
| Oklahoma | 64 | 28 | ... | 58 | ... | 150 |
| Oregon | 61 | 33 | 1 | ... | ... | 95 |
| Pennsylvania | 455 | 19 | ... | ... | ... | 474 |
| Rhode Island | 19 | 4 | ... | ... | ... | 23 |
| South Carolina | 46 | 0 | ... | 6 | ... | 52 |
| South Dakota | 46 | 14 | ... | ... | ... | 60 |
| Tennessee | 191 | 10 | 76 | 16 | 18 | 311 |
| Texas | 138 | 43 | ... | 95 | ... | 276 |
| Utah | 26 | 2 | ... | 16 | ... | 44 |
| Vermont | 29 | 9 | ... | 4 | ... | 42 |
| Virginia | 126 | 9 | 1 | 12 | ... | 148 |
| Washington | 88 | 60 | ... | ... | ... | 148 |
| West Virginia | 99 | 6 | ... | ... | ... | 105 |
| Wisconsin | 49 | 7 | ... | 82 | ... | 138 |
| Wyoming | 8 | 4 | ... | 22 | ... | 34 |
| Totals | 5046 | 674 | 209 | 1167 | 134 | 7230 |

This table shows the total number registered during 1909 in each state by the various methods. The first column shows the recent graduates registered, the second column, the old practitioners (graduates of 1904 and previous years), the third column the non-graduates, and the fourth column shows the number licensed through reciprocity. It is interesting to note that states which have registered large numbers through reciprocity have examined very few "old practitioners." The chief exception is New York, which has arranged reciprocal relations with only six other states. The fifth column shows those registered without written examination under various exemption clauses. The last column shows the total number of physicians registered in each state during the year. The figures for Alabama are complete here, but one of the two reports could not be included in the other tables, since the list of failures was not sent in.

TABLE N.—PHYSICIANS REGISTERED THROUGH RECIPROCITY BY STATE EXAMINING BOARDS DURING 1909.

| State Board of | Total Registered by Each State Thro' Reciprocity. | Alabama | Arkansas | Arizona | California | Colorado | Connecticut | Delaware | Dist. of Columbia | Florida | Georgia | Idaho | Illinois | Indiana | Iowa | Kansas | Kentucky | Louisiana | Maine | Maryland | Massachusetts | Michigan | Minnesota | Mississippi | Missouri | Nebraska | Nevada | New Hampshire | New Jersey | New Mexico | New York | North Carolina | North Dakota | Ohio | Oklahoma | Pennsylvania | Rhode Island | South Carolina | South Dakota | Tennessee | Texas | Utah | Vermont | Virginia | West Virginia | Wisconsin | Wyoming | U. S. Army | Foreign |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arkansas | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Colorado | 140 | 2 | 1 | 1 | .. | .. | 1 | .. | 1 | 1 | .. | 1 | 27 | 5 | 14 | 8 | 2 | .. | 1 | .. | 1 | 5 | 2 | .. | 9 | 6 | .. | .. | .. | 5 | 13 | 1 | .. | 12 | 4 | 6 | 1 | .. | 1 | 2 | 1 | 1 | 1 | 1 | .. | 2 | 1 | .. | .. |
| Connecticut | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Delaware | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. |
| District of Columbia | 11 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Georgia | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. |
| Illinois | 41 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 7 | 3 | 1 | .. | 2 | .. | .. | 3 | 2 | .. | .. | 2 | 1 | .. | 1 | .. | .. | .. | .. | 6 | .. | .. | .. | .. | .. | 2 | .. | 1 | .. | .. | 2 | 4 | .. | .. | .. |
| Indiana | 42 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 14 | .. | 1 | .. | 2 | .. | .. | 1 | .. | 7 | .. | .. | 2 | 1 | .. | 1 | .. | .. | .. | .. | .. | 7 | .. | .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | 2 | .. | .. | .. |
| Iowa | 83 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 50 | 1 | .. | 6 | .. | .. | .. | .. | .. | 3 | 2 | 1 | 1 | 11 | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 4 | .. | .. | .. |
| Kansas | 98 | .. | .. | .. | .. | 5 | .. | 1 | .. | .. | 1 | .. | 33 | 9 | 7 | .. | 6 | .. | 1 | 1 | .. | 4 | 1 | .. | .. | 13 | .. | .. | 2 | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | 1 | 8 | .. | .. | 2 |
| Kentucky | 17 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | .. | .. | 4 | 2 | .. | .. | .. | .. |
| Louisiana | 11 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 3 | .. | .. | 1 | .. | .. | .. | .. | .. | 2 | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. |
| Maine | 12 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | 1 | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | .. | .. | .. | .. | .. |
| Maryland | 31 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 3 | .. | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | .. | .. | 2 | .. | .. | 1 | .. | .. | 3 | 6 | 2 | .. | .. | .. |
| Michigan | 43 | .. | .. | .. | 1 | .. | 1 | .. | 1 | .. | .. | .. | 16 | 2 | 1 | 1 | .. | .. | 4 | 1 | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | 3 | .. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 3 | .. | .. | 1 |
| Minnesota | 68 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20 | 3 | 12 | 3 | .. | .. | 1 | .. | .. | 6 | .. | .. | 2 | 1 | .. | .. | 2 | .. | .. | .. | 4 | 3 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 10 | .. | .. | .. |
| Nebraska | 54 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 19 | 10 | .. | .. | .. | 1 | .. | .. | 1 | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 3 | 1 | 2 | .. |
| Nevada | 8 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. |
| New Hampshire | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| New Jersey | 40 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 3 | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 28 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 1 | .. | .. | .. | .. |
| New York | 42 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7 | .. | .. | .. | .. | .. | .. | 19 | .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 13 | .. | .. | .. | .. | .. | .. |
| North Carolina | 13 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | 4 | .. | .. | .. | 1 | .. |
| North Dakota | 34 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 18 | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 12 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. |
| Ohio | 55 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 15 | 9 | 1 | .. | .. | .. | .. | 2 | .. | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 11 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | 1 | .. | .. | .. |
| Oklahoma | 58 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 21 | 2 | .. | 8 | 1 | .. | .. | .. | .. | .. | .. | .. | 13 | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7 | .. | .. | .. | 1 | 2 | 1 | .. | .. | .. |
| South Carolina | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 1 | .. | .. | .. | .. |
| Tennessee | 16 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 2 | .. | .. | .. | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Texas | 95 | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | 33 | 5 | 3 | .. | 6 | .. | 1 | 5 | .. | 2 | 2 | .. | 18 | 4 | .. | 1 | 2 | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 7 | 1 | .. | .. | .. |
| Utah | 16 | .. | .. | .. | .. | 5 | .. | .. | .. | .. | .. | .. | 1 | 1 | 4 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | .. | .. |
| Vermont | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Virginia | 12 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 3 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. |
| Wisconsin* | 82 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 46 | .. | 4 | .. | 2 | 1 | 1 | 1 | .. | 2 | 9 | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | 1 | 2 | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | 1 |
| Wyoming | 22 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 1 | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 2 | .. | .. | .. | .. | .. | 2 | 1 | .. | .. | .. | .. |
| Total received from each state through reciprocity | 1167 | 2 | 1 | 2 | 1 | 12 | 2 | 1 | 13 | 1 | 10 | 1 | 320 | 46 | 77 | 41 | 30 | 2 | 18 | 25 | 3 | 51 | 35 | 1 | 58 | 53 | 2 | 8 | 29 | 7 | 59 | 7 | 5 | 47 | 5 | 7 | 1 | 7 | 1 | 21 | 4 | 4 | 24 | 26 | 36 | 46 | 2 | 3 | 4 |

* For six candidates, the names of states where original licenses were granted, were not obtained.

This table shows the number of physicians registered by each state through reciprocity during 1909. "Reciprocity" is not the best term to use, however, since some states, Colorado for instance, register candidates who have satisfactory credentials including licenses, regardless as to whether the state issuing the original license reciprocates with those states or not. Taking New York as an example, reading from left to right, the table shows that New York registered a total of 42 applicants through reciprocity during 1909, of which number 7 came from Michigan, 19 from New Jersey, 3 from Ohio and 13 from Vermont. Reading from above downward, the table shows that 59 physicians left New York during 1909 and registered in other states under the reciprocity provision, of which number 13 registered in Colorado, 1 in Connecticut, 1 in Delaware, 3 in Michigan, 28 in New Jersey, 1 in North Carolina, 1 in Ohio and 1 in Vermont. Colorado leads, having registered 140 physicians through reciprocity, followed by Kansas which registered 98, Texas with 95, Iowa with 83 and Wisconsin with 82. It is interesting to note in what states the original licenses were issued. The table shows that of the 1,167 applicants registered through reciprocity, 320 or 27.4 per cent. obtained their original licenses in Illinois, the states furnishing the three next highest numbers being Iowa with 77, New York with 59 and Missouri with 58.

Altogether 1,167 licenses were issued through reciprocity in 1909, an increase of 75 over 1908, 178 over 1907 and 482 over 1906.

## *TABLE A.—PHYSICIANS EXAMINED BY STATE*

| Margin Number | NAME OF COLLEGE | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | | 21 | | Margin Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Alabama* | | Arizona | | Arkansas | | California | | Colorado | | Connecticut | | Delaware | | District of Columbia | | Florida | | Georgia | | Idaho | | Illinois | | Indiana | | Iowa | | Kansas | | Kentucky | | Louisiana | | Maine | | Maryland | | Massachusetts | | Michigan | | |
| | | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | |
| | ALABAMA |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | Birmingham Medical College.—R |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| 2 | University of Alabama, Med. Dept.—R | 1 | 0 |  |  | 1 | 0 |  |  |  |  |  |  |  |  |  |  | 4 | 0 | 2 | 0 |  |  | 1 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 |
| | ARKANSAS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3 | College of Physicians and Surg.—R |  |  |  |  | 1 | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 | 1 |  |  |  |  |  |  |  |  | 3 |
| 4 | Univ. of Arkansas, Med. Dept.—R |  |  |  |  | 4 | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 1 |  |  |  |  |  |  |  |  | 3 | 2 |  |  |  |  |  |  |  |  | 4 |
| | CALIFORNIA |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5 | California Eclectic Med. College.—E |  |  |  |  |  |  | 1 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 5 |
| 6 | College of P. and S., Los Angeles.—R |  |  | 1 | 0 |  |  | 4 | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 6 |
| 7 | Coll. of P. and S., San Francisco.—R |  |  |  |  |  |  | 15 | 8 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 7 |
| 8 | Cooper Medical College.—R |  |  |  |  |  |  | 24 | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 8 |
| 9 | Hahnemann Med. Coll. of Pacific.—H |  |  |  |  |  |  | 8 | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 9 |
| 10 | Oakland Coll. of Med. and Surg.—R |  |  |  |  |  |  | 3 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 10 |
| 11 | Univ. of California, Med. Dept.—R |  |  |  |  |  |  | 9 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 11 |
| 12 | Univ. of Southern California.†—R |  |  |  |  |  |  | 26 | 6 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 0 | 12 |
| | COLORADO |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 13 | Denver and Gross Coll. of Med.—R |  |  |  |  |  |  | 3 | 0 | 18 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 0 |  |  | 1 | 0 |  |  |  |  |  |  |  |  |  |  |  |  | 13 |
| 14 | Univ. of Colorado, Med. Dept.—R |  |  |  |  |  |  | 1 | 0 | 5 | 0 |  |  |  |  |  |  |  |  |  |  | 3 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 14 |
| | CONNECTICUT |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15 | Yale Medical School.— |  |  |  |  |  |  | 2 | 0 |  |  | 8 | 1 |  |  |  |  | 1 | 0 |  |  |  |  | 1 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 3 | 0 |  |  | 15 |
| | DISTRICT OF COLUMBIA |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 16 | George Washington University.—R |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 21 | 9 | 1 | 0 | 1 | 0 |  |  | 2 | 0 |  |  | 2 | 0 | 1 | 0 |  |  |  |  |  |  | 4 | 1 |  |  |  |  | 16 |
| 17 | Georgetown Univ., School of Med.—R |  |  | 1 | 0 |  |  |  |  |  |  | 2 | 1 |  |  | 2 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 0 |  |  | 3 | 0 |  |  | 17 |
| 18 | Howard University, Med. Dept.—R |  |  |  |  | 2 | 0 |  |  |  |  | 0 | 1 |  |  | 9 | 7 |  |  |  |  |  |  | 1 | 0 |  |  |  |  | 1 | 0 |  |  |  |  |  |  | 6 | 1 | 5 | 3 |  |  | 18 |
| | GEORGIA |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 19 | Atlanta College of Phys. and Surg.—R |  |  | 1 | 0 |  |  |  |  |  |  |  |  |  |  |  |  | 3 | 1 | 31 | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 19 |
| 20 | Atlanta School of Medicine.—R |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 12 | 1 | 43 | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 20 |
| 21 | Georgia Coll. of Eclectic M. & S.—E |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 21 |
| 22 | Hospital Medical College, Atlanta.—E |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 22 |
| 23 | Medical College of Georgia.—R |  |  |  |  | 0 | 3 | 1 | 1 |  |  |  |  |  |  |  |  | 2 | 0 | 19 | 3 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 1 |  |  |  |  | 0 | 1 |  |  | 23 |
| | ILLINOIS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 24 | American Med. Missionary College.—R |  |  |  |  |  |  | 1 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 7 | 0 | 24 |
| 25 | Bennett Medical College.—R |  |  | 1 | 0 | 1 | 0 |  |  | 0 | 1 |  |  |  |  |  |  |  |  |  |  | 0 | 1 | 29 | 9 | 1 | 0 |  |  | 1 | 1 | 1 | 0 |  |  |  |  |  |  |  |  |  |  | 25 |
| 26 | Chicago Coll. of Med. and. Surg.—R |  |  |  |  |  |  |  |  | 0 | 1 |  |  |  |  |  |  | 2 | 0 |  |  | 1 | 0 | 81 | 7 | 1 | 0 | 0 | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 26 |
| 27 | College and Med. and Surg.—Ph.M. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 4 | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 27 |
| 28 | College of Phys. and Surg.—R |  |  |  |  |  |  | 4 | 3 |  |  |  |  |  |  | 1 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 93 | 7 | 2 | 0 | 4 | 0 | 2 | 1 | 1 | 0 |  |  |  |  |  |  |  |  | 1 | 0 | 28 |
| 29 | Hahnemann Med. Coll. and Hosp.—H |  |  |  |  | 1 | 0 | 4 | 3 |  |  | 0 | 2 |  |  |  |  |  |  |  |  | 0 | 1 | 16 | 6 |  |  | 3 | 0 | 2 | 0 |  |  |  |  |  |  |  |  | 2 | 0 | 1 | 0 | 29 |
| 30 | Hering Medical College.—H |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 6 | 0 | 1 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 30 |
| 31 | Illinois Medical College.—R |  |  |  |  | 1 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 22 | 7 | 2 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 31 |
| 32 | Jenner Medical College.—R |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 17 | 10 | 0 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 32 |
| 33 | National Medical University.—P | 0 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 8 | 6 | 1 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 33 |
| 34 | Northwestern Univ. Med. School.—R |  |  | 1 | 0 |  |  | 7 | 1 |  |  |  |  |  |  |  |  |  |  |  |  | 3 | 2 | 122 | 3 | 3 | 0 | 5 | 0 | 2 | 0 | 1 | 0 |  |  |  |  |  |  |  |  | 2 | 0 | 34 |
| 35 | Reliance Medical College.—R |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 14 | 6 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 35 |
| 36 | Rush Medical College.—R |  |  |  |  | 1 | 0 | 6 | 3 | 1 | 0 |  |  |  |  |  |  |  |  |  |  | 7 | 0 | 67 | 0 |  |  | 2 | 1 | 1 | 0 |  |  |  |  |  |  |  |  |  |  | 1 | 0 | 36 |
| | INDIANA |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 37 | Indiana Univ., School of Med.—R |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 55 | 0 |  |  | 1 | 0 |  |  |  |  |  |  |  |  |  |  |  |  | 37 |
| | IOWA |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 38 | Drake Univ., College of Medicine.—R |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 1 |  |  | 18 | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 38 |
| 39 | State Univ. of Iowa, Coll. of Med.—R |  |  |  |  | 1 | 0 | 3 | 2 |  |  |  |  |  |  |  |  |  |  |  |  | 3 | 0 | 1 | 0 |  |  | 43 | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 39 |
| 40 | State Univ. of Iowa, Homeo. Dept.—H |  |  | 1 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 3 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 40 |
| | KANSAS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 41 | Kansas Medical College.—R |  |  |  |  |  |  |  |  |  |  | 1 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 20 | 1 |  |  | 1 | 0 |  |  |  |  |  |  |  |  | 41 |
| 42 | Univ. of Kansas, School of Med.—R |  |  |  |  |  |  | 1 | 0 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 1 |  |  |  |  |  |  | 9 | 0 |  |  |  |  |  |  |  |  |  |  |  |  | 42 |
| | KENTUCKY |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 43 | Louisville National Med. College.—R |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 0 |  |  |  |  |  |  |  |  |  |  | 43 |
| 44 | Southwestern Homeo. Med. Coll.—H |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 0 |  |  |  |  | 1 | 0 |  |  |  |  |  |  |  |  |  |  | 44 |
| 45 | Univ. of Louisville, Med. Dept.—R |  |  | 2 | 0 | 3 | 1 | 2 | 3 | 0 | 1 | 1 | 0 |  |  |  |  | 2 | 1 | 1 | 0 |  |  | 9 | 4 | 15 | 1 |  |  | 4 | 2 | 92 | 14 | 3 | 1 |  |  |  |  |  |  | 3 | 1 | 45 |
| | LOUISIANA |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 46 | Flint Medical College.—R |  |  |  |  | 1 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 | 2 |  |  |  |  |  |  |  |  | 46 |
| 47 | Tulane University, Med. Dept.—R |  |  |  |  | 5 | 0 | 1 | 0 |  |  |  |  |  |  |  |  | 3 | 0 |  |  |  |  | 1 | 0 |  |  |  |  | 1 | 0 |  |  | 57 | 1 |  |  |  |  |  |  |  |  | 47 |
| | MAINE |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 48 | Medical School of Maine.—R |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 19 | 1 |  |  | 8 | 0 |  |  | 48 |
| | MARYLAND |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 49 | Atlanta Medical College.—P |  |  |  |  |  |  |  |  |  |  | 0 | 1 | 2 | 0 | 1 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 3 | 1 |  |  |  |  |  |  | 49 |
| 50 | Baltimore Medical Colege.—R |  |  |  |  |  |  | 1 | 1 | 1 | 1 | 3 | 1 | 1 | 0 | 1 | 1 |  |  | 2 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 | 2 | 13 | 7 | 16 | 15 |  |  | 50 |
| 51 | College of Phys. and Surg.—R |  |  | 2 | 0 |  |  |  |  |  |  | 2 | 0 |  |  | 0 | 1 | 3 | 0 | 1 | 0 | 1 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 14 | 0 | 4 | 1 |  |  | 51 |
| 52 | Johns Hopkins Univ., Med. Dept.—R |  |  |  |  |  |  | 2 | 0 | 2 | 0 | 1 | 0 |  |  | 1 | 0 |  |  | 1 | 0 |  |  | 3 | 0 | 2 | 0 | 2 | 0 |  |  |  |  |  |  |  |  | 17 | 0 | 2 | 0 |  |  | 52 |
| 53 | Maryland Medical College.—R |  |  |  |  | 1 | 0 |  |  | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 |  |  | 2 | 0 |  |  | 1 | 0 |  |  |  |  |  |  |  |  | 1 | 1 | 5 | 0 | 8 | 11 | 0 | 2 |  |  | 53 |
| 54 | Univ. of Maryland, School of Med.—R |  |  |  |  |  |  | 1 | 2 | 1 | 0 |  |  | 2 | 0 | 1 | 0 | 2 | 0 | 3 | 0 |  |  |  |  | 2 | 0 |  |  |  |  |  |  |  |  |  |  | 40 | 4 |  |  |  |  | 54 |
| 55 | Woman's Med. Coll. of Baltimore.—R |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 0 |  |  |  |  |  |  |  |  | 2 | 3 |  |  |  |  | 55 |
| | MASSACHUSETTS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 56 | Boston Univ. School of Medicine.—H | 0 | 1 |  |  |  |  | 1 | 0 |  |  | 0 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 3 | 0 |  |  | 15 | 1 |  |  | 56 |
| 57 | College of Phys. and Surgeons.—R |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 5 | 3 |  |  | 5 | 11 |  |  | 57 |
| 58 | Harvard Medical School.—R |  |  |  |  |  |  | 7 | 1 |  |  | 3 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 | 0 |  |  | 38 | 1 |  |  | 58 |
| 59 | Tufts College Medical School.—R |  |  |  |  |  |  | 1 | 1 |  |  | 1 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 6 | 0 |  |  | 55 | 8 |  |  | 59 |
| | MICHIGAN |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 60 | Detroit College of Medicine.—R |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 4 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 36 | 0 | 60 |
| 61 | Detroit Homeopathic College.—H |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 5 | 0 | 61 |
| 62 | Univ. of Mich., Dept. of M. and S.—R. | 1 | 0 | 2 | 1 |  |  | 2 | 4 | 1 | 0 |  |  |  |  | 2 | 0 | 1 | 0 |  |  | 2 | 0 |  |  | 1 | 0 |  |  |  |  |  |  |  |  | 1 | 0 | 1 | 0 |  |  | 63 | 0 | 62 |
| 63 | Univ. of Michigan, Homeo. College.—H |  |  |  |  |  |  | 1 | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 0 |  |  |  |  |  |  |  |  |  |  | 16 | 1 | 63 |
| | MINNESOTA |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 64 | Univ. of Minn., Coll. of M. & S.—R. |  |  |  |  |  |  | 3 | 1 |  |  |  |  |  |  |  |  |  |  |  |  | 2 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 1 |  |  | 64 |
| 65 | Hamline University, Med. Dept.—R |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 65 |
| | MISSISSIPPI |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 66 | Mississippi Medical College.—R |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 66 |
| | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | | 21 | | |

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.

* One report not complete. † Now the Los Angeles Medical Department of the University of California.

| 23 | | 24 | | 25 | | 26 | | 27 | | 28 | | 29 | | 30 | | 31 | | 32 | | 33 | | 34 | | 35 | | 36 | | 37 | | 38 | | 39 | | 40 | | 41 | | 42 | | 43 | | 44 | | 45 | | 46 | | 47 | | 48 | | 49 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mississippi | | Missouri | | Montana | | Nebraska | | Nevada | | New Hampshire | | New Jersey | | New Mexico | | New York | | North Carolina | | North Dakota | | Ohio | | Oklahoma | | Oregon | | Pennsylvania | | Rhode Island | | South Carolina | | South Dakota | | Tennessee | | Texas | | Utah | | Vermont | | Virginia | | Washington | | West Virginia | | Wisconsin | | Wyoming | | Totals: | Examined—Passed | Examined—Failed | Percentage of Failures | No. States Ex. in | Margin Number |
| P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | | | | | | |
|1|0| | | | | | | | | | | | | | | | | | | | | | |2|0|1|0| | | | |0|1| | | | |1|0| | | | | | | | | | | | | | |6|5|1|16.7|5|1|
|5|0| | | | | | | | | | | | |1|0| | | | | | | | | | | | | | | | | | | | |1|0| | | | | | | | | | | | | | | | |16|16|0|0.|8|2|
| | | | | | | | | | | | | | | | | | | | | | | | |0|1| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |7|3|4|57.1|3|3|
| | | | | | | | | | | | | | | | | | | | | | | | |3|2| | | | | | | | | | | | |3|0| | | | | | | | | | | | | | |23|13|10|43.5|5|4|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |1|0| | | | | | |3|2|1|33.3|2|5|
| | | | | | | | |1|0| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |9|7|2|22.2|4|6|
| | | | | | | | |2|0| | | | | | | | | | | | | | | | |2|0| | | | | | | | | | |1|0| | | | | | |2|1| | | | | | |31|22|9|29.0|5|7|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |3|0| | | | | | |30|27|3|10.0|2|8|
| | | | |1|0| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |14|9|5|35.7|2|9|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |3|3|0|0.|1|10|
| | | | |1|0| | |1|0| | |0|1| | |0|1| | | | | | | | | | |2|0| | | | | | | | | | | | | | | | | | |3|0| | | | | | |18|16|2|11.1|7|11|
| | | | | | |1|0| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |34|28|6|17.6|3|12|
| | | | | | | | | | | | | | | | |1|0| | | | |1|0| | |1|0| | | | | | | | | | | | |2|0| | | | |1|0| | | | |3|0|33|32|1|3.0|10|13|
| | | | | | | | | | | | | | | | | | | | | | | | | | |1|1| | | | | | | | | | | | |1|0| | | | | | | | | | | | |13|11|2|15.4|5|14|
| | | | | | | | | | | | | | | | |9|0| | | | | | | | | | |1|0|2|0| | | | | | | | | | | | | | | | | | | | | | |28|27|1|3.6|8|15|
| | | | |2|0| | |1|0| | | | | | |1|0|1|0|1|0| | | | |2|0|1|0|1|0| | |1|0| | | | |1|0|1|0|2|0|3|0|1|0|1|0| | |62|52|10|16.1|22|16|
| | | | | | | | | | | | | | | | |2|1| | | | |1|0| | | | |4|0| | | | | | | | | | | | | | |1|0|1|0|4|0| | | | |25|22|3|12.0|11|17|
| | |1|1| | | | | | | | |1|1| | | | | | | | | | | | | | |0|2| | |1|1|0|1| | |1|0| | | | |6|0| | |2|0| | | | |54|36|18|33.3|15|18|
|0|1| | | | | | | | | | | | | | | | |3|0| | | | |1|0|0|1| | | | |1|0| | |1|0|2|0| | | | | | |1|0| | | | | | |51|44|7|13.7|11|19|
| | | | | | | | | | | | | | | | | | |5|0| | | | | | | | | | | | | | | | |2|0| | | | | | | | | | | | | | | | |68|62|6|8.8|4|20|
|0|1|1|0| | | | | | | | | | |0|1| | | | | | | | | | | | | | | | | | | | | | |3|0| | | | | | | | | | | | | | |6|4|2|33.3|4|21|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |22|
| | | | | | | | | | | | | | |1|0| | | | | | | | | | | | | | | | |2|5| | | | | | | | | | | | | | | | | | | | |39|25|14|35.9|8|23|
| | | | |1|1| | | | | | | | | | |1|0| | | | | | | | |1|0| | | | | | | | | | | | | | | | | | | | | | | | | | |12|11|1|8.3|5|24|
| | | | |1|1| | | | | | | | | | |0|1| | |1|0| | |0|1| | |2|0| | | | | | | | | | | | | | |1|0| | |1|0| | | | | | |56|40|16|28.6|16|25|
|1|0| | |0|1|0|1| | | | | | | | | | | | | | | | |0|2|0|1|2|0| | | | |2|0|1|0|1|0| | | | | | |0|2|1|0| | | | |110|93|17|15.5|17|26|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |0|1| | | | | | |10|4|6|60.0|2|27|
|1|0|2|0|4|0|0|2| | | | | | | | |2|1| | |1|0|1|0|4|1|5|4| | | | | | |8|1| | |1|0| | | | | | |1|2| | |3|1| | |170|145|25|14.7|25|28|
| | | | |1|0| | | | | | | | | | |3|1| | | | | | | | |1|0| | | | | | |1|1| | | | | | | | | | | | |2|0| | |2|0| | |53|39|14|26.4|15|29|
| | | | | | | | | | | | | | | | | | | | | | |0|1|1|0| | | | | | | | | | | | | | | | | | | | | | | | | | | | |9|8|1|11.1|4|30|
| | | | |1|1| | | | | | | | | | |0|2| | | | |0|1|1|0|0|1|2|1| | | | | | | | |0|1| | | | | | |1|0| | | | | | |44|30|14|31.8|11|31|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |1|0| | | | | | |0|1| | | | | | |30|18|12|40.0|4|32|
|0|1| | | | | | | | | | | | | | | | | | | | | | | | | | |1|0| | | | | | |1|0| | | | | | | | | | | | | | | | |19|11|8|42.1|6|33|
| | |1|0|6|0|2|0| | | | | | | | | | | | |3|0| | |4|0|5|2|2|0| | | | |9|2|1|0| | |11|1| | | | |10|1| | |4|1|2|0|229|214|15|6.6|23|34|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |20|14|6|30.0|1|35|
|2|0|5|0|4|0| | |1|0| | | | | | | | | | |1|0|1|0| | |6|2|1|0| | | | |8|2| | |2|0|3|0| | | | |9|2| | | | | | |142|132|10|7.0|21|36|
| | | | | | | | | | | | | | | | | | | | | | |3|0| | | | | | | | | | | | | | |1|0| | | | | | | | | | | | | | |60|60|0|0.|4|37|
| | |1|0|1|0| | | | | | | | | | | | | | | | | | | | |0|1| | | | | | | | | | | | | | | | | | | | | | | | | | |24|20|4|16.7|5|38|
| | | | | | | | | | | | | | | | | | | | |8|0| | | | |1|0| | | | | | |10|1|1|0| | | | | | | | |4|1| | | | | | |81|75|6|7.3|10|39|
| | | | |0|1| | | | | | | | | | | | | | | | | | |1|0|2|0| | | | | | |1|0| | | | | | | | | | | | | | | | | | |9|8|1|11.1|6|40|
| | | | | | | | | | | | | | |1|0| | | | | | | | |2|1|1|1| | | | | | | | | | | | | | | | | | |0|1| | | | | | |30|26|4|13.3|7|41|
| | |8|4| | | | | | | | | | | | | | | | | | |1|0|4|0|1|0| | | | | | | | | | | | | | | | | | | | | | | | | | |29|24|5|17.2|7|42|
| | | | | | |1|0| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |2|2|0|0.|2|43|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |2|2|0|0.|2|44|
|4|0|5|1|1|0| | | | | | |1|1| | |2|0|2|0|1|0|1|0|10|6|1|2|7|2| | |1|1|1|0|11|0|13|0|1|1| | |4|5|2|1|28|5| | | | |288|233|55|19.1|33|45|
|0|2| | | | | | | | | | | | | | | | | | | | | | |1|0| | | | | | | | | | | | | | | | | | | | | | | | | | | | |9|4|5|55.6|4|46|
|8|1|1|0|2|0| | | | | | | | | | | | | | | | |1|0|2|1|1|0| | | | | | |1|0|1|0|19|1| | | | |2|0|0|1| | | | |1|0|112|107|5|4.5|18|47|
| | | | | | | | | | |1|0| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |29|28|1|3.4|3|48|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |13|2|0|1| | | | | | | | | | | | | | | | | | | | | | |24|19|5|20.8|6|49|
| | | | | | | | | | |2|1|3|0| | |13|2|1|0| | | | | | |1|0|10|0|4|4|0|1| | | | |2|0| | |1|0|5|1|1|2|5|0| | | | |127|88|39|30.7|22|50|
| | | | |2|0| | | | | | |4|0| | |4|3|1|0| | | | |1|0| | |3|0|2|1| | | | | | |1|0| | | | |3|0| | |14|0| | | | |68|62|6|8.8|18|51|
| | | | | | | | | | | | |2|1| | |9|0|2|0| | | | | | | | |7|0| | | | | | | | |1|0| | | | |2|0|2|0|1|0|4|0| | |65|64|1|1.5|20|52|
| | |0|1| | | | | | |0|2| | | | | | | | | | | | |1|0| | |11|0| | | | | | |1|0| | | | |1|0|5|8| | |10|1| | | | |78|48|30|38.5|19|53|
| | | | | | |2|0| | | | | | | | |2|0|12|1| | | | | | | | |9|1|2|0|7|1| | |1|0|3|0| | | | |5|2|1|0|3|0| | | | |111|100|11|9.9|20|54|
|1|0| | | | | | | | | | | | | | | | |1|0| | | | | | | | |1|0| | | | | | | | | | | | | | |1|0| | | | | | | | |10|7|3|30.0|6|55|
| | | | | | | | | | |3|0| | | | | | | | | | | | |1|0| | |1|0|1|0| | | | | | |1|0| | | | | | |1|0| | | | | | |31|28|3|9.7|12|56|
| | | | | | | | | | | | |1|0| | |0|1| | | | | | | | | | | | | | | | | | | | | | | | |2|1|0|1|1|0| | | | | | |32|15|17|53.1|8|57|
| | | | |1|0| | | | |1|0| | | | |8|0| | |1|0|5|0| | | | | | | | | | | | | | | | | | |1|0| | |1|1| | | | | | |73|70|3|4.1|12|58|
| | | | | | | | | | |4|0| | | | |6|1| | | | | | | | | | |1|0|1|0| | | | | | |1|0| | | | | | |2|2| | | | | | |90|78|12|13.3|10|59|
| | |0|1| | | | | | | | | | | | | | | | | | | | | | | | |1|0| | | | | | | | | | | | | | | | |0|2| | | | | | |44|41|3|6.8|5|60|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |0|1| | | | | | |6|5|1|16.7|2|61|
| | |2|0|7|0| | | | | | |0|1|1|0| | |1|0|1|0|2|0|0|1|2|0|4|0|1|0| | |1|1| | | | |2|0| | | | |7|2| | | | | | |119|109|10|8.4|26|62|
| | |1|0| | | | | | | | | | | | | | | | | | |2|0| | |1|0| | | | | | | | | | | | |1|0| | | | | | | | | | | | |26|23|3|11.5|7|63|
| | | | |1|0| | | | | | | | | | | | | | |4|0| | | | |1|0| | | | | | |8|0| | | | | | | | | | |2|1| | |1|0| | |74|68|6|8.1|10|64|
| | | | |3|0|1|0| | | | | | | | | | | | |4|2| | | | | | | | | | | | | | | | | | | | | | | | |2|0| | |2|0| | |36|24|12|33.3|6|65|
|5|14| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |1|0| | | | | | | | | | | | | | | | |27|7|14|66.7|3|66|
| 23 | | 24 | | 25 | | 26 | | 27 | | 28 | | 29 | | 30 | | 31 | | 32 | | 33 | | 34 | | 35 | | 36 | | 37 | | 38 | | 39 | | 40 | | 41 | | 42 | | 43 | | 44 | | 45 | | 46 | | 47 | | 48 | | 49 | | | | | | | |

| Margin Number | NAME OF COLLEGE | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | | 21 | |
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| | | Alabama* | | Arizona | | Arkansas | | California | | Colorado | | Connecticut | | Delaware | | District of Columbia | | Florida | | Georgia | | Idaho | | Illinois | | Indiana | | Iowa | | Kansas | | Kentucky | | Louisiana | | Maine | | Maryland | | Massachusetts | | Michigan | |
| | | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F |
| | MISSOURI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 67 | American Medical College.—E | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | |
| 68 | Barnes Medical College.—R | | | | | 2 | 1 | 1 | 0 | 0 | 1 | | | | | | | 1 | 1 | | | 4 | 5 | 26 | 9 | | | | | 3 | 0 | | | | | | | | | | | | |
| 69 | Ensworth Medical College.—R | | | | | 1 | 0 | | | 0 | 1 | | | | | | | | | | | 1 | 0 | | | | | | | 12 | 8 | | | | | | | | | | | | |
| 70 | Kansas City Hahnemann Medical College.—H | | | | | 1 | 0 | | | | | | | | | | | | | | | 0 | 1 | | | 1 | 0 | | | 10 | 1 | | | | | | | | | | | | |
| 71 | St. Louis University, School of Medicine.—R | | | | | 1 | 0 | | | | | | | | | | | | | | | 2 | 2 | 28 | 0 | | | | | 1 | 0 | | | | | | | | | | | | |
| 72 | St. Louis College of Phys. and Surgs.—R | | | | | 0 | 1 | 1 | 0 | 0 | 1 | | | | | | | | | | | | | 30 | 18 | 2 | 1 | 2 | 2 | 1 | 1 | | | | | | | | | | | | |
| 73 | University of Missouri, Medical Dept.—R | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | | | | |
| 74 | University Medical College, Kansas City.—R | | | | | 1 | 0 | 1 | 0 | 0 | 1 | | | | | | | | | | | 1 | 0 | 0 | 1 | | | 1 | 0 | 29 | 1 | | | | | | | | | | | | |
| 75 | Western Eclectic Coll. of Med. and Surg.—E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 1 | | | | | | | | | | | | |
| 76 | Washington University, Med. Department.—R | | | | | | | 2 | 1 | | | | | | | | | | | | | | | 30 | 1 | 1 | 0 | 1 | 0 | | | | | | | | | | | | | | |
| | NEBRASKA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 77 | John A. Creighton Medical College.—R | | | | | | | 1 | 1 | | | | | | | | | | | | | 1 | 0 | | | | | 1 | 0 | 2 | 0 | | | | | | | | | | | | |
| 78 | Lincoln Medical College.—E | | | | | | | | | 0 | 1 | | | | | | | 1 | 0 | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | |
| 79 | University of Nebraska, College of Med.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | NEW HAMPSHIRE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80 | Dartmouth Medical School.—R | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 3 | 1 | | |
| | NEW YORK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 81 | Albany Medical College.—R | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | |
| 82 | Columbia Univ. Coll. of Phys. and Surg.—R | | | | | | | 1 | 0 | | | 3 | 0 | | | | | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | | | | | 4 | 1 | | |
| 83 | Cornell University Medical College.—R | | | | | | | 2 | 0 | | | 4 | 0 | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | |
| 84 | Eclectic Med. Coll.. of City of New York.—E | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 85 | Fordham University, School of Medicine.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 86 | Long Island College Hospital.—R | | | | | | | | | | | 3 | 0 | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | 1 | 1 | 1 | 0 |
| 87 | New York Homeo. Med. Coll. and Hosp.—H | | | | | | | 1 | 1 | | | 4 | 0 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | 1 | 0 | | |
| 88 | N. Y. Med. Coll. and Hosp. for Women.—H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 89 | Syracuse University, College of Medicine.—R | | | | | | | | | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | |
| 90 | University and Bellevue Hosp. Med. Coll.—R | 1 | 0 | | | | | | | | | 2 | 0 | | | | | 1 | 0 | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | | | 1 | 0 | | |
| 91 | University of Buffalo, Medical Dept.—R | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | NORTH CAROLINA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 92 | Leonard School of Medicine.—R | 0 | 1 | | | | | | | | | | | | | | | 5 | 0 | 5 | 2 | | | | | | | | | | | | | | | | | 1 | 0 | 0 | 1 | | |
| 93 | North Carolina Medical College.— | | | | | | | | | | | | | | | | | 4 | 0 | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 94 | University of North Carolina, Med. Dept.—R | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | |
| | OHIO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 95 | Cleveland College of Phys. and Surgs.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 96 | Cleveland Homeopathic Medical College.—H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 97 | Eclectic Medical College.—E | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | 0 | | | | | | | 1 | 0 | | | | | | | | | 1 | 0 |
| 98 | Medical College of Ohio.—R | | | 1 | 0 | | | | | | | | | | | | | 2 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | | | | | | | 3 | 0 | | | | | | | | | | |
| 99 | Miami Medical College.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 0 | | | | | | | | | | |
| 100 | Pulte Medical College.—H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | 1 | 0 | | | | | | | | |
| 101 | Starling-Ohio Medical College.—R | | | | | | | 1 | 0 | | | | | | | | | 1 | 0 | | | 1 | 0 | | | | | 1 | 0 | | | | | | | | | | | | | | |
| 102 | Toledo Medical College.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 103 | Western Reserve University, Medical Dept.—R | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | OKLAHOMA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 104 | Epworth College of Medicine.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | OREGON | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 105 | Willamette University, Medical Dept.—R | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 106 | University of Oregon, Medical Dept.—R | | | | | | | 0 | 1 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | |
| | PENNSYLVANIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 107 | Hahnemann Med. College and Hospital.—H | | | | | | | 1 | 1 | | | 1 | 0 | 3 | 0 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | | | 1 | 0 | | | | | 2 | 1 | | |
| 108 | Jefferson Medical College.—R | | | 1 | 1 | | | 4 | 5 | | | 1 | 1 | 3 | 0 | 1 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | | | 1 | 0 | | | 2 | 0 | 4 | 0 | 2 | 0 | 1 | 0 |
| 109 | Medico-Chirurgical College of Philadelphia.—R | | | | | | | 1 | 1 | | | 1 | 0 | 1 | 1 | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 1 | 0 | 1 | 0 | | |
| 110 | Temple University, Medical Department.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | |
| 111 | Univ. of Pennsylvania, Dept. of Med.—R | 1 | 0 | | | | | 3 | 0 | | | 1 | 0 | 5 | 0 | 1 | 1 | 1 | 0 | | | | | 1 | 0 | 2 | 0 | | | | | | | | | | | 13 | 1 | 3 | 0 | | |
| 112 | Western Pennsylvania Medical College.—R | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | |
| 113 | Woman's Med. Coll. of Pennsylvania.—R | | | | | | | 1 | 0 | | | | | | | 1 | 0 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | 3 | 0 | | |
| | SOUTH CAROLINA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 114 | Med. Coll. of the State of So. Carolina.—R | | | 1 | 0 | | | | | | | | | | | | | 1 | 1 | 1 | 0 | | | 0 | 1 | | | | | | | | | | | | | | | | | | |
| | TENNESSEE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 115 | Chattanooga Medical College.—R | | | 0 | 1 | | | | | | | | | | | | | 1 | 0 | 3 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| 116 | College of Phys. and Surgs., Memphis.—R | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | |
| 117 | Knoxville Medical College.—R | | | | | | | | | | | | | | | | | | | 0 | 2 | | | | | | | | | 0 | 1 | | | | | | | | | | | | |
| 118 | Memphis Hospital Medical College.—R | | | | | 5 | 1 | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | 24 | 13 | | | | | | | | |
| 119 | Meharry Medical College.—R | 0 | 1 | | | 5 | 12 | | | 0 | 2 | | | | | | | 2 | 2 | 11 | 7 | | | 2 | 3 | | | | | 2 | 1 | 1 | 2 | 1 | 6 | | | | | | | | |
| 120 | Tennessee Medical College.—R | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | |
| 121 | University of Nashville, Medical Dept.—R | 0 | 1 | 1 | 0 | 3 | 0 | | | | | | | | | | | 1 | 0 | | | 0 | 1 | 5 | 0 | | | | | | | 2 | 0 | 8 | 3 | | | | | | | | |
| 122 | University of Tennessee, Dept. of Med.—R | | | | | 5 | 0 | | | | | | | | | | | 1 | 0 | 1 | 0 | | | 0 | 1 | | | | | | | 0 | 1 | 5 | 0 | | | | | | | | |
| 123 | University of West Tennessee, Med. Dept.—R | | | | | 0 | 2 | | | | | | | | | | | 0 | 1 | 0 | 2 | | | | | | | | | | | | | | | | | | | | | | |
| 124 | Vanderbilt University, Medical Department.—R | 1 | 0 | | | 3 | 0 | 0 | 1 | | | | | | | | | | | 1 | 0 | | | 1 | 1 | | | | | | | 2 | 0 | 2 | 0 | | | | | | | | |
| | TEXAS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 125 | Baylor University, College of Medicine.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 126 | Fort Worth University, Medical Dept.—R | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 127 | Southwestern University Medical College.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 128 | University of Texas, Dept. of Medicine.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | VERMONT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 129 | University of Vermont, College of Med.—R | | | | | | | 2 | 2 | | | 3 | 1 | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | 10 | 1 | | |
| | VIRGINIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 130 | Medical College of Virginia.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | |
| 131 | University of Virginia, Dept. of Medicine.—R | | | | | 1 | 0 | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 1 | 0 | | | | | 1 | 0 | | | | |
| 132 | University College of Medicine.—R | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 0 | 1 | 0 | 2 | | |
| | WISCONSIN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 133 | Marquette University, Medical Dept.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | |
| 134 | Wisconsin College of Phys. and Surgs.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | |
| 135 | Canadian Colleges | | | | | 1 | 0 | 5 | 0 | 2 | 0 | 2 | 0 | | | 1 | 0 | 1 | 0 | | | 3 | 0 | 6 | 1 | | | 1 | 0 | | | | | | | 2 | 2 | 1 | 0 | 9 | 5 | | |
| 136 | Foreign Colleges | | | | | | | 3 | 2 | | | 1 | 1 | | | | | 1 | 0 | | | | | 5 | 3 | | | | | 1 | 0 | | | | | 0 | 1 | | | 6 | 3 | 1 | 0 |
| 137 | Miscellaneous Medical Colleges | 0 | 2 | 2 | 1 | 6 | 0 | 6 | 4 | 5 | 2 | 1 | 0 | 1 | 0 | | | 5 | 3 | 4 | 1 | 4 | 3 | 6 | 6 | 6 | 0 | 3 | 5 | 6 | 0 | 7 | 1 | 9 | 2 | 3 | 0 | 3 | 4 | 1 | 3 | | |
| 138 | Undergraduates | 2 | 13 | | | 52 | 101 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5 | 31 | | |
| | Totals by States | 27 | | 25 | | 242 | | 257 | | 51 | | 65 | | 21 | | 67 | | 82 | | 171 | | 77 | | 762 | | 105 | | 112 | | 141 | | 138 | | 154 | | 65 | | 163 | | 308 | | 142 | |
| | Totals—Examined—Passed | 7 | | 19 | | 111 | | 184 | | 36 | | 52 | | 19 | | 46 | | 70 | | 143 | | 54 | | 645 | | 102 | | 98 | | 121 | | 120 | | 121 | | 65 | | 130 | | 213 | | 140 | |
| | Totals—Examined—Failed | 20 | | 6 | | 131 | | 73 | | 15 | | 13 | | 2 | | 21 | | 12 | | 28 | | 23 | | 117 | | 3 | | 14 | | 20 | | 18 | | 33 | | 10 | | 33 | | 95 | | 2 | |
| | Percentage of Failures | 74.1 | | 24.0 | | 54.1 | | 28.4 | | 29.4 | | 20.0 | | 9.5 | | 31.3 | | 14.6 | | 16.4 | | 29.9 | | 15.4 | | 2.9 | | 12.5 | | 14.2 | | 13.0 | | 21.4 | | 15.4 | | 20.2 | | 30.8 | | 1.4 | |
| | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | | 21 | |

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.

* One report not complete. † Now the Los Angeles Medical Department of the University of California.

| 22 | 23 | | 24 | | 25 | | 26 | | 27 | | 28 | | 29 | | 30 | | 31 | | 32 | | 33 | | 34 | | 35 | | 36 | | 37 | | 38 | | 39 | | 40 | | 41 | | 42 | | 43 | | 44 | | 45 | | 46 | | 47 | | 48 | | 49 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minnesota | Mississippi | | Missouri | | Montana | | Nebraska | | Nevada | | New Hampshire | | New Jersey | | New Mexico | | New York | | North Carolina | | North Dakota | | Ohio | | Oklahoma | | Oregon | | Pennsylvania | | Rhode Island | | South Carolina | | South Dakota | | Tennessee | | Texas | | Utah | | Vermont | | Virginia | | Washington | | West Virginia | | Wisconsin | | Wyoming | | Totals: | Examined—Passed | Examined—Failed | Percentage of Failures | No. States Ex. In | Margin Number |
| F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | | | | | | |
| .. | .. | .. | 3 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7 | 5 | 2 | 28.6 | 4 | 67 |
| 1 | .. | .. | 31 | 14 | 0 | 3 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | 3 | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | 0 | 2 | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | 117 | 76 | 41 | 35.0 | 17 | 68 |
| .. | .. | .. | 7 | 3 | .. | .. | 7 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 0 | 2 | .. | .. | .. | .. | .. | .. | 44 | 29 | 15 | 34.1 | 8 | 69 |
| .. | .. | .. | 1 | 2 | 0 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 0 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | 20 | 14 | 6 | 30.0 | 8 | 70 |
| 1 | .. | .. | 40 | 1 | 0 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | 3 | 2 | 0 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | .. | 1 | 0 | .. | .. | 89 | 80 | 9 | 10.1 | 12 | 71 |
| .. | 0 | 1 | 16 | 15 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | 1 | 2 | 2 | 2 | 1 | 0 | .. | .. | .. | .. | 0 | 1 | .. | .. | 3 | 3 | 1 | 0 | .. | .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | 112 | 62 | 50 | 44.6 | 17 | 72 |
| .. | .. | .. | 3 | 0 | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 0 | 1 | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 8 | 7 | 1 | 12.5 | 6 | 73 |
| .. | .. | .. | 26 | 12 | 1 | 2 | 1 | 0 | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | 86 | 67 | 19 | 22.1 | 15 | 74 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | 4 | 1 | 20.0 | 1 | 75 |
| .. | .. | .. | 43 | 3 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 0 | 1 | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | 87 | 80 | 7 | 8.0 | 9 | 76 |
| 0 | .. | .. | 1 | 0 | 1 | 0 | 26 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 0 | 1 | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7 | 1 | .. | .. | 1 | 0 | 1 | 0 | 51 | 47 | 4 | 7.8 | 14 | 77 |
| .. | .. | .. | 0 | 1 | .. | .. | 8 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 | 9 | 3 | 25.0 | 5 | 78 |
| .. | .. | .. | .. | .. | .. | .. | 9 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | 10 | 10 | 0 | 0. | 2 | 79 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | 2 | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 17 | 13 | 4 | 23.5 | 6 | 80 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | 31 | 3 | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 39 | 35 | 4 | 10.3 | 5 | 81 |
| 0 | 1 | 0 | 1 | 0 | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | 0 | .. | .. | 81 | 3 | 1 | 0 | .. | .. | 1 | 0 | .. | .. | .. | .. | 3 | 0 | .. | .. | 1 | 0 | .. | .. | 2 | 0 | 1 | 0 | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | 1 | 0 | .. | .. | 113 | 108 | 5 | 4.4 | 19 | 82 |
| .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 0 | .. | .. | 55 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 71 | 71 | 0 | 0. | 9 | 83 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 13 | 12 | 1 | 7.7 | 3 | 84 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | 10 | 0 | 0. | 1 | 85 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 82 | 9 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 100 | 89 | 11 | 11.0 | 6 | 86 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | 11 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 24 | 21 | 3 | 12.5 | 7 | 87 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 4 | 0 | 0. | 1 | 88 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 33 | 1 | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 39 | 38 | 1 | 2.6 | 6 | 89 |
| .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | 1 | 0 | 1 | 0 | .. | .. | 78 | 1 | .. | .. | 2 | 0 | .. | .. | 1 | 0 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 97 | 94 | 3 | 3.1 | 15 | 90 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | 29 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | 2 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | 37 | 35 | 2 | 5.4 | 6 | 91 |
| .. | 0 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | 3 | .. | .. | .. | .. | 0 | 1 | .. | .. | 2 | 1 | .. | .. | 0 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | 2 | .. | .. | 2 | 0 | .. | .. | .. | .. | 47 | 31 | 16 | 34.0 | 12 | 92 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 14 | 0 | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | 2 | 0 | .. | .. | .. | .. | 0 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 25 | 23 | 2 | 8.0 | 6 | 93 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 | 1 | .. | .. | .. | .. | .. | .. | 0 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 17 | 15 | 2 | 11.8 | 4 | 94 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | 16 | 0 | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 19 | 19 | 0 | 0. | 4 | 95 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7 | 0 | 1 | 0 | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | 10 | 10 | 0 | 0. | 4 | 96 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | 4 | 1 | 0 | 1 | .. | .. | 3 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | 3 | 1 | .. | .. | .. | .. | 20 | 16 | 4 | 20.0 | 10 | 97 |
| .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 28 | 1 | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | 43 | 42 | 1 | 2.3 | 11 | 98 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 14 | 4 | .. | .. | 3 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 24 | 20 | 4 | 16.7 | 3 | 99 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 0 | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 0 | .. | .. | .. | .. | .. | .. | 11 | 10 | 1 | 9.1 | 5 | 100 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 48 | 3 | .. | .. | 1 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 0 | .. | .. | 1 | 0 | 62 | 57 | 5 | 8.1 | 9 | 101 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 0 | .. | .. | .. | .. | .. | .. | 8 | 7 | 1 | 12.5 | 2 | 102 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 0 | .. | .. | .. | .. | 25 | 0 | .. | .. | .. | .. | 3 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 32 | 31 | 1 | 3.1 | 4 | 103 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 3 | 0 | 0. | 1 | 104 |
| .. | .. | .. | .. | .. | 1 | 0 | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 11 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | 1 | .. | .. | .. | .. | .. | .. | 29 | 19 | 10 | 34.5 | 5 | 105 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 16 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 0 | .. | .. | .. | .. | .. | .. | 28 | 21 | 7 | 25.0 | 4 | 106 |
| 0 | 0 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7 | 1 | .. | .. | 2 | 3 | .. | .. | .. | .. | 3 | 0 | 1 | 0 | .. | .. | 39 | 2 | .. | .. | .. | .. | 0 | 1 | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | 75 | 65 | 10 | 13.3 | 17 | 107 |
| 3 | 1 | 0 | 1 | 0 | 4 | 1 | 3 | 0 | .. | .. | .. | .. | 15 | 1 | .. | .. | 9 | 1 | 8 | 0 | 2 | 0 | 6 | 0 | 2 | 0 | 2 | 1 | 80 | 1 | 2 | 0 | 1 | 0 | .. | .. | .. | .. | 1 | 0 | 4 | 0 | 1 | 0 | 1 | 0 | 5 | 1 | 3 | 0 | 1 | 0 | 1 | 0 | 202 | 186 | 16 | 7.9 | 39 | 108 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 8 | 0 | .. | .. | 2 | 2 | .. | .. | .. | .. | 2 | 0 | .. | .. | 1 | 0 | 68 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | 2 | 0 | 3 | 0 | .. | .. | .. | .. | 98 | 93 | 5 | 5.1 | 14 | 109 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 19 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | 22 | 21 | 1 | 4.5 | 3 | 110 |
| .. | 1 | 0 | 2 | 0 | 1 | 0 | .. | .. | .. | .. | .. | .. | 13 | 0 | .. | .. | 10 | 0 | 4 | 0 | .. | .. | 3 | 0 | 0 | 1 | 1 | 0 | 74 | 0 | .. | .. | .. | .. | 1 | 0 | 1 | 0 | .. | .. | .. | .. | .. | .. | 3 | 0 | 6 | 0 | .. | .. | 1 | 0 | .. | .. | 155 | 152 | 3 | 1.9 | 25 | 111 |
| .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 57 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | 9 | 0 | .. | .. | .. | .. | 77 | 70 | 7 | 9.1 | 7 | 112 |
| .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | 1 | 0 | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | 15 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | 1 | 0 | .. | .. | .. | .. | .. | .. | 29 | 28 | 1 | 3.4 | 11 | 113 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | 24 | 14 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | 46 | 30 | 16 | 34.8 | 8 | 114 |
| .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 3 | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 19 | 0 | 1 | 1 | .. | .. | .. | .. | 1 | 3 | .. | .. | 1 | 2 | .. | .. | .. | .. | 44 | 31 | 13 | 29.5 | 11 | 115 |
| .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | 0 | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 11 | 8 | 3 | 27.3 | 5 | 116 |
| .. | 0 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 0 | 2 | .. | .. | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 16 | 8 | 8 | 50.0 | 6 | 117 |
| .. | 22 | 14 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 0 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 29 | 0 | 10 | 4 | .. | .. | .. | .. | 0 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 133 | 96 | 37 | 27.8 | 10 | 118 |
| .. | 1 | 15 | 4 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 0 | 1 | .. | .. | 0 | 1 | 4 | 1 | .. | .. | .. | .. | .. | .. | 2 | 3 | .. | .. | 28 | 0 | 5 | 3 | .. | .. | .. | .. | 0 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 136 | 68 | 68 | 50.0 | 18 | 119 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 1 | .. | .. | .. | .. | 0 | 1 | 0 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 17 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | 0 | 2 | 1 | 1 | .. | .. | .. | .. | 28 | 21 | 7 | 25.0 | 7 | 120 |
| .. | 4 | 6 | 0 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 0 | .. | .. | 1 | 2 | .. | .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | .. | 27 | 0 | 3 | 2 | .. | .. | .. | .. | 1 | 0 | 0 | 1 | 1 | 0 | .. | .. | .. | .. | 83 | 64 | 19 | 22.9 | 19 | 121 |
| .. | 2 | 2 | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | 9 | 0 | 4 | 0 | .. | .. | .. | .. | 0 | 1 | 1 | 0 | .. | .. | .. | .. | .. | .. | 39 | 33 | 6 | 15.4 | 15 | 122 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 | 7 | 5 | 41.7 | 5 | 123 |
| .. | 3 | 1 | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | 5 | 0 | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | 14 | 0 | 7 | 1 | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 49 | 44 | 5 | 10.2 | 16 | 124 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 13 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 13 | 13 | 0 | 0. | 1 | 125 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 13 | 13 | 0 | 0. | 2 | 126 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 8 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 9 | 8 | 1 | 11.1 | 1 | 127 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 35 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 39 | 38 | 1 | 2.6 | 2 | 128 |
| .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | 1 | 3 | 2 | 0 | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 0 | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | 22 | 0 | .. | .. | 1 | 0 | 1 | 0 | .. | .. | .. | .. | 56 | 48 | 8 | 14.3 | 14 | 129 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 0 | 1 | 3 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 31 | 3 | .. | .. | 3 | 0 | .. | .. | .. | .. | 43 | 39 | 4 | 9.3 | 6 | 130 |
| .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 13 | 3 | 1 | 0 | 3 | 0 | 1 | 0 | .. | .. | 28 | 24 | 4 | 14.3 | 10 | 131 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 14 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 34 | 1 | 1 | 0 | 1 | 0 | .. | .. | .. | .. | 55 | 51 | 4 | 7.3 | 7 | 132 |
| .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | 2 | 0 | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | 15 | 10 | .. | .. | 33 | 22 | 11 | 33.3 | 7 | 133 |
| .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | 13 | 1 | .. | .. | 20 | 19 | 1 | 5.0 | 5 | 134 |
| 1 | .. | .. | .. | .. | 5 | 1 | .. | .. | .. | .. | 1 | 0 | 3 | 0 | .. | .. | 22 | 0 | .. | .. | 2 | 1 | 4 | 0 | .. | .. | 2 | 2 | 3 | 0 | 3 | 3 | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | 2 | 1 | 0 | 1 | 14 | 1 | .. | .. | 2 | 0 | .. | .. | 121 | 101 | 20 | 16.5 | 27 | 135 |
| 0 | .. | .. | .. | .. | 2 | 1 | .. | .. | .. | .. | 0 | 1 | 3 | 3 | .. | .. | 19 | 25 | .. | .. | .. | .. | 1 | 0 | .. | .. | 1 | 1 | 5 | 1 | 0 | 1 | .. | .. | .. | .. | .. | .. | 2 | 0 | 0 | 1 | .. | .. | 1 | 0 | 3 | 0 | .. | .. | 1 | 0 | .. | .. | 101 | 57 | 44 | 43.6 | 22 | 136 |
| 0 | 6 | 4 | 3 | 2 | 5 | 5 | 9 | 2 | 1 | 0 | 1 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 3 | 1 | 2 | 2 | 0 | 11 | 10 | 7 | 2 | 5 | 5 | .. | .. | 0 | 1 | 3 | 6 | 11 | 0 | 12 | 1 | 0 | 1 | 1 | 0 | 5 | 6 | 8 | 9 | 1 | 0 | 2 | 0 | 3 | 0 | 286 | 184 | 102 | 30.0 | 46 | 137 |
| .. | 57 | 85 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7 | 0 | .. | .. | .. | .. | .. | .. | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 76 | 4 | .. | .. | .. | .. | .. | .. | 1 | 0 | .. | .. | .. | .. | .. | .. | .. | .. | 438 | 201 | 237 | 54.1 | 8 | 138 |
| 115 | 284 | | 282 | | 91 | | 82 | | 9 | | 30 | | 88 | | 15 | | 638 | | 129 | | 47 | | 205 | | 136 | | 145 | | 501 | | 33 | | 79 | | 81 | | 281 | | 200 | | 32 | | 40 | | 176 | | 197 | | 115 | | 69 | | 12 | | 7287 | .... | .... | .... | .. | |
| 90 | 130 | | 212 | | 68 | | 74 | | 9 | | 20 | | 76 | | 11 | | 566 | | 111 | | 41 | | 192 | | 92 | | 95 | | 474 | | 23 | | 46 | | 60 | | 277 | | 181 | | 28 | | 38 | | 136 | | 148 | | 105 | | 56 | | 12 | | .... | 5857 | .... | .... | .. | |
| 25 | 154 | | 70 | | 23 | | 8 | | 0 | | 10 | | 12 | | 4 | | 72 | | 18 | | 6 | | 13 | | 44 | | 50 | | 27 | | 10 | | 33 | | 21 | | 4 | | 19 | | 4 | | 2 | | 40 | | 49 | | 10 | | 13 | | 0 | | .... | .... | 1430 | .... | .. | |
| 1.7 | 54.2 | | 24.8 | | 25.3 | | 9.8 | | 0. | | 33.3 | | 13.6 | | 26.7 | | 11.3 | | 14.0 | | 12.8 | | 6.3 | | 32.4 | | 34.5 | | 5.4 | | 30.3 | | 41.8 | | 25.9 | | 1.4 | | 9.5 | | 12.5 | | 5.0 | | 22.7 | | 24.9 | | 8.7 | | 18.8 | | 0. | | .... | .... | .... | 19.6 | .. | |
| 22 | 23 | | 24 | | 25 | | 26 | | 27 | | 28 | | 29 | | 30 | | 31 | | 32 | | 33 | | 34 | | 35 | | 36 | | 37 | | 38 | | 39 | | 40 | | 41 | | 42 | | 43 | | 44 | | 45 | | 46 | | 47 | | 48 | | 49 | | | | | | | |

## *TABLE B.—GRADUATES OF 1909 EXAMINE*

| Margin Number | NAME OF COLLEGE | 1 Alabama* | | 2 Arizona | | 3 Arkansas | | 4 California | | 5 Colorado | | 6 Connecticut | | 7 Delaware | | 8 District of Columbia | | 9 Florida | | 10 Georgia | | 11 Idaho | | 12 Illinois | | 13 Indiana | | 14 Iowa | | 15 Kansas | | 16 Kentucky | | 17 Louisiana | | 18 Maine | | 19 Maryland | | 20 Massachusetts | | 21 Michigan | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F |
| | ALABAMA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Birmingham Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | University of Alabama, Medical Department.—R. | | | | | | | | | | | | | | | | | 2 | 0 | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | |
| | ARKANSAS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | College of Physicians and Surgeons.—R. | | | | | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | | | | | | | | |
| 4 | University of Arkansas, Medical Dept.—R. | | | | | 2 | 5 | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | 1 | 1 | | | | | | | | |
| | CALIFORNIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | California Eclectic Medical College.—E. | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | College of P. and S., Los Angeles.—R. | | | 1 | 0 | | | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | College of P. and S., San Francisco.—R. | | | | | | | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Cooper Medical College.—R. | | | | | | | 18 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Hahnemann Medical College of Pacific.—H. | | | | | | | 2 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Oakland College of Medicine and Surgery.—R. | | | | | | | 3 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | University of California, Medical Dept.—R. | | | | | | | 5 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | University of Southern California.†—R. | | | | | | | 13 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 |
| | COLORADO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | Denver and Gross College of Medicine.—R. | | | | | | | 1 | 0 | 13 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | University of Colorado, Medical Dept.—R. | | | | | | | | | 5 | 0 | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | |
| | CONNECTICUT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Yale Medical School.—R. | | | | | | | | | | | 5 | 1 | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 1 | 0 | | |
| | DISTRICT OF COLUMBIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | George Washington Univ., Dept. of Med.—R. | | | | | | | | | | | | | | | 11 | 1 | | | | | | | | | | | | | | | | | | | | | 3 | 0 | | | | |
| 17 | Georgetown University, School of Medicine.—R. | | | | | | | | | | | 1 | 0 | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | |
| 18 | Howard University, Medical Department.—R. | | | | | 1 | 0 | | | | | | | | | 1 | 2 | | | | | | | | | | | | | | | | | | | | | 3 | 0 | 0 | 1 | | |
| | GEORGIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Atlanta College of Physicians and Surgeons.—R. | | | | | | | | | | | | | | | | | 2 | 0 | 30 | 4 | | | | | | | | | | | | | | | | | | | | | | |
| 20 | Atlanta School of Medicine.—R. | | | | | | | | | | | | | | | | | 8 | 1 | 43 | 5 | | | | | | | | | | | | | | | | | | | | | | |
| 21 | Georgia College of Eclectic M. and S.—E. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | Hospital Medical College, Atlanta.—E. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | Medical College of Georgia.—R. | | | | | | | | | | | | | | | | | | | 19 | 2 | | | | | | | | | | | | | | | | | | | | | | |
| | ILLINOIS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | American Medical Missionary College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | 0 |
| 25 | Bennett Medical College.—R. | | | | | 1 | 0 | | | 0 | 1 | | | | | | | | | | | | | 27 | 9 | | | | | 0 | 1 | | | | | | | | | | | | |
| 26 | Chicago College of Medicine and Surgery.—R. | | | | | | | | | | | | | | | | | 2 | 0 | | | | | 79 | 5 | 1 | 0 | 0 | 2 | | | | | | | | | | | | | | |
| 27 | College of Medicine and Surgery.—Ph.M. | | | | | | | | | | | | | | | | | | | | | | | 3 | 3 | | | | | | | | | | | | | | | | | | |
| 28 | College of Physicians and Surgeons.—R. | | | | | | | 2 | 1 | | | | | | | | | | | | | | | 89 | 5 | 1 | 0 | 4 | 0 | 2 | 0 | 1 | 0 | | | | | | | | | 1 | 0 |
| 29 | Hahnemann Medical College and Hospital.—H. | | | | | | | | | | | 0 | 2 | | | | | | | | | 0 | 1 | 13 | 2 | | | 1 | 0 | 1 | 0 | | | | | | | | | | | | |
| 30 | Hering Medical College.—H. | | | | | | | | | | | | | | | | | | | | | | | 6 | 0 | 1 | 0 | | | | | | | | | | | | | | | | |
| 31 | Illinois Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | 19 | 2 | 1 | 0 | | | | | | | | | | | | | | | | |
| 32 | Jenner Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | 13 | 3 | | | | | | | | | | | | | | | | | | |
| 33 | National Medical University.—P. | | | | | | | | | | | | | | | | | | | | | | | 6 | 3 | | | | | | | | | | | | | | | | | | |
| 34 | Northwestern University Medical School.—R. | | | | | | | 2 | 0 | | | | | | | | | | | | | 1 | 1 | 119 | 2 | 3 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | | | | | | | | | 1 | 0 |
| 35 | Reliance Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | 14 | 6 | | | | | | | | | | | | | | | | | | |
| 36 | Rush Medical College.—R. | | | | | | | 3 | 0 | 1 | 0 | | | | | | | | | | | | | 63 | 0 | | | | | | | | | | | | | | | | | 1 | 0 |
| | INDIANA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 37 | Indiana University, School of Medicine.—R. | | | | | | | | | | | | | | | | | | | | | | | | | 55 | 0 | | | | | | | | | | | | | | | | |
| | IOWA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 38 | Drake University, College of Medicine.—R. | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | 18 | 1 | | | | | | | | | | | | | | |
| 39 | State University of Iowa, College of Med.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | 43 | 1 | | | | | | | | | | | | | | |
| 40 | State University of Iowa, Homeo. Dept.—H. | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 0 | | | | | | | | | | | | | | |
| | KANSAS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 41 | Kansas Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 17 | 1 | | | | | | | | | | | | |
| 42 | University of Kansas, School of Medicine.—R. | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | 6 | 0 | | | | | | | | | | | | |
| | KENTUCKY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 43 | Louisville National Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 44 | Southwestern Homeopathic Medical College.—H. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | |
| 45 | University of Louisville, Medical Dept.—R. | | | 1 | 0 | 1 | 0 | | | | | | | | | | | 1 | 0 | | | | | 8 | 2 | 11 | 0 | | | 3 | 1 | 81 | 10 | | | | | | | | | | |
| | LOUISIANA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 46 | Flint Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 | | | | | | | | |
| 47 | Tulane University, Medical Department.—R. | | | | | 1 | 0 | | | | | | | | | | | 2 | 0 | | | | | | | | | | | 1 | 0 | | | 55 | 1 | | | | | | | | |
| | MAINE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 48 | Medical School of Maine.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | 0 | | | 3 | 0 | | |
| | MARYLAND | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 49 | Atlantic Medical College.—P. | | | | | | | | | | | 0 | 1 | 2 | 0 | | | | | | | | | | | | | | | | | | | | | 3 | 1 | | | | | | |
| 50 | Baltimore Medical College.—R. | | | | | | | | | | | 3 | 0 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 11 | 5 | 6 | 2 | | |
| 51 | College of Physicians and Surgeons.—R. | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 9 | 0 | 2 | 1 | | |
| 52 | Johns Hopkins University, Medical Dept.—R. | | | | | | | | | | | 1 | 0 | | | | | | | | | | | 1 | 0 | 1 | 0 | 2 | 0 | | | | | | | | | 10 | 0 | 1 | 0 | | |
| 53 | Maryland Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 0 | 5 | 6 | 0 | 1 | | |
| 54 | University of Maryland, School of Medicine.—R. | | | | | | | 0 | 1 | | | | | | | | | 1 | 0 | 2 | 0 | | | 1 | 0 | | | | | | | | | | | | | 33 | 3 | | | | |
| 55 | Woman's Medical College of Baltimore.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | 1 | 1 | | | | |
| | MASSACHUSETTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 56 | Boston University School of Medicine.—H. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | 10 | 1 | | |
| 57 | College of Physicians and Surgeons.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 4 | 6 | | |
| 58 | Harvard Medical School.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 22 | 1 | | |
| 59 | Tufts College Medical School.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 0 | | | 35 | 6 | | |
| | MICHIGAN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60 | Detroit College of Medicine.—R. | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 36 | 0 |
| 61 | Detroit Homeopathic College.—H. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5 | 0 |
| 62 | Univ. of Michigan, Dept. of Med. and Surg.—R. | | | 1 | 1 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | 58 | 0 |
| 63 | University of Michigan, Homeo. College.—H. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 14 | 0 |
| | MINNESOTA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 64 | University of Minnesota, Coll. of M. and S.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 65 | Hamline University, Medical Department.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MISSISSIPPI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 66 | Mississippi Medical College.—R. | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | | 21 | |

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.

* One report not complete. † Now the Los Angeles Medical Department of the University of California.

| Margin Number | 22 | 23 Mississippi | | 24 Missouri | | 25 Montana | | 26 Nebraska | | 27 Nevada | | 28 New Hampshire | | 29 New Jersey | | 30 New Mexico | | 31 New York | |
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| 36 | | | |2|0| | | | | | | | | | | | | | |
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| 38 | | | | | |1|0| | | | | | | | | | | | |
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| 42 | | | |6|0| | | | | | | | | | | | | | |
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| 46 | |0|2| | | | | | | | | | | | | | | | |
| 47 | |6|0|1|0| | | | | | | | | | | | | | |
| 48 | | | | | | | | | | | |1|0| | | | | | |
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| 50 | | | | | | | | | | | | | |2|0| | |2|1|
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| | 22 | 23 | | 24 | | 25 | | 26 | | 27 | | 28 | | 29 | | 30 | | 31 | |

| Margin Number | 32 North Carolina | | 33 North Dakota | | 34 Ohio | | 35 Oklahoma | | 36 Oregon | | 37 Pennsylvania | | 38 Rhode Island | | 39 South Carolina | | 40 South Dakota | |
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| 34 | | |2|0| | |2|0|1|0| | | | | | |1|0|
| 35 | | | | | | | | | | | | | | | | | | |
| 36 | | | | |1|0| | | | |1|0| | | | |1|0|
| 37 | | | | |3|0| | | | | | | | | | | | |
| 38 | | | | | | | | | | | | | | | | | | |
| 39 | | |1|0| | | | | | | | | | | | |5|0|
| 40 | | | | | | | | |1|0| | | | | | | | |
| 41 | | | | | | |1|0| | | | | | | | | | |
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| 45 |1|0|1|0| | |1|1|1|0|5|1| | | | | | |
| 46 | | | | | | |1|0| | | | | | | | | | |
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| 51 |1|0| | | | | | | | |2|0|1|1| | | | |
| 52 |1|0| | | | | | | | |3|0| | | | | | |
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| 54 |10|0| | | | | | | | |5|1|2|0|4|1| | |
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| 62 |1|0| | |2|0| | |2|0|4|0| | | | | | |
| 63 | | | | |2|0| | | | | | | | | | | | |
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| Margin Number | 41 Tennessee | | 42 Texas | | 43 Utah | | 44 Vermont | | 45 Virginia | | 46 Washington | | 47 West Virginia | | 48 Wisconsin | | 49 Wyoming | | Totals: | Examined—Passed | Examined—Failed | Percentage of Failures | No. States Ex. in |
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| 4 | | | | | | | | | | | | | | | | | | |11|4|7|63.6|4|
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| 8 | | | | | | | | | | |2|0| | | | | | |21|20|1|4.8|2|
| 9 | | | | | | | | | | | | | | | | | | |6|3|3|50.0|2|
| 10 | | | | | | | | | | | | | | | | | | |3|3|0|0.|1|
| 11 | | | | | | | | | | | | | | | | | | |6|6|0|0.|2|
| 12 | | | | | | | | | | | | | | | | | | |16|14|2|12.5|2|
| 13 | | | | | | | | | | | | | | | | |1|0|17|16|1|5.9|4|
| 14 | | | | | | | | | | | | | | | | | | |6|6|0|0.|2|
| 15 | | | | | | | | | | | | | | | | | | |9|8|1|11.1|4|
| 16 | | | | |1|0| | | | | | | | | | | | |17|16|1|5.9|4|
| 17 | | | | | | | | | | | | |3|0| | | | |8|7|1|12.5|5|
| 18 | | |1|0| | | | |6|0| | | | | | | | |16|13|3|18.7|7|
| 19 | | |2|0| | | | | | | | | | | | | | |40|36|4|10.0|4|
| 20 | | | | | | | | | | | | | | | | | | |62|56|6|9.7|3|
| 21 | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | |23|21|2|8.7|2|
| 24 | | | | | | | | | | | | | | | | | | |6|6|0|0.|1|
| 25 | | | | | | |1|0| | | | | | | | | | |42|31|11|26.2|6|
| 26 | | |1|0| | | | | | | | |1|0| | | | |97|89|8|8.2|10|
| 27 | | | | | | | | | | | | | | | | | | |6|3|3|50.0|1|
| 28 | | | | | | | | | | |0|2| | |1|1| | |114|104|10|8.8|13|
| 29 | | | | | | | | | | | | | | |1|0| | |21|16|5|23.8|6|
| 30 | | | | | | | | | | | | | | | | | | |7|7|0|0.|2|
| 31 | | | | | | | | | | | | | | | | | | |22|20|2|9.1|2|
| 32 | | | | | | | | | | | | | | | | | | |16|13|3|18.7|1|
| 33 | | | | | | | | | | | | | | | | | | |9|6|3|33.3|1|
| 34 | | | | |7|0| | | | |1|0| | |3|1|1|0|160|155|5|3.1|18|
| 35 | | | | | | | | | | | | | | | | | | |20|14|6|30.0|1|
| 36 | | | | | | | | | | |1|0| | | | | | |74|74|0|0.|9|
| 37 | | |1|0| | | | | | | | | | | | | | |59|59|0|0.|3|
| 38 | | | | | | | | | | | | | | | | | | |21|19|2|9.5|3|
| 39 | | | | | | | | | | |1|0| | | | | | |51|50|1|2.0|4|
| 40 | | | | | | | | | | | | | | | | | | |4|4|0|0.|2|
| 41 | | | | | | | | | | | | | | | | | | |19|18|1|5.3|2|
| 42 | | | | | | | | | | | | | | | | | | |14|14|0|0.|4|
| 43 | | | | | | | | | | | | | | | | | | |1|1|0|0.|1|
| 44 | | | | | | | | | | | | | | | | | | |1|1|0|0.|1|
| 45 |8|0|4|0| | | | |0|2| | |15|2| | | | |168|149|19|11.3|18|
| 46 | | | | | | | | | | | | | | | | | | |7|3|4|57.1|3|
| 47 | | |14|1| | | | |1|0| | | | | | | | |86|83|3|3.5|10|
| 48 | | | | | | | | | | | | | | | | | | |19|19|0|0.|3|
| 49 | | | | | | | | | | | | | | | | | | |17|14|3|17.7|5|
| 50 | | |2|0| | | | |3|1| | |3|0| | | | |52|42|10|19.2|11|
| 51 | | | | | | | | |1|0| | |9|0| | | | |32|30|2|6.2|10|
| 52 | | |1|0| | | | |1|0| | | | | | | | |27|26|1|3.7|12|
| 53 | | | | | | | | |3|6| | |6|1| | | | |39|25|14|35.9|6|
| 54 | | |1|0| | | | |4|2| | |3|0| | | | |76|68|8|10.5|13|
| 55 | | | | | | | | | | | | | | | | | | |4|3|1|25.0|3|
| 56 | | | | | | | | | | | | | | | | | | |15|14|1|6.7|4|
| 57 | | | | | | | | | | | | | | | | | | |12|6|6|50.0|3|
| 58 | | | | | | | | | | | | | | | | | | |27|26|1|3.7|4|
| 59 | | | | | | | | | | | | | | | | | | |46|40|6|13.0|3|
| 60 | | | | | | | | | | | | | | | | | | |38|38|0|0.|3|
| 61 | | | | | | | | | | | | | | | | | | |5|5|0|0.|1|
| 62 | | | | |1|0| | | | |2|0| | | | | | |79|78|1|1.3|12|
| 63 | | | | |1|0| | | | | | | | | | | | |17|17|0|0.|3|
| 64 | | | | | | | | | | | | | | |1|0| | |46|43|3|6.5|4|
| 65 | | | | | | | | | | | | | | |1|0| | |15|10|5|33.3|2|
| 66 |1|0| | | | | | | | | | | | | | | | |16|7|9|56.2|3|
| | 41 | | 42 | | 43 | | 44 | | 45 | | 46 | | 47 | | 48 | | 49 | | | | | | |

## TABLE B.—GRADUATES OF 1909 EXAMIN

| Margin Number | NAME OF COLLEGE | 1 Alabama* |  | 2 Arizona |  | 3 Arkansas |  | 4 California |  | 5 Colorado |  | 6 Connecticut |  | 7 Delaware |  | 8 District of Columbia |  | 9 Florida |  | 10 Georgia |  | 11 Idaho |  | 12 Indiana |  | 13 Illinois |  | 14 Iowa |  | 15 Kansas |  | 16 Kentucky |  | 17 Louisiana |  | 18 Maine |  | 19 Maryland |  | 20 Massachusetts |  | 21 Michigan |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  |  | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F |
|  | MISSOURI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 67 | American Medical College.—E. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 68 | Barnes Medical College.—R. | | | | | 1 | 0 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | 25 | 4 | | | | | 2 | 0 | | | | | | | | | | | | |
| 69 | Ensworth Medical College.—R. | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 8 | 6 | | | | | | | | | | | | |
| 70 | Kansas City Hahnemann Medical College.—H. | | | | | 1 | 0 | | | | | | | | | | | | | | | 0 | 1 | | | | | | | 10 | 1 | | | | | | | | | | | | |
| 71 | St. Louis University, School of Medicine.—R. | | | | | | | | | | | | | | | | | | | | | | | 28 | 0 | | | | | 1 | 0 | | | | | | | | | | | | |
| 72 | St. Louis Coll. of Physicians and Surgeons.—R. | | | | | | | | | | | | | | | | | | | | | | | 29 | 12 | 1 | 0 | 2 | 2 | | | | | | | | | | | | | | |
| 73 | University of Missouri, Medical Department.—R. | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | | | | |
| 74 | University Medical College, Kansas City.—R. | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 1 | 0 | 23 | 0 | | | | | | | | | | | | |
| 75 | Western Eclectic College of Med. and Surg.—E. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 1 | | | | | | | | | | | | |
| 76 | Washington University, Medical Department.—R. | | | | | | | | | | | | | | | | | | | | | | | 28 | 1 | | | | | | | | | | | | | | | | | | |
|  | NEBRASKA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 77 | John A. Creighton Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | |
| 78 | Lincoln Medical College.—E. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 79 | University of Nebraska, College of Medicine.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | NEW HAMPSHIRE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80 | Dartmouth Medical School.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 1 | 0 | | |
|  | NEW YORK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 81 | Albany Medical Collge.—R. | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | |
| 82 | Columbia University College of P. and S.—R. | | | | | | | | | | | 2 | 0 | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | |
| 83 | Cornell University Medical College.—R. | | | | | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | |
| 84 | Eclectic Med. College of City of New York.—E. | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 85 | Fordham University, School of Medicine.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 86 | Long Island College Hospital.—R. | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 87 | New York Homeo. Med. Coll. and Hosp.—H. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 88 | New York Med. Coll. and Hosp. for Women.—H. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 89 | Syracuse University, College of Medicine.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 90 | University and Bellevue Hospital Med. Coll.—R. | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 91 | University of Buffalo, Medical Department.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | NORTH CAROLINA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 92 | Leonard School of Medicine.—R. | | | | | | | | | | | | | | | | | 3 | 0 | 3 | 0 | | | | | | | | | | | | | | | | | 1 | 0 | | | | |
| 93 | North Carolina Medical College.—R. | | | | | | | | | | | | | | | | | 3 | 0 | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | |
| 94 | University of North Carolina, Med. Dept.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | OHIO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 95 | Cleveland Coll. of Physicians and Surgeons.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 96 | Cleveland Homeopathic Medical College.—H. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 97 | Eclectic Medical College.—E. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | |
| 98 | Medical College of Ohio.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | |
| 99 | Miami Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | |
| 100 | Pulte Medical College.—H. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | |
| 101 | Starling-Ohio Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 102 | Toledo Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 103 | Western Reserve University, Medical Dept.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | OKLAHOMA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 104 | Epworth College of Medicine.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | OREGON | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 105 | Willamette University, Medical Department.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 106 | University of Oregon, Medical Department.—R. | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | |
|  | PENNSYLVANIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 107 | Hahnemann Medical College and Hospital.—H. | | | | | | | 0 | 1 | | | 1 | 0 | 1 | 0 | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 108 | Jefferson Medical College.—R. | | | | | | | 1 | 0 | | | 1 | 1 | 3 | 0 | | | | | 2 | 0 | | | | | | | 1 | 0 | | | 1 | 0 | | | 1 | 0 | 3 | 0 | | | | |
| 109 | Medico-Chirurgical College of Philadelphia.—R. | | | | | | | | | | | 1 | 0 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 110 | Temple University, Medical Department.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | |
| 111 | University of Pennsylvania, Dept. of Med.—R. | | | | | | | | | | | 1 | 0 | 3 | 0 | | | | | | | | | | | 1 | 0 | | | | | | | | | | | 10 | 1 | | | | |
| 112 | Western Pennsylvania Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | |
| 113 | Woman's Medical College of Pennsylvania.—R. | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | SOUTH CAROLINA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 114 | Med. College of the State of South Carolina.—R. | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
|  | TENNESSEE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 115 | Chattanooga Medical College.—R. | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 116 | College of Physicians and Surgs., Memphis.—R. | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 117 | Knoxville Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 118 | Memphis Hospital Medical College.—R. | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | 19 | 6 | | | | | | | | |
| 119 | Meharry Medical College.—R. | | | | | 4 | 3 | | | | | | | | | | | | | 8 | 3 | | | 2 | 2 | | | | | 1 | 0 | 0 | 1 | 1 | 5 | | | | | | | | |
| 120 | Tennessee Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 121 | University of Nashville, Medical Dept.—R. | | | 1 | 0 | 1 | 0 | | | | | | | | | | | | | | | | | 4 | 0 | | | | | | | 2 | 0 | 4 | 0 | | | | | | | | |
| 122 | University of Tennessee, Dept. of Medicine.—R. | | | | | 4 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 0 | | | | | | | | |
| 123 | University of West Tennessee, Med. Dept.—R. | | | | | 0 | 1 | | | | | | | | | | | 0 | 1 | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 124 | Vanderbilt University, Medical Department.—R. | | | | | | | 0 | 1 | | | | | | | | | | | 1 | 0 | | | 0 | 1 | | | | | | | 2 | 0 | 1 | 0 | | | | | | | | |
|  | TEXAS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 125 | Baylor University, College of Medicine.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 126 | Fort Worth University, Medical Dept.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 127 | Southwestern University Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 128 | University of Texas, Dept. of Medicine.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | VERMONT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 129 | University of Vermont, College of Medicine.—R. | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 0 | | |
|  | VIRGINIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 130 | Medical College of Virginia.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 131 | University of Virginia, Dept. of Medicine.—R. | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 132 | University College of Medicine.—R. | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 0 | 1 | | | | |
|  | WISCONSIN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 133 | Marquette University, Medical Department.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | |
| 134 | Wisconsin College of Physicians and Surgs.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | |
| 135 | Canadian Colleges | | | | | | | | | | | 1 | 0 | | | | | | | | | 1 | 0 | 2 | 0 | | | | | | | | | | | | | 1 | 0 | 1 | 2 | | |
| 136 | Foreign Colleges | | | | | | | 1 | 0 | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| 137 | Miscellaneous Medical Colleges | | | | | | | | | 4 | 1 | | | | | | | 1 | 1 | | | | | 1 | 0 | 4 | 0 | 3 | 1 | | | | | | | | | 1 | 0 | | | | |
|  | Totals by States | .... | | 5 | | 34 | | 71 | | 26 | | 30 | | 12 | | 19 | | 33 | | 130 | | 9 | | 646 | | 80 | | 93 | | 91 | | 106 | | 105 | | 33 | | 109 | | 114 | | 123 | |
|  | Totals—Examined—Passed | .... | | 4 | | 21 | | 59 | | 23 | | 25 | | 11 | | 15 | | 29 | | 114 | | 6 | | 582 | | 80 | | 86 | | 80 | | 95 | | 89 | | 32 | | 92 | | 93 | | 123 | |
|  | Totals—Examined—Failed | .... | | 1 | | 13 | | 12 | | 3 | | 5 | | 1 | | 4 | | 4 | | 16 | | 3 | | 64 | | 0 | | 7 | | 11 | | 11 | | 16 | | 1 | | 17 | | 21 | | 0 | |
|  | Percentage of Failures | .... | | 20.0 | | 38.2 | | 16.9 | | 11.5 | | 16.7 | | 8.3 | | 21.1 | | 11.8 | | 12.3 | | 33.3 | | 9.9 | | 0. | | 7.5 | | 12.1 | | 10.4 | | 15.2 | | 3.0 | | 15.6 | | 18.4 | | 0. | |
|  |  | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | | 21 | |

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.

* One report not complete. † Now the Los Angeles Medical Department of the University of California.

| 23 Mississippi | | 24 Missouri | | 25 Montana | | 26 Nebraska | | 27 Nevada | | 28 New Hampshire | | 29 New Jersey | | 30 New Mexico | | 31 New York | | 32 North Carolina | | 33 North Dakota | | 34 Ohio | | 35 Oklahoma | | 36 Oregon | | 37 Pennsylvania | | 38 Rhode Island | | 39 South Carolina | | 40 South Dakota | | 41 Tennessee | | 42 Texas | | 43 Utah | | 44 Vermont | | 45 Virginia | | 46 Washington | | 47 West Virginia | | 48 Wisconsin | | 49 Wyoming | | Totals: | Examined—Passed | Examined—Failed | Percentage of Failures | No. States Ex. in | Margin Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | | | | | | |
| | | 3 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 3 | 0 | 0. | 1 | 67 |
| | | 30 | 12 | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 80 | 62 | 18 | 22.5 | 9 | 68 |
| | | 7 | 2 | | | 6 | 1 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 32 | 23 | 9 | 28.1 | 5 | 69 |
| | | 1 | 2 | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 17 | 12 | 5 | 29.4 | 5 | 70 |
| | | 34 | 0 | 0 | 1 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 67 | 65 | 2 | 3.0 | 6 | 71 |
| | | 15 | 8 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | 1 | 0 | | | | | | | | | 1 | 1 | 1 | 0 | | | | | | | | | | | | | | | 75 | 51 | 24 | 32.0 | 8 | 72 |
| | | 3 | 0 | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | 6 | 0 | 0. | 4 | 73 |
| | | 23 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 58 | 49 | 9 | 15.5 | 5 | 74 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5 | 4 | 1 | 20.0 | 1 | 75 |
| | | 41 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | 1 | 0 | | | | | | | | | | | | | | | | | 74 | 70 | 4 | 5.4 | 4 | 76 |
| | | | | | | 24 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | 1 | 0 | 1 | 0 | 29 | 29 | 0 | 0. | 5 | 77 |
| | | | | | | 8 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8 | 8 | 0 | 0. | 1 | 78 |
| | | | | | | 9 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | 9 | 0 | 0. | 1 | 79 |
| | | | | | | | | | | 3 | 0 | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | 6 | 0 | 0. | 4 | 80 |
| | | | | | | | | | | | | | | | | 23 | 2 | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 28 | 26 | 2 | 7.1 | 4 | 81 |
| | | | | | | | | | | | | 1 | 0 | | | 37 | 1 | 1 | 0 | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | 1 | 0 | | | 46 | 45 | 1 | 2.2 | 8 | 82 |
| | | | | | | | | | | | | 2 | 0 | | | 40 | 0 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 46 | 46 | 0 | 0. | 6 | 83 |
| | | | | | | | | | | | | | | | | 7 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | 8 | 1 | 11.1 | 2 | 84 |
| | | | | | | | | | | | | | | | | 10 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 10 | 10 | 0 | 0. | 1 | 85 |
| | | | | | | | | | | | | | | | | 41 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 47 | 42 | 5 | 10.6 | 2 | 86 |
| | | | | | | | | | | | | | | | | 10 | 1 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 12 | 11 | 1 | 8.3 | 2 | 87 |
| | | | | | | | | | | | | | | | | 4 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 4 | 0 | 0. | 1 | 88 |
| | | | | | | | | | | | | | | | | 29 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 30 | 29 | 1 | 3.2 | 1 | 89 |
| | | | | | | | | | | | | | | | | 52 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 53 | 53 | 0 | 0. | 2 | 90 |
| | | | | | | | | | | | | | | | | 19 | 0 | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 21 | 21 | 0 | 0. | 2 | 91 |
| 0 | 1 | | | | | | | | | | | | | | | | | 9 | 3 | | | | | 0 | 1 | | | 2 | 1 | | | 0 | 1 | | | | | | | | | | | 4 | 0 | | | 1 | 0 | | | | | 30 | 23 | 7 | 23.3 | 10 | 92 |
| | | | | | | | | | | | | | | | | | | 12 | 0 | | | | | | | | | | | | | 2 | 0 | | | | | 0 | 1 | | | | | | | | | | | | | | | 20 | 19 | 1 | 5.0 | 5 | 93 |
| | | | | | | | | | | | | | | | | | | 12 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 13 | 12 | 1 | 7.7 | 1 | 94 |
| | | | | | | | | | | | | | | | | | | | | | | 16 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 16 | 16 | 0 | 0. | 1 | 95 |
| | | | | | | | | | | | | | | | | | | | | | | 7 | 0 | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 8 | 8 | 0 | 0. | 2 | 96 |
| | | | | | | | | | | | | | | | | | | | | | | 4 | 1 | | | | | 3 | 0 | | | | | | | | | | | | | | | | | | | 3 | 1 | | | | | 13 | 11 | 2 | 15.4 | 4 | 97 |
| | | | | | | | | | | | | | | | | | | | | | | 28 | 0 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 30 | 30 | 0 | 0. | 3 | 98 |
| | | | | | | | | | | | | | | | | | | | | | | 14 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 20 | 16 | 4 | 20.0 | 2 | 99 |
| | | | | | | | | | | | | | | | | | | | | | | 4 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | 6 | 0 | 0. | 2 | 100 |
| | | | | | | | | | | | | | | | | | | | | | | 47 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | 51 | 48 | 3 | 5.9 | 2 | 101 |
| | | | | | | | | | | | | | | | | | | | | | | 5 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | 5 | 1 | 16.7 | 1 | 102 |
| | | | | | | | | | | | | | | | | 1 | 0 | | | | | 24 | 0 | | | | | 3 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 28 | 28 | 0 | 0. | 3 | 103 |
| | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 | 0 | 0. | 1 | 104 |
| | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | 4 | 3 | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 9 | 6 | 3 | 33.3 | 3 | 105 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 10 | 2 | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 14 | 12 | 2 | 14.3 | 3 | 106 |
| | | | | | | | | | | | | 3 | 0 | | | 1 | 2 | | | | | 3 | 0 | | | | | 39 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 53 | 50 | 3 | 5.7 | 9 | 107 |
| 1 | 0 | | | 2 | 0 | 1 | 0 | | | | | 8 | 0 | | | | | 8 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | | | 69 | 1 | 1 | 0 | | | | | | | | | 1 | 0 | | | | | 1 | 1 | 3 | 0 | 1 | 0 | | | 123 | 117 | 6 | 4.9 | 23 | 108 |
| | | | | | | | | | | | | 3 | 0 | | | 1 | 0 | | | | | 2 | 0 | | | | | 64 | 1 | | | | | | | | | | | | | | | 1 | 0 | | | 2 | 0 | | | | | 77 | 75 | 2 | 2.6 | 8 | 109 |
| | | | | | | | | | | | | | | | | | | 4 | 0 | | | | | | | | | 18 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 23 | 23 | 0 | 0. | 3 | 110 |
| | | | | | | | | | | | | 7 | 0 | | | 3 | 0 | | | | | 2 | 0 | | | | | 69 | 0 | | | | | | | | | | | | | | | 1 | 0 | 2 | 0 | | | 1 | 0 | | | 101 | 100 | 1 | 1.0 | 11 | 111 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | 49 | 3 | | | | | | | | | | | | | | | | | | | 3 | 0 | | | | | 56 | 53 | 3 | 5.4 | 3 | 112 |
| | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 13 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 15 | 15 | 0 | 0. | 3 | 113 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 24 | 10 | | | | | | | | | | | | | | | | | | | | | 36 | 25 | 11 | 30.6 | 2 | 114 |
| 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 11 | 0 | | | | | | | | | | | 1 | 2 | | | | | 17 | 14 | 3 | 17.7 | 4 | 115 |
| 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 0 | 1 | 0 | | | | | | | | | | | | | | | 7 | 5 | 2 | 28.6 | 4 | 116 |
| 0 | 1 | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | 5 | 0 | | | | | | | | | | | | | | | | | 7 | 5 | 2 | 28.6 | 3 | 117 |
| 8 | 9 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | 25 | 0 | 4 | 1 | | | | | 0 | 2 | | | | | | | | | 89 | 68 | 21 | 23.6 | 8 | 118 |
| 0 | 7 | 3 | 2 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 1 | 2 | | | 19 | 0 | 3 | 1 | | | | | | | | | | | | | | | 69 | 43 | 26 | 37.7 | 12 | 119 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 13 | 0 | | | | | | | | | | | 1 | 0 | | | | | 14 | 14 | 0 | 0. | 2 | 120 |
| 0 | 1 | 0 | 1 | | | | | | | | | | | | | | | | | | | | | 2 | 1 | | | | | | | 2 | 1 | | | 22 | 0 | 2 | 1 | | | | | 1 | 0 | | | 1 | 0 | | | | | 47 | 42 | 5 | 10.6 | 13 | 121 |
| 1 | 2 | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | 0 | 3 | 0 | | | | | | | | | | | | | | | 21 | 19 | 2 | 9.5 | 6 | 122 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 0 | | | | | | | | | | | | | | | | | 6 | 3 | 3 | 50.0 | 4 | 123 |
| 3 | 0 | 1 | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 1 | 0 | | | 14 | 0 | 7 | 1 | | | | | | | | | | | | | | | 34 | 31 | 3 | 8.8 | 11 | 124 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 13 | 0 | | | | | | | | | | | | | | | 13 | 13 | 0 | 0. | 1 | 125 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 12 | 0 | | | | | | | | | | | | | | | 12 | 12 | 0 | 0. | 1 | 126 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | 1 | | | | | | | | | | | | | | | 7 | 6 | 1 | 14.3 | 1 | 127 |
| | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 33 | 0 | | | | | | | | | | | | | | | 34 | 34 | 0 | 0. | 2 | 128 |
| | | | | | | | | | | 0 | 1 | 1 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 15 | 0 | | | | | | | | | | | 24 | 23 | 1 | 4.2 | 6 | 129 |
| | | | | | | | | | | | | | | | | | | 3 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 29 | 1 | | | 3 | 0 | | | | | 36 | 35 | 1 | 2.8 | 3 | 130 |
| | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 7 | 1 | | | 2 | 0 | | | | | 12 | 11 | 1 | 8.3 | 4 | 131 |
| | | | | | | | | | | | | | | | | | | 12 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 32 | 1 | | | 1 | 0 | | | | | 48 | 46 | 2 | 4.2 | 5 | 132 |
| | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 10 | 6 | | | 19 | 13 | 6 | 31.6 | 4 | 133 |
| | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 12 | 1 | | | 16 | 15 | 1 | 6.3 | 3 | 134 |
| | | | | 1 | 1 | | | | | 1 | 0 | 2 | 0 | | | 3 | 0 | | | | | 1 | 0 | | | | | 1 | 0 | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | 20 | 15 | 5 | 25.0 | 13 | 135 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | 3 | 2 | 1 | 33.3 | 3 | 136 |
| | | 2 | 2 | | | 9 | 0 | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | 1 | 1 | | | 2 | 0 | 0 | 1 | | | 1 | 2 | 0 | 1 | | | | | 1 | 0 | 41 | 30 | 11 | 26.9 | 15 | 137 |
| 74 | | 221 | | 13 | | 67 | | 2 | | 8 | | 35 | | ..... | | 302 | | 89 | | 11 | | 178 | | 29 | | 26 | | 396 | | 12 | | 52 | | 15 | | 132 | | 124 | | 15 | | 16 | | 113 | | 21 | | 68 | | 43 | | 4 | | 4011 | .... | .... | ..... | .. | |
| 41 | | 180 | | 10 | | 64 | | 2 | | 7 | | 34 | | ..... | | 288 | | 83 | | 11 | | 169 | | 22 | | 20 | | 388 | | 8 | | 37 | | 13 | | 132 | | 116 | | 13 | | 16 | | 95 | | 17 | | 62 | | 34 | | 4 | | .... | 3586 | .... | ..... | .. | |
| 33 | | 41 | | 3 | | 3 | | 0 | | 1 | | 1 | | ..... | | 14 | | 6 | | 0 | | 9 | | 7 | | 6 | | 8 | | 4 | | 15 | | 2 | | 0 | | 8 | | 2 | | 0 | | 18 | | 4 | | 6 | | 9 | | 0 | | .... | .... | 425 | ..... | .. | |
| 44.6 | | 18.6 | | 23.1 | | 4.5 | | 0. | | 12.5 | | 2.9 | | ..... | | 4.6 | | 6.7 | | 0. | | 5.1 | | 24.1 | | 23.1 | | 2.0 | | 33.3 | | 28.9 | | 13.3 | | 0. | | 6.5 | | 13.3 | | 0. | | 15.9 | | 19.0 | | 8.8 | | 21.0 | | 0. | | .... | .... | .... | 10.6 | .. | |
| 23 | | 24 | | 25 | | 26 | | 27 | | 28 | | 29 | | 30 | | 31 | | 32 | | 33 | | 34 | | 35 | | 36 | | 37 | | 38 | | 39 | | 40 | | 41 | | 42 | | 43 | | 44 | | 45 | | 46 | | 47 | | 48 | | 49 | | | | | | | |

## TABLE C.—GRADUATES OF 1905 TO

| Margin Number | NAME OF COLLEGE | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | | 21 |
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| | | Alabama* | | Arizona | | Arkansas | | California | | Colorado | | Connecticut | | Delaware | | District of Columbia | | Florida | | Georgia | | Idaho | | Illinois | | Indiana | | Iowa | | Kansas | | Kentucky | | Louisiana | | Maine | | Maryland | | Massachusetts | | Michiga |
| | | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P |
| | ALABAMA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Birmingham Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | University of Alabama, Medical Department.—R. | | | | | | | | | | | | | | | | | 4 | 0 | 2 | 0 | | | | | | | | | | | | | | | | | | | | | |
| | ARKANSAS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | College of Physicians and Surgeons.—R. | | | | | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | | | | | | | |
| 4 | University of Arkansas, Medical Dept.—R. | | | | | 3 | 5 | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | 3 | 2 | | | | | | | |
| | CALIFORNIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | California Eclectic Medical College.—E. | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | College of P. and S., Los Angeles.—R. | | | 1 | 0 | | | 4 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | College of P. and S., San Francisco.—R. | | | | | | | 13 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Cooper Medical College.—R. | | | | | | | 24 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Hahnemann Medical College of Pacific.—H. | | | | | | | 7 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Oakland College of Medicine and Surgery.—R. | | | | | | | 3 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | University of California, Medical Dept.—R. | | | | | | | 9 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | University of Southern California.†—R. | | | | | | | 25 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| | COLORADO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | Denver and Gross College of Medicine.—R. | | | | | | | 2 | 0 | 18 | 1 | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | |
| 14 | University of Colorado, Medical Dept.—R. | | | | | | | 1 | 0 | 5 | 0 | | | | | | | | | | | 3 | 0 | | | | | | | | | | | | | | | | | | | |
| | CONNECTICUT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Yale Medical School.—R. | | | | | | | 1 | 0 | | | 8 | 1 | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 3 | 0 | |
| | DISTRICT OF COLUMBIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | George Washington Univ., Dept. of Med.—R. | | | | | | | | | | | | | | | 20 | 9 | 1 | 0 | 1 | 0 | | | 2 | 0 | | | 2 | 0 | 1 | 0 | | | | | | | 4 | 1 | | | |
| 17 | Georgetown University, School of Medicine.—R. | | | 1 | 0 | | | | | | | 2 | 1 | | | 2 | 1 | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 3 | 0 | |
| 18 | Howard University, Medical Department.—R. | | | | | 2 | 0 | | | | | | | | | 8 | 6 | | | | | | | 1 | 0 | | | | | 1 | 0 | | | | | | | 6 | 1 | 3 | 3 | |
| | GEORGIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Atlanta College of Physicians and Surgeons.—R. | | | | | | | | | | | | | | | | | 3 | 1 | 30 | 4 | | | | | | | | | | | | | | | | | | | | | |
| 20 | Atlanta School of Medicine.—R. | | | | | | | | | | | | | | | | | 12 | 1 | 43 | 5 | | | | | | | | | | | | | | | | | | | | | |
| 21 | Georgia College of Eclectic M. and S.—E. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | Hospital Medical College, Atlanta.—E. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | Medical College of Georgia.—R. | | | | | 0 | 3 | | | | | | | | | | | 2 | 0 | 19 | 3 | | | | | | | | | | | | | 0 | 1 | | | | | 0 | 1 | |
| | ILLINOIS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | American Medical Missionary College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7 |
| 25 | Bennett Medical College.—R. | | | 1 | 0 | 1 | 0 | | | 0 | 1 | | | | | | | | | | | 0 | 1 | 29 | 9 | | | | | 0 | 1 | 1 | 0 | | | | | | | | | |
| 26 | Chicago College of Medicine and Surgery.—R. | | | | | | | | | | | | | | | | | 2 | 0 | | | 1 | 0 | 81 | 7 | 1 | 0 | 0 | 2 | | | | | | | | | | | | | |
| 27 | College of Medicine and Surgery.—Ph.M. | | | | | | | | | | | | | | | | | | | | | | | 4 | 5 | | | | | | | | | | | | | | | | | |
| 28 | College of Physicians and Surgeons.—R. | | | | | | | 3 | 1 | | | | | | | 1 | 0 | | | 1 | 0 | 1 | 0 | 91 | 6 | 1 | 0 | 4 | 0 | 2 | 1 | 1 | 0 | | | | | | | | | 1 |
| 29 | Hahnemann Medical College and Hospital.—H. | | | | | 1 | 0 | | | | | 0 | 2 | | | | | | | | | 0 | 1 | 16 | 5 | | | 3 | 0 | 2 | 0 | | | | | | | | | 2 | 0 | 1 |
| 30 | Hering Medical College.—H. | | | | | | | | | | | | | | | | | | | | | | | 6 | 0 | 1 | 0 | | | | | | | | | | | | | | | |
| 31 | Illinois Medical College.—R. | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 22 | 7 | 2 | 0 | | | | | | | | | | | | | | | |
| 32 | Jenner Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | 17 | 10 | 0 | 1 | | | | | | | | | | | | | | | |
| 33 | National Medical University.—P. | 0 | 1 | | | | | | | | | | | | | | | | | | | | | 8 | 6 | 1 | 0 | | | | | | | | | | | | | | | |
| 34 | Northwestern University Medical School.—R. | | | | | | | 4 | 0 | | | | | | | | | | | | | 1 | 1 | 121 | 2 | 3 | 0 | 5 | 0 | 1 | 0 | 1 | 0 | | | | | | | | | 2 |
| 35 | Reliance Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | 14 | 6 | | | | | | | | | | | | | | | | | |
| 36 | Rush Medical College.—R. | | | | | | | 5 | 0 | 1 | 0 | | | | | | | | | | | 2 | 0 | 66 | 0 | | | 2 | 0 | | | | | | | | | | | | | 1 |
| | INDIANA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 37 | Indiana University, School of Medicine.—R. | | | | | | | | | | | | | | | | | | | | | | | | | 55 | 0 | | | 1 | 0 | | | | | | | | | | | |
| | IOWA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 38 | Drake University, College of Medicine.—R. | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | 18 | 2 | | | | | | | | | | | | | |
| 39 | State University of Iowa, College of Med.—R. | | | | | | | | | | | | | | | | | | | | | 3 | 0 | 1 | 0 | | | 43 | 2 | | | | | | | | | | | | | |
| 40 | State University of Iowa, Homeo. Dept.—H. | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 3 | 0 | | | | | | | | | | | | | |
| | KANSAS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 41 | Kansas Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 20 | 1 | | | | | | | | | | | |
| 42 | University of Kansas, School of Medicine.—R. | | | | | | | 1 | 0 | | | | | | | | | | | | | 0 | 1 | | | | | | | 9 | 0 | | | | | | | | | | | |
| | KENTUCKY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 43 | Louisville National Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 44 | Southwestern Homeopathic Medical College.—H. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | |
| 45 | University of Louisville, Medical Dept.—R. | | | 1 | 0 | 3 | 0 | 1 | 0 | 0 | 1 | | | | | | | 2 | 0 | 1 | 0 | | | 8 | 3 | 15 | 1 | | | 4 | 2 | 90 | 14 | 2 | 1 | | | | | | | 3 |
| | LOUISIANA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 46 | Flint Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 | | | | | | | |
| 47 | Tulane University, Medical Department.—R. | | | | | 2 | 0 | 1 | 0 | | | | | | | | | 3 | 0 | | | | | | | | | | | 1 | 0 | | | 55 | 1 | | | | | | | |
| | MAINE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 48 | Medical School of Maine.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 18 | 1 | | | 8 | 0 | |
| | MARYLAND | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 49 | Atlantic Medical College.—P. | | | | | | | | | | | 0 | 1 | 2 | 0 | 1 | 0 | | | | | | | | | | | | | | | | | | | 3 | 1 | | | | | |
| 50 | Baltimore Medical College.—R. | | | | | | | 1 | 1 | 1 | 1 | 3 | 1 | 1 | 0 | 1 | 1 | | | 2 | 0 | | | | | | | | | | | | | | | 2 | 2 | 13 | 7 | 16 | 14 | |
| 51 | College of Physicians and Surgeons.—R. | | | | | | | | | | | 2 | 0 | | | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | | | | | | | | | | | | | | | 13 | 0 | 4 | 1 | |
| 52 | Johns Hopkins University, Medical Dept.—R. | | | | | | | 2 | 0 | 2 | 0 | 1 | 0 | | | 1 | 0 | | | 1 | 0 | | | 3 | 0 | 2 | 0 | 2 | 0 | | | | | | | | | 15 | 0 | 1 | 0 | |
| 53 | Maryland Medical College.—R. | | | | | | | | | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | 5 | 0 | 8 | 11 | 0 | 2 | |
| 54 | University of Maryland, School of Medicine.—R. | | | | | | | 0 | 1 | | | | | 2 | 0 | 1 | 0 | 1 | 0 | 3 | 0 | | | | | 2 | 0 | | | | | | | | | | | 40 | 4 | | | |
| 55 | Woman's Medical College of Baltimore.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | 2 | 3 | | | |
| | MASSACHUSETTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 56 | Boston University School of Medicine.—H. | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | 14 | 1 | |
| 57 | College of Physicians and Surgeons.—R. | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 4 | 2 | | | 4 | 11 | |
| 58 | Harvard Medical School.—R. | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 38 | 1 | |
| 59 | Tufts College Medical School.—R. | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | 0 | | | 53 | 8 | |
| | MICHIGAN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60 | Detroit College of Medicine.—R. | | | | | | | | | | | | | | | | | | | | | 3 | 0 | | | | | | | | | | | | | | | | | | | 36 |
| 61 | Detroit Homeopathic College.—H. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5 |
| 62 | Univ. of Michigan, Dept. of Med. and Surg.—R. | 1 | 0 | 1 | 1 | | | | | | | | | | | | | 1 | 0 | | | | | | | 1 | 0 | | | | | | | | | 1 | 0 | | | | | 62 |
| 63 | University of Michigan, Homeo. College.—H. | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 |
| | MINNESOTA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 64 | University of Minnesota, Coll. of M. and S.—R. | | | | | | | 1 | 1 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 0 | 1 | |
| 65 | Hamline University, Medical Department.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MISSISSIPPI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 66 | Mississippi Medical College.—R. | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | |
| | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | | 21 |

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.

* One report not complete. † Now the Los Angeles Medical Department of the University of California.

| 23 Mississippi P | 23 Mississippi F | 24 Missouri P | 24 Missouri F | 25 Montana P | 25 Montana F | 26 Nebraska P | 26 Nebraska F | 27 Nevada P | 27 Nevada F | 28 New Hampshire P | 28 New Hampshire F | 29 New Jersey P | 29 New Jersey F | 30 New Mexico P | 30 New Mexico F | 31 New York P | 31 New York F | 32 North Carolina P | 32 North Carolina F | 33 North Dakota P | 33 North Dakota F | 34 Ohio P | 34 Ohio F | 35 Oklahoma P | 35 Oklahoma F | 36 Oregon P | 36 Oregon F | 37 Pennsylvania P | 37 Pennsylvania F | 38 Rhode Island P | 38 Rhode Island F | 39 South Carolina P | 39 South Carolina F | 40 South Dakota P | 40 South Dakota F | 41 Tennessee P | 41 Tennessee F | 42 Texas P | 42 Texas F | 43 Utah P | 43 Utah F | 44 Vermont P | 44 Vermont F | 45 Virginia P | 45 Virginia F | 46 Washington P | 46 Washington F | 47 West Virginia P | 47 West Virginia F | 48 Wisconsin P | 48 Wisconsin F | 49 Wyoming P | 49 Wyoming F | Totals: | Examined—Passed | Examined—Failed | Percentage of Failures | No. States Ex. in | Margin Number |
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| | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 10 | 10 | 0 | 0. | 4 | 2 |
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| | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 16 | 8 | 8 | 50.0 | 4 | 4 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | 1 | 50.0 | 1 | 5 |
| | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | 7 | 2 | 22.2 | 4 | 6 |
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| | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 13 | 8 | 5 | 38.4 | 2 | 9 |
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| | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 33 | 27 | 6 | 18.2 | 3 | 12 |
| | | | | | | | | | | | | | | | | 1 | 0 | | | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | | | 2 | 0 | | | | | 1 | 0 | | | | | 3 | 0 | 31 | 30 | 1 | 3.2 | 9 | 13 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 10 | 10 | 0 | 0. | 4 | 14 |
| | | | | | | | | | | | | | | | | 9 | 0 | | | | | | | | | | | 1 | 0 | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | 26 | 25 | 1 | 3.8 | 7 | 15 |
| | | | | 1 | 0 | | | 1 | 0 | | | | | | | | | 1 | 0 | 1 | 0 | | | | | 2 | 0 | 1 | 0 | 1 | 0 | | | | | | | | | 1 | 0 | 1 | 0 | 1 | 0 | 3 | 0 | 1 | 0 | 1 | 0 | | | 57 | 47 | 10 | 17.5 | 20 | 16 |
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| | | 1 | 1 | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | 0 | 2 | | | 1 | 1 | | | | | 1 | 0 | | | | | 6 | 0 | | | 2 | 0 | | | | | 48 | 33 | 15 | 31.2 | 13 | 18 |
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| | | | | | | | | | | | | | | | | | | 5 | 0 | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | 68 | 62 | 6 | 8.8 | 4 | 20 |
| | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 100.0 | 1 | 21 |
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| | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 2 | 5 | | | | | | | | | | | | | | | | | | | | | 37 | 24 | 13 | 35.1 | 7 | 23 |
| | | | | 1 | 0 | | | | | | | | | | | 1 | 0 | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 10 | 10 | 0 | 0. | 4 | 24 |
| | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 2 | 0 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | 48 | 36 | 12 | 25.0 | 10 | 25 |
| | 0 | | | 0 | 1 | 0 | 1 | | | | | | | | | | | | | | | | | 0 | 1 | | | 2 | 0 | | | | | 2 | 0 | 1 | 0 | 1 | 0 | | | | | | | 0 | 2 | 1 | 0 | | | | | 107 | 93 | 14 | 13.1 | 15 | 26 |
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| | 0 | 2 | 0 | 3 | 0 | | | | | | | | | | | 1 | 0 | | | 1 | 0 | 1 | 0 | 2 | 1 | 2 | 2 | | | | | | | 4 | 1 | | | | | | | | | | | 1 | 2 | | | 1 | 1 | | | 141 | 125 | 16 | 11.3 | 22 | 28 |
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| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | 29 | 17 | 12 | 41.4 | 3 | 32 |
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| | | | | 5 | 0 | 1 | 0 | | | | | | | | | | | | | 3 | 0 | | | 2 | 0 | 3 | 2 | 2 | 0 | | | | | 8 | 2 | 1 | 0 | | | 10 | 1 | | | | | 5 | 0 | | | 4 | 1 | 2 | 0 | 203 | 192 | 11 | 5.4 | 21 | 34 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 20 | 14 | 6 | 30.0 | 1 | 35 |
| | 0 | 4 | 0 | 2 | 0 | | | | | | | | | | | | | | | 1 | 0 | 1 | 0 | | | 3 | 0 | 1 | 0 | | | | | 6 | 1 | | | | | 3 | 0 | | | | | 4 | 0 | | | | | | | 105 | 104 | 1 | 1.0 | 17 | 36 |
| | | | | | | | | | | | | | | | | | | | | | | 3 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 60 | 60 | 0 | 0. | 4 | 37 |
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| | | 8 | 4 | | | | | | | | | | | | | | | | | | | 1 | 0 | 4 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 28 | 23 | 5 | 17.9 | 6 | 42 |
| | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 0 | 0. | 1 | 43 |
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| | 0 | 5 | 1 | 1 | 0 | | | | | | | 1 | 1 | | | 2 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 8 | 3 | 1 | 2 | 7 | 2 | | | 1 | 1 | 1 | 0 | 10 | 0 | 7 | 0 | 1 | 1 | | | 4 | 4 | 2 | 1 | 27 | 5 | | | | | 260 | 215 | 45 | 17.3 | 32 | 45 |
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| | 1 | 1 | 0 | 2 | 0 | | | | | | | | | | | | | | | | | 1 | 0 | 2 | 1 | 1 | 0 | | | | | | | | | | | 15 | 1 | | | | | 2 | 0 | | | | | | | | | 97 | 93 | 4 | 4.1 | 13 | 47 |
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| | | | | | | | | | | | | | | | | | | | | | | | | | | | | 13 | 1 | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | 23 | 19 | 4 | 17.4 | 6 | 49 |
| | | | | | | | | | | 2 | 1 | 3 | 0 | | | 13 | 2 | 1 | 0 | | | | | | | | | 10 | 0 | 4 | 4 | 0 | 1 | | | | | 2 | 0 | | | 1 | 0 | 5 | 1 | 1 | 1 | 5 | 0 | | | | | 124 | 87 | 37 | 29.8 | 21 | 50 |
| | | | | 2 | 0 | | | | | | | 4 | 0 | | | 2 | 3 | 1 | 0 | | | | | 1 | 0 | | | 3 | 0 | 2 | 1 | | | | | | | | | | | | | 2 | 0 | | | 13 | 0 | | | | | 58 | 52 | 6 | 10.3 | 16 | 51 |
| | | | | | | | | | | | | 2 | 1 | | | 8 | 0 | 2 | 0 | | | | | | | | | 5 | 0 | | | | | | | | | 1 | 0 | | | | | 2 | 0 | 2 | 0 | 1 | 0 | 3 | 0 | | | 58 | 57 | 1 | 1.7 | 20 | 52 |
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| | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | 9 | 6 | 3 | 33.3 | 5 | 55 |
| | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 1 | 0 | | | 1 | 0 | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 23 | 21 | 2 | 8.7 | 8 | 56 |
| | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | 1 | 0 | | | | | | | 25 | 11 | 14 | 56.0 | 6 | 57 |
| | | | | 1 | 0 | | | | | 1 | 0 | | | | | 5 | 0 | | | | | 5 | 0 | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 1 | 1 | | | | | | | 59 | 57 | 2 | 3.4 | 10 | 58 |
| | | | | | | | | | | 3 | 0 | | | | | 5 | 0 | | | | | | | | | | | 1 | 0 | 1 | 0 | | | | | | | | | | | | | | | 2 | 2 | | | | | | | 83 | 72 | 11 | 13.3 | 8 | 59 |
| | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 0 | 2 | | | | | | | 43 | 40 | 3 | 7.0 | 5 | 60 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | 6 | 5 | ·1 | 16.7 | 2 | 61 |
| | | 2 | 0 | 6 | 0 | | | | | | | | | 1 | 0 | | | 1 | 0 | 1 | 0 | 2 | 0 | | | 2 | 0 | 4 | 0 | | | | | | | | | | | 1 | 0 | | | | | 3 | 0 | | | | | | | 92 | 91 | 1 | 1.1 | 17 | 62 |
| | | 1 | 0 | | | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 22 | 20 | 2 | 9.1 | 5 | 63 |
| | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | 8 | 0 | | | | | | | | | | | 2 | 1 | | | 1 | 0 | | | 67 | 61 | 6 | 8.9 | 8 | 64 |
| | | | | 1 | 0 | 1 | 0 | | | | | | | | | | | | | 3 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | 2 | 0 | | | 31 | 21 | 10 | 32.3 | 6 | 65 |
| 5 | 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 21 | 7 | 14 | 66.7 | 3 | 66 |
| 23 | | 24 | | 25 | | 26 | | 27 | | 28 | | 29 | | 30 | | 31 | | 32 | | 33 | | 34 | | 35 | | 36 | | 37 | | 38 | | 39 | | 40 | | 41 | | 42 | | 43 | | 44 | | 45 | | 46 | | 47 | | 48 | | 49 | | | | | | | |

## *TABLE C.—GRADUATES OF 1905 TO 1909 INCLUS*

| Margin Number | NAME OF COLLEGE | 1 Alabama* | | 2 Arizona | | 3 Arkansas | | 4 California | | 5 Colorado | | 6 Connecticut | | 7 Delaware | | 8 District of Columbia | | 9 Florida | | 10 Georgia | | 11 Idaho | | 12 Illinois | | 13 Indiana | | 14 Iowa | | 15 Kansas | | 16 Kentucky | | 17 Louisiana | | 18 Maine | | 19 Maryland | | 20 Massachusetts | | 21 Michigan | |
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| | | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F |
| | MISSOURI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 67 | American Medical College.—E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 68 | Barnes Medical College.—R | | | | | 2 | 1 | 1 | 0 | 0 | 1 | | | | | | | | | | | 2 | 4 | 26 | 9 | | | | | 3 | 0 | | | | | | | | | | | | |
| 69 | Ensworth Medical College.—R | | | | | 1 | 0 | | | 0 | 1 | | | | | | | | | | | 1 | 0 | | | | | | | 12 | 7 | | | | | | | | | | | | |
| 70 | Kansas City Hahnemann Medical College.—H | | | | | 1 | 0 | | | | | | | | | | | | | | | 0 | 1 | | | 1 | 0 | | | 10 | 1 | | | | | | | | | | | | |
| 71 | St. Louis University, School of Medicine.—R | | | | | 1 | 0 | | | | | | | | | | | | | | | 1 | 2 | 28 | 0 | | | | | 1 | 0 | | | | | | | | | | | | |
| 72 | St. Louis Coll. of Physicians and Surgeons.—R | | | | | 0 | 1 | 1 | 0 | | | | | | | | | | | | | | | 30 | 18 | 1 | 1 | 2 | 2 | 1 | 1 | | | | | | | | | | | | |
| 73 | University of Missouri, Medical Department.—R | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | | | | |
| 74 | University Medical College, Kansas City.—R | | | | | 1 | 0 | 1 | 0 | 0 | 1 | | | | | | | | | | | | | | | | | 1 | 0 | 27 | 1 | | | | | | | | | | | | |
| 75 | Western Eclectic College of Med. and Surg.—E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 1 | | | | | | | | | | | | |
| 76 | Washington University, Medical Department.—R | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 30 | 1 | 1 | 0 | | | | | | | | | | | | | | | | |
| | NEBRASKA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 77 | John A. Creighton Medical College.—R | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | 1 | 0 | 2 | 0 | | | | | | | | | | | | |
| 78 | Lincoln Medical College.—E | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | |
| 79 | University of Nebraska, College of Medicine.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | NEW HAMPSHIRE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80 | Dartmouth Medical School.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 2 | 0 | | |
| | NEW YORK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 81 | Albany Medical Collge.—R | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | |
| 82 | Columbia University College of P. and S.—R | | | | | | | 1 | 0 | | | 3 | 0 | | | | | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | | | | | 2 | 1 | | |
| 83 | Cornell University Medical College.—R | | | | | | | 2 | 0 | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | |
| 84 | Eclectic Med. College of City of New York.—E | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 85 | Fordham University, School of Medicine.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 86 | Long Island College Hospital.—R | | | | | | | | | | | 3 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | |
| 87 | New York Homeo. Med. Coll. and Hosp.—H | | | | | | | 1 | 1 | | | 3 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 88 | New York Med. Coll. and Hosp. for Women.—H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 89 | Syracuse University, College of Medicine.—R | | | | | | | | | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | |
| 90 | University and Bellevue Hospital Med. Coll.—R | 1 | 0 | | | | | | | | | 2 | 0 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 1 | 0 | | |
| 91 | University of Buffalo, Medical Department.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | NORTH CAROLINA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 92 | Leonard School of Medicine.—R | 0 | 1 | | | | | | | | | | | | | | | 5 | 0 | 5 | 2 | | | | | | | | | | | | | | | | | 1 | 0 | 0 | 1 | | |
| 93 | North Carolina Medical College.—R | | | | | | | | | | | | | | | | | 4 | 0 | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 94 | University of North Carolina, Med. Dept.—R | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | |
| | OHIO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 95 | Cleveland Coll. of Physicians and Surgeons.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 96 | Cleveland Homeopathic Medical College.—H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 97 | Eclectic Medical College.—E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | 1 | 0 |
| 98 | Medical College of Ohio.—R | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | 2 | 0 | | | | | | | | | | |
| 99 | Miami Medical College.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | |
| 100 | Pulte Medical College.—H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | |
| 101 | Starling-Ohio Medical College.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 102 | Toledo Medical College.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 103 | Western Reserve University, Medical Dept.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | OKLAHOMA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 104 | Epworth College of Medicine.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | OREGON | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 105 | Willamette University, Medical Department.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 106 | University of Oregon, Medical Department.—R | | | | | | | 0 | 1 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | |
| | PENNSYLVANIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 107 | Hahnemann Medical College and Hospital.—H | | | | | | | 0 | 1 | | | 1 | 0 | 2 | 0 | 1 | 0 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | 2 | 1 | | |
| 108 | Jefferson Medical College.—R | | | | | | | 1 | 0 | | | 1 | 1 | 3 | 0 | | | | | 2 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | | | 1 | 0 | | | 1 | 0 | 4 | 0 | | | | |
| 109 | Medico-Chirurgical College of Philadelphia.—R | | | | | | | | | | | 1 | 0 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 0 | | |
| 110 | Temple University, Medical Department.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | |
| 111 | University of Pennsylvania, Dept. of Med.—R | 1 | 0 | | | | | 2 | 0 | | | 1 | 0 | 5 | 0 | | | 1 | 0 | | | | | 1 | 0 | 1 | 0 | | | | | | | | | | | 13 | 1 | 2 | 0 | | |
| 112 | Western Pennsylvania Medical College.—R | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | |
| 113 | Woman's Medical College of Pennsylvania.—R | | | | | | | 1 | 0 | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | |
| | SOUTH CAROLINA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 114 | Med. College of the State of South Carolina.—R | | | 1 | 0 | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| | TENNESSEE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 115 | Chattanooga Medical College.—R | | | 0 | 1 | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 116 | College of Physicians and Surgs., Memphis.—R | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | |
| 117 | Knoxville Medical College.—R | | | | | | | | | | | | | | | | | | | 0 | 2 | | | | | | | | | | | | | | | | | | | | | | |
| 118 | Memphis Hospital Medical College.—R | | | | | 2 | 1 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 21 | 10 | | | | | | | | |
| 119 | Meharry Medical College.—R | 0 | 1 | | | 5 | 11 | | | 0 | 2 | | | | | | | 1 | 2 | 10 | 6 | | | 2 | 3 | | | | | 2 | 1 | 1 | 2 | 1 | 6 | | | | | | | | |
| 120 | Tennessee Medical College.—R | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | |
| 121 | University of Nashville, Medical Dept.—R | 0 | 1 | 1 | 0 | 2 | 0 | | | | | | | | | | | 1 | 0 | | | | | 4 | 0 | | | | | | | 2 | 0 | 8 | 1 | | | | | | | | |
| 122 | University of Tennessee, Dept. of Medicine.—R | | | | | 4 | 0 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | 0 | 1 | 5 | 0 | | | | | | | | |
| 123 | University of West Tennessee, Med. Dept.—R | | | | | 0 | 2 | | | | | | | | | | | 0 | 1 | 0 | 2 | | | | | | | | | | | | | | | | | | | | | | |
| 124 | Vanderbilt University, Medical Department.—R | | | | | 1 | 0 | 0 | 1 | | | | | | | | | | | 1 | 0 | | | 1 | 1 | | | | | | | 2 | 0 | 1 | 0 | | | | | | | | |
| | TEXAS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 125 | Baylor University, College of Medicine.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 126 | Fort Worth University, Medical Dept.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 127 | Southwestern University Medical College.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 128 | University of Texas, Dept. of Medicine.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | VERMONT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 129 | University of Vermont, College of Medicine.—R | | | | | | | 1 | 2 | | | 3 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 8 | 0 | | |
| | VIRGINIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 130 | Medical College of Virginia.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | |
| 131 | University of Virginia, Dept. of Medicine.—R | | | | | 1 | 0 | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 1 | 0 | | | | | 1 | 0 | | | | |
| 132 | University College of Medicine.—R | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 0 | 1 | 0 | 2 | | |
| | WISCONSIN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 133 | Marquette University, Medical Department.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | |
| 134 | Wisconsin College of Physicians and Surgs.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | |
| 135 | Canadian Colleges | | | | | | | 4 | 0 | 2 | 0 | 1 | 0 | | | | | | | | | 2 | 0 | 4 | 0 | | | 1 | 0 | | | | | | | 1 | 1 | 1 | 0 | 7 | 4 | | |
| 136 | Foreign Colleges | | | | | | | 2 | 1 | | | 1 | 1 | | | | | 1 | 0 | | | | | 1 | 1 | | | | | | | | | | | | | | | 1 | 1 | | |
| 137 | Miscellaneous Medical Colleges | 0 | 2 | | | 2 | 0 | | | 5 | 2 | | | | | | | 2 | 2 | 2 | 1 | | | 2 | 1 | 5 | 0 | 3 | 2 | 4 | 0 | 5 | 1 | 5 | 0 | 1 | 0 | 3 | 3 | 0 | 1 | | |
| | Totals by States | 9 | | 10 | | 64 | | 167 | | 47 | | 51 | | 19 | | 58 | | 58 | | 161 | | 38 | | 726 | | 99 | | 106 | | 126 | | 131 | | 132 | | 54 | | 158 | | 236 | | 137 | |
| | Totals—Examined—Passed | 3 | | 8 | | 37 | | 132 | | 34 | | 40 | | 17 | | 39 | | 50 | | 134 | | 26 | | 624 | | 96 | | 96 | | 108 | | 113 | | 107 | | 47 | | 126 | | 182 | | 135 | |
| | Totals—Examined—Failed | 6 | | 2 | | 27 | | 35 | | 13 | | 11 | | 2 | | 19 | | 8 | | 27 | | 12 | | 102 | | 3 | | 10 | | 18 | | 18 | | 25 | | 7 | | 32 | | 54 | | 2 | |
| | Percentage of Failures | 66.7 | | 20.0 | | 42.2 | | 21.0 | | 27.7 | | 21.6 | | 10.5 | | 32.8 | | 13.8 | | 16.8 | | 31.6 | | 14.0 | | 3.0 | | 9.4 | | 14.3 | | 13.7 | | 18.9 | | 13.0 | | 20.3 | | 22.8 | | 1.5 | |
| | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | | 21 | |

**R**—Regular; **H**—Homeopathic; **E**—Eclectic; Ph.M—Physiomedical; P—Panpathic.
* One report not complete. † Now the Los Angeles Medical Department of the University of California.

| 3 | 24 | | 25 | | 26 | | 27 | | 28 | | 29 | | 30 | | 31 | | 32 | | 33 | | 34 | | 35 | | 36 | | 37 | | 38 | | 39 | | 40 | | 41 | | 42 | | 43 | | 44 | | 45 | | 46 | | 47 | | 48 | | 49 | | | | | | | |
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| | Missouri | | Montana | | Nebraska | | Nevada | | New Hampshire | | New Jersey | | New Mexico | | New York | | North Carolina | | North Dakota | | Ohio | | Oklahoma | | Oregon | | Pennsylvania | | Rhode Island | | South Carolina | | South Dakota | | Tennessee | | Texas | | Utah | | Vermont | | Virginia | | Washington | | West Virginia | | Wisconsin | | Wyoming | | Totals: | Examined—Passed | Examined—Failed | Percentage of Failures | No. States Ex. in | Margin Number |
| F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | | | | | | |
| | 3 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 4 | 4 | 0 | 0. | 2 | 67 |
| | 31 | 14 | | | 1 | 1 | | | | | | | | | | | | | | | | | 1 | 0 | 0 | 1 | | | | | | | 0 | 2 | | | 1 | 0 | | | | | | | 1 | 0 | | | | | | | 103 | 69 | 34 | 33.0 | 14 | 68 |
| | 7 | 3 | | | 6 | 1 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | 0 | 2 | | | | | | | 42 | 28 | 14 | 33.3 | 8 | 69 |
| | 1 | 2 | 0 | 1 | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 20 | 14 | 6 | 30.0 | 8 | 70 |
| | 40 | 1 | 0 | 1 | | | | | | | | | | | 1 | 0 | | | | | | | 3 | 2 | 0 | 1 | | | | | | | | | | | | | | | | | | | 2 | 1 | | | 1 | 0 | | | 88 | 79 | 9 | 10.2 | 12 | 71 |
| 1 | 16 | 14 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 2 | 1 | 1 | 0 | | | | | 0 | 1 | | | 1 | 3 | 1 | 0 | | | | | | | | | | | | | 101 | 57 | 44 | 43.6 | 14 | 72 |
| | 3 | 0 | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | 6 | 0 | 0. | 4 | 73 |
| | 26 | 12 | 1 | 1 | | | 1 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 76 | 61 | 15 | 19.7 | 11 | 74 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5 | 4 | 1 | 20.0 | 1 | 75 |
| | 43 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | 1 | 0 | | | | | | | | | 1 | 0 | | | | | | | 82 | 77 | 5 | 6.1 | 7 | 76 |
| | 1 | 0 | 1 | 0 | 26 | 1 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | 3 | 0 | | | | | | | | | | | 6 | 0 | | | 1 | 0 | 1 | 0 | 46 | 45 | 1 | 2.2 | 12 | 77 |
| | 0 | 1 | | | 8 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 11 | 8 | 3 | 27.3 | 4 | 78 |
| | | | | | 9 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 10 | 10 | 0 | 0. | 2 | 79 |
| | | | | | | | | | 5 | 1 | | | | | 1 | 0 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 11 | 10 | 1 | 9.1 | 5 | 80 |
| | | | | | | | | | | | | | | | 31 | 3 | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 37 | 34 | 3 | 8.1 | 4 | 81 |
| 0 | 1 | 0 | 0 | 1 | | | | | | | 2 | 0 | | | 78 | 2 | 1 | 0 | | | | | | | | | 2 | 0 | | | 1 | 0 | | | 1 | 0 | 1 | 0 | | | | | | | 1 | 0 | | | 1 | 0 | | | 103 | 99 | 4 | 3.9 | 18 | 82 |
| | | | | | | | | | | | 3 | 0 | | | 55 | 0 | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | 66 | 66 | 0 | 0. | 7 | 83 |
| | | | | | | | | | | | | | | | 10 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 12 | 11 | 1 | 8.3 | 2 | 84 |
| | | | | | | | | | | | | | | | 10 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 10 | 10 | 0 | 0. | 1 | 85 |
| | | | | | | | | | | | | | | | 82 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | 96 | 87 | 9 | 9.4 | 4 | 86 |
| | | | | | | | | | | | 1 | 0 | | | 11 | 1 | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 20 | 18 | 2 | 10.0 | 5 | 87 |
| | | | | | | | | | | | | | | | 4 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 4 | 0 | 0. | 1 | 88 |
| | | | | | | | | | | | | | | | 33 | 1 | | | | | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 39 | 38 | 1 | 2.6 | 6 | 89 |
| | | | | | | | | | 1 | 0 | 1 | 0 | | | 77 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | 86 | 85 | 1 | 1.2 | 8 | 90 |
| | | | | | | | | | | | | | | | 29 | 0 | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 31 | 31 | 0 | 0. | 2 | 91 |
| 1 | | | | | | | | | | | | | | | | | 10 | 3 | | | | | 0 | 1 | | | 2 | 1 | | | 0 | 4 | | | | | | | | | | | 6 | 2 | | | 2 | 0 | | | | | 47 | 31 | 16 | 34.0 | 12 | 92 |
| | | | | | | | | | | | | | | | | | 14 | 0 | | | | | 1 | 0 | | | | | | | 2 | 0 | | | | | 0 | 1 | | | | | | | | | | | | | | | 25 | 23 | 2 | 8.0 | 6 | 93 |
| | | | | | | | | | | | | | | | | | 12 | 1 | | | | | | | 0 | 1 | | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | 17 | 15 | 2 | 11.8 | 4 | 94 |
| | | | | | | | | | | | | | | | 1 | 0 | | | | | 16 | 0 | | | | | 1 | 0 | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 19 | 19 | 0 | 0. | 4 | 95 |
| | | | | | | | | | | | | | | | | | | | | | 7 | 0 | 1 | 0 | | | 1 | 0 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 10 | 10 | 0 | 0. | 4 | 96 |
| | | | | | | | | | | | | | | | | | | | | | 4 | 1 | | | | | 3 | 0 | | | | | | | | | | | | | | | | | | | 3 | 1 | | | | | 14 | 12 | 2 | 14.3 | 5 | 97 |
| | | | | | | | | | | | | | | | | | | | | | 28 | 0 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 32 | 32 | 0 | 0. | 4 | 98 |
| | | | | | | | | | | | | | | | | | | | | | 14 | 4 | | | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 22 | 18 | 4 | 18.2 | 3 | 99 |
| | | | | | | | | | | | | | | | | | | | | | 4 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | 6 | 0 | 0. | 2 | 100 |
| | | | | | | | | | | | | | | | | | | | | | 47 | 3 | | | 1 | 0 | 0 | 1 | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | 53 | 49 | 4 | 7.5 | 4 | 101 |
| | | | | | | | | | | | | | | | | | | | | | 5 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | 5 | 1 | 16.7 | 1 | 102 |
| | | | | | | | | | | | | | | | 2 | 0 | | | | | 25 | 0 | | | | | 3 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 30 | 30 | 0 | 0. | 3 | 103 |
| | | | | | | | | | | | | | | | | | | | | | | | 3 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 3 | 0 | 0. | 1 | 104 |
| | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | | | | | | | 11 | 7 | | | | | | | | | | | | | | | | | | | 6 | 0 | | | | | | | 26 | 19 | 7 | 26.9 | 4 | 105 |
| | | | | | | | | | | | | | | | | | | | | | | | | | 16 | 6 | | | | | | | | | | | | | | | | | | | 3 | 0 | | | | | | | 27 | 20 | 7 | 25.9 | 4 | 106 |
| 1 | | | | | | | | | | | 6 | 1 | | | 2 | 3 | | | | | 3 | 0 | 1 | 0 | | | 39 | 2 | | | | | 0 | 1 | | | | | | | | | | | | | 1 | 0 | | | | | 70 | 60 | 10 | 14.3 | 15 | 107 |
| 0 | 1 | 0 | 2 | 1 | 2 | 0 | | | | | 14 | 0 | | | 9 | 1 | 8 | 0 | 2 | 0 | 5 | 0 | 1 | 0 | | | 80 | 1 | 1 | 0 | 1 | 0 | | | | | 1 | 0 | 4 | 0 | 1 | 0 | 1 | 0 | 5 | 1 | 3 | 0 | 1 | 0 | 1 | 0 | 173 | 165 | 8 | 4.6 | 33 | 108 |
| | | | | | | | | | | | 6 | 0 | | | 2 | 0 | | | | | 2 | 0 | | | 1 | 0 | 68 | 1 | | | | | | | | | | | | | | | 1 | 0 | | | 3 | 0 | | | | | 89 | 87 | 2 | 2.2 | 11 | 109 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | 19 | 1 | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | 22 | 21 | 1 | 4.5 | 3 | 110 |
| 0 | 1 | 0 | | | | | | | | | 12 | 0 | | | 8 | 0 | 4 | 0 | | | 2 | 0 | | | 1 | 0 | 73 | 0 | | | | | 1 | 0 | 1 | 0 | | | | | | | 2 | 0 | 3 | 0 | | | 1 | 0 | | | 138 | 137 | 1 | 0.7 | 22 | 111 |
| | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | 57 | 6 | | | | | | | | | | | | | | | | | | | 8 | 0 | | | | | 74 | 67 | 7 | 9.5 | 5 | 112 |
| | | | | | 1 | 0 | | | | | 1 | 0 | | | 2 | 1 | | | | | | | | | 1 | 0 | 15 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | 25 | 24 | 1 | 4.0 | 9 | 113 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 24 | 13 | | | | | | | | | | | | | | | | | | | | | 40 | 26 | 14 | 35.0 | 3 | 114 |
| 0 | | | | | | | | | | | | | | | | | 0 | 2 | | | | | | | | | | | | | | | | | 19 | 0 | 1 | 0 | | | | | 1 | 3 | | | 1 | 2 | | | | | 33 | 24 | 9 | 27.3 | 8 | 115 |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5 | 0 | 1 | 0 | | | | | | | | | | | | | | | 11 | 8 | 3 | 27.3 | 5 | 116 |
| 1 | | | | | | | | | | | | | | | | | 0 | 2 | | | | | 2 | 2 | | | | | | | | | | | 6 | 0 | | | | | | | | | | | | | | | | | 15 | 8 | 7 | 46.7 | 5 | 117 |
| 13 | 1 | 1 | | | | | | | | | | | 1 | 1 | | | | | | | | | | | 0 | 1 | | | | | | | | | 28 | 0 | 5 | 1 | | | | | 0 | 2 | | | | | | | | | 108 | 78 | 30 | 27.8 | 10 | 118 |
| 15 | 4 | 6 | | | | | | | | | | | | | | | 0 | 1 | | | 0 | 1 | 3 | 1 | | | | | | | 2 | 3 | | | 28 | 0 | 5 | 3 | | | | | | | | | | | | | | | 129 | 65 | 64 | 49.5 | 17 | 119 |
| | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 0 | 1 | | | | | | | | | 17 | 0 | | | | | | | | | | | 1 | 1 | | | | | 22 | 19 | 3 | 13.6 | 5 | 120 |
| 4 | 0 | 1 | | | | | | | | | | | 1 | 0 | | | 0 | 2 | | | | | 3 | 1 | | | | | | | 2 | 1 | | | 26 | 0 | 3 | 1 | | | | | 1 | 0 | | | 1 | 0 | | | | | 70 | 58 | 12 | 17.1 | 17 | 121 |
| 2 | | | | | 1 | 0 | | | | | | | | | | | 2 | 1 | | | | | | | | | | | | | | | | | 9 | 0 | 3 | 0 | | | | | | | | | | | | | | | 31 | 27 | 4 | 12.9 | 9 | 122 |
| | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | 6 | 0 | | | | | | | | | | | | | | | | | 12 | 7 | 5 | 41.7 | 5 | 123 |
| 1 | 1 | 0 | | | | | | | | | 1 | 0 | | | | | | | | | | | 3 | 0 | | | | | | | 1 | 0 | | | 14 | 0 | 7 | 1 | | | | | | | 0 | 1 | | | | | | | 41 | 36 | 5 | 12.2 | 14 | 124 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 13 | 0 | | | | | | | | | | | | | | | 13 | 13 | 0 | 0. | 1 | 125 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 12 | 0 | | | | | | | | | | | | | | | 12 | 12 | 0 | 0. | 1 | 126 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8 | 1 | | | | | | | | | | | | | | | 9 | 8 | 1 | 11.1 | 1 | 127 |
| | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | 35 | 0 | | | | | | | | | | | | | | | 37 | 37 | 0 | 0. | 2 | 128 |
| | | | | | | | | | 0 | 3 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | 1 | 0 | | | | | | | | | | | | | 19 | 0 | | | | | 1 | 0 | | | | | 40 | 35 | 5 | 12.5 | 9 | 129 |
| | | | | | | | | | | | | | | | | | 3 | 0 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | 31 | 3 | | | 3 | 0 | | | | | 42 | 39 | 3 | 7.1 | 5 | 130 |
| 1 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 13 | 3 | | | 3 | 0 | 1 | 0 | | | 27 | 23 | 4 | 14.8 | 9 | 131 |
| | | | | | | | | | | | | | | | | | 14 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 34 | 1 | | | 1 | 0 | | | | | 54 | 50 | 4 | 7.4 | 6 | 132 |
| | | | 1 | 1 | | | | | | | | | | | 1 | 0 | | | 1 | 0 | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 14 | 9 | | | 30 | 20 | 10 | 33.3 | 7 | 133 |
| | | | 1 | 0 | | | | | | | | | | | | | | | 3 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 13 | 1 | | | 20 | 19 | 1 | 5.0 | 5 | 134 |
| | | | 4 | 1 | | | | | 1 | 0 | 3 | 0 | | | 15 | 0 | | | 1 | 0 | 4 | 0 | | | 1 | 0 | 1 | 0 | 2 | 2 | | | 1 | 0 | | | | | | | 2 | 1 | | | 8 | 0 | | | 2 | 0 | | | 80 | 70 | 10 | 12.5 | 23 | 135 |
| | | | | | | | | | 0 | 1 | 2 | 2 | | | 8 | 9 | | | | | | | | | | | 3 | 0 | 0 | 1 | | | | | | | | | 0 | 1 | | | | | | | | | | | | | 37 | 19 | 18 | 48.6 | 11 | 136 |
| 1 | 2 | 2 | 0 | 1 | 9 | 2 | 1 | 0 | | | | | 0 | 1 | | | 0 | 2 | 0 | 2 | 1 | 0 | 4 | 3 | | | 1 | 1 | | | 0 | 1 | 2 | 5 | 7 | 0 | 6 | 0 | 0 | 1 | | | 3 | 6 | 2 | 3 | 1 | 0 | | | 1 | 0 | 130 | 84 | 46 | 35.4 | 35 | 137 |
| 122 | 273 | | 48 | | 76 | | 8 | | 23 | | 72 | | 6 | | 565 | | 110 | | 30 | | 197 | | 83 | | 88 | | 476 | | 28 | | 78 | | 61 | | 191 | | 150 | | 30 | | 30 | | 161 | | 112 | | 109 | | 61 | | 8 | | 5891 | | | | | |
| 60 | 206 | | 39 | | 70 | | 8 | | 15 | | 65 | | 4 | | 524 | | 96 | | 27 | | 186 | | 64 | | 61 | | 455 | | 19 | | 46 | | 46 | | 191 | | 138 | | 26 | | 29 | | 126 | | 88 | | 99 | | 49 | | 8 | | | 4985 | | | | |
| 62 | 67 | | 9 | | 6 | | 0 | | 8 | | 7 | | 2 | | 41 | | 14 | | 3 | | 11 | | 19 | | 27 | | 21 | | 9 | | 32 | | 15 | | 0 | | 12 | | 4 | | 1 | | 35 | | 24 | | 10 | | 12 | | 0 | | | | 906 | | | |
| 0.8 | 24.5 | | 18.7 | | 7.9 | | 0. | | 34.8 | | 9.7 | | 33.3 | | 7.2 | | 12.7 | | 10.0 | | 5.6 | | 22.9 | | 30.7 | | 4.4 | | 32.1 | | 41.0 | | 24.6 | | 0. | | 8.0 | | 13.3 | | 3.3 | | 21.7 | | 21.4 | | 9.2 | | 19.7 | | 0. | | | | | 15.4 | | |
| 23 | 24 | | 25 | | 26 | | 27 | | 28 | | 29 | | 30 | | 31 | | 32 | | 33 | | 34 | | 35 | | 36 | | 37 | | 38 | | 39 | | 40 | | 41 | | 42 | | 43 | | 44 | | 45 | | 46 | | 47 | | 48 | | 49 | | | | | | | |

## TABLE D.—GRADUATES OF 1904 AND PRE

| Margin Number | NAME OF COLLEGE | 1 Alabama* | | 2 Arizona | | 3 Arkansas | | 4 California | | 5 Colorado | | 6 Connecticut | | 7 Delaware | | 8 District of Columbia | | 9 Florida | | 10 Georgia | | 11 Idaho | | 12 Illinois | | 13 Indiana | | 14 Iowa | | 15 Kansas | | 16 Kentucky | | 17 Louisiana | | 18 Maine | | 19 Maryland | | 20 Massachusetts | | 21 |
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| | | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P |
| | ALABAMA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Birmingham Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | University of Alabama, Medical Department.—R. | 1 | 0 | | | 1 | 0 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | |
| | ARKANSAS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | College of Physicians and Surgeons.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | University of Arkansas, Medical Dept.—R. | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | CALIFORNIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | California Eclectic Medical College.—E. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | College of P. and S., Los Angeles.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | College of P. and S., San Francisco.—R. | | | | | | | 2 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Cooper Medical College.—R. | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Hahnemann Medical College of Pacific.—H. | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Oakland College of Medicine and Surgery.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | University of California, Medical Dept.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | University of Southern California.†—R. | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | COLORADO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | Denver and Gross College of Medicine.—R. | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | |
| 14 | University of Colorado, Medical Dept.—R. | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | |
| | CONNECTICUT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Yale Medical School.—R. | | | | | | | 1 | 0 | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | |
| | DISTRICT OF COLUMBIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | George Washington Univ., Dept. of Med.—R. | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | Georgetown University, School of Medicine.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | Howard University, Medical Department.—R. | | | | | | | | | | | 0 | 1 | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | |
| | GEORGIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Atlanta College of Physicians and Surgeons.—R. | | | 1 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | |
| 20 | Atlanta School of Medicine.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | Georgia College of Eclectic M. and S.—E. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | Hospital Medical College, Atlanta.—E. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | Medical College of Georgia.—R. | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | ILLINOIS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | American Medical Missionary College.—R. | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | Bennett Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | |
| 26 | Chicago College of Medicine and Surgery.—R. | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | College of Medicine and Surgery.—Ph.M. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 28 | College of Physicians and Surgeons.—R. | | | | | | | 1 | 2 | | | | | | | | | 1 | 0 | | | 1 | 0 | 2 | 1 | 1 | 0 | | | | | | | | | | | | | | | |
| 29 | Hahnemann Medical College and Hospital.—H. | | | | | | | 4 | 3 | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | |
| 30 | Hering Medical College.—H. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 31 | Illinois Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32 | Jenner Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 33 | National Medical University.—P. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 34 | Northwestern University Medical School.—R. | | | 1 | 0 | | | 3 | 1 | | | | | | | | | | | | | 2 | 1 | 1 | 1 | | | | | 1 | 0 | | | | | | | | | | | |
| 35 | Reliance Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 36 | Rush Medical College.—R. | | | | | 1 | 0 | 1 | 3 | | | | | | | | | | | | | 5 | 0 | 1 | 0 | | | 0 | 1 | 1 | 0 | | | | | | | | | | | |
| | INDIANA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 37 | Indiana University, School of Medicine.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | IOWA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 38 | Drake University, College of Medicine.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 39 | State University of Iowa, College of Med.—R. | | | | | 1 | 0 | 3 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40 | State University of Iowa, Homeo. Dept.—H. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | KANSAS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 41 | Kansas Medical College.—R. | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | |
| 42 | University of Kansas, School of Medicine.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | KENTUCKY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 43 | Louisville National Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | |
| 44 | Southwestern Homeopathic Medical College.—H. | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | |
| 45 | University of Louisville, Medical Dept.—R. | | | 1 | 0 | 0 | 1 | 1 | 3 | | | 1 | 0 | | | | | 0 | 1 | | | | | 1 | 1 | | | | | | | 2 | 0 | 1 | 0 | | | | | | | |
| | LOUISIANA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 46 | Flint Medical College.—R. | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 47 | Tulane University, Medical Department.—R. | | | | | 3 | 0 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | 2 | 0 | | | | | | | |
| | MAINE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 48 | Medical School of Maine.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | |
| | MARYLAND | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 49 | Atlantic Medical College.—P. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50 | Baltimore Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | |
| 51 | College of Physicians and Surgeons.—R. | | | 2 | 0 | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | | | 1 | 0 | | | |
| 52 | Johns Hopkins University, Medical Dept.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | 1 | 0 | |
| 53 | Maryland Medical College.—R. | | | | | 1 | 0 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 1 | 1 | | | | | | | |
| 54 | University of Maryland, School of Medicine.—R. | | | | | | | 1 | 1 | 1 | 0 | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | |
| 55 | Woman's Medical College of Baltimore.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MASSACHUSETTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 56 | Boston University School of Medicine.—H. | 0 | 1 | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 1 | 0 | |
| 57 | College of Physicians and Surgeons.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | 1 | 0 | |
| 58 | Harvard Medical School.—R. | | | | | | | 5 | 1 | | | 3 | 0 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | |
| 59 | Tufts College Medical School.—R. | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | |
| | MICHIGAN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60 | Detroit College of Medicine.—R. | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | |
| 61 | Detroit Homeopathic College.—H. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 62 | Univ. of Michigan, Dept. of Med. and Surg.—R. | | | 1 | 0 | | | 2 | 4 | 1 | 0 | | | | | 2 | 0 | | | | | 2 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | 1 |
| 63 | University of Michigan, Homeo. College.—H. | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | 1 |
| | MINNESOTA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 64 | University of Minnesota, Coll. of M. and S.—R. | | | | | | | 2 | 0 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | |
| 65 | Hamline University, Medical Department.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MISSISSIPPI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 66 | Mississippi Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | | 21 |

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.

* One report not complete. † Now the Los Angeles Medical Department of the University of California.

| 24<br>Missouri | | 25<br>Montana | | 26<br>Nebraska | | 27<br>Nevada | | 28<br>New Hampshire | | 29<br>New Jersey | | 30<br>New Mexico | | 31<br>New York | | 32<br>North Carolina | | 33<br>North Dakota | | 34<br>Ohio | | 35<br>Oklahoma | | 36<br>Oregon | | 37<br>Pennsylvania | | 38<br>Rhode Island | | 39<br>South Carolina | | 40<br>South Dakota | | 41<br>Tennessee | | 42<br>Texas | | 43<br>Utah | | 44<br>Vermont | | 45<br>Virginia | | 46<br>Washington | | 47<br>West Virginia | | 48<br>Wisconsin | | 49<br>Wyoming | | Totals: | Examined—Passed | Examined—Failed | Percentage of Failures | No. States Ex. in | Margin Number |
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| | | | | | | | | | | | | | | | | | | | | | | 1 | 2 | | | | | | | | | | | | | 3 | 0 | | | | | | | | | | | | | | | 7 | 5 | 2 | 28.6 | 3 | 4 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 1 | 1 | 0 | 0. | 1 | 5 |
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| | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 6 | 4 | 2 | 33.3 | 3 | 7 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 100.0 | 1 | 8 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 0 | 0. | 1 | 9 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 10 |
| | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 4 | 4 | 0 | 0. | 3 | 11 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 0 | 0. | 1 | 12 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 | 0 | 0. | 2 | 13 |
| | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1 | 2 | 66.7 | 2 | 14 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 | 0 | 0. | 2 | 15 |
| | | 1 | 0 | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | 1 | 0 | | | | | | | | | 5 | 5 | 0 | 0. | 5 | 16 |
| | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 | 0 | 0. | 2 | 17 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | 6 | 3 | 3 | 50.0 | 4 | 18 |
| | | | | | | | | | | | | | | | | 1 | 0 | | | | | 1 | 0 | 0 | 1 | | | | | | | | | 1 | 0 | | | | | | | | | 1 | 0 | | | | | | | 8 | 6 | 2 | 25.0 | 8 | 19 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 20 |
| 1 | 0 | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | 3 | 0 | | | | | | | | | | | | | | | 5 | 4 | 1 | 20.0 | 3 | 21 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 22 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | 1 | 50.0 | 1 | 23 |
| | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | 1 | 50.0 | 2 | 24 |
| | | 1 | 1 | | | | | | | | | | | 0 | 1 | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 8 | 4 | 4 | 50.0 | 7 | 25 |
| | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 0 | 3 | 100.0 | 3 | 26 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | 1 | 0 | 1 | 100.0 | 1 | 27 |
| | | 1 | 0 | 0 | 2 | | | | | | | | | 1 | 1 | | | | | | | 2 | 0 | 3 | 2 | | | | | | | 4 | 0 | | | 1 | 0 | | | | | | | | | | | 2 | 0 | | | 29 | 20 | 9 | 31.0 | 14 | 28 |
| | | 1 | 0 | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | 1 | 0 | | | | | | | 12 | 7 | 5 | 41.7 | 6 | 29 |
| | | | | | | | | | | | | | | | | | | | | 0 | 1 | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | 1 | 50.0 | 2 | 30 |
| | | 0 | 1 | | | | | | | | | | | 0 | 1 | | | | | | | 1 | 0 | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | 4 | 1 | 3 | 75.0 | 4 | 31 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 1 | 1 | 0 | 0. | 1 | 32 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 33 |
| 1 | 0 | 1 | 0 | 1 | 0 | | | | | | | | | | | | | | | | | 2 | 0 | 2 | 0 | | | | | | | 1 | 0 | | | | | 1 | 0 | | | | | 5 | 1 | | | | | | | 26 | 22 | 4 | 15.4 | 13 | 34 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 35 |
| 1 | 0 | 2 | 0 | | | 1 | 0 | | | | | | | | | | | | | | | | | 3 | 2 | | | | | | | 2 | 1 | | | 2 | 0 | | | | | | | 5 | 2 | | | | | | | 37 | 28 | 9 | 24.3 | 15 | 36 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 37 |
| 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | 1 | 50.0 | 2 | 38 |
| | | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | 0 | 1 | | | | | | | 11 | 8 | 3 | 27.3 | 5 | 39 |
| | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 100.0 | 1 | 40 |
| | | | | | | | | | | | | 1 | 0 | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5 | 4 | 1 | 20.0 | 4 | 41 |
| | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 0 | 0. | 1 | 42 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 0 | 0. | 1 | 43 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 0 | 0. | 1 | 44 |
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| | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | 3 | 1 | 2 | 66.7 | 3 | 50 |
| | | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | 1 | 0 | | | 1 | 0 | | | | | 10 | 10 | 0 | 0. | 7 | 51 |
| | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 7 | 7 | 0 | 0. | 5 | 52 |
| 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | 2 | 0 | | | | | 9 | 6 | 3 | 33.3 | 6 | 53 |
| | | | | | | | | | | | | | | 1 | 0 | 0 | 1 | | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | 1 | 0 | 1 | 0 | | | | | | | 10 | 8 | 2 | 20.0 | 8 | 54 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 0 | 0. | 1 | 55 |
| | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 1 | 0 | | | | | | | 8 | 7 | 1 | 12.5 | 7 | 56 |
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| | | 1 | 0 | | | | | | | | | | | | | | | 2 | 0 | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 7 | 7 | 0 | 0. | 5 | 64 |
| | | 2 | 0 | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5 | 3 | 2 | 40.0 | 3 | 65 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 66 |
| 24 | | 25 | | 26 | | 27 | | 28 | | 29 | | 30 | | 31 | | 32 | | 33 | | 34 | | 35 | | 36 | | 37 | | 38 | | 39 | | 40 | | 41 | | 42 | | 43 | | 44 | | 45 | | 46 | | 47 | | 48 | | 49 | | | | | | | |

## TABLE D.—GRADUATES OF 1904 AND PRE

| Margin Number | NAME OF COLLEGE | 1 Alabama* | | 2 Arizona | | 3 Arkansas | | 4 California | | 5 Colorado | | 6 Connecticut | | 7 Delaware | | 8 District of Columbia | | 9 Florida | | 10 Georgia | | 11 Idaho | | 12 Illinois | | 13 Indiana | | 14 Iowa | | 15 Kansas | | 16 Kentucky | | 17 Louisiana | | 18 Maine | | 19 Maryland | | 20 Massachusetts | | 21 |
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| |MISSOURI|||||||||||||||||||||||||||||||||||||||||
|67|American Medical College.—E|||||||||||||||||||||0|1||||||||||||||||||||
|68|Barnes Medical College.—R|||||||||||||||||1|1|||2|1||||||||||||||||||||
|69|Ensworth Medical College.—R|||||||||||||||||||||||||||||0|1||||||||||||
|70|Kansas City Hahnemann Medical College.—H|||||||||||||||||||||||||||||||||||||||||
|71|St. Louis University, School of Medicine.—R|||||||||||||||||||||1|0||||||||||||||||||||
|72|St. Louis Coll. of Physicians and Surgeons.—R|||||||||0|1|||||||||||||||1|0||||||||||||||||
|73|University of Missouri, Medical Department.—R|||||||||||||||||||||||||||||||||||||||||
|74|University Medical College, Kansas City.—R|||||||||||||||||||||1|0|0|1|||||2|0||||||||||||
|75|Western Eclectic College of Med. and Surg.—E|||||||||||||||||||||||||||||||||||||||||
|76|Washington University, Medical Department.—R|||||||1|1|||||||||||||||||||1|0||||||||||||||
| |NEBRASKA|||||||||||||||||||||||||||||||||||||||||
|77|John A. Creighton Medical College.—R|||||||1|1||||||||||||||||||||||||||||||||||
|78|Lincoln Medical College.—E|||||||||||||||||1|0||||||||||||||||||||||||
|79|University of Nebraska, College of Medicine.—R|||||||||||||||||||||||||||||||||||||||||
| |NEW HAMPSHIRE|||||||||||||||||||||||||||||||||||||||||
|80|Dartmouth Medical School.—R|||||||1|0|||||||||||||||||||||||||||||||1|1||
| |NEW YORK|||||||||||||||||||||||||||||||||||||||||
|81|Albany Medical Collge.—R|||||||||||||||||||||||||||||||||||||||0|1||
|82|Columbia University College of P. and S.—R|||||||||||||||||||||||||||||||||||||||2|0||
|83|Cornell University Medical College.—R|||||||||||3|0||||||||||||||||||||||||||||||
|84|Eclectic Med. College of City of New York.—E|||||||||||||||||||||||||||||||||||||||||
|85|Fordham University, School of Medicine.—R|||||||||||||||||||||||||||||||||||||||||
|86|Long Island College Hospital.—R|||||||||||||||||||||0|1|||||||||||||||||0|1|1|
|87|New York Homeo. Med. College and Hosp.—H|||||||||||1|0|||||||||||||||||1|0|||||||||1|0||
|88|New York Med. Coll. and Hosp. for Women.—H|||||||||||||||||||||||||||||||||||||||||
|89|Syracuse University, College of Medicine.—R|||||||||||||||||||||||||||||||||||||||||
|90|University and Bellevue Hospital Med. Coll.—R|||||||||||||||||1|0|||1|0||||||||||||||||||||
|91|University of Buffalo, Medical Department.—R|||||||1|0||||||||||||||||||||||||||||||||||
| |NORTH CAROLINA|||||||||||||||||||||||||||||||||||||||||
|92|Leonard School of Medicine.—R|||||||||||||||||||||||||||||||||||||||||
|93|North Carolina Medical College.—R|||||||||||||||||||||||||||||||||||||||||
|94|University of North Carolina, Med. Dept.—R|||||||||||||||||||||||||||||||||||||||||
| |OHIO|||||||||||||||||||||||||||||||||||||||||
|95|Cleveland Coll. of Physicians and Surgeons.—R|||||||||||||||||||||||||||||||||||||||||
|96|Cleveland Homeopathic Medical College.—H|||||||||||||||||||||||||||||||||||||||||
|97|Eclectic Medical College.—E|||||||||||||||||||||1|1|1|0||||||||||||||||||
|98|Medical College of Ohio.—R|||1|0|||||||||||||2|0|||2|0|1|0|||||||1|0||||||||||
|99|Miami Medical College.—R|||||||||||||||||||||||||||||||1|0||||||||||
|100|Pulte Medical College.—H|||||||||||||||||||||||||||||||||1|0||||||||
|101|Starling-Ohio Medical College.—R|||||||1|0|||||||||1|0|||1|0|||||1|0||||||||||||||
|102|Toledo Medical College.—R|||||||||||||||||||||||||||||||||||||||||
|103|Western Reserve University, Medical Dept.—R|||1|1||||||||||||||||||||||||||||||||||||||
| |OKLAHOMA|||||||||||||||||||||||||||||||||||||||||
|104|Epworth College of Medicine.—R|||||||||||||||||||||||||||||||||||||||||
| |OREGON|||||||||||||||||||||||||||||||||||||||||
|105|Willamette University, Medical Department.—R|||0|1||||||||||||||||||||||||||||||||||||||
|106|University of Oregon, Medical Department.—R|||||||||||||||||||||||||||||||||||||||||
| |PENNSYLVANIA|||||||||||||||||||||||||||||||||||||||||
|107|Hahnemann Medical College and Hospital.—H|||||||1|0|||||1|0|||||||||||||||1|0||||||||||||
|108|Jefferson Medical College.—R|||1|1|||3|5|||||||1|0|2|0|||||1|0|||||||||||1|0|||2|0|1|
|109|Medico-Chirurgical College of Philadelphia.—R|||||||1|1|||||||||||||1|0||||||||||||||||||||
|110|Temple University, Medical Department.—R|||||||||||||||||||||||||||||||||||||||||
|111|University of Pennsylvania, Dept. of Med.—R|||||||1|0|||||||1|1|||||||||1|0|||||||||||||1|0||
|112|Western Pennsylvania Medical College.—R|||||||||||||||||||||||||||||||||||||||||
|113|Woman's Medical College of Pennsylvania.—R|||||||||||||||||||||||||||||1|0|||||||||2|0||
| |SOUTH CAROLINA|||||||||||||||||||||||||||||||||||||||||
|114|Med. College of the State of South Carolina.—R|||||||||||||||||||1|0|||0|1||||||||||||||||||
| |TENNESSEE|||||||||||||||||||||||||||||||||||||||||
|115|Chattanooga Medical College.—R|||||||||||||||||1|0|2|0|1|1||||||||||||||||||||
|116|College of Physicians and Surgs., Memphis.—R|||||||||||||||||||||||||||||||||||||||||
|117|Knoxville Medical College.—R|||||||||||||||||||||||||||||0|1||||||||||||
|118|Memphis Hospital Medical College.—R|||||3|0|||||||||||||1|0|||||||||||||3|3||||||||
|119|Meharry Medical College.—R|||||0|1|||||||||||1|0|1|1||||||||||||||||||||||
|120|Tennessee Medical College.—R|||||||||||||||||||||||||||||||||||||||||
|121|University of Nashville, Medical Dept.—R|||||1|0|||||||||||||||0|1|1|0|||||||||0|2||||||||
|122|University of Tennessee, Dept. of Medicine.—R|||||1|0|||||||||||1|0|||||0|1||||||||||||||||||
|123|University of West Tennessee, Med. Dept.—R|||||||||||||||||||||||||||||||||||||||||
|124|Vanderbilt University, Medical Department.—R|1|0|||2|0|||||||||||||||||||||||||||1|0||||||||
| |TEXAS|||||||||||||||||||||||||||||||||||||||||
|125|Baylor University, College of Medicine.—R|||||||||||||||||||||||||||||||||||||||||
|126|Fort Worth University, Medical Dept.—R|||||1|0||||||||||||||||||||||||||||||||||||
|127|Southwestern University Medical College.—R|||||||||||||||||||||||||||||||||||||||||
|128|University of Texas, Dept. of Medicine.—R|||||||||||||||||||||||||||||||||||||||||
| |VERMONT|||||||||||||||||||||||||||||||||||||||||
|129|University of Vermont, College of Medicine.—R|||||||1|0|||0|1|||||0|1|||||||||||||||||||||2|1||
| |VIRGINIA|||||||||||||||||||||||||||||||||||||||||
|130|Medical College of Virginia.—R|||||||||||||||||||||||||||||||||||||||||
|131|University of Virginia, Dept. of Medicine.—R|||||||||||||||||||||||||||||||||||||||||
|132|University College of Medicine.—R|||||||||||||||||||||||||||||||||||||||||
| |WISCONSIN|||||||||||||||||||||||||||||||||||||||||
|133|Marquette University, Medical Department.—R|||||||||||||||||||||||||||||||||||||||||
|134|Wisconsin College of Physicians and Surgs.—R|||||||||||||||||||||||||||||||||||||||||
|135|Canadian Colleges|||||1|0|1|0|||1|0|||1|0|1|0|||1|0|2|1|||||||||||1|1|||2|1||
|136|Foreign Colleges|||||||1|1|||||||||||||||4|2|||||1|0|||||0|1|||5|2|1|
|137|Miscellaneous Medical Colleges|||2|1|4|0|6|4|||1|0|1|0|||8|1|2|0|4|3|4|5|1|0|0|3|2|0|2|0|4|2|2|0|0|1|1|2||
| |Totals by States|3||15||25||90||4||14||2||9||24||10||39||36||6||6||15||7||22||11||5||36|||
| |Totals—Examined—Passed|2||11||22||52||2||12||2||7||20||9||28||21||6||2||13||7||14||8||4||26|||
| |Totals—Examined—Failed|1||4||3||38||2||2||0||2||4||1||11||15||0||4||2||0||8||8||1||10|||
| |Percentage of Failures|66.7||73.3||12.0||42.2||50.0||14.3||0.||22.2||16.7||10.0||28.3||41.7||0.||66.7||13.3||0.||36.4||27.3||20.0||27.8||0.|
| | |1||2||3||4||5||6||7||8||9||10||11||12||13||14||15||16||17||18||19||20||21|

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.
* One report not complete. † Now the Los Angeles Medical Department of the University of California.

|23 Mississippi| |24 Missouri| |25 Montana| |26 Nebraska| |27 Nevada| |28 New Hampshire| |29 New Jersey| |30 New Mexico| |31 North Dakota| |32 North Carolina| |33 New York| |34 Ohio| |35 Oklahoma| |36 Oregon| |37 Pennsylvania| |38 Rhode Island| |39 South Carolina| |40 South Dakota| |41 Tennessee| |42 Texas| |43 Utah| |44 Vermont| |45 Virginia| |46 Washington| |47 West Virginia| |48 Wisconsin| |49 Wyoming| |Totals:|Examined—Passed|Examined—Failed|Percentage of Failures|No. States Ex. in|Margin Number|
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|P|F|P|F|P|F|P|F|P|F|P|F|P|F|P|F|P|F|P|F|P|F|P|F|P|F|P|F|P|F|P|F|P|F|P|F|P|F|P|F|P|F|P|F|P|F|P|F|P|F|P|F|P|F| | | | | | |
| | | | | | | | | | | | | | | | | | | | |1|1| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |3|1|2|66.7|2|67|
| | | | |0|3| | | | | | | | | | | | | | |1|0| | |2|1|1|1| | | | | | | | | | | | | | | | | | | | | | | | | | | |14|7|7|50.0|6|68|
| | | | | | |1|0| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |2|1|1|50.0|2|69|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |70|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |1|1|0|0.|1|71|
| | |0|1| | | | | | | | | | | | | | | | |1|0| | |0|1|0|1| | | | | | | | | | |2|0| | | | | | |1|2| | | | | | |11|5|6|54.5|8|72|
| | | | | | | | | | | | | | | | | | | | | | | | |0|1|1|0| | | | | | | | | | | | | | | | | | | | | | | | | | |2|1|1|50.0|2|73|
| | | | |0|1|1|0| | | | | | | | | | | | | | | | |0|1| | | | | | | | | | | | |1|0| | | | | | |1|1| | | | | | |10|6|4|40.0|5|74|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |75|
| | | | |1|1| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |5|3|2|40.0|3|76|
| | | | | | | | | | | | | | | | |0|1| | | | | | | | | | | | | | | | | | | | | | | | | | | | |1|1| | | | | | |5|2|3|60.0|3|77|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |1|1|0|0.|1|78|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |79|
| | | | | | | | | | |0|1| | | | |0|1| | | | | | | | | | | | |1|0| | | | | | | | | | | | | | | | | | | | | | | |6|3|3|50.0|5|80|
| | | | | | | | | | | | |1|0| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |2|1|1|50.0|2|81|
| | | | |1|0| | | | | | | | | | |3|1| | | | |1|0| | | | |1|0| | | | | | |1|0| | | | | | | | | | | | | | | | |10|9|1|10.0|6|82|
|1|0| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |1|0| | | | | | | | | | |5|5|0|0.|3|83|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |1|0| | | | | | | | | | | | | | |1|1|0|0.|1|84|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |85|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |1|0| | | | | | | | | | |4|2|2|50.0|4|86|
| | | | | | | | | | | | | | | | |0|1| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |4|3|1|25.0|4|87|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |88|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |89|
| | | | |1|0| | | | | | | | | | |1|0| | |2|0| | |1|0|1|1| | | | | | | | | | | | | | | | | | |1|1| | | | | | |11|9|2|18.1|8|90|
| | | | | | | | | | | | |1|0| | |0|2| | | | | | | | |1|0| | | | | | | | | | | | | | | | | | |1|0| | | | | | |6|4|2|33.3|5|91|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |92|
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| | | | | | | | | | | | | | | | |1|0| | | | | | |0|1| | | | | | | | | | | | | | | | | | | | |1|0| | | | | | |6|4|2|33.3|5|97|
| | | | |1|0| | | | | | | | | | | | | | | | |0|1|1|0| | | | | | | | | | | | | | | | | | | | |1|0| | | | | | |11|10|1|9.1|9|98|
| | | | | | | | | | | | | | | | | | | | | | | | | | |1|0| | | | | | | | | | | | | | | | | | | | | | | | | | |2|2|0|0.|2|99|
| | | | | | | | | | | | | | | | | | | | | | | | | | |1|1| | | | | | | | | | | | | | | | | | |2|0| | | | | | |5|4|1|20.0|3|100|
| | | | | | | | | | | | | | | | | | | | | | |1|0| | |0|1|1|0| | | | | | | | | | | | | | | | | | |1|0| | |1|0|9|8|1|11.1|9|101|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |2|0| | | | | | |2|2|0|0.|1|102|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |2|1|1|50.0|1|103|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |104|
| | | | | | | | | | | | | | | | | | | | | | | | | | |0|1| | | | | | | | | | | | | | | | | | |0|1| | | | | | |3|0|3|100.0|3|105|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |1|0| | | | | | |1|1|0|0.|1|106|
| | | | | | | | | | | | |1|0| | | | | | | | | | | | | | | | | | | | | | | | | | | | |1|0| | | | | | | | | | |5|5|0|0.|5|107|
| | | | |2|0|1|0| | | | |1|1| | | | | | | | | | |1|0|1|0|2|1| | |1|0| | | | | | | | | | | | | | | | | | | | | | |29|21|8|27.6|15|108|
| | | | | | | | | | | | |2|0| | |0|2| | | | | | | | | | | | | | | | | | | | | | | | | | | | |2|0| | | | | | |9|6|3|33.3|5|109|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |110|
| | |1|0|1|0| | | | | | |1|0| | |2|0| | | | | | |1|0|0|1| | |1|0| | | | | | | | | | | | | | | | |1|0|3|0| | | | | | |17|15|2|11.8|13|111|
| | | | |1|0| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |1|0|1|0| | | | |3|3|0|0.|3|112|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |1|0| | | | | | |4|4|0|0.|3|113|
| | | | | | | | | | | | | | | | |1|0| | | | | | | | | | |1|0| | |0|1| | | | | | | | | | |1|0| | | | | | | | |6|4|2|33.3|6|114|
| | | | | | | | | | | | | | | | | | |2|1| | | | |1|1| | | | | | | | | | | | |0|1| | | | | | | | | | | | | | |11|7|4|36.3|6|115|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |116|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |1|0|1|100.0|1|117|
|3|1| | | | | | | | | | | | | |2|0| | | | | | | | | | | | | | | | | | | | |1|0|5|3| | | | | | | | | | | | | | |25|18|7|28.0|7|118|
| | |0|1| | | | | | | | | | | | | | | | | | | | |1|0| | | | | | | | | | | | | | | | | | |0|1| | | | | | | | |7|3|4|57.1|6|119|
| | | | | | | | | | | | | | | | | | |2|1| | | | |0|1| | | | | | | | | | | | | | | | | | | | |0|2| | | | | | |6|2|4|66.7|3|120|
|1|2| | | | | | | | | | | | | |1|0| | |1|0| | | | | | | | | | | | | | | | |1|0|0|1| | | | | | |0|1| | | | | | |13|6|7|53.8|10|121|
| | | | | | | | | | | | | | | |1|0| | | | | | | | | | |1|0| | | | | | | | | | |1|0| | | | |0|1|1|0| | | | | | |8|6|2|25.0|8|122|
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| | | | | | | | | | | | | | | | | | | | |1|0| | | | | | | | | | | | | | | | | | | | | | | | | | | | |1|1| | |3|2|1|33.3|2|133|
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| | | | |2|1| | | | | | |1|1| | |11|16| | | | |1|0| | |1|1|2|1| | | | | | | | |2|0| | | | |1|0|3|0| | |1|0| | |64|38|26|42.2|17|136|
|3|3|1|0|5|4| | | | |1|1|2|2|1|1|2|1|1|1|1|0|1|0|7|7|7|2|4|4| | | | |1|1|4|0|6|1| | |1|0|2|0|6|6| | |2|0|2|0|156|100|56|36.1| |137|
|20| |9| |43| |6| |1| |7| |16| |9| |73| |12| |17| |8| |53| |53| |25| |5| |1| |20| |10| |50| |2| |10| |14| |85| |6| |8| |4| |958| | | | | |
|13| |6| |29| |4| |1| |5| |11| |7| |42| |8| |14| |6| |28| |33| |19| |4| |0| |14| |10| |43| |2| |9| |9| |60| |6| |7| |4| | |671| | | | |
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|5.0| |33.3| |32.6| |33.3| |0.| |28.6| |31.3| |22.2| |42.5| |33.3| |17.7| |25.0| |47.2| |37.7| |24.0| |20.0| |100.0| |30.0| |0.| |14.0| |0.| |10.0| |35.7| |29.4| |0.| |12.5| |0.| | | | |30.0| | |
|23| |24| |25| |26| |27| |28| |29| |30| |31| |32| |33| |34| |35| |36| |37| |38| |39| |40| |41| |42| |43| |44| |45| |46| |47| |48| |49| | | | | | | |

## Miscellany

**The Problem of the Criminal.**—The advanced view of the problem of the criminal, and the one which is being accepted by intelligent men, is that he should be returned to the world after his prison term, not a moral and physical wreck, but if possible, healthier in body and mind. In the new penitentiary being built in New York to take the place of the unhealthful and demoralizing Sing Sing, not all the ideas of the modern penologist will be practiced, but the health of the inmates will be considered and the men released will not have the germs of tuberculosis in their systems, as is now the case with many of them. New York is also establishing a colony for the mentally defective on the pavilion system now in use at modern hospitals for the insane and the tuberculous. Some such plan is sure to be followed in future in the imprisonment and reformation of law-breakers. By it the less hardened would be segregated and would issue forth repentant, and most important of all, with some of their self-respect remaining. When justice learns to punish a man without stripping him of all his self-respect, the problem will be a long way toward solution.—*Newark Evening News.*

**Infantile Eczema.**—Infantile eczema is found in all classes and conditions of society. In one case the child may be poorly nourished and cachectic while in another the baby may be fat and chubby. In the one case the child may be poorly nourished from the lack of a sufficient amount of wholesome diet, while in the other case there may be a lack of proper relation as regard digestion and assimilation.—C. R. Day, in *Journal of the Oklahoma State Medical Association.*

**Appendicitis and Cystitis.**—When a chronically inflamed appendix is adherent to the bladder, its removal will bring relief, provided that a colon bacillus cystitis has not already developed. In case of the latter event, operation must be supplemented by measures directed against the vesical infection.—C. W. Bonney, in *Therapeutic Gazette.*

## Books Received

Die Untersuchung und Beurteilung des Wassers und des Abwassers. Ein Leitfaden für die Praxis und zum Gebrauch im Laboratorium. Von Dr. W. Ohlmüller, Verwaltungsdirektor des Virchow-Krankenhauses, und Dr. O. Spitta, Privatdozent der Hygiene an der Universität. Third Edition. Paper. Price, 12 marks. Pp. 422, with illustrations. Berlin: Julius Springer, 1910.

Manual of Surgery. By Alexis Thomson, F.R.C.S., Professor of Surgery, University of Edinburgh, and Alexander Miles, F.R.C.S., Surgeon, Edinburgh Royal Infirmary. Vol. I, General Surgery. Pp. 886, with 339 illustrations. Vol. II, Regional Surgery. Pp. 861, with 227 illustrations. Third Edition. Cloth. Price, $7. Pp. 861, with 227 illustrations. New York: Oxford University Press, 1909.

Habit-Forming Agents: Their Indiscriminate Sale and Use a Menace to the Public Welfare. By L. F. Kebler, Chief, Division of Drugs, Bureau of Chemistry. U. S. Department of Agriculture. Farmers' Bulletin 393. Paper. Pp. 19, with illustrations. Washington: [Superintendent of Documents] Government Printing Office, 1910.

Transactions of the American Pediatric Society. Twenty-first Session, Held at the Curtis Hotel, Lenox, Mass., on May 27 and 28, 1909. Edited by Linnaeus Edford La Fétra, M.D. Vol. XXI. Reprinted from *Archives of Pediatrics*, 1909-1910. Cloth. Pp. 207, with illustrations. New York: E. B. Treat & Co., 1910.

Emergencies of General Practice. By Percy Sargent, M.B., Surgeon to Out-Patients, St. Thomas' Hospital, and Alfred E. Russell, M.D., Physician to Out-Patients' St. Thomas' Hospital. Cloth. Price, $5.50. Pp. 364, with 91 illustrations. New York: Oxford University Press, 1910.

Consumption: Its Prevention and Home Treatment. A Guide for the Use of Patients. By H. Hyslop Thomson, M.D., Medical Superintendent Liverpool Sanatorium. Cloth. Price, $1. Pp. 75, with illustrations. New York: Oxford University Press, 1910.

Practical Pathology. A Manual for Students and Practitioners. By G. Sims Woodhead, M.D., Fellow of the Royal Society, Edinburgh. Fourth Edition. Cloth. Price, $11. Pp. 798, with 275 illustrations. New York: Oxford University Press, 1910.

The Expectation of Life of the Consumptive after Sanatorium Treatment. By Noel D. Bardswell, M.D., Medical Superintendent, King Edward VII Sanatorium. Cloth. Price, $1.50. Pp. 130. New York: Oxford University Press, 1910.

Karlsbad. Klinische Studie über Wirkungsweise, Indikationen und Heilwert seiner Mineralquellen. Von Dr. Adolf Ritter, Grossh. oldenb. Medizinalrat. Prize Essay. Paper. Pp. 112. Munich: Druck von R. Oldenbourg, 1908.

Transactions of the American Urological Association. Eighth Annual Meeting at Atlantic City, N. J., June 7 and 8, 1909. Edited by Charles G. Cumston, M.D. Cloth. Pp. 477, with illustrations. 1910.

The Report of the Pediatric Department of a Maternity Polyclinic (Dr. Hill's Clinic) and Some Studies in Infant Mortality. By Herman Schwarz, M.D. Paper. Pp. 28. New York.

Seventeenth Annual Report on the Births, Marriages, Divorces and Deaths in the State of Maine. For the Year Ending Dec. 31, 1908. Cloth. Pp. 189. Waterville: Sentinel Publishing Co., 1909.

The Religio-Medical Masquerade. A Complete Exposure of Christian Science. By Frederick W. Peabody, LL.B., of the Boston Bar. Cloth. Price, $1. Pp. 197. Hancock Press, Boston, 1910.

The Excursions of a Book-Lover. Being Papers on Literary Themes. By Frederic R. Marvin. Cloth. Price, $1.50 net. Pp. 331. Boston: Sherman, French & Co., 1910.

Fifth Annual Report of the Hospital of the Woman's Medical College of Pennsylvania. For the Year Ending May 31, 1909. Paper. Pp. 59. Philadelphia, 1909.

Hygiene of Pregnancy. By E. H. Harris, M.D., Higginsville, Mo. Paper. Price, 10 cents. Pp. 23.

Report of the White Hospital, Ravenna, Ohio. For the Year Ending Dec. 31, 1909. Paper. Pp. 14.

## New Patents

Recent patents of interest to physicians:

946529. Making durable solutions of peroxid of hydrogen. Joseph Arndts, Paderborn, Germany.
946633. Hair tonic. Conrad Beyer, Cologne-Rodenkirchen, Germany.
947052. Stoppering device for bottles and the like to prevent fraudulent refilling. Lawrence Blew-Jones, Cornhill, London, England.
946853. Sanitary cuspidor. Harry G. Cathcart, Detroit.
946837. Fountain tonic applicator. Cordelia L. Common, Cleveland, Ohio.
946538. Scalp sprayer. Thomas A. De Vilbiss, Toledo, Ohio.
947153. Optical testing instruments. John F. Forth, Syracuse, N. Y.
946637. Physicians' card index. Charles F. A. Hall, Newburyport, Mass.
946940. Capsule filler. August R. Hesske, Philadelphia.
947078. Manufacturing lactic acid. Wilhelm Klapproth, Nieder-Ingelheim-on-the-Rhine, Germany.
947113. Appliance for the support of the foot. Anthony E. Magoris, Binghamton, N. Y.
946972. Massage apparatus. Coleman J. Manning, Medford, Mass.
946556. Thermocauter. John P. Muller, New Rochelle, N. Y.
946648. Syringe-bidet. Martha E. Reichelt, Newark, N. J.
946690. Safety methylated-spirit stove. Franz Szakall, Palota-Mjfalu and D. Kardos, Budapest, Austria-Hungary.
947609. Work-table for bars, soda-fountain-counters, and the like. Julius J. Betzold, St. Louis.
947551. Truss pad or cushion. Daniel O. Fosgate, Chicago.
947382. Surgical instrument. Justus C. Goosmann, Chicago.
947383. Adjustable bed attachment or rest for invalids. Gertrude M. Greaves, South Yarra, Victoria, Australia.
947412. Abdominal belt or support. Arthur B. Kendrick, East Orange, N. J.
947725. Surgical appliance. William C. Yates, Coalinga, Cal.
947726. Fumigating attachment. Ernest L. B. Zimmer, Minneapolis.
948158. Utilizing nitrous gases. Kristian Birkeland, Christiania, Norway.
948005. Massager. Andrew R. Campbell, Saskatoon, Saskatchewan, Canada.
948233. Body brace. Robert F. MacClemmy, New York.
948234. Body-brace. Robert F. MacClemmy, New York.
948153. Vaporizer for medicines. Arthur G. Whitehorne-Cole, Brighton, England.
948305. Hernial truss. John W. Bunker, New York.
948306. Hernial truss. John W. Bunker, New York.
948443. Pasteurizing apparatus. Robert M. Cauffman and W. Best, Centerville, Mich.
948725. Apparatus for purifying liquids or semiliquids. Nat H. Freeman, Boulder, Colo.
948447. Operating table. Elmer E. Helfrich, Oklahoma, Okla.
948627. Rupture appliance. James C. Hogle and A. Meyer, St. Louis.
948456. Surgical clip applier. Abraham Le Witt, Hartford, Conn.
948930. Preparing medicaments. Alfred Meyer, Mulhausen, Germany.
948835. Ammonia condenser. Bruce Walter, Pittsburg, Pa.
948947. Catalytic and making same. Theodore J. Wrampelmeier, Berkeley, Cal.
949055. Apparatus for removing superphosphates from the decomposition chamber. Knut J. Beskow, Helsingborg, Sweden.
949258. Breast pump. Howard V. Brumley, New York.
949414. Nursing attachment. Hugh B. Cunningham, Arnot, Pa.
949623. Steam face-bath. Sanford J. Dalzelle, Beaumont, Tex.
949728. Supporter. Frederick C. Ferrell, Clifford, Ill.
949230. Massage apparatus. Mary A. Haines, Cleveland, Ohio.
949708. Package for chemicals. Charles F. Jenkins, Washington, D. C.
949236. Speculum and spatula. Samuel Kaplan and E. Batault, Geneva, Switzerland.
949539. Vaginal syringe, Oscar Katzenberger, Chicago.
949489. Nozzle. James G. Mastin, Chicago.
949302. Instrument for administering powder and other substances. Ludwig J. F. Nicolai, Dresden, Germany.
949716. Supporter. Arthur Quenzer, New York.
949661. Sterilizing apparatus. Alexandra Richter, Leipzig, Germany.
949550. Massage apparatus. John Sabatino, New York.
949093. Sectional form and truss support. George H. Sherwood, Dayton, Ky.
949134. Local anesthetic. Nathan Sulzberger, New York.

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## Original Articles

# SUMMARY OF A TEN YEARS' CAMPAIGN AGAINST HOOKWORM DISEASE IN PORTO RICO

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SAN JUAN, PORTO RICO

For years preceding the occupation of Porto Rico by the United States, the anemia problem had been widely discussed here by writers of all professions, and public opinion concerning this deplorable condition is well expressed by a physician and literateur, who, writing in 1886, remarks:[1]

> To malaria, to the debilitating influence of a diet, limited in quantity and poor in quality, and to diseases produced by detestable hygienic defects, we can attribute the majority of the anemia of the Porto Rican peasant.

The author of the treatise above quoted was one of the first to acknowledge the parasitic cause of this anemia shortly after its announcement. But the public simplified its opinion further in succeeding years, laying more and more stress on the factor of insufficient food.

### DEATHS UNDER SPANISH AND AMERICAN RULE

The number of deaths for the last five years of Spanish rule in the island was 130,207, with an average death-rate of 28.9 per thousand of population. Three thousand and sixty-two of these deaths were due to smallpox and yellow fever. The number of deaths for the first five years of American government was 159,312, with an average death-rate of 33.48 per thousand. Practically no deaths occurred after June 30, 1899, from smallpox, and none from yellow fever.

Thus in the ten years of American government, to 1908, the last statistics available, smallpox and yellow fever as factors in the death-rate have disappeared.

This enormous increase in the mortality incident to the first five years of American government is due to several causes:

1. In 1898 the war and change of sovereignty occurred and for several years a rather serious economic crisis was felt. Heavily mortgaged coffee plantations lost the high prices coffee commanded before our occupation, due to the exclusive tariff laws of foreign markets and at that very time (in August, 1899) a terrific hurricane wiped out a large portion of the coffee trees. This practically ruined a great part of the coffee planters. As coffee was the chief industry, and peons worked from hand to mouth on these plantations for a mere pittance, when disaster fell on coffee they were reduced to extreme poverty.

2. The endemic of uncinariasis which from time immemorial had been becoming more and more severe in the years preceding the American occupation, became very fatal in the midst of the privation and misery attendant on these disturbances of commerce and the elements. It seems to us that we have in the fact of poor and insufficient food, exposure, etc., a remarkable illustration of how, when resistance to disease is lowered in the life of a whole population, an endemic disease becomes a veritable scourge.

3. More important is another element, as yet but very incompletely discussed in Reports of the Porto Rico Anemia Commission. It is well-known that when eggs of the uncinaria fall on dry ground a tremendous number fail to develop and in those cases that do reach the larval or infective stage the larvæ promptly die in the absence of water which is essential to their life. Now uncinariasis in Porto Rico is a series of multiple infestations in the barefooted population and this infestation, we believe, is practically always accomplished through the healthy skin. There are certain places in the island where dampness is perennial and this depends largely on shade; hence, coffee plantations are apt to be, in spots, always infested. When, however, the sun shines long enough to dry the ground there is an enormous reduction in the infectivity of the soil in general. Ninety per cent. at least of the Porto Rican peasants in 1899 were worm-carriers and were generally so heavily infected as to be worm-sick. Soil pollution is a custom among them; 80 per cent. or more of the total population are guilty of this practice. From 1890 to 1899 about 15 per cent. of the total deaths were ascribed to "anemia." But in 1898 and 1899 the rains deluged the island at the very time that coffee culture was at its height and the ground was always wet. Hence the infectivity of the soil was immensely intensified and laborers in a weakened state, due to poor food, wretched shelter, etc., added dangerous fresh infestations to those already possessed. The result was a huge mortality immediately following the hurricane of 1899.

The total mortality for the period of seven months ending April 30, 1900, was 23,936, which is at the rate of 42 per thousand *per annum*.

In the months of October, November and December, 1899, the months immediately following the hurricane, the death-rate was 57, 58, and 49 per thousand per annum, respectively.[2] In addition to this the same authority commenting on the figures given states:

> The present rate of 42 per thousand would be reduced to 31 if we could eliminate the cases of anemia. . . . The causes to

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[1] Al paludismo, á las causas debilitantes de una alimentacion escasa y de mala calidad, y a'las enfermedades producidas por un regimen higienico detestable debemos atribuir principalmente la anemia del campesino puertoriqueño.

[2] The above statistics are to be found in the report of the Superior Board of Health of Porto Rico, pp. 97 and 98.

which this condition is due are of such a nature as to affect the poorest people almost alone. It is well known that a large majority of the island's population is composed of peons, who are scattered over every portion of the country, living in unusually poor hovels, and subsisting on the merest apology for food. This is the class in which this large mortality occurs. It cannot be better shown than by comparing the death rate from anemia in the municipalities of San Juan and Ponce, with that in the municipalities of Utuado and Adjuntas. The former may be considered as inhabited by an urban population, while in the latter by far the greater portion is composed of the peon or poor class. Ponce and San Juan show a death-rate from anemia of 5 and 1 per thousand per annum, respectively, while in Utuado and Adjuntas the death rate is 24 and 32 respectively.

In concluding our remarks for the second five-year period let it be understood that the total mortality is even higher, as the first six months of 1900, with an unusually high death-rate, are not included, due to the change from the calendar to the fiscal year system in furnishing statistical data.

In the last two of the first five years of American government, (fiscal year, 1901-2 and 1902-03) the rains were less continuous and the anemia mortality (and consequently the total mortality) fell to its Spanish normal, minus the smallpox and yellow fever factor. In those first five years, in spite of great publicity given the discovery that the cause of the anemia was "hookworm," in spite of a pamphlet descriptive of the disease, issued as a result of that discovery by the Superior Board of Health of the then military government to all physicians, *practicantes,* and municipal governments in December, 1899, no credence was given the announcement; and this was entirely natural. There was apparently abundant proof that the miserable physical condition of the people was due to the concomitant factors of poor food and poverty, and an united people so explained it.

For this reason, of the 11,885 deaths from "anemia" out of 35,781 deaths from all causes in that year, not one single death was attributed to uncinarial anemia.

In the next five years of American government (1903-1904 to 1907-1908 inclusive) a remarkable change takes place. In 1904 the Porto Rico Anemia Commission began its work and it can be sincerely stated that the fall in mortality can be attributed almost entirely to the campaign of these five years against the disease, which more than all else has given a mortality far above what Porto Rico, a naturally healthy country, should have.

This is not to say that other diseases than uncinariasis do not contribute to a mortality, still unfortunately high. They do, but uncinariasis is still, *par excellence,* the reigning disease of Porto Rico.

In these five years 120,595 deaths occurred, a death rate of 23.33 a thousand a year. A summary of total deaths by five-year periods, taken from official records, is as follows:

TABLE 1

| First Five Years. | | Second Five Years. | | Third Five Years. | |
|---|---|---|---|---|---|
| 1893 | 21,616 | 1898 | 33,614 | 1903-04 | 22,694 |
| 1894 | 24,892 | 1899 | 39,918 | 1904-05 | 23,050 |
| 1895 | 26,284 | 1900-01 | 35,781 | 1905-06 | 23,811 |
| 1896 | 25,435 | 1901-02 | 24,447 | 1906-07 | 27,060 |
| 1897 | 31,980 | 1902-03 | 25,552 | 1907-08 | 23,980 |
| Totals | 130,207 | | 159,312 | | 120,595 |
| Average Death Rate Per 1,000 | | | | | |
| | 28.9 | | 33.48 | | 23.33 |

HISTORY OF THE WORK IN PORTO RICO

Now that at last the continent of the United States has awakened to a realization of the baneful presence of hookworm disease within its own borders and a prominent man of means has made possible the beginning of a campaign against this formidable enemy of industrial and agricultural activity, we, the members of the late Porto Rico Anemia Commission, feel it our duty to deliver to the Rockefeller Commission and the medical fraternity at large, a succinct account of the operations of our commission and its successor, "The Anemia Dispensary Service" in the Island of Porto Rico.

On Nov. 24, 1899, Dr. Bailey K. Ashford, of the U. S. Army, found the extremely prevalent and fatal anemia of the Island of Porto Rico to be due to hookworm disease. He was in charge of a large field hospital, in which were gathered the indigent sick of the cyclone of August of the same year, most of whom were pale, dropsical and debilitated. Not being able to make any appreciable effect on this anemia by abundant and rich food, he was convinced that there existed a common morbific cause, not only for the condition of these patients, but also for that of the great mass of anemics he had noted throughout the island.

He examined the blood of 20 patients at random, found eosinophilia a leading characteristic, and thus was led to examine the feces, where eggs were found which tallied in every particular with those described in Manson's "Tropical Hygiene," then issued to army medical officiers.

Not being a zoologist, Dr. Ashford contented himself with giving a full description of the disease,[3] his blood findings and an exposition of the dangers of the worm to the states from an economic standpoint, leaving to Dr. Charles Wardell Stiles, the recognized American authority on animal parasites, the purely zoologic description of the nematode.

Stiles, in 1902, working with Ashford's specimen of hookworms from Porto Rico, and with others from the United States, found subsequently, announced that zoologically the parasites belonged to a new species, *Uncinaria americana,* although later he changed the name to that which now obtains, *Necator americanus.* The new species, interesting from a zoologic standpoint, although the mode of infection, symptomatology, morbid anatomy, treatment and prophylaxis of the disease caused by the old-world and the new-world worms are, so far as we know, precisely similar, became of tremendous importance when Dr. Stiles demonstrated for the first time that hookworm disease was crippling the South just as Dr. Ashford had shown it to be the industrial curse of Porto Rico.

In January, 1902, Dr. Ashford after a careful survey of the literature of this disease in the Surgeon General's Library, returned to Porto Rico and immediately began with Dr. Walter W. King of the U. S. Public Health and Marine-Hospital Service, a complete study of 100 cases in the Tricoche Hospital, in Ponce. These cases were reported elsewhere,[4] giving blood-counts, histories and end-results of treatment up to date of publication. In this article it was shown that over 30 per cent. of the deaths in Porto Rico were charged to "anemia," and an earnest appeal was made to combat the disease that was the scourge of fully 90 per cent. of the agricultural laboring classes in Porto Rico, a class representing at least 600,000 souls out of a million population.

A strong editorial in *"American Medicine"* shortly after the appearance of this paper, coupled with the publication, through Col. W. C. Gorgas, then Chief Surgeon, Department of the East, of an official letter to the President of the Superior Board of Health of Porto Rico and an address at the annual meeting of the Medical Association of Porto Rico by Dr. Ashford, pointing out the vital necessity for combating the disease, aroused the interest and concern of the Hon. Regis Henri Post, auditor for Porto Rico, and through him of the Governor, Hon. William H. Hunt. The latter recommended strongly the passage of a bill carrying an appropriation of $5,000.00 for the study and treatment of anemia in Porto Rico, which was favorably acted on by the legislature of Porto Rico in February, 1904, Mr. Post introducing the bill in the Executive Council. Drs. Ashford, King and Gutierrez were appointed members of the commission for this purpose, the War and Treasury departments ceding the services of the first two named. The War Department on request of the Surgeon General furnished a complete field hospital and innumerable scientific instruments and books.

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[3] New York Med. Jour., April 14, 1900.

[4] Am. Med., Sept. 5 and 12, 1903.

This marks the first era in the work against hookworm in Porto Rico and was the first demonstration of its endemic presence on American soil, an endemic now so painfully evident in the South.

### SYSTEMATIC WORK BEGUN

We began with only a handful of friends. The press thought it strange that hunger should be "discovered" to be due to a parasite and based its incredulity on serious economic crises, through which the island was passing and chiefly to the loss of foreign coffee markets. The well-informed and moderately well-informed people, whose circumstances protected them against the disease, as they were well shod, reasoned that as they were well *fed* they were perfectly protected against this "hunger-producing parasite," in contradistinction to the afflicted pale ones who were desperately poor and had to live on bananas alone. In short we had a difficult situation to meet. Had it not been for one saving clause we would have failed. That element was the poor man himself. He was so utterly miserable that he could not be more so and as he had faithfully embraced each and all promises to cure him of what he persistently called his "*enfermedad*," (illness), in spite of the more refined explanation of his better educated compatriots he gingerly accepted our treatment.

The moment we opened our hospital the sick began to arrive. We had told the Governor we might treat 500 cases, but when considerably more than 600 had been treated in Bayamon in less than one month and a cured patient began to deposit his entire family and that of his neighbors at one morning clinic, it became evident that we had to move to some other town where we were not known, or succumb to force of numbers. We moved to Utuado, said to be the most hungry of all of the Porto Rican municipalities, with a population of 40,000. We rapidly reorganized our work to satisfy the demands we knew would come, and in spite of every care and outside assistance we were again overwhelmed with patients. They came from every barrio of the extensive municipality, afoot, horseback, and in hammocks. As soon as some notorious old anemic who had spent his last cent to buy iron pills would return to his barrio from our hospital cured, the whole barrio would swarm about our ears. On July 4, 1904, two members of the commission were ill and the one remaining handled a clinic of over 700 persons, each one of whom had to have a clinical summary of his case made out, a specimen of his feces examined and a prescription written, an unvarying rule in all the work done here so far. In addition, a prophylactic talk was administered and blood counts were made in the afternoon in special cases. Aside from this clinic, we had a field hospital of from 54 to 66 beds filled with patients registering from 8 to 30 per cent. hemoglobin, each one requiring medication of a special nature to meet special complications and intercurrent diseases of so profound an anemia.

Our plan was to leave Utuado for some other town in a month but we never got away. Certainly this work was none the easier for the two American members of the commission who had to contend with a foreign language, and a dialect at that, and with a people whose customs and modes of life were not well known, even by many educated Porto Ricans; nor was it at all less trying to Dr. Gutierrez who was taking his part in an unpopular work at the expense of his private interests. In five months, our $5,000 was spent and 5,049 cases had been treated, and we withdrew to San Juan to write the report of the work.

### FIRST REPORT

This report which, together with those of succeeding years, was published by the insular government contained 234 pages of written matter in Spanish and English, with illustrations. It comprised, (1) a fairly complete history of the disease throughout the world, and of the commission's work in the five months' campaign; (2) a discussion of the parasite, its zoologic description and its life history, together with all possible predisposing causes for the profound anemia observed; the symptomatology, the pathogenesis, morbid anatomy and course, prognosis, and lethality, prophylaxis, diagnosis and treatment. An appendix to this report gives the details of 61 special cases, in which weekly blood records of hemoglobin, counts of red and white blood cells and differential counts of leucocytes are tabled. Also a synopsis of all deaths, of which there were but 27, or a total mortality of 0.49 per cent.

This report fully demonstrated the cause of death from "Porto Rican anemia" and finally relegated the matter of insufficient and improper food to the secondary place of a mere predisposing factor. It demonstrated beyond a reasonable doubt that uncinariasis was contracted through contact of the healthy skin with infested earth, the first practical demonstration on a large scale of Loos' beautifully clear laboratory experiments, and, above all, it convinced the people of Porto Rico that they were dying of a curable disease; that their entire laboring class was threatened with at least semi-invalidism, and that it could be successfully combated with a drug which had been hitherto unjustly accused in Europe of being a dangerous and unjustifiable remedy. The manner in which the Porto Rican people received this report does them fine credit, not at all understood or appreciated by outsiders, and sweeps away all the bitterness of five years of apparent indifference for which they were really largely excusable. From that time to the present this work has been loyally supported by larger and larger appropriations each year, made by the Legislature of Porto Rico.

In the year 1905-1906, we decided to have our central dispensary and field hospital, and administer from this unit as many sub-stations as our meager funds would permit. Recognizing that the highlands of Porto Rico were the most needy, Aibonito, a town in the mountains, was chosen, and around it were grouped in little towns the bulk of the sub-stations. Apart from these surrounding towns we placed one large station in Lares, a mountain town of the West, and one in Utuado, in the center of the island.

In four of our ten stations the town offered to bear all expenses if we would administer the work and furnish the medicines. The physicians volunteered their services. This alone will demonstrate the excellent spirit prevailing.

### SECOND REPORT

Our second report contained 176 pages and reports 18,865 cases. It demonstrates that:

1. The keynote of the campaign looking toward an effective reduction of the frequency of the disease must depend on the treatment of all persons infected, on personal direct education of the laboring classes by lectures and pamphlets, and on a complete reformation of the public health service in Porto Rico.
2. Ground-itch is the first sign of infestation, and to avoid it shoes should be worn and earth pollution stopped.
3. The coffee districts of Porto Rico are the most intensely infested of all regions in the island.
4. Five doses of thymol given a week apart are sufficient to practically cure nearly every patient and to reduce the power of infectivity of the patient to the soil about nineteen-twentieths.

In addition a full plan for future work is laid out and it is brought forcibly home to all that from this time on the extermination of Porto Rican anemia, is largely a matter of money. Not the least of the labors of this year was the counting of all uncinariæ expelled after each dose of thymol in 40 cases and after each dose of betanaphthol in 30 more. This was most tiresome and disgusting, but a fruitful work, as we established the fact that after even one dose 74.54 per cent. of the parasites were expelled.

On receipt of this report, again the Legislature of Porto Rico trebled their appropriation of the year before and the third year's work began.

At this point Drs. Ashford and King returned to their services and Dr. Pedro Gutierrez Igaravidez took the directorship of the work.

### PERMANENT COMMISSION ESTABLISHED

In view of the fact that the Porto Rico Anemia Commission of the previous two years had demonstrated beyond a doubt the extent and curability of uncinariasis, the legislature of 1906 passed a law organizing for the first time a permanent commission for the extermination of uncinariasis in Porto Rico.

Governor Winthrop appointed Dr. Gutierrez Igaravidez as president and Drs. I. Gonzales Martinez of Mayaguez and Dr. F. Sein Sein of Lares as members of that commission on June 25.

This commission, after discussion of the problems before them, in accord with the plans of the previous commission, considered it necessary to continue the work by means of dispensaries as in preceding years, thus offering to every man, woman or child suffering with uncinariasis, a microscopic diagnosis, a free specific for his disease and printed matter and verbal explanation of the endemic, which would tend to disseminate the facts among his neighbors and friends and thus popularize the reform undertaken.

The requests for dispensaries from nearly every town in the island showed the desire of the people that the campaign be made to cover, so far as resources permitted, every particle of ground possible; the commission realized the justice of these requests and decided to establish the largest number of stations feasible.

### DISPENSARIES OPENED

As the practical problem outweighed every other consideration in the fight against this disease, both from the standpoint of prevention and cure, the commission directed its efforts rather toward this phase of the question than to the scientific work which more time and money might have made also possible. Each month as soon as they could be organized, dispensaries were opened in some towns, until 35 were found working at the end of the fiscal year, 1906 and 1907. In order to better administer the stations and supply them, the island was divided into three districts, one for each commissioner. The central station was established near San Juan and directed the entire work.

Each commissioner and some of the directors of dispensaries were permitted to place in the municipal hospitals at the expense of the service certain seriously ill anemics, who were unable to return to their homes and who apart from this offered opportunities for clinical research and for the study of the effects of new remedies for the expulsion of the worm.

In the 35 dispensaries in operation in the year 1906-1907, 89,233 persons were treated, of whom 43.09 per cent. were cured. The remainder, for reasons before expressed, could be considered as having been relieved of such an overwhelming number of their parasites as to no longer suffer clinically from the disease. In addition, such patients possessed only a small fraction of their power for infestation of the soil. The mortality was but 0.21 per cent. The records kept of these patients was the same as kept in previous years; a card of identification corresponding to the serial number of the history card kept at the dispensary was given each patient.

### LITERATURE DISTRIBUTED

Printed circulars were widely distributed, in which the nature of the "anemia" of Porto Rico was made plain, and also the manner of contracting it and the means of avoiding it. These circulars reached the planters and interested them in sending patients to be cured at the dispensaries. In addition to this, each patient on receiving his medicines was issued a colored card with printed instructions as to the manner in which they should be taken and the means that should be adopted to avoid reinfection. In conjunction with the above prophylactic measures the commission wished to try out the effects of sanitary inspectors who would visit the country barrios (or townships), and who would speak in the homes of these people of the campaign that was going on, investigating at the same time the general health conditions prevailing in each home and advising those who had not visited the dispensary to immediately take up the treatment of their curable affection. These inspectors left a card of explanation at the houses and noted under the printed headings of another card the information required of him by the commission. But lack of funds only allowed three such inspectors. These methods brought a greater number of sick to the dispensaries, caused latrines to be constructed, where before there had been none, and would have been even more fruitful of good had enough money been available to employ more inspectors.

### SCIENTIFIC STUDIES

Although the cure of the greatest number of sick and the instruction in prophylaxis were the principal objects of the work of this and following years, we note in addition some scientific studies worthy of special mention:

1. The discovery of the presence of *Ankylostoma duodenale* by Dr. Gutierrez in the Central Station at Rio Piedras in the person of a native Porto Rican who had never been out of the island, thus proving the coexistence of the old-world and new-world species in Porto Rico.

2. The trial of Phillips' eucalyptol and chloroform treatment for the expulsion of the worm by Gutierrez. This treatment was not as successful in the hands of the commission as it was reported to have been by its author. The patients thus treated suffered greatly from dizziness, lethargy, somnolence and fainting spells. Some grave cases of collapse occurred, and as many of them refused to continue the treatment by this medication, it was abandoned.

3. The study of tissues recovered from autopsies performed by the first anemia commission in cases of fatal uncinariasis. These tissues were sectioned and stained by Dr. Ashford in Washington and studied there by him, Dr. King, and by the late Major James Carroll and Major F. F. Russell, both of the Army Medical Corps.

4. The study of the influence on the urine of uncinariasis and the anthelmintics used for the expulsion of the parasites. These voluminous notes were compiled and reported by the first commission and are found in the reports for 1906 and 1907. Notes on animal experimentation performed by Gutierrez and Ashford at the close of the last year were compiled, and sections from the human intestines were photographed of the worm *in situ* by Dr. William Gray of the Army Medical Museum.

### REPORTS FOR 1907 AND 1908

The report of 1906-1907 contained 206 pages and was illustrated.

The next year, 1907-08, the legislature again appropriated a sum for the continuance of the work and the 35 dispensaries founded in the preceding year were continued, although some were moved to other towns, and 7 more dispensaries were added, making 42 in all, The service in this year followed the plan of the last year, and 81,375 persons were treated with 51.54 per cent. cured, and a mortality of 0.12 per cent.

In 1908 the Legislature did not appropriate any funds for the continuance of the work, so that it was necessary to close all stations June 30, 1908. Nevertheless, surplus medicines on hand permitted many former directors of dispensaries to continue treating applicants, which they did without remuneration from the insular government.

A special session of the legislature was convoked by proclamation of the Governor to consider the irrigation project for the island and the anemia problem, and in September, 1908, the legislature made a modification of the law placing the work of the Commission under the Department of Health, Charities and Corrections as a bureau of that department with the name of Anemia Dispensary Service. The director of this service was Dr. Gutierrez who began in October to organize it.

In November, 1908, after a month's work in organization, the old dispensaries were gradually restored and the total number increased to 59. The number treated this year plus those treated in the five preceding months by voluntary service by the former directors of dispensaries reached 54,725, of whom 41.49 per cent. were cured and 0.08 per cent. died. In addition, 9,159 were treated as patients of former years, making a total of 63,884 treated in 1908-09.

The following table gives a succinct statement of the work to date:

TABLE 2.—SUMMARY OF ANEMIA WORK

| | | Age | | | |
|---|---|---|---|---|---|
| Years. | Patients Treated. | Under Ten Years. | Between Ten and Thirty. | Over Thirty. | Not Recorded. |
| 1904-5... | 5,490 | 566 | 3,138 | 1,764 | 22 |
| 1905-6... | 18,865 | 2,199 | 11,532 | 4,922 | 212 |
| 1906-7... | 89,233 | 8,913 | 51,972 | 28,232 | 116 |
| 1907-8... | 81,375 | 8,954 | 52,608 | 19,152 | 661 |
| 1908-9... | 54,725 | 6,668 | 34,905 | 13,152 | ... |
| Total.... | 249,688 | 27,300 | 154,155 | 67,222 | 1,011 |
| Percentage | | 10.93 | 61.74 | 26.92 | 0.41 |

CLINICAL TYPE

| Years | Very Light. | Light. | Medium. | Intense. | Very Intense. | Unclassified. |
|---|---|---|---|---|---|---|
| 1904... | ..... | 1,222 | 1,063 | 2,258 | ..... | 947 |
| 1905-6... | 1,378 | 4,483 | 8,706 | 3,501 | 440 | 357 |
| 1906-7... | 7,085 | 19,503 | 38,439 | 19,212 | 4,162 | 832 |
| 1907-8 | 3,022 | 14,968 | 40,136 | 19,140 | 3,465 | 644 |
| 1908-9... | ..... | 10,720 | 24,248 | 16,409 | 3,344 | 4 |
| Total.... | 11,485 | 50,896 | 112,592 | 60,520 | 11,411 | 2,784 |
| Percentage | .4.59 | 20.38 | 45.10 | 24.24 | 4.57 | 1.12 |

| | Number of Visits. | Number of Deaths. | Amount Spent. | Per Patient. |
|---|---|---|---|---|
| 1904-5.......... | 22,000 | 27 | $ 4,954.84 | |
| 1905-6.......... | 76,896 | 67 | 10,808.77 | |
| 1906-7.......... | 425,131 | 193 | 49,116.31 | |
| 1907-8.......... | 472,407 | 93 | 56,950.57 | |
| 1908-9.......... | 305,598 | 46 | 32,360.91 | |
| Total ........ | 1,302,032 | 426 | $154,191.40 | .6175 |

### TOTAL NUMBER TREATED

In addition to the 249,688 patients treated up to June 30, 1909, there have been treated, but not yet classified, from that date to Feb. 28, 1910, 22,568 more; hence the sum total to date is 272,256 persons who have received treatment from 1904 to the latter date, by government work alone. It would be impossible to fix the total number who have been treated apart from government work for uncinariasis. This number cannot possibly be less than 30,000. Thus 300,000 is the total number so far treated for uncinariasis in the Island of Porto Rico since March, 1904.

### THE WORK OF DR. KING

This is the first time in the history of the Porto Rico Anemia Commission that all its members have not taken an active part in preparing public reports of its labors. Time and distance separate us from the third member, who otherwise would have shared in the preparation of this work. But it is not amiss to note that Dr. Walter W. King was one of its members, planned with us the work it has accomplished and met the difficult situations it has fortunately weathered. Although he does not sign this article with us, his name is intimately associated with every page of its history.

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**Senile Cataract Often Avoidable.**—C. Ziem of Danzig, Germany, presents a number of arguments to sustain his contention that cataract is not the result of encroaching age alone but is due mainly to other factors, most of them avoidable. He includes among these unhygienic, damp dwellings, a damp subsoil as at St. Petersburg and Rotterdam, and dampness from the melting of heavy snows. Chief in importance, however, seem to be chronic purulent nasal affections, and he relates nine cases in which this coincidence was striking, especially as vision improved materially under treatment of the nasal trouble, and particularly when sinusitis was cured. He attributes the improvement to the bettering of the conditions in the circulation in the region and vicinity. His article on the subject is published in the *Archives internat. de Laryngologie, etc.*, 1910, xxix, 397.

# A CLINICAL INVESTIGATION ON THE RELATIONSHIP OF TUBERCULOSIS TO CERTAIN DISEASES OF THE EYE *

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We wish to present for consideration a summary of the examination of ninety-two cases in which the ocular disease suggested a tuberculous origin. In selecting these patients for investigation our suspicion of tuberculosis rested on the clinical type of the disease process in the eye.

The study was carried out during a period of five months (October, 1908, to February, 1909) in the outpatient clinics of the Carney Hospital and the Massachusetts Charitable Eye and Ear Infirmary, and we are much indebted to the staff of the latter institution for allowing us to make use of their material.

The plan of work was as follows: Having selected our patient, a careful record of the family history, personal history and present illness was made. The cutaneous test was then performed on the upper arm, for which at first we used a 25 per cent. solution of old tuberculin supplied by H. M. Alexander & Co. More recently we have discarded this for the full strength tuberculin as recommended by von Pirquet in his last publications.

In all of the patients a control vaccination was made. The patient was seen after forty-eight hours and, in case of a negative result, watched until the possibility of a reaction was over.

Following the vaccination, our patients were referred to the medical clinic of the Carney or to that of the Massachusetts General Hospital with the request in each instance that special attention should be paid to the question of an active or inactive tuberculosis. We wish to express our obligations to the members of the staffs of those two institutions who aided us in this connection.

In a few instances in which a definite diagnosis was of great importance and no confirmatory signs elsewhere could be obtained, the patient was taken into the hospital and the subcutaneous test applied for the purpose of producing, if possible, a local reaction.

In tabulating our results we have recorded our medical examinations as positive whenever the consultant reported the case as suspicious. As a matter of fact, there are but few cases in our series in which an absolutely definite diagnosis of tuberculosis elsewhere could be made, and those are, first, the ones in which there was a positive local reaction to the subcutaneous injection of tuberculin; and, second, a few cases of tuberculous adenitis or tuberculosis of the larynx and one of lupus of the nose. No bacilli were found in the sputum of any patient, which only serves to emphasize the early stage of the pulmonary process. In these patients the family history was recorded as positive if there was reasonable evidence of a tuberculosis affecting a member of the patient's immediate family.

Our cases may be roughly divided into two groups, in one of which the ocular inflammation was superficial, and one in which the deeper structures of the eye were involved.

### GROUP I

The first group is made up of the so-called phlyctenular cases. We have fourteen cases of phlyctenular conjunctivitis with an average age of 14½ years.

In 3 of these (21 per cent.) the family history was positive. Only 1 patient (0.7 per cent.) showed an elevation of temperature. Nine (64 per cent.) gave positive physical signs. In 7 these signs were in the lungs, while 1 had a tuberculous adenitis and 1 a lupus of the nose. The cutaneous reaction was positive in 11 (78.5 per cent.).

The second division of the first group contains the so-called cases of phlyctenular keratitis (keratitis eczematosa, scrofulous keratitis), and we regret to classify them under so unsatisfactory a term; for in but few of them were actual phlyctenules observed. They are rather the cases of recurrent superficial inflammation of the cornea, with or without vascularization, occurring usually in children and young adults of unhealthy appearance. We have 52 such cases, with an average age of 9½ years; the youngest 1 year; the oldest 27. In this group the family history was positive in 13 (25 per cent.). The temperature was elevated in 25 (48 per cent.). There was positive physical fiindings in 23 (44 per cent.). In 17 of these the lungs were suspicious. Five had a tuberculous adenitis, 1 a tuberculous empyema, 1 a tuberculous larynx, 1 a tuberculous spine. In 48 cases (92.3 per cent.) the cutaneous test was positive.

It may be noted here in this connection that in a series of 43 phlyctenular cases published last year by one of us[1] 88 per cent. of patients reacted to tuberculin, and in the same paper attention was called to 23 similar cases tested subcutaneously by Stock with an exactly similar percentage of positive reactions. Fifty-nine of the 66 cases of this present series gave a positive cutaneous reaction (89 per cent.), a remarkably close approach to the former figures.

### GROUP II

Leaving now for the moment the group of superficial inflammations, we have 26 cases in which the deeper ocular structures were involved. These are made up of 6 cases of scleritis, 6 of interstitial keratitis, 4 of uveitis, 7 of sclerokeratitis and 3 of keratoiritis. As a matter of fact all these cases may be placed together, for although they have been classified anatomically according to the location of the chief process, yet usually during the course of the disease neighboring tissues became involved.

Of our 26 patients the youngest was 6 years; the oldest 49; the average age was 26⅓ years. The family history was positive in 5 (19.2 per cent.). The temperture was elevated in 12 (46 per cent.). The physical signs were positive in 18 (69 per cent.). In 15 of these the lungs were reported as "suspicious," while in 3 there was a tuberculous adenitis. The cutaneous reaction was obtained in 24 (92.3 per cent.). It may be of interest to combine the figures of the first group and compare them with those of the second.

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* Read in the Section on Ophthalmology of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

[1] Derby, G. S.: The Increasing Importance of Tuberculosis as a Cause of Ocular Disease. The Newer Methods of Diagnosis and the Treatment, Arch. Ophth., 1908, xxxvii, No. 5.

GROUP I (SUPERFICIAL OCULAR INFLAMMATIONS) AND GROUP II (INFLAMMATIONS INVOLVING DEEPER STRUCTURES OF THE EYE)

FAMILY HISTORY

| | | |
|---|---|---|
| Group I: | 66 cases. | Positive in 16, or 24.2%. |
| Group II: | 26 cases. | Positive in 5, or 19.2%. |
| Whole Series: | 92 cases. | Positive in 21, or 22.8%. |

TEMPERATURE

| | | |
|---|---|---|
| Group I: | 66 cases. | Elevated in 26, or 39.3%. |
| Group II: | 26 cases. | Elevated in 12, or 46.1%. |
| Whole Series: | 92 cases. | Elevated in 38, or 41.3%. |

SUSPICIOUS SIGNS OF TUBERCULOSIS

(Lungs, glands, local reaction to subcutaneous test, etc.)

| | | |
|---|---|---|
| Group I: | 66 cases. | Positive signs in 32, or 48.5%. |
| Group II: | 26 cases. | Positive signs in 18, or 69 %. |
| Whole series: | 92 cases. | Positive signs in 50, or 54.3%. |

REACTION TO TUBERCULIN

| | | |
|---|---|---|
| Group I: | 66 cases. | Positive in 59, or 89.3%. |
| Group II: | 26 cases. | Positive in 24, or 92.3%. |
| Whole series: | 92 cases. | Positive in 85, or 90.2%. |

In fifty cases out of a possible ninety-two there were signs pointing to a tuberculosis outside the eye, and as pertinent here we quote from the paper previously referred to:

> Since at autopsy tubercular lesions, healed or active, are found in from 40 per cent. to 90 per cent. of subjects, it follows that only in a small percentage of cases, most of them of a severe type, is the diagnosis made during life. There are then many mild cases, some of which are not seen by the medical man, and others in which the signs and symptoms are not clear enough to render the diagnosis possible. Most of these patients get well, and only in the event of autopsy is the disease manifest. In a large percentage of cases where it has been possible to make a definite diagnosis of tuberculosis, the disease has been in an advanced stage and cure has been uncertain. This is especially true of pulmonary tuberculosis, in which the finding of bacilli in the sputum clinches the diagnosis, but means advanced disease. I believe the same conditions exist in regard to ocular tuberculosis. Formerly only the hopeless cases, leading to the destruction of the eye, were recognized, while now we are beginning to recognize the milder types which are curable.
>
> If tubercular disease of the eye is as prevalent as my figures tend to show, it will lie in the power of the ophthalmologist to take a more active part in the fight against tuberculosis than he can at present. We see hundreds of these cases in our clinics each year. My small series shows that many have signs pointing to tuberculosis in their lungs or elsewhere. These are the incipient cases that the tuberculosis expert wishes to reach. Even if the patient shows no general signs of the disease himself, he may be the means of directing attention to the whereabouts of an active focus of tuberculosis in the community.

Our present study tends to confirm these views. Furthermore, if we should search in these cases for signs of the so-called scrofulous diathesis we should find them, as many investigators of phlyctenular disease have shown, in a much larger number of patients, 85 to 90 per cent. As time goes on the identity of scrofula with tuberculosis is becoming more widely accepted. As long ago as 1904 Behring stated:

> Candidates for tuberculosis owe their much-discussed predisposition to an infantile infection with tuberculous virus. The practicing physician will before long become convinced that human pulmonary tuberculosis is no more nor less than the final stage of a tuberculous infection dating from infancy, which infection in childhood manifested itself in the signs of a relatively latent scrofulosis.

We believe that for the good of the community, if not for the individuals themselves, these eye patients should be given a thorough physical examination as a routine procedure. We think it likely that the deep and severe tuberculous infection of the eye are often the final stage of a tuberculous infection acquired in childhood and manifested at that time in the form of a phlyctenular process.

It is important that the significance of these forms of ocular disease should be brought to the attention of the opthalmologist and to the medical profession in general.

TUBERCULIN FOR DIAGNOSIS

In our work the use of the subcutaneous test for diagnosis has been found impracticable except in a small portion of the cases. It is impossible in large clinics to obtain the requisite number of hospital beds and it is very difficult to induce the patient to give up a sufficient amount of time for the test. Then, too, the moral effect of a positive reaction with marked general disturbance is often disastrous and has in our experience caused the patient to refuse subsequent tuberculin treatment. Furthermore, the anticipated local reaction may not be obtained. We believe in confining the subcutaneous test to those cases in which the diagnosis can be made in no other way and in which a diagnosis is essential if an intelligent course of treatment is to be prescribed. We have discarded the conjunctival test as being occasionally productive of disastrous results and as being but little more convenient than the cutaneous. We do not believe that there is as yet sufficient evidence of the superiority of the former test as indicating an active tuberculous focus. There can be no doubt that a negative cutaneous test is of far greater importance than a positive one. A positive reaction can add but little to the diagnosis of the ocular disease while as a result of two negative cutaneous tests tuberculosis may, with reasonable probability, be excluded. We have performed the latter test on nearly 200 patients and have never seen harm result from it.

TREATMENT

Although not included in the title of this paper, it may not be amiss to take up the question of treatment.

We reiterate the belief expressed by one of us previously[1] that these patients as a group are best handled by means of the tuberculosis class. In our work we have seriously felt the need of such organizations, and up to within a few months have had to refer our patients for treatment to the classes of other institutions. Three months ago we assisted in establishing such a class at the Carney Hospital for the treatment of all varieties of tuberculosis and in January a class for ocular tuberculosis alone (of which one of us is in charge) was financed by certain generous private individuals and was started at the Massachusetts Charitable Eye and Ear Infirmary. This we believe to be the first of its kind.

Our machinery there consists of an ophthalmologist, an internist, a social worker and a nurse. Patients are referred from the clinics to the class for the investigation necessary to diagnose, and when this is positive and the patient's case is a suitable one for class treatment he is registered as a member. We have a weekly session, but certain seriously affected patients are seen more often and the patients with milder cases may be instructed to report less frequently. Each patient is given a book in which a minute record of his daily life may be recorded. He is weighed, his temperature taken, and, if indicated, a tuberculin injection is given. This is but a part of the treatment, however, for it is most important to reach these patients in their homes and to exercise a strict control over their manner of living. Our treatment differs but little from that of the general tuberculosis class, except that our cases are usually a milder type of disease than the average one seen in the general class. We insist on rest during an active inflammation, and especially if the temperature is elevated during some period of the day, even if the rise be slight. The patients are taught cleanliness and how to get the maximum amount of fresh air. They have the usual antituberculosis diet and forced feeding. They are visited in their homes by our social worker as often as is necessary, and in this way we keep in close touch with them and do not have to depend on their own statements.

The severity and duration of the treatment needed varies markedly with the individual case. Most of the patients in phlyctenular cases soon recover and remain well if they contiue to live in good hygienic surroundings. We have them report every month or two. The deeper processes have been much stubborner and in our hands usually require treatment for many months. As has been observed by many, these cases are all especially liable to recurrences even when the patient's condition becomes robust.

We have a certain amount of money at our disposal to help worthy patients who can not follow out directions on account of lack of means. Those who have not homes where proper treatment may be carried out are referred to various institutions which have facilities for handling tuberculosis. Occasionally we meet a case in which class treatment is not successful. These are referred to the sanatoria; just as in all medical cases each patient must be treated as an individual and the treatment modified to suit his wants.

The paper referred to above[1] stated that the writer (G. S. D.) had been convinced of the value of tuberculin. As the result of further observation we wish to modify this statement. In the classes referred to tuberculin is used in all severer inflammations. As a rule the phlyctenular case does not need it. We believe that, as a rule, our patients do better when tuberculin is used. We employ now a bouillon filtrate obtained from Saranac and begin ordinarily with an initial dose of 0.0001 mg. It has seemed to us that our patients did better and suffered less harm on small and increasing doses rather than when given larger doses for the purpose of stirring up a slight local reaction. We have, however, seen in certain instances a marked improvement follow the diagnostic injection of old tuberculin, and in one instance, a case which had reached a standstill, the patient began to improve again after one or two large doses had been tried; but we have also often seen setbacks result from too large dosage, and therefore we do not believe in it as a routine procedure. We believe that the use of tuberculin should always be second to strict hygienic treatment even if the patient be in apparently good condition, for we know of the great good which may be accomplished in this way alone.

To conclude, allow us to report an interesting and severe case that resisted class treatment and tuberculin but yielded readily after the patient was sent to a sanatorium.

*History.*—M. M., a man, aged 26, was referred to us for treatment May 5, 1908. Following measles when he was 11 years old he had numerous attacks of ocular inflammation which seriously damaged his sight and kept him out of work. During several of these attacks he was treated as an in-patient in the Massachusetts Charitable Eye and Ear Infirmary. The attacks were so frequent that he was able to work only five months all told out of the last thirty-six.

*Examination.*—The patient had swollen lids, intense photophobia and lachrymation; both corneæ were covered with old scars and a well-marked pannus. There was no trachoma. V. O. D. and V. O. S. = hand movements. It was necessary to lead the patient. General examination showed a poorly nourished man with the signs of an old pulmonary tuberculosis at the left apex. Cutaneous reaction positive. Temperature elevated. The patient was in a most despondent condition.

*Course of Disease.*—In conjunction with the Massachusetts General Hospital Tuberculosis Class we took charge of him and a strict antituberculosis regimen was prescribed, with tuberculin injections and appropriate local treatment. The patient was helped financially, as, outside of what his wife could earn cooking, they had no means of support. Although we did everything in our power for him, his improvement was very slow, and at the end of ten weeks we decided to send him to the state sanatorium at Rutland, at which institution he was admitted July 15. Here his improvement was most rapid; the ocular inflammation had subsided at the end of five weeks, and his vision had increased to 10/200 o. u., as much as he had had for some years previously, according to his former hospital record. He left Rutland after seven weeks, having gained 24 pounds and feeling in better condition than ever before in his life. He resumed his work in a golf-ball factory and has not missed a day in the last six months. He reports occasionally for observation and is careful of his method of living.

7 Hereford St., Boston—54 West Main St., Westboro.

## ABSTRACT OF DISCUSSION

Dr. W. H. Wilder, Chicago: The results that Dr. Derby has obtained accord closely with those which I have had in the cases I have examined. It is astonishing how frequently in cases of phlyctenulosis we will get a positive reaction to tuberculin tests and how frequently in certain other suspicious eye diseases if we make the cutaneous test we will get a positive reaction. So that these results seem to show that, after all, as v. Pirquet has stated, from 70 to 90 per cent. of individuals will react to this delicate cutaneous test. This would help to bear out the statement of the pathologists that, at the age of 60, 999 individuals in 1,000 have tuberculous lesions. Of course, to believe such a statement must require more credulity than some of us possess, because I do not think the pathologists can positively demonstrate the fact. But at any rate there must be a great deal of latent tuberculosis. If we find that so many of our cases of suspicious eye disease will respond to the tuberculin test, can it be made of any great value as a means of diagnosis? Possibly it may be, and it will be the work of the committee which has been appointed to try to determine if there is any possible relation between the lesion in the eye and the severity of the reaction obtained in the test; also whether there is any relationship between the suspected lesion in the eye and tuberculous lesions elsewhere in the body. Possibly the study of a large number of cases may enable us to arrive at some definite conclusion. Again, it will be of value in the study of an eye lesion of suspicious character to be able to determine whether or not there is a more or less active tuberculous lesion elsewhere, for it will direct treatment to this condition and will teach the ophthalmologist that he must cooperate with the general practitioner or the physician who is familiar with tuberculosis in the management of such cases. Another interesting and important question is whether it is necessary to have tuberculous foci in the eye itself to account for certain diseased conditions, as many of the Germans hold, or whether it is not possible for toxins originating in a tuberculous lesion elsewhere in the body to excite in the delicate structures of the eye inflammation that would take on the form of iritis, cyclitis, keratitis and others of a suspicious nature. I am inclined to think the day will come when we will have proof that toxic inflammation from tubercle elsewhere in the body ay be responsible for many lesions of the eye, the etiology f which is now obscure.

**Dr. W. C. Posey**, Philadelphia: This paper is further evience of the tuberculous origin of phlyctenulæ, a question which as been much in dispute during the past decade, while the etection of signs pointing to tuberculosis in fifty of the auhors' cases out of a possible ninety-two should impress on us, s they suggest, the importance of a thorough physical examiation in this class of cases, not only for the advantage of the dividuals themselves, but also for the good of the community t large. An article in the April number of the *Klin. Monatslätter für Augenheilkunde*, by Cohen, has a similar trend, for f 123 adult patients with phlyctenulæ who were collected from hthoff's clinic, 63.4 per cent. were tuberculous. It is of inerest to remark in the analysis of this group of cases that the iagnosis of tuberculosis elsewhere in the body was established y the older clinical methods, without the means of modern iagnostic aids, most of the observations having been made rior to their discovery. Of particular significance was the ct that the phlyctenulæ in many of the cases were found to ccur in the first stages of tuberculosis, and that in a vast ajority of the cases there had not been an earlier inflammaion of the eyes during childhood.

Drs. Derby and Ayer have discarded the conjunctival test as eing occasionally productive of disastrous results and as being ut little more convenient than the cutaneous. This perhaps is e present practice of many clinicians and is being more uniersally pursued. Considerable difficulty certainly attends the ndeavor in many cases of suspected tuberculous disease of the ve to ascertain whether a tuberculous element is actually resent or not. Thus, when tuberculin is injected for diagostic purposes, the local reaction, even in undoubted cases of berculosis, is often absent, or at least but transient, and hen a general reaction is obtained, without local signs of irriition or inflammation, it frequently seems presumptious to nclude with any degree of certainty that the case is one of berculosis of the eye. The observation and study of a large ries of cases can alone solve the problem, so that in time the ried forms under which tuberculosis occurs in the eye may be ifferentiated into definite types.

For some years past, I have endeavored to recognize tuberlosis of the cornea at first hand by simple inspection, and ve found after the diagnosis had been controlled by tuberlin tests, that the projection of a tongue-like area of yelwish-white infiltrate from the limbus into the interstitial mellæ of the cornea toward its center and the occurrence of screte yellow-white oval areas, which appear caseous and ascular, is very significant of tuberculous keratitis, while I ve observed the deposition of small rounded areas resembling ops of cold mutton fat on the posterior surface of the cornea in the lamellæ of the cornea, secondary to tubercle of the is and of the deeper parts of the eye.

Dr. Derby's suggestion of a tuberculosis class appears to solve e difficulty which all ophthalmologists must have experienced treating these individuals purely as ophthalmic patients, for it few ophthalmic hospitals are equipped to care properly for ch cases, and the establishment of such classes in all cities ems most desirable.

The fact, now presumably fairly well established, that the ocrrence of phlyctenulæ in adults as well as children, indicates tuberculous infection, should be appreciated not only by ophalmic surgeons, but by general practitioners as well, both for e suggestion which the appearance of the phlyctenulæ may ve of the seat of tuberculosis in the system, as well as for the cessity which arises of treating subjects with this ocular disse as possible sources of tuberculous infection to others.

**Dr. G. S. Derby**, Boston: We lay very little stress on a sitive skin reaction, as so many individuals will show it, but there are two negative reactions tuberculosis can be excluded ith reasonable probability.

**Symptoms of Bladder Calculi.**—Diurnal urgency, pain in the adder, pain at the external meatus at the end of micturition d the presence of blood corpuscles in the urine should lead e to examine for stone.—C. W. Bonney, in *Therapeutic Gazette*.

# TREATMENT OF HOOKWORM DISEASE*

EDWARD E. LINDEMAN, M.D.
TAMPA, FLA.

It has recently been roughly estimated that there are 2,000,000 people in the United States infected with hookworm disease. Since it is a disease prevalent in the country districts of the sandy soil area of the South, where perhaps more recent literature on the subject has not as yet permeated, I have undertaken a discussion of the treatment of hookworm disease, including some practical points from my own observations, with the hope that this article may reach those parts where this information may be new.

## THE PARASITE AND ITS MODE OF ENTRANCE

It might be well first to state briefly the life cycle of the parasite producing this disease. The disease is caused by the *Uncinaria americana* (Stiles) which belongs to the roundworm family *(Strongyloidæ)*. This worm is from 7 to 11 mm. long and 1 mm. in diameter. It inhabits the intestinal tract, principally the lower part of the duodenum, the jejunum, and the upper portion of the ileum, where it attaches itself to the mucosa by its dorsal and ventral lips or suckers. It is also armed with a prominent dorso-median buccal tooth, which is simply a hollow tooth-like spine. With this tooth it pierces the intestinal wall to reach the blood-channels, draws blood into itself for food and injects a toxin through the same opening. It thus produces small hemorrhagic erosions on the intestinal wall. Both male and female worms inhabit the intestinal tract. The female worm is very fertile and lays eggs abundantly. These eggs are cast into the exterior world with the feces. As many as 4,000 worms have been found in one individual, and as many as 2,000,000 ova may be discharged in a single stool. Where proper conditions of soil, climate, moisture and oxygen prevail, these eggs readily hatch into larvæ. The larvæ are exceedingly minute, unseen by the naked eye, and are found in soil, drinking-water and food which may be polluted. The larvæ enter the body mainly through two channels: (1) with ingested food and water; (2) through the skin. It is the latter which is regarded by most authorities as the main avenue of entrance, more frequently the skin of the feet, because of the more ready and intimate exposure of these parts to the polluted soil by people going barefoot during the warm (which is the infective) season. The hands and arms are next in frequency as routes of entrance, but the larvæ may gain entrance through, any exposed surface with which they come in contact. The larvæ present in the skin produce an itching sensation accompanied by an inflammatory reaction, and sometimes secondary infection of other microorganisms may take place. This condition is commonly known as ground-itch or dew-itch. The larvæ, having pierced the skin, soon gain entrance to the lymph and blood-channels, through which they are carried to the heart, to reach the capillaries of the lungs. They then pass through the capillary walls into the alveolar spaces; from here they migrate through the bronchioles into the bronchi, and then crawl up the trachea to reach the mouth cavity, after which they are swallowed in ordinary acts of deglutition, eating, drinking, etc., and thereby reach the intestinal tract.

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* Read before the Florida State Medical Association, April 6, 1910.

### TREATMENT BY THYMOL

There is perhaps no drug whose action is more nearly a specific in the treatment of this disease than is thymol. There are, however, a group of cases, and those usually of the more extreme type, that are not relieved by thymol, and among a number of practitioners this drug has fallen somewhat into disrepute, and other drugs, such as betanaphthol and turpentine, have been substituted. The administration of thymol is not without some danger unless certain necessary precautions are observed. Severe intoxications have not infrequently occurred because of the improper administration of the drug by the profession as well as by the laity.

Further, in other instances thymol has been administered in such form as to pass through the intestinal tract *en masse* with no more effect than pellets of lead. For instance, there have been sent to the bacteriologic laboratory of the State Board of Health of Florida a few stone-like masses about the size of a small marble which were obtained from the stools of children suffering with hookworm disease which were regarded as a concomitant pathologic condition with uncinariasis. These on microscopic examination and chemical analysis proved to be pure thymol. It is self-evident that thymol in such form can have little or no theraputic value. Thymol in this case had been given in a pulverized state in ordinary capsules.

There is, too, a group of cases unrelieved in which thymol has been administered in mucilage of acacia, and in which no such masses as above stated are formed. At the Hookworm Conference in Atlanta, Ga., and in Tampa, Fla., to explain these unrelieved cases it was suggested that there must be some idiosyncrasy or a development of an immunity to the drug.

Now, to clear up these elements of doubt and put the treatment on a safe and rational basis, it is necessary to appreciate the following points:

1. The pharmacology of thymol.
2. The object to be desired in the treatment.
3. The best means of obtaining this object with highest therapeutic value, least dosage and least deleterious effects to the individual.

### PHARMACOLOGY

Thymol *(Thymus valgaris,* Linné) occurs in common thyme and several other plants and forms large, colorless, translucent rhombic prisms, having an aromatic, thyme-like odor, and a pungent thyme-like taste, with a slight caustic effect on the mucous membrane of the mouth. It melts at 50 centigrade, is soluble 1,100 parts of water and in less than its own weight of ether, alcohol or chloroform, and is soluble in glacial acetic acid, fixed oils and fats.

### TOXICOLOGY

The toxic effect of thymol is obtained when absorbed. These toxic effects are similar to those of the phenol series, but of a somewhat milder grade. In fact, thymol is closely related chemically to phenol, differing only in having a methyl and a propyl radical to replace two of the hydrogen atoms in the benzin ring. In poisoning from its use, locally there is a burning sensation in the stomach and slightly caustic effects on the mucous membranes of the intestines, producing intestinal irritation and evacuation of feces, nausea and vomiting. Tremors and convulsions are induced, though rarely, and less intense than those induced by phenol.

Fatty degeneration of the liver, marked congesti
and even consolidation of the lungs have been observe
In the milder forms of poisoning together with t
local mild caustic effects and burning sensation in t
stomach, there are tingling sensations over various par
of the surface of the body, tremors and muscular twitc
ings, which may go on to convulsions; in fact, t
patient may show any of the symptoms resulting fro
irritation of the anterior cord. In the more extren
cases of poisoning this is soon followed by collaps
while in others the stage of irritability may be misse
owing to the debility of the patient from disease. T
debilitated patients making up the greater group
those poisoned, the more frequent picture is that
apathy, collapse, paralysis and shock, in which stage t
patient may succumb. In the stimulating stage t
respiration and heart-rate are increased. In the sta
of collapse there is a slowing of both heart and respir
tion, the former being due to direct action on the hea
musculature.

Thymol has no toxic effects constitutionally unless
solution and absorbed. When absorbed it has absolute
no therapeutic value in the treatment of hookworm di
ease. The therapeutic value of thymol is confined e
tirely to its action on the worm in the intestinal tra
The worm is affected by thymol in crystalline form
well as in solution, and while the solution is more tox
to the parasite, the crystalline form is sufficiently tox
to paralyze or kill it, but it accomplishes this only
the individual crystals reach the individual worn
it is therefore evident that thymol passing through t
intestinal tract *en masse* can come in contact with rel
tively very few worms. The more widely disseminate
the individual crystals the more worms will they rea
and the higher the therapeutic value.

### METHOD OF ADMINISTRATION

Thymol has very strong adhesive properties, a
when placed in capsules, whether loosely or tight
packed, readily forms a conglomerate, stone-like mas
I was therefore led to experiment with thymol in ord
to determine how it might be administered to perm
the widest dissemination of its crystals. The drug wa
packed in capsules with different degrees of compa
ness, in finely and coarsely pulverized states. Acid
lated tap water was used as the solvent, and slight st
ring was done to imitate gastric conditions. It w
found that while some thymol went into suspensio
much of it formed solid lumps. Those packed loose
and in a finely pulverized state broke into several lum
about one-quarter of the amount going into fine suspe
sion; those packed loosely and in a coarser state we
a little better divided and suspended; those packe
tightly, whether fine or coarse, remained in almost t
same state. Cachets were then tried in a similar ma
ner, with perhaps a little better result, but not qui
all that was desired. It occurred to me that better r
sults might be obtained by triturating the crystals wi
a readily soluble substance and packing them loosely
cachets, so that when the drug reached the gastric me
struum the soluble intercrystalline substance would
into solution leaving the thymol in a finely divided a
widely disseminated state of suspension. Equal par
of milk-sugar was used as the triturating vehicle. T
results were all that could be desired.

Now while the form of administration, as is self-ev
dent, must modify the dosage required, and this fa
in a measure explains some cases of hookworm disea
not cured by thymol treatment, it does not explain a

ther group of cases treated with thymol put up in mu- llage of acacia, some of which it should be noted were f the extreme type. In some of these instances beta- aphthol had been used and in others spirits of turpen- ne, with varied results.

To explain these cases by an acquired tolerance or nmunity or some idiosyncrasy to the drug on the part f the individual seems to me to be fallacious. It should e remembered that the treatment of hookworm disease, 1 reality, is entirely confined to the worm and not to ie patient and since the individual as such is not eated, it would be absurd to speak of an immunity or ven an idiosyncrasy of the individual to thymol.

It seems to me that the explanation for the failure in ie group of cases of unsuccessful thymol treatment is ot to be found in a developed immunity or idiosyn- rasy of the patient or worm to thymol, but rather in me peculiar physiologic or pathologic conditions pre- nt, or in faulty administration which prevents the rug administered from reaching the parasite for effi- ent action.

The form of administration has been touched on in ie preceding; now let us see what physiologic or patho- gic conditions can prevail which might prevent thymol om coming in contact with the parasite. Theoretic- ly they are as follows:

1. A peculiar mucous or catarrhal condition of the small in- stines. The parasite in its effort to hold on to the intestinal ll may be well buried in such mucus, or in the thickened ucosa, thus preventing the drug from coming in contact th it.

2. A viscous or colloidal state of intestinal fluid which ight prevent intimate contact of crystals—for instance, a rge amount of bile present.

3. The parasites produce small hemorrhagic erosions on the testinal wall. When, as in the extreme cases, there are osions enough, thymol may set up considerable irritation, ich may produce vigorous peristalsis and thus propel the attached intestinal contents with a sufficient degree of pidity, to prevent the worm from being exposed long enough the drug to be much affected by it. (It might here be ted that in the cases unsuccessfully treated, a partial relief m the disease is always obtained through the thymol; that to say, a certain number of worms are killed or paralyzed d expelled).

4. The gastric or upper intestinal menstruum may be of a ture to dissolve the drug and permit of its absorption to a fficient extent to relieve the worm of its toxicity.

5. Thymol may be administered in a form so as to reach latively few worms, as discussed above.

6. In hookworm disease there is present generally, and in the vere cases always, an extreme of pot-belly, a great debility d a general enteroptosis. With a general enteroptosis and activity, dilatation of the stomach is a common association. is easily seen how a drug may lie for a comparatively long riod in such a stomach and fail to reach the parasite. Later, en carthartics are administered, the drug is propelled rough the intestines so rapidly as to prevent sufficient ex- sure of the worms to the drug for efficient action.

That all these factors can play a part in protecting the rasites from the drug must be conceded. The impor- nce of each factor would vary with each individual se, but of all these factors the last seems the more kely. I happened to see a case in a dog a few days o which would seem to bear out this conclusion. The terinarian in charge of the case gives the following story:

*History.*—A large English pointer of fine breed, three years d, considerably emaciated, extremely anemic and weak; icous membrane white; constipation and no appetite. March , 3 p. m., a half ounce of epsom salts given; no action. rch 25, 9 a. m., thymol, grains 25, given; 2 p. m., half ounce of epsom salts given; no action. March 26, 8 a. m., castor oil, drams 2; no action. March 26, 11 a. m., I saw the dog for the first time. Its condition was as follows: paralysis, shock, slow heart, slow respiration, fall of temperature, later followed by coma. Rectal irrigations were then given; strychnin, brandy and salt solution were injected subcutaneously. The dog sank slowly and died several hours later.

*Autopsy.*—General paleness and extreme anemia of all tissues and organs; heart-filaria fifteen in number; stomach full and greatly dilated; pyloric end closed; stomach contents thin, watery fluid; some solid remnants, hairs, etc., and remnants of cachets. The entire intestinal tract was extremely pale and literally covered with hookworms, even the rectum. The mucosa was much thickened with numerous hemorrhagic erosions scattered over it. In this thickened mucosa many of the worms were well buried and obtainable only by scraping with a knife.

Here is a case, if we can use this as an experimental one, of an intestinal system so depleted of blood and debilitated by disease that there was not sufficient power remaining to propel the stomach contents into the intestines. The dilation resulting offered an excellent reservoir for all material ingested. Water was not absorbed because of the epsom salts present. The castor oil administered dissolved what thymol was present in the stomach permitting its absorption, producing the poisoned condition in which the dog was found, and so debilitated was the animal from disease that it could not withstand the intoxication.

This danger in the treatment can be overcome to some extent if the patient be placed on the right side in bed (after administering thymol) as recommended by Stiles. This will permit mechanically more ready passage of stomach contents through the pylorus and incidentally a good deal of the burning sensation of the stomach will be avoided.

## TREATMENT

The patient should have nothing to eat from noon of the day previous to the administration day of the thymol. On this day and the day following, fat of any kind, milk, cream, butter, bacon, etc., should be avoided. Whiskey, beer, wine and oils are absolutely interdicted, as all these can dissolve thymol. Early in the evening of the first day sufficient epsom salts should be given for efficient purgation. It is important that the bowels should be well moved. Early next day the dose of thymol decided on should be divided into two parts and given one hour apart. It is best administered in cachets triturated with equal parts of milk-sugar, and before using the cachets should be well softened in water until they are of the consistency of a raw oyster. It is best to put the patient to bed, on the right side. The thymol should be retained for from two to five hours, unless distress or symptoms of intoxication occur. (H. F. Harris, Atlanta, Ga.) Epsom salts should then be used for flushing the bowels and expelling the drug. The following dosage as outlined by the State Board of Health of Florida is considered safe to use:

| | |
|---|---|
| Under 5 years of age | Up to 8 grains |
| 5 to 10 years of age | 8 to 15 grains |
| 10 to 15 years of age | 15 to 30 grains |
| 15 to 20 years of age | 30 to 45 grains |
| 20 to 60 years of age | 45 to 60 grains |
| Over 60 years of age | 45 grains |

In determining the size of the dose the apparent age and the real weight of the child should be considered. The condition of the heart, the degree of debility and anemia should also be considered. And where these latter conditions prevail to any extent small doses are indicated. The nauseating effects of epsom salts can be considerably lessened if dissolved in the smallest quantity of warm water possible and swallowed. This to be then followed by a large quantity of any mild fluid, even water. The mixing thus takes place in the stomach instead of in the glass. The patient may begin to eat after the bowels are well moved on this day. It is best that they should eat sparingly and avoid distress from engorgement. The same precautions should be observed on this day regarding fats, oils, alcohol, etc.

Once the worm is eradicated, fresh air, sunshine, plenty of water and proper food are the chief requirements for the treatment of the anemia of hookworm disease. Iron, arsenic, tonics and ferruginous vegetables are indicated. The patient should be treated at intervals of one, two or three weeks until the stool is free from eggs or parasites. The more debilitated patients should be treated at longer intervals.

Betanaphthol is not so toxic to the parasite as thymol, but has a more toxic action on the kidneys. The anthelmintic properties of turpentine are less than those of thymol; besides turpentine is less desirable because of its ready absorption and liability to produce an acute nephritis. Pressed thymol tablets should never be used.

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# REMOVAL OF NEOPLASMS OF THE URINARY BLADDER

## A NEW METHOD, EMPLOYING HIGH-FREQUENCY (OUDIN) CURRENTS THROUGH A CATHETERIZING CYSTOSCOPE*

EDWIN BEER, M.D.

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NEW YORK

This brief preliminary report is written with the object of calling the attention of the profession to a new and simple method of destroying new growths of the urinary bladder. Even though my experience is not extensive, limited as it is to two large papillary growths, still the observations made leave no doubt in my mind that the Oudin current, employed as I have employed it, will prove effective in the cure of benign papillomata, as well as useful in malign tumors, papillomatous or not, both as a hemostatic and as a cauterizing agent.[1] My experiences also suggest the usefulness of these currents in many other conditions both in the bladder and in other parts, e. g. tuberculous ulcers of the bladder, prostatic hypertrophy, growths in the urethra, etc.

In March, 1908, I hit on the idea of using the high-frequency current as I now use it. Expert electric manufacturers told me I could not obtain the effects I desired through a water medium; that an air gap was necessary. Moreover, that if I used the current as I intended, it would burn out my cystoscope. Others who had experience with these currents in skin conditions were equally pessimistic. Despite these opinions I ordered from the manufacturer a thoroughly insulated cable, No. 6 French caliber, so that it could be introduced readily through the catheter tunnel of a Nitze catheterizing cystoscope. My experimental work was confined to the removal of skin warts through a water medium I soon convinced myself of the efficacy of this therapy, despite the absence of an air gap. I also teste my Nitze cystoscopes and found that they stood the te perfectly. They were not burned out and I could rea ily see what was going on at the end of the electro though very rarely an insignificant variation in the i tensity of the light occurred.

Through the courtesy of Dr. A. G. Gerster, I wa able to try out this new method in an inoperable tum of the bladder in a woman of 81. In a second cas that of woman of 66, I employed this method als Both patients were troubled with hematuria. In th second case the bleeding was very active, while in th first case it was moderate when the treatment was be gun. As my experiences in these cases were highly sati factory, I hasten to lay them before the professio that others may avail themselves thereof.

### TECHNIC, ETC.

*Instruments*—1. I employed the Oudin current d rived from a Wappler machine, placing the rheostat v tically so that one-half the resistance was thrown in the circuit. The spark gap in the muffler was approx mately 1/10—⅛ inch.

2. Nitze, double-catheter cystoscope was used. In o catheter tunnel, I placed the electrode introducing just as one introduces a catheter while to the oth catheter tunnel I attached a tube for irrigation.

3. The electrode was a simple 6-ply cable of copp wire thoroughly insulated with rubber and cut o squarely at the vesical end. It measured No. 6 Frenc and was made for me by the Wappler firm.

*Application*—The applications were made directly t the growth, the electrode being pushed a short distan in among the villi under the guidance of the eye an then the current was turned on for fifteen to thirt seconds at various points. The bladder was distende with distilled water. Experience may show that som other medium is preferable in view of the fact tha ionization with magnesia appears particularly effective i removal of skin papillomata.

### EFFECTS AND RESULTS

The immediate visible effects are very striking. N spark is seen even when the full current is thrown o without any resistance. While the current is on gas i generated quite freely and is seen bubbling out of th growth. If the point of application is superficial w can readily see a blanching of the tissues about th point of application; and at the spot where the elec trode's point rested, the tissues are blackened—carbon ized. As the electrode is withdrawn from the growth very frequently it is found to be adherent to the vill and as it is pulled on, the whole tumor moves with th electrode, which finally comes away with a piece of th tumor well baked to its vesical end.[2] This is only rarel followed by bleeding and a reapplication of the curren at the same spot controls this bleeding. The great hea generated melts the insulating rubber at the end of th electrode so that one has to cut it off squarely from tim to time, to prevent the wires from protruding freely an injuring the bladder wall.

In the second case the very first application of th current controlled the bleeding to such an extent tha cystoscopy, which had been almost impossible, owing t the excessively rapid clouding of the medium from th arterial bleeding, became fairly easy. Eight applica tions at one sitting to various parts of the growth, ag regating in all four minutes, controlled the bleeding. n the first case, the hematuria was equally well conrolled, but the result was less striking than in Case 2, n which the severe hemorrhage ceased at once and inensely bloody urine gave way to normal yellow urine.

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* From the First Surgical Service of Mount Sinai Hospital.

[1] In early cases of malignant disease a complete destruction may be possible

[2] These fragments have been used for microscopic examinatio

Such applications of fifteen to thirty seconds seem to ause a very well-marked necrosis, which is in part due o the heat engendered. Other factors probably conribute to the final result. How much ionization, elecrolysis and other factors contribute, I cannot state as et. By making applications at eight to twelve differnt points in the two large tumors treated, a total necrois of all the villous outgrowths followed with absoute cessation of hematuria. Gradually during three to ve weeks the dead tissue separated from the healthy nd the tumors were expelled in small masses, as the nucous membrane gradually grew in around the base f the dead tissue.[3] No ulcers were visible at any time. The treatment caused no more discomfort than an orinary cystoscopy. The bladder mucous membrane was ut little affected by the application though some conestion and trigonitis developed in the vicinity of the rowths.

At some future date, I shall report these cases in full, hich is hardly necessary for this preliminary note.

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# NIMAL EXPERIMENTATION IN RELATION TO PRACTICAL MEDICAL KNOWLEDGE OF THE CIRCULATION*

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(*Continued from page 1684*)

## . *MODERN VIEWS OF AND METHODS OF STUDYING DISEASES OF THE CIRCULATION*

In Part I of this paper the attempt has been made to esent in the briefest possible form the fact that we ve our knowledge of the circulation primarily to anial experimentation. This paper has been written for e purpose of showing the practical bearings of the owledge so gained on our understanding of certain ases of human pathology.

There could be no more emphatic way of bringing home the practicing physician the practical results, so far the cardiovascular system is concerned, that have crued through the application to human pathology of e results of experiments on animals than to transcribe full for his consideration the parts dealing with disse of the blood-vessel system, first, from some work at was standard before the Renaissance, i. e., before e importance of animal experimentation was fully alized, and, secondly, from a work that is standard -day, calling attention to the differences between them d indicating how far such differences are due more or s directly to experiments on animals. Unfortunately, wever, the limited scope of this paper precludes the full treatment of the subject in this way. I must, therefore, content myself for the present with brief extracts and discussions which, it is hoped, will furnish the reader material about which he may group his own ideas on the subject. It should be added that the extracts given below have not been selected at random, but only after careful consideration and as representing the views which, in my opinion, are in closest accord with those of the most enlightened thought of the time.

I select as the work from which to quote the views held prior to the revival of learning, "The Seven Books of Paulus Ægineta with a Commentary Embracing a Complete View of the Knowledge Possessed by the Greeks, Romans, and Arabians on all Subjects Connected with Medicine and Surgery,"[1] which dates from the seventh century. This work has been selected, first, because of its accessibility, and, secondly, because it purports to be a more or less complete compendium of the then known medicine.

The section on the heart is brief and may be quoted practically without abbreviation:

> When the heart itself is primarily affected, the case is far beyond all medical aid, occasioning sudden death; and also in the inflammations and erysipelas of it, strong distempers in very acute fevers, and hemorrhages when it is wounded, especially in the left ventricle. When it is affected sympathetically with the brain, the liver, the orifice of the stomach, and from sorrow, fear, and many other causes, it brings on the affection called syncope, being a sudden collapse of the vital powers, indicated by prostration of strength, delinquium animi, a small pulse, coldness of the extremities and copious perspiration. When this affection is of a violent nature, it also is irremediable; but if the strength stands out, it may sometimes be relieved. But strong palpitations of the heart often arise from a fulness or effervescence of its blood. When, therefore, the heart is overheated, it renders the respiration large and dense, but when it is too cold, the respiration is small and rare. The complete cure of syncope of the heart, when it occurs among the symptoms of fever, we have treated in the Second Book. This only may be added, that when collapse gains ground after friction and ointments have been applied to the extremities, and after purification of the floor, and other cooling means, we must sprinkle on the parts of the body which are sweating powdered myrtle, limolian earth, or amber, or pomegranate-rind with marena, or Samian earth with gum; and cataplasms of mustard or pellitory, adarce, are to be applied to the cold extremities, as far as to the groins and armpits. The food should be bread out of water, or out of cold diluted wine, swine's feet and joints and snout, and fowls; all things to be given in a cold state. . . .[2]

Under the topic of "palpitation of the heart" there is found the following interesting passage:

> "I knew a certain person," says Galen, "who suffered an attack of palpitation of the heart every year in the season of spring. Wherefore, having for three years experienced benefit from venesection, in the fourth he anticipated the attack by getting bled, and so escaped from it, and did so for many years afterwards, using at the same time a suitable diet. And yet even he died before attaining old age, as every other person in this complaint does, some being suddenly cut off in acute fevers by syncope; but some of them without syncope, being unexpectedly deprived of life, as if by apoplexy. The majority of those who are thus affected do not reach the fiftieth year of age, but pass the fortieth."

Finally the ideas held by Paul of Ægina in regard to dropsy are set forth in the following passage:

> Where the liver is greatly congealed, sometimes primarily, as when it has been inflamed, indurated, or otherwise affected, or when from sympathy with other parts the process of sanguinification ceases, and the affection is called dropsy. . . . But, for

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* This paper is one of the series prepared for and reprinted by Council on Defense of Medical Research of the American Medi- Association for circulation among the public. Fourteen of these nphlets are now ready, taking up the relations of animal experintation to ethics, diagnosis, cancer, vaccination, the live stock ustry, tuberculosis, typhoid, dysentery, plague, rabies, surgery, ernal secretions, the circulation of the blood, protozoan tropical eases, etc.

[3] If the flat base of the growth remains after the sloughing of necrotic villi, these small areas must be treated in turn ectly, to produce a cure. To avoid perforating the bladder, rter application of fifteen seconds should be used here, such as sed in Case 1.

[1] Transl. by Adams, London, 1844.

[2] Paul of Ægina: Seven Books . . . , i, 501.

> the most part, it arises from hardness and scirrhus about the spleen and liver, and from chronic deflexions about the intestines; whereby it happens that the belly is swelled, while the rest of the body is melted owing to its not being nourished. . . . Sometimes throughout the whole body a colder and more pituitous blood is collected, either coming from the liver, or deriving its origin from a melting down of the flesh of the whole body, which is as it were converted into water. . . . In treating these complaints, we commence generally with evacuation; but in ascites and tympanites it is by administering hydragogue medicine; and in anasarca by blood-letting. . . . When those who have ascites are not benefited by any of the remedies already described, we must have recourse to paracentesis, which does not apply to any of the other varieties of dropsy.[3]

The quotations cited above show that the theory and practice of the time of Paul of Ægina, which are not to be scoffed at, are based on the physiology of Galen, who, by some, is considered the founder of physiologic experiments, carefully planned and executed.[4] It will do no harm to call attention again to the fact that the first careful experimenter, and the last to experiment prior to the Renaissance, was the authority of all practitioners through the long period of the dark and middle ages. And, it may be added, that so far as Galen's followers expounded views that were the result of experiments on animals, just so far were they indebted to animal experimentation for their clinical knowledge. It would carry me too far afield to attempt a detailed exposition of this dependence.

Nor is the modern practitioner any less dependent on the results of animal experimentation than were his predecessors.

> The problem for a physician to solve when confronted with a case of circulatory disease is, which of the many factors in the maintenance of the circulation are at fault? . . . The factors in the normal maintenance of the circulation are: an efficient myocardium with a sound directing innervation, efficient and unobstructing valves at the atrioventricular and arterial orifices, an aorta and branches of suitable caliber with elastic walls.[5]

The part that animal experimentation has played in determining this problem may be made clear by paraphrasing it to suit our purposes, thus: The animal experiments of Harvey, Malpighi and others have demonstrated that in animals the blood is propelled through the blood-vessels in a circle through the pump-like action of the heart, whose active tissue consists of muscle (experiments of Harvey,[6] Stenson[7] and Borelli[8]), not of parenchyma.[9] Clinical experience, viewed in the light of Harvey's experiments, has shown that in man, too, the blood circulates. In disease of the cardiovascular system the circulatory mechanism does not work properly. What is at fault? It may be Harvey's force-pump, not the (mainly) suction-pump of the earlier writers. The pump may fail to work efficiently through unfavorable action of the nerves which regulate its movements. That the nerves of the heart do not determine its action was demonstrated by the experiments of Haller[10] (1757); that the work of the automatic heart is regulated by its nerves was demonstrated by the experiments of the Weber brothers[11] (1845), who discovered the tonic action of the vagus mechanism, and von Betzold[12] and Cyon,[12] who determined through a mal experimentation the action of the accelerator ner The contracting myocardium can move the blood in circle only through the medium of the valves of t heart. It is obvious that any one familiar with t structure of the valves could easily infer their mecha cal action, provided the information was at hand as whether the heart acted after the fashion of a for pump or a suction-pump or both. Erasistratus seems have been familiar with the action of the valves, b swayed as he was by the belief that the heart alt nately took in and expelled materials, his knowled served neither his contemporaries nor his successors a useful purpose. After Harvey had, however, demo strated the true action of the heart and after this acti had been more convincingly demonstrated by the anim experiments of Marey[13] and others, further experime were needed only for the purpose of working out t finer details of the valvular mechanisms. The need "efficient and unobstructing valves" became obvio The mechanical advantages of elastic tubing in t maintenance of the circulation were pointed out by t animal experimenter, Borelli,[14] and the whole questi was studied in greater detail by S. H. Weber[15] (1850

All of the factors in the maintenance of the circul tion, then, which a modern clinician considers of pri importance have been brought to light directly or ind rectly through animal experiments.

Pre-Harveian treatises on diseases of the blood-ves system, therefore, differ from modern works on t same subject in at least two fundamental respects: The foundation of the latter consists of a clear conce tion of the function of the parts concerned, this conce tion being based for the most part on demonstrat facts. 2. It is recognized in modern treatises th disease is due to disturbed function.

It is interesting to trace in somewhat greater det the effect that the discovery of the circulation of t blood and the consequent renewed activity in experime tal physiology had on the discovery of diseases of t heart. It has been shown that before the time of Ha vey diseases of the blood-vessel system received ve scant mention in the standard texts. Excepting treati on the pulse and on bleeding, the writings on the subje were very scant indeed, while but very few distin diseases were recognized. Of diseases of the heart a symptoms, mention is made in pre-Harveian literatu only of hydrops pericardii, syncope, palpitation, erysip las, abscess, tumors and wounds, the mythical *cor hirs tum,* and, late in the sixteenth century, dilatation, a these conditions were very imperfectly understood.

On the other hand, within the hundred years who beginning is marked by the publication of Harvey tract (1628) distinct progress toward the modern co ception of cardiovascular disease can be discerned. Ha vey himself describes a case of rupture of the left ve tricle, and a case of *cor bovinum* with dilatation of t aorta, together with the symptoms during life. Lowe one of a trio of brilliant animal experimenters of Ha vey's time, discusses hydropericardium as a result venous stasis, and also a case of adhesive pericarditis. Cooper described aortic insufficiency and appreciated i

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[3] Paul of Ægina: Seven Books . . . , i, 569.

[4] Neuburger and Pagel: Handbuch der Geschichte de Medizin, i, 572.

[5] Hoover: In Osler's Modern Medicine.

[6] Harvey: De Motu Cordis.

[7] Stenson: De Musculis . . . , 1664. Quoted in Neuburger and Pagel: Handbuch der Geschichte der Medizin, ii, 343.

[8] Borelli: De Motu Animalium. 1681. Quoted in Neuburger and Pagel: Handbuch der Geschichte der Medizin, ii, 344.

[9] See Ozanam: La circulation et le pouls, Paris, 1886, p. 75.

[10] Quoted by Howell: Text-Book of Physiology, 1905, p. 496.

[11] Quoted by Howell: Text-Book of Physiology, 1905, p. 513.

[12] See Richet's Dictionnaire de Physiologie, 1900, p. 103.

[13] Trav. du laboratoire de Marey, 1877, iii.

[14] Borelli: De Motu Animalium, 1681. Quoted by Neuburger a Pagel: Handbuch der Geschichte der Medizin, ii, 336.

[15] Abstr. in Luciani: Lehrbuch der Physiologie, i, 191.

[16] Lower, Richard: Tractatus de Corde, 1669. Quoted by Ne burger and Pagel: Handbuch der Geschichte der Medizin, ii, 634.

gnificance.[17] The same lesion as well as stenosis of
ie mitral orifice, with an ingenious explanation of the
ulse quality in that disease, as well as many other
nteresting references to cardiac disease encountered in
ie course of his practice, are mentioned by Vieussens
a work devoted primarily to the normal structure and
mctions of the heart.[18] Finally, in a work on the
ovement of the heart and on aneurisms, Lancisi makes
any important contributions to cardiac pathology and
thologic physiology.[19] Besides making many other
luable additions to our knowledge, he ascribes sudden
ath to structural defects, mechanical obstructions and
ervous diseases of the heart. He is the first to call
tention clearly to the significance of engorgement of
ie veins of the neck in dilatation of the right cavities
the heart, a diagnostic sign of great importance which
uld not have been comprehended had Lancisi had at
s disposal only the ancient view that the veins and the
ood originate in the liver. In this connection he
eaks of tricuspid insufficiency. He also understood
most perfectly the symptoms of dilatation of the heart
id their cause.

The most important of the early works on diseases of
e heart appeared, however, something over a century
ter than Harvey's great contribution. This is Senac's
Treatise on the Structure of the Heart, on its Action
id its Diseases" (Paris, 1749). Perhaps the most
riking feature of this work is its modernness. There
no difficulty in comprehending the conditions
scribed by the author; so modern are the thoughts
at the reader can hardly believe that he has before
m a work written over one and one-half centuries ago.
am of the opinion that Senac's pre-eminence in the
ld of cardiac pathology must be attributed largely to
s grasp of the anatomy and physiology of the heart.
owever this may be, it is not without significance that
the two large volumes Senac has written on this sub-
ct about one and one-half are devoted to an exposition
the anatomy and physiology of the circulation.

Of his many important contributions, space will per-
it of reference to but one. To Senac must be attrib-
ed the recognition of the venous pulse as a diagnostic
gn. At the same time he recognizes the most impor-
nt factor in its production. Speaking of dilatation of
e right auricle, he says (p. 411): "It is evident that
atation of the vena cava should be no less frequent;
e blood is pushed with force when contraction dimin-
ies the cavity, and this is the cause of a singular
enomenon; the jugular veins beat with regularity.
. . ." Whether Senac was here dealing with the
lse produced by a hypertrophied right auricle or by
gurgitation through the tricuspid orifice cannot be
termined. From our standpoint, however, it matters
tle, since in either case the phenomenon, without a
owledge of the "motion of the heart," would have been
thout significance as a diagnostic sign.

At about the same time Morgagni,[20] the father of
thologic anatomy, called particular attention to the
chanism of the circulatory disturbances caused by
vular lesions and explained the symptom of cyanosis
a congestion of blood.

### DEVELOPMENT OF CLINICAL METHODS

Through animal experimentation coupled with inferences from anatomy, the circulation of the blood in animals was demonstrated. Observations on human beings sufficed to show that the results of animal experiments were applicable to man without change. And finally clinical conditions were gradually recognized in the light of normal function and a more logical classification of disease became possible. Except, however, the relation between right-sided lesions and venous engorgement and pulsation, exact methods of recognizing pathologic conditions in living man were, aside from the evident symptoms exhibited by the patient, almost entirely lacking. It is to the relation which the development of these methods bears to animal experimentation that attention will next be directed.

At the outset it should be made clear that the problem of developing methods must, from the nature of the case, be largely clinical, since what are desired are methods for the detection of conditions which are commonly seen in man, and rarely in animals, and which may be studied in animals usually only after the diseased condition as disclosed in man has been reproduced in animals.

The methods now employed by the physician in his effort to detect deranged function of the organs of the circulation are usually classified under the heads of inspection, palpation, percussion and auscultation. Three of these principles, namely, inspection, palpation and auscultation, are as old as the seeing eye, the feeling hand and the hearing ear. Their origin, therefore, bears no relation to animal experiments. The same statement is not, however, true of their subsequent development and elaboration. The eye must be trained to see and the hand to feel. Few of us are gifted with the power of seeing or feeling what others before us have failed to see or feel. Yet the eye or hand when provided with a working hypothesis or a demonstrated fact can often discover or discern phenomena which otherwise might have escaped them entirely. For instance, Galen, than whom the world has had no keener observer, must frequently have watched the beating heart exposed in animals—he actually records having seen the beating heart of man, exposed by disease—yet he failed to recognize what Harvey discovered in the same way, but probably with his working hypothesis more or less fully developed, namely, that the active phase of the heart's motion, and the phase corresponding with the pulse in the arteries, is its systole and not its diastole. To the student of to-day, guided, as he is, by demonstrated fact, it is almost inconceivable that any one could for a moment have held any but our present view in regard to the motion of the heart.

#### *Inspection*

And so it is that to-day pallor, cyanosis, dyspnea, pulsation in the veins and arteries, as well as many other visible signs of disease are quickly recognized even by the beginner and their significance almost as quickly grasped.

Whereas pallor now, and as was probably the case even at the time of Hippocrates, denotes bloodlessness, we of to-day have learned to distinguish between pallor of several different origins; for example, the pallor of anemia, of deficient heart action (of nervous origin),[21] of deficient vasomotor tone in the splanchnic area,[22] the two

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7. Cooper: Phil. Tr., London, 1705, No. 299. Quoted by Gibson: Osler's Modern Medicine.
8. Vieussens: Traité nouveau de la structure et des causes des ements naturel du cœur, 1715.
9. Lancisi: De Motu Cordis et de Aneurysmatibus, Rome, 1728. oted by Neuburger and Pagel: Handbuch der Geschichte der lizin, ii, 635; and Rosenstein: in Ziemssen's Handbuch, Ed. 2, 9, vi.
0. Morgagni: De Sedibus et Causis Morborum, Ven., 1761. oted by Ziemssen: Handbuch der speciellen Pathologie, etc., Ed. 1879, iv.

[21] Goltz: Virchows Arch. f. path. Anat., 1863, xxvi, 11.
[22] Ludwig and Cyon, 1866. Quoted by Luciani: Lehrbuch der Physiologie, i, 281.

latter conceptions arising out of animal experiments, and the pallor of localized vasomotor overaction,[23] likewise a conception which the clinician owes to physiologic experiments. The ability to distinguish these and other types of pallor is not merely an accomplishment devoid of all practicality; rather it is through this ability that the practitioner is placed in a position to discover causes and to remove them by means of rational treatment directed specifically to them and, if it is so desired, to nothing else.

To be somewhat more specific, I shall quote for purposes of illustration a passage from Paul of Ægina. Under the title of "Deliquium Animi or Swooning" (one of the topics treated under "Fevers") this author says:[24]

> Several strong ligatures are likewise to be applied; when the evacuations are downward, to the arms, and, when upward, to the legs. The patients are also to be placed in an easy erect posture, and a cupping instrument applied, so as to produce revulsion to the opposite part of the body. . . .

It is quite unnecessary to call the attention of the reader to the points at which the above (which probably is largely Galen's) treatment is at variance with ours, which is dependent on modern conceptions, both mechanical (Spallanzani[25] (1729), Haller,[26] and others) and vosomotor (Bernard[23] and others) of the circulation.

Cyanosis, too, has always been recognized; but how, in the absence of facts brought to light by animal experimentation, could the distinction be made between the cyanosis of acquired heart disease, where it always is an indication of back-pressure into the veins from a congested right heart,[20] the cyanosis of insufficiently aerated blood (Lower, Mayow and Guericke, Lavoisier and others[27]) and the cyanosis of local asphyxia, probably of vasomotor origin (Bernard,[23] Thompson[28] and others).

Dyspnea as a symptom of cardiovascular disease is occasionally hinted at by the early writers. Thus, Paul of Ægina says: "When the heart is overheated it renders the respiration large and dense, but when it is too cold the respiration is small and rare."[29] This relation between the heart and the respiration was probably suggested by the Galenic doctrine that the main functions of respiration were to remove from the body the fuliginous vapors and to cool the blood which is warmed by the innate heat of the heart. That there is an element of truth in this doctrine cannot be denied (and we should not lose sight of the fact that this, in large part, is the fruit of animal experiments), yet it is evident that such a view would have been entirely inadequate to bring to light the true clinical significance of cardiac dyspnea. Deficient internal respiration due to slowing of the blood-stream (a sequel to the demonstration of the circulation) and engorgement of the lungs, on which depends also the hemoptysis of heart disease (Albertini[30]), now account quite satisfactorily for this condition and suggest lines of treatment.

### *Palpation*

The way in which the animal experimenter has helped our hands to feel for clinical states also may be illustrated by a few examples.

From time immemorial the pulse has been held t have great diagnostic value. Indeed, until quite recentl and even now in some parts of the world, China, fo instance, a great deal more significance was or is attri uted to the pulse than is justified by experiment. Th result was that classification of the pulse was carried to degree of refinement that is bewildering. Thus, Sanct rius, in 1625, recognizes seventy-three significant kind of pulse.[31] His time probably marks the pinnacle pulse analysis. With the advent of careful experiment methods, as laid down by Harvey, and largely throu the efforts of experimentalists, the Weber brothers[32] particular, and down even to the present day[33] the number of significant varieties of pulse has constantly dimi ished. And, what is of far greater interest, the signi cance of the few varieties now recognized has become fa more definite. The first step toward this simplificatio was made by Harvey when he recognized the right rela tion between the contraction of the heart and the puls in the arteries. Paul of Ægina thus explains th Galenic view of the pulse:

> The pulse, is a movement of the heart and arteries, takin place by a diastole and systole. Its object is twofold; for by th diastole, which is, as it were, an unfolding and expansion the artery, the cold air enters, ventilating and resuscitatin the animal vigor . . .; and by the systole, which is, as it wer a falling down and contraction of the circumference of th artery towards the center, the evacuation of the fuliginou superfluities is effected. . . . They (the arteries) arise from th heart, and are distributed to all parts of the body, and, ther fore, all the arteries pulsate in a similar manner and like th heart, so that from one of them you may judge concerning the rest.[34]

The fact that "all the arteries pulsate in a simila manner and like the heart" is the very foundation of th diagnostic significance of the pulse. Naturally, howeve the errors in the Galenic conception dragged into medicine along with them many misconceptions with rega to the mechanism of the pulse, and consequently led th physician to feel events which actually do not transpir For instance, we find that, in accord with the idea tha the pulse consists of an active systole and an even mor active diastole of the artery itself, the Galenists divide the time of rest between pulses into the diastolic rest an the systolic rest. With the adoption of the views on th pulse as determined by Harvey, by the Weber brother animal experimenters, and with the invention of the firs practical sphygmograph by animal experimenter (Vierordt[35] and Marey) the clinicians came into th right conception as to the form and time relations of th pulse: the distinction made by the Galenists, which now know to be without foundation in fact, is no longe taught. The chief value of the sphygmograph, it shoul here be added, does not consist in the means it affords of making for purposes of study a graphic record of th pulse, although this result is not to be undervalued rather it is that the knowledge of the true form of th pulse-wave as determined with the sphygmograph make it possible for the student to discern more easily and value by simple palpation what otherwise he might neve or only after diligent application, learn to discover.

It may reasonably be doubted whether the Galenist had any clear ideas in regard to pressure and pressur variations in the arteries and veins. It is true that their classification of pulses they speak of the "consistence of the body of the artery"[36] and distinguish three varieties thereof, namely, hard, soft and moderate; yet it cannot be made out from the context whether "consistence" is a property of the arterial wall proper or one imparted to it through the pressure of the blood in the lumen.

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[23] Bernard and Brown-Séquard, 1851-2; Quoted in Schäfer's Text-Book of Physiology, 1900, ii, 131.

[24] Paul of Ægina: Seven Books . . . , i, 327.

[25] Quoted by Ozanam: La circulation et le pouls, p. 110.

[26] Quoted by Neuburger and Pagel: Handbuch der Geschichte der Medizin, ii, 351.

[27] Neuburger and Pagel: Handbuch der Geschichte der Medizin, ii, 341 et seq.

[28] Thompson: Jour. Physiol., 1894, xvii, 120.

[29] Paul of Ægina: Seven Books . . . , i, 501.

[30] Neuburger and Pagel: Handbuch der Geschichte der Medizin, ii, 636

[31] Quoted by Ozanam: La circulation et le pouls, p. 49.

[32] Quoted by Neuburger and Pagel: Handbuch der Geschichte d Medizin, ii, 373.

[33] Frank: Ztschr. f. Biol., 1905, xlvi, 441.

[34] Paul of Ægina: Seven Books . . . . i, 202.

[35] Vierordt: Die Lehre vom Arterienpuls in gesunden u kranken Zuständen, Brunswick, 1855.

However this may be, we owe to the Rev. Stephen Hales[37] the demonstration, by means of his classical experiments on animals, of the pressure in the arteries and veins and some of their variations. These experiments, multiplied and analyzed by subsequent investigations (Ludwig,[38] Marey[39] and others), gave to the practitioner a new clinical idea, that of attempting to determine by palpation the degree of arterial tension and to correlate tension with the clinical picture as a whole.

It was Traube who introduced the term "tension of the arterial wall" into the clinic. He had so often felt of the exposed artery of animals and had so often compared this with the pressure as measured by a manometer connected with the artery that he was in a position to estimate through palpation alone the pressures in man.[40] But Traube's method of training the touch is not a practical one for general use. Furthermore, palpation of pulse tension, like palpation of pulse form, had to be controlled and taught with the aid of some instrument of greater precision than the finger. The sphygmomanometer, the first practical form of which was devised by an animal experimenter and clinician (von Basch[41]), and which has been tested by animal experiments, was the result of this need. With this instrument Cushing,[42] guided by experiments performed on animals, discovered not only a sign of intracranial hemorrhage, but also a signal for operative interference in that condition. Most of the work in this field, however, is so recent that it is hardly necessary to refer specifically to other practical results that have come of it in the diagnosis, prognosis and treatment[43] of cardiovascular disease. I cannot refrain, however, from making a brief reference to a recent report by Williamson showing the prognostic value of blood-pressure estimations. Of seventeen patients with a blood-pressure over 200 mm. Hg. (the normal is about 120) Williamson was able to keep track of thirteen. Of these, eight had died within from two to three years.[44]

Neither inspection nor digital palpation sufficed for the correct analysis of the venous pulse. This was not possible until we had at hand the results of animal experiments (Riegel,[45] Frédéricq,[46] Porter[47] and others) and until such results had been applied practically in the analysis of the human venous pulse (Riegel,[45] Mackenzie,[48] and others) through the use of graphic methods primarily developed by animal experimenters (Ludwig, Marey and others). This whole subject is so new that it is quite unnecessary to remind the clinician of the practical results in the diagnosis of cardiac disease that have accrued therefrom.

### *Percussion*

The direct object of percussion is anatomic rather than physiologic; it seeks to determine the limits of organs and the nature of their contents. Its indirect object, however, is to discover disturbed function. It therefore follows that the intelligent interpretation of the secrets brought to light by percussion can be made only by one who is familiar with the physiology, normal and pathologic, of the organs of the body. I quote in this connection the views on this subject held by Corvisart, the practitioner first to employ intelligently the method of percussion for the purpose of discerning cardiac disease. In his epoch-making work, in which are set forth the results of his clinical observations, Corvisart first discusses the relation of the development of anatomy and of pathologic anatomy to diseases of the heart and then proceeds to say:

> But it were very erroneous to think morbid anatomy sufficient to accomplish this end; it is quite the reverse; the physician who does not unite physiology [when I say physiology, I mean, once for all, the physiology of experience and observation (ever-cautious of the too easy indications from analogy) but not the systematic physiology which is often supposing, and constantly explaining] with anatomy will ever remain a more or less dextrous, industrious, and patient inquirer, but he will never become a firm and decisive practitioner, particularly in the treatment of the organic lesions.[49]

The facts brought to light by percussion, then, are, in the opinion of the founder of cardiac nosology, of the greatest significance only when viewed from the standpoint of experimental physiology.

### *Auscultation*

Who, if not the practicing physician, would be expected to discover the sounds emitted by the beating heart? The nature of his work requires that the clinician keep alert all of his senses in his effort to bring to light the diseases he may encounter in his practice. The time and energy devoted to human beings for this purpose far exceed those devoted to animals. Yet Harvey, animal experimenter, as well as clinician, seems to have been the first to call attention to the fact that, simultaneously with pulsation, a sound can be heard in the chest.[50] To the practitioner Laennec, however, belongs the credit of developing clinical auscultation.[51] Whether or not Laennec himself performed experiments on animals I have been unable to determine. As a pupil of Corvisart (see above) he must, however, have taken at least an active interest in experimental physiology. That he did avail himself of the results of animal experimentation in the interpretation of auscultatory phenomena is seen in the following quotation, which at the same time will serve to indicate that had Laennec had just a little more first-hand knowledge of the action of the heart he might have succeeded in making a better interpretation of the facts revealed by his clinical observations.

> At the moment of the arterial pulse the ear is slightly elevated by an isochronous motion of the heart, which is accompanied by a somewhat dull, though distinct sound. This is the contraction of the ventricles. Immediately after, and without any interval, a noise resembling that of a valve, or a whip, or the lapping of a dog, announces the contraction of the auricles. . . . Immediately after the systole of the auricles there is a very short, yet well marked interval of repose. . . . This state of quietude after the contraction of the auricles

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[36] Paul of Ægina: Seven Books . . . , i, 202, et seq.
[37] Hales, Stephen: Statical Essays, 1733.
[38] Ludwig: Arch. f. Physiol., 1847, p. 243.
[39] Chauveau and Marey: Mém. Acad. de med., 1863, xxvi, 302.
[40] Quoted by von Basch: Berl. klin. Wchnschr., 1887, xxiv, 179.
[41] Von Basch: Ztschr. f. klin. Med., 1880, ii, 79.
[42] Cushing: Am. Jour. Med. Sc., 1903, cxxv, 1017.
[43] Oliver: Treatment of High Blood-Pressure, Med. Press and Circular, Feb. 2, 1910.
[44] Williamson: Clin. Jour., June 30, 1909.
[45] Riegel: Deutsch. Arch. f. klin. Med., 1882, xxxi, 1, 471.
[46] Frédéricq: Trav. du. laboratoire de Liège, 1890, iii, 85.
[47] Porter: Jour. Physiol., 1892, xiii, 513.
[48] Mackenzie: Brit. Med. Jour., March and April, 1905.
[49] Corvisart: Essai sur les maladies et les lésions organiques du cœur . . . , 1806; transl. by Gates, 1812.
[50] Luciani: Lehrbuch der Physiologie, 1905, i, 152.
[51] Laennec: Traité de l'auscultation médiate . . . , 1819; transl. by Forbes, 1823.

does not appear to have been known to Haller as a natural condition.[52]

Laennec therefore accepts without question the fact shown by Harvey and later first utilized by Albertini[53] as a diagnostic sign, that the apex-beat occurs with systole; while at the same time he calls attention to what he believes to be an oversight on the part of Haller—by many considered the father of modern experimental physiology—in regard to the time relation of auricular and ventricular systole.

But if Laennec had only taken the pains to examine an exposed beating heart in the light of his clinical observations, he never would have made the mistake of attributing the second sound to the contraction of the auricle, nor would he so quickly have jumped to an erroneous conclusion in the face of the results of direct experimental observation. Not very many years had elapsed, however, when Turner,[54] interpreting correctly the results of physiologic experiments as recorded in Haller's "Elementa," objected to Laennec's views on the cause of the second sound on the ground that the contraction of the auricles precedes that of the ventricles, and does not follow it as Laennec had assumed.

The limits of this paper make it impossible to trace for the reader the development of our knowledge of the cause of the heart sounds.[55] The statement must suffice that through combined clinical (Laennec, Skoda, etc.) and experimental observation, the most noteworthy of which were made by a committee of the British association under the leadership of Williams,[56] and the later experiments of Hürthle[57] and others, we are now quite certain of the true relations which the sounds bear to the events of the cardiac cycle, notwithstanding the existence at the present time of some uncertainty as to the causes of some of the normal sounds. With regard to abnormal heart-sounds, deductions from normal physiology as well as experiments in pathologic physiology have served to indicate to the clinician their meaning and even their diagnostic value. For example, a ringing aortic second sound indicates to the clinician an abnormally high aortic tension. Harvey's experiments in themselves might have suggested this, but the conclusive proof of it was offered by the experiments of Williams and others, who showed that the second sound arises in the arterial valves and that its intensity diminishes when the arterial tension is lowered. If the reader is desirous of further instances of this nature he may consult any of the modern handbooks on diseases of the heart; for example, the article by Gibson on cardiac insufficiency in Osler's "Modern Medicine," which he will find to be practically an article on applied physiology—physiology made up almost exclusively of experiments on animals.

*(Chapter III will appear next week)*

148 West Gorham Street.

**Wassermann Test for Determination of Paternity.**—Hochsinger reports some cases of a child born with inherited syphilis, but neither husband nor wife showed any traces of the disease and both gave a negative seroreaction or the woman alone responded positively. In each instance the circumstance was cleared up by the mother's confession, the paternity being extraconjugal. His communication is published in the *Mitt. d. Gesellsch. f. inn. Med. u. Kinderh.*, ix, 1910, page 53.

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[52] Laennec: Traité de l'auscultation médiate . . . . , p. 256.

[53] Quoted by Ziemssen: Handbuch der speciellen Pathologie, etc., 1879, vi.

[54] Ref. Luciani: Lehrbuch der Physiologie, 1905, i, 152.

[55] An excellent account of this subject is given by Luciani: Lehrbuch der Physiologie, 1905, i, 152.

[56] Report of the Brit. Assn., 1836, vi, 265.

[57] Hürthle: Arch. f. d. ges. Physiol., 1895, lx, 263.

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# SOME ALLEGED EFFECTS OF SODIUM BENZOATE AND BENZOIC ACID

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In a recent number of this journal [1] Dr. D. R. Lucas has published certain statements in regard to the action of benzoate of soda which are so much at variance with facts as to call for criticism and correction. The circumstance that these statements have emerged from the laboratory of a leading university is liable to secure for them a hearing which would scarcely be accorded otherwise.

I have no intention of entering here on a detailed examination of the claims set forth in the paper to which I refer; but there are a few points on which I deem it my duty to make at least some comment, despite the fact that this task is highly distasteful to me.

## I

At the beginning of the paper there is presented a table showing the influence of various drugs on the action of ferments. This table is based on data given many years ago by T. Lauder Brunton and is designed to show that benzoic acid exerts a relatively strong inhibiting action on emulsin, pepsin, etc. The generalization is then made that from these data it is evident that the inhibiting action of the given amounts of benzoic acid in combined form (e. g. sodium benzoate) is very much weaker than when the benzoic acid is free. This statement, which on superficial observation appears very damaging to benzoic acid, is exactly paralleled by the platitude that sodium chlorid has a much weaker action than free hydrochloric acid. In other words, it is a statement which is true of acids in general, as has long been well known. As a matter of fact the figures given by Brunton and quoted so confidently in the above-mentioned paper, have been shown by Dr. Dakin to be entirely erroneous and misleading, as I shall show in detail in a forthcoming publication.

Here it must suffice to state that the claim that peptic digestion is easily arrested by benzoic acid in the proportion of 1 to 200 is entirely erroneous. Peptic digestion may proceed actively under suitable conditions in a solution completely saturated with benzoic acid, although naturally here the velocity of the action is diminished. One-tenth of 1 per cent. of benzoic acid retards peptic digestion about 12 per cent. When the circulation of free hydrochloric acid is low the effect is still less. One-tenth of 1 per cent. of benzoate of soda has no marked effect on tryptic digestion of casein. Seven-tenths of 1 per cent. of benzoate of soda has about 10 per cent. retardation.

These figures are true for human trypsin as well as for that of animals. It is thus evident that no important effects on peptic or tryptic digestion are exerted *in vitro* by the above mentioned concentrations.

## II

Dr. Lucas' paper contains the statement that "sodium benzoate in proportions equal to about 1 per cent. was found to be a poor preservative of neutral or weakly acid media." It is true that sodium benzoate is not a powerful preservative, but the statement just quoted is highly misleading for the reason that most bacteria in media neutral to litmus (e. g. sugar bouillon) are very much retarded in their growth or wholly inhibited by percentages of sodium benzoate ranging from 0.2 per cent. to 0.5 per cent. For example, Professor Theobald Smith of Harvard University found that the growth of typhoid bacilli was greatly retarded by 0.3 per cent. of sodium benzoate and completely inhibited by 0.5 per cent.

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[1] Lucas, Daniel R.: Some Effects of Sodium Benzoate, The Journal A. M. A., March 5, 1910, liv, 759

### III

The statement is made that "benzoic acid, liberated from sodium benzoate by strongly acid fruits or vegetables and taken in them, even in small amounts, into an empty stomach, is sufficiently irritating to cause gastro-intestinal disturbances as well as systemic symptoms." It is, of course, obvious that acids, when liberated from their salts by other acids, are more apt to act as irritants than when these acids are neutralized by bases. And naturally benzoic acid is no exception to the general rule.

The assertion that injurious effects are obtained on the digestive tract and on other parts of the body is based on conditions very foreign to anything that happens in the course of any sane habit of diet. Large quantities of acid fruit-juices were employed in these experiments. In the second place, these acid materials were taken on an empty stomach. In the third place, the concentrations and the amounts of benzoic acid taken were far in excess of any quantities that would be consumed by persons in a normal state of mind and with a normal appetite. There is one possible exception to the latter statement and that is in the case of cider, which a person sometimes so gormandizes as to consume several liters of cider in the course of a few hours. Even here it is hardly conceivable that more than 2 or 3 gm. of free benzoic acid would be ingested.

### IV

The character of the expedients employed to show the detrimental action of sodium benzoate is well shown in the pointless experiments on dogs, which were fed enormous doses of sodium benzoate from which the acid was liberated by means of hydrochloric acid and citric acid. Among others, the following is reported: A fasting dog weighing 3.5 kilos received sodium benzoate and hydrochloric acid in a preliminary experiment. The day after recovery from muscular weakness, nausea, etc., it received four gm. of sodium benzoate in an amount of hydrochloric acid theoretically sufficient to decompose it completely to free benzoic acid, together with 100 c.c. of a 2 per cent. citric acid solution. The animal became very weak, developed convulsions and died soon after the dose, showing congestion, ulceration and hemorrhage, etc. in the digestive tract, liver and lungs.

Anyone who will reflect on what this experiment represents in the way of benzoic acid in a human being will see that it is equivalent to giving 80 gm. of benzoate of soda to a man weighing 70 kilos. The effect in such an experiment is to liberate benzoic acid in its most concentrated form, to say nothing of free solid benzoic acid. How any other outcome than gross damage to the digestive tract was to be expected it is difficult to see, the results obtained being merely in accord with what every pharmacologist knows to be the action of strong acids. The fact that dogs receiving hydrochloric acid and citric acid in considerable quantities without benzoic acid did not become sick and die presents no unexpected features. It is doubtful if any competent, fairminded investigator, or anybody gifted with a sense of humor would put forward such an infelicitous experiment as the one quoted above as an argument in regard to the action of benzoic acid as a food preservative.

### V

Among the claims made in regard to the injurious action of benzoic acid is the one that the presence of benzoic acid in acid fruits and fruit-juices gives rise to albuminuria, sometimes associated with nephritis. Experiments made in my laboratory with the administration of several grams of free benzoic acid daily in apple-butter or cider, failed to show the presence of albuminuria. In one of our subjects a faint trace of albumin was found from time to time during the experiments and also at other times. A careful expert examination with the cystoscope showed a slightly tender spot in the posterior urethra. No casts or evidence of renal irritation were found. Similar experiments with large quantities of benzoic acid in acid media have been made by various colleagues, including Professor Long,[2] without any of the results described in Dr. Lucas' paper.

The circumstance that the blood possesses an abundance of alkali with which to neutralize free benzoic acid, even in doses far above those obtainable in preservatives, explains why this acid, ingested in moderate amounts, can give rise to no injury of the kidneys, since the salts of benzoic acid, like the salts of most ordinary acids, are without injurious effects on the kidneys. It is necessary for those who are responsible for the claim that benzoic acid is the cause of albuminuria to give the exact methods by which the presence of albumin was ascertained—a precaution which is omitted in the published results. In this connection it should be recalled that benzoic acid was formerly used freely in bladder disease in large doses without any evidence that it was injurious to the kidneys.

### VI

The tables in the paper under discussion give the impression that when benzoate of soda is ingested it is followed by the appearance of reducing substances in the urine attributable to the benzoic acid. Unfortunately the author has committed the flagrant error of making no adequate controls based on the action of cider alone. I wish to state that unbenzoated cider, 2 liters in the course of the day, in many persons gives rise to a marked increase in the reducing substance of the urine. For this reason it is wholly unfair on the strength of the data given to implicate benzoic acid in the causation of the reducing action noted. There is not the slightest evidence that this is the case. On the contrary, a series of experiments by Dr. Wakeman, made with scientific accuracy, showed that the action of benzoated cider was exactly paralleled by the action of unbenzoated cider. An accurate comparison of the varying reducing power of the urine with Fehling's solution can be excessive must suggest an injurious action of which definite volumes of Fehling's solution and of urine of definite specific gravity are employed and boiled for the same length of time, the results being recorded after a definite lapse of time. These essential precautions have been wholly neglected in the paper under consideration.

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[2] Professor Long reports the results of experiments on three men who drank strongly acid lemonade containing benzoate, through a period of five days. The average acidity of the lemonade was 0.14 normal (equivalent to 8.4 grams of acetic acid per liter), and the amounts consumed were as follows, in the mean: Subject 1, daily, 700 c.c. of lemonade with 2.6 gm. of benzoate; subject 2, 700 c.c. of lemonade with 2.9 gm. of benzoate; subject 3, 600 c.c. of lemonade with 2.4 gm. of benzoate. The highest amounts of benzoate taken daily were 3.75, 5.00 and 5.00 grams respectively. Careful tests of the urine through the five days of the experiment, and for several days subsequently, failed to show the presence of even traces of albumin, or of reducing substances acting on Fehling's solution. No abnormal behavior of any kind was observed.

It is well known that large doses of benzoate of soda (10 to 20 gm. daily) cause the appearance of increased reduction in the urine due to the glycuronic acid. Somewhat smaller doses may sometimes suffice to do this. The relatively small quantities taken in benzoated cider do not suffice to produce this effect. The reducing substance present after taking very large doses of sodium benzoate has nothing whatever to do with the appearance of sugar in the urine and this point should be clearly understood.

## VII

One other instance may be mentioned of the incorrect statements in which this paper abounds. The statement is made that after taking benzoated cider "excessive amounts of hippuric acid were eliminated." It is not clear what is meant by excessive amounts of hippuric acid, but the implication that the amounts observed were excessive must suggest an injurious action of which there is, of course, no evidence whatever. That this implication is clearly the intent, in the paper under consideration, is shown by the coupling of the above statement with the information that the urine was reduced in amount.

Not the remotest evidence exists that the excretion of hippuric acid, even in very large amounts, ever causes any damage to the kidneys. On the contrary, the evidence is all in the other direction. The paper quoted leaves us entirely in the dark as to what constitutes an excessive amount of hippuric acid and it surely would be no easy matter to give any rational meaning to such an expression.

If it were worth while to cite further examples of the untrue statements with which this paper abounds it would be an easy undertaking. But I think that enough has been said to show the unreliable and biased nature of Dr. Lucas' publication; and it may safely be left to the fair-minded reader to put a valuation on the conclusions of the paper in question.

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# PANCREATITIS FROM THE STANDPOINT OF THE CLINICAL SURGEON

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Since the surgeon has come to consider pancreatitis habitually with the same uniform system that he considers all other important intra-abdominal pathologic conditions, our appreciation of its importance as well as our knowledge of this condition have acquired reasonable dimensions.

## ETIOLOGY

In 1895 my attention was directed to the practical side of the subject during a visit to Mayo Robson's clinic in Leeds, but it was only after his enthusiastic presentation[1] before the International Congress in Paris in 1900 that I really awoke to an appreciation of the value of his observations. Undoubtedly, the infection usually travels up the common duct into the gall-bladder where there is a possibility for the accumulation of a large quantity of infected bile mixed with mucus, which on its way down the common duct is easily diverted into the pancreatic duct if there is obstruction owing to the presence of gall-stones or of edema below the point at which the duct of Wirsung empties into the common duct.

In my cases the irritation of the common duct has been due quite as often to the passage of infected sandy bile as to the presence of gall-stones.

There is much difference in the statistics of various authors regarding the relative frequency with which pancreatitis accompanies gall-stones. This is probably due to the fact that the diagnosis of pancreatitis is based on the impression the surgeon obtains from palpating the gland during operation, and one surgeon may consider the gland practically normal in an individual instance in which the same condition would impress another surgeon as representing a certain degree of enlargement.

Unless a surgeon has examined many cases in which the abdomen was opened for conditions which could have no relation with the condition of the pancreas in order to become familiar with the feeling of a normal pancreas it is not likely that his judgment in this matter can be entirely satisfactory.

It is therefore well to palpate the pancreas in cases of operation for the removal of uterine fibroids or ovarian cysts and other similar conditions. This can be done readily while the surgeon's hand is in the upper portion of the abdomen for the purpose of examining the gall-bladder.

All surgeons with large experience in this especial direction seem to agree that pancreatitis patients almost invariably suffer from disease of the gall-bladder or ducts and that gall-stones in the common duct are more commonly accompanied with pancreatitis than stones in the gall-bladder (Robson,[2] Mayo,[3] Moynihan,[4] Egdahl,[5] Opie.[6])

It has been suggested by Williams and Bush,[7] and apparently confirmed by careful experimentation, that anatomic peculiarities interfering with the free drainage of pancreatic juice through the ducts of Santorini or Wirsung provide favorable conditions for the infection of the pancreas. It is plain that when the natural conditions for free drainage of pancreatic juice are unfavorable, complete obstruction, due to the presence of gall-stones or edema, is much more likely to occur.

The colon bacillus is the most common cause of the infection, and this is frequently associated with the streptococcus and the staphylcoccus, according to the investigations of Egdahl[5] and others.

Pancreatitis, in common with all inflammatory diseases of the gall-bladder and ducts, frequently follows the inflammatory diseases of the gastro-intestinal tract.

After the pancreas has once been infected a species of vicious circle is developed from the fact that the swollen pancreas obstructs the portion of the common duct which passes through the head of this organ, and this favors the development of septic micro-organisms above this point as well as their further backing up into the pancreas. It is for this reason that the free drainage due to cholecystostomy has given such uniformly favorable results.

## PATHOLOGY

All these facts seem to bear out the theory commonly accepted at the present time that, barring the rare occurrence of metastatic infection, pancreatitis is due to infection from the alimentary canal, usually through the biliary passages, or, according to Maugaret, more especially through the lymphatic system of these passages. The acute violent cases of hemorrhagic pancreatitis are apparently due to retrograde injection of the pancreas with infected bile and pancreatic juice which, according to Flexner, must be in a relatively concentrated form.

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[1] Robson-Mayo: Tr. Internat. Med. Cong., Paris, 1900.

[2] Robson-Mayo: Lancet, London, 1900, Vol. ii.

[3] Mayo, W. H.: Pancreatitis Resulting from Gall-Stone Disease, The Journal A. M. A., April 11, 1908, l, 1161.

[4] Moynihan: Keen's Surgery, Vol. iii.

[5] Egdahl: Jour. Surg. Gynec. and Obst., 1907, iv, 599.

[6] Opie: Diseases of the Pancreas, 1903.

[7] Williams and Bush: Tr. Assn. Am. Phys., 1907, p. 304.

In these cases which take a violent acute course there is commonly a rapid destruction of the gland parenchyma.

In the chronic forms, on the other hand, the inflammation results in interlobular fibrous tissue hyperplasia. The secreting cells of the acini are more readily destroyed than the islands of Langerhans. This fact would account for the relative infrequency of glycosuria in mild or early cases of pancreatitis.

## DIAGNOSIS

Until recently the diagnosis of pancreatitis was made incidentally only during the progress of operations on the gall-bladder or biliary tracts and the stomach. Since the attention of the surgeons was generally directed to this condition by Mayo Robson,[1] Riedel,[9] Mayo and others, the diagnosis has frequently been made before and confirmed during the operation. From this it has become possible to associate the condition of pancreatitis with a number of more or less typical diagnostic signs observed before operation.

In 1904 Cammidge,[10] in connection with the clinical work of Mayo Robson, brought out a most ingenious chemical test which promised to be of great value in the diagnosis of this condition.

The method has been described most clearly by Schroeder,[11] as follows:

> Forty c.c. of the urine, filtered, acid reaction, free from albumin and sugar, are boiled with 2 c.c. of strong hydrochloric acid for ten minutes. After partly cooling, 8.0 gm. of lead carbonate are gradually added. When the reaction is complete, the mixture is chilled, filtered and the excess of lead in solution removed by addition of 2 gm. of sodium sulphate bringing the mixture to a boil, chilling and filtering to 20 c.c. To this filtrate is now added a mixture of phenylhydrazin hydrochlorate 0.80 gm., sodium acetate 2.0 gm. and of 50 per cent. glacial acetic acid 1 c.c. and the whole is boiled on a sand-bath for ten minutes. The solution is then filtered while hot and set aside to crystallize. The precipitation of crystals, sometimes only in microscopic quantities, of the characteristic formation of ozazones, makes a positive reaction.

In 1905 I had a large number of tests made at the Augustana Hospital laboratory on patients who were later operated on so that the findings could be judged as to their reliability by the actual examination of the pancreas. These tests were carried out by Dr. J. L. Yates, then my chief assistant, whose large experience as a carefully trained laboratory investigator fitted him particularly for this task. He had, moreover, assisted me in the diagnosis, operation and after-treatment of a great number of cases belonging to this special group, so that he also possessed a large experience as clinical surgeon.

These tests were extremely fascinating, but it seemed to us that it required too much of the personal element of the observer to make the method useful except in the hands of unusually skilful experts.

The fact that surgeons like Robson and Moynihan continue to trust this test is, however, sufficiently important to convince me that it contains real merit.

## SYMPTOMS

If we add to the well-known symptoms of cholecystitis an area of tenderness from 5 to 10 cm. long located to the right of the umbilicus over the middle of the right rectus abdominis muscle in cases in which we can exclude a diagnosis of duodenal ulcer we have the typical symptoms on which to make a diagnosis of pancreatitis.

In duodenal ulcers there are two symptoms usually present which are not symptoms of pancreatitis: (1) pain before meals when the stomach is empty and (2) hyperchlorhydria with eructation.

In pancreatitis there is frequently referred pain to the mid-scapular or left scapular regions. In gastric ulcer the same pain is commonly present, but with this there is pain on deep pressure at a point half-way between the ensiform appendix of the sternum and the umbilicus.

There are, of course, cases in which two or more or all of these conditions are present in the same patient and other cases in which it is possible only to determine the fact that one or more of these conditions are present, while a strict differential diagnosis may not be possible. In these cases, however, it is quite possible to determine the necessity of an exploratory incision, and, when the indications for this are not clear, then it is usually safe to keep the patient under dietetic treatment until further study of the case has cleared up the diagnosis.

Solomon[13] has pointed out the fact that in the presence of pancreatitis von Noorden's oatmeal diet gives rise to typical butter stools and that an abnormally large amount of lecithin is excreted. From 0.4 to 1.2 gm. is excreted in twenty-four hours when these patients are placed on an egg diet, while normal individuals excrete not to exceed 0.1 gm. under similar feeding.

According to Schlecht[14], Mueller's test is quite reliable. The patient is given a test meal which is followed after two hours by a calomel purge. A few drops of the stool are sterilized by heat, then placed on an agar plate containing Loeffer's serum. The plates are kept in an oven at 131 to 141 F. for twenty-four hours. If trypsin is present the serum shows pronounced depressions, if absent the surface is smooth. Lepine[15] has made most interesting but very complicated experiments which he claims are valuable in the diagnosis of this condition.

In advanced cases there is usually marked emaciation frequently with peculiar circumscribed areas of fat in roll-like masses on the front and sides of the chest and abdomen. There is usually marked anemia present, often approaching chlorosis with degeneration of the erythrocytes. Many of these patients suffer from obstinate constipation while others have equally troublesome diarrhea.

Sugar is present in only a small proportion of these cases.

## TREATMENT OF CHRONIC PANCREATITIS

The treatment must consist primarily in relieving the irritation due to the backing up of infected bile by establishing free drainage which must be sufficiently permanent to permit complete restoration of gall-bladder and ducts as well as the pancreatic ducts. It is important to keep the intestines and stomach normal and free from irritation permanently by the use of proper diet and hygiene after these operations.

In case gall-stones or pancreas stones are present, these must be removed, whatever their location may be. In rare cases in which the common duct is permanently obstructed, cholecystenterostomy may be indicated.

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[9] Riedel: Berl. klin. Wchnschr., January, 1896.
[10] Cammidge: Lancet, London, 1904, i, 776.
[11] Schroeder: Surgery, Gynec. and Obst., December, 1908.
[13] Solomon: Wien. klin. Wchnschr., April 2, 1908, No. 14, p. 453.
[14] Schlecht: München. med. Wchnschr., lv, No. 14, p. 713.
[15] Lepine: Rev. méd., No. 14, xxviii, p. 157.

It is probably best to make the anastomosis between the gall-bladder and duodenum where possible and between the gall-bladder and jejunum through an opening in the transverse mesocolon where the duodenum cannot be safely reached. The suture method should be employed similar to the one employed in posterior gastroenterostomy.

### ACUTE PANCREATITIS

It is difficult to make a differential diagnosis in acute pancreatitis with any degree of certainty because there are several other violent acute conditions which are so similar in their symptoms that they can probably never be positively excluded. The conditions most likely to be confounded are (1) perforation of the posterior wall of the pyloric end of the stomach; (2) perforation or gangrene of the gall-bladder or duodenum.

Cases of severe acute pancreatitis have been diagnosed as acute intestinal obstruction, renal colic, ectopic gestation and, of course, appendicitis and gall-stone colic.

In acute pancreatitis the pain is extremely severe in the right upper quadrant of the abdomen. There is intense shock; nausea and vomiting are usually present and the patient gives the impression of being at the verge of destruction. The abdominal muscles are tense, although Moynihan[4] found this symptom absent in some of his cases. There is usually a steady rise of the pulse from the onset.

In these cases there is usually a history pointing to gall-stone colic in previous milder attacks (Fitz[16]).

If a tumor be felt there is usually tympanitis on percussion over this surface because the gland is located behind the duodenum (Elliott[17]).

Cyanosis has been observed by Opie and others. Sugar is present in the urine in some cases. Egdahl[5] gives a careful review of 107 cases in his study of the symptoms and diagnosis of acute pancreatitis which is well worth the careful consideration of the clinician.

### SURGICAL TREATMENT OF CHRONIC PANCREATITIS

In chronic pancreatitis the treatment originally practiced and advised by Mayo Robson, consisting in the establishment of perfect drainage through a cholecystostomy opening, seems to be still the best. The edema of the common duct and the pressure and consequent obstruction due to the presence of an enlarged pancreas are thus relieved and with this the pancreas and the liver are simultaneously reduced to a normal size.

The portion of the gland that has been hopelessly destroyed is, of course, permanently lost, but the remaining portions are usually sufficient to perform the necessary physiologic functions if the patient is properly educated in the selection of food.

### SURGICAL TREATMENT OF ACUTE PANCREATITIS

In mild cases of acute pancreatitis surgical treatment is not indicated. If the local irritation is removed by making gastric lavage and placing the patient on exclusively rectal alimentation so that nothing passes through the duodenum for a time the obstruction to drainage through the common duct will soon subside because of the disappearance of the local edema and then the conditions will be favorable for recovery from acute pancreatitis.

The correctness of this view must be plain to every one who has operated on a large number of patients suffering from acute gall-stone impaction in the common and cystic ducts at various periods during these attacks. If an operation is performed during the attack the simple drainage of the gall-bladder has always, in my experience, sufficed to relieve the condition except in cases in which there existed at the same time a severe acute cholangeitis in which there has been a mortality of about 30 per cent. A moderate degree of cholangeitis will subside even if there is marked acute pancreatitis, provided the operation itself does not increase the infection.

It should be as simple as possible and no rough or unnecessary handling of the inflamed tissues should be employed.

Even in violent acute cases of pancreatitis a proportion of patients will recover if the abdomen is quickly opened and simple drainage is introduced. Glass tubes covered with gauze, split rubber tubes or cigarette drains may be employed. The number of recoveries depends on the severity of the attack and the promptness with which drainage is supplied. Robson has had nearly 40 per cent. of recoveries. Patients in whom the extravasation of pancreatic juice has caused fat necrosis are least likely to recover. I have seen several of these patients that have recovered without and one with operation and Mayo[18] reports similar results.

Unless jaundice is present it is best to limit the operation to the location and drainage of circumscribed areas of infection or necrosis of the pancreas, to the control of hemorrhage by means of fine catgut sutures and the free drainage of the entire area. This can best be done through a median or a high right rectus incision. It is important to go over the gland carefully, but it is quite as important not to traumatize the tissues unnecessarily. These patients have but a slight margin of possibility to recover and this can easily be lost by unnecessary traumatism or prolonged exposure.

If jaundice is present simple drainage of the gall-bladder with removal of loose gall-stones is indicated, but it is best not to interfere with stones impacted in the ducts. I have lost two patients needlessly before appreciating the folly of doing too much in these cases.

In a general way the following conclusions seem proper:

1. A clinical diagnosis of chronic pancreatitis is usually possible before operation.
2. This condition is practically always a complication of gall-bladder or gall-duct disease, except when following metastic infection.
3. It is usually curable by relieving the pathologic condition of the gall-bladder and ducts.
4. An operative diagnosis of acute pancreatitis can often be made.
5. Early operation greatly improves the prognosis.
6. It is important to reduce to a minimum the trauma in these cases.
7. The important factor in the treatment consists in the establishment of free drainage.

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**Importance of Tuberculides for Diagnosis of Tuberculosis in Infants.**—J. S. Leopole found typical papulo-squamous tuberculides in 40 per cent. of 30 cases of tuberculosis in children less than a year old. In 5 of the cases they were the only sign of the disease and were thus a premonitory symptom of tuberculosis; in 2 cases they were the only means by which the tuberculosis was differentiated from syphilis. The arms, the lower part of the back and the back of the legs are the most frequent seat of the lesions; in only a few cases was there more than one. Such lesions are generally overlooked. He never found these typical lesions on children free from tuberculosis, and the tuberculin reaction or the later course of the disease confirmed their tuberculous nature. His article issues from Finkelstein's service at Berlin, and is published in the *Zeitschrift f. ärztliche Fortbildung,* Feb. 15, 1910.

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16. Fitz: Middleton, Goldsmith Lecture, 1889.
17. Elliott: International Text-Book of Surgery, p. 468.

# NEWER METHODS OF DEMONSTRATING THE TREPONEMA PALLIDUM WITH ESPECIAL REFERENCE TO THE INDIA-INK METHOD*

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Since Schaudinn demonstrated the presence in syphilitic lesions of a spirillum which he called *Spirochæta pallida*, afterward changing the name to *Treponema pallidum* because the name *Spirochæta pallida* had already been given to another organism, numerous observers have attempted to utilize various methods in the hope of rendering the demonstration of the organisms more easy. Schaudinn made use of Giemsa's azur eosin polychrome mixture by which the organism is demonstrated as a pale slightly reddish-blue spiral. The various modifications of the Jenner or Romanowski stain have shown themselves of value, especially those of Leishman and Wright. The shortening, too, of the time necessary for the staining by Giemsa's method have increased the usefulness of this procedure although, perhaps, a less satisfactory stain results than when the original stain is used.

The identification of the organism, however, by all of these methods is far from easy and decidedly tiring to the eyes. Levaditi's method of demonstrating the organisms by the deposition of silver has proved itself invaluable, especially for the demonstration of the treponema in the tissues. Levaditi's method is, however, lengthy and not well adapted to general use by the practitioner of medicine.

The perfecting of the "dark-field" condenser has been a great boon to those of necessity examining numbers of specimens for diagnostic purposes. But what will probably prove to be the most valuable procedure to the practitioner at large on account of its simplicity, the cheapness of the materials used and the comparative ease of finding the organisms in the microscopic field, is that known as the "India-ink method."

I shall refer first to the "India-ink method" and later speak of the special advantage of the dark-field illumination in recognizing the differential characteristics of the spirochete. In 1909 Burri in his monograph drew attention to the fact that bacteria were not stained by India ink and that as a result the presence of micro-organisms in a thin layer of ink could be recognized by the presence of clear areas in a dark field. He advocated especially the addition of ink to growing cultures of organisms in order to watch cell division. Hech and Wilenko[1] in July, 1909, published the observation that the *Treponema pallidum* along with other micro-organisms, rendered itself easy of identification by this method.

The technic of the method is simplicity itself. As in procuring material for staining by any method the superficial necrotic layer, if it be an ulcerating surface, or the superficial epithelium, if the lesion be covered by epidermis, is scraped off and the serum which exudes is removed by means of a curette or scalpel. The fluid thus obtained is placed on a slide and an equal quantity of ink added. The ordinary commercial India inks may be used, Günther's being particularly good, although the results with Higgins' waterproof ink are good enough. The serum and the ink are then rapidly and thoroughly mixed and smeared over the slide so that a pale brown color results. The material dries in a minute or slightly more and is immediately ready for examination on placing the oil for immersion directly on the ink smear.

The picture produced will show the red blood-cells as large clear circular areas in a brownish-black field, the bacteria and débris present appearing as white rods and dots and spirochetes, if present, as clear white spirals. Hecht describes the appearance as being similar to that produced by dropping pieces of glass rods into a mixture of melted dark-colored agar in a Petri dish and holding it up to the light when cold. This description though somewhat clumsy, is sufficiently exact to give an idea of the general impression.

It is particularly important in using this method that in so far as possible serum alone be used and that a minimal amount of mucous material or fibrin be mixed with the ink. The presence of mucus results in its taking up a large amount of the color material of the ink, with the result that a smear of the requisite color and thickness cannot be made. If too much serum is used the albuminous material appears to precipitate the stain from the fluid and a finely granular appearance is seen microscopically, which is practically worthless for diagnostic purposes. Again, if too much ink is used the surface of the smear is increased in size to such an extent that the task of examining it thoroughly is greatly lengthened.

Regarding the reliability of this method perhaps it is not yet possible to speak definitely. It would appear, however, from my own results that here we have a method by which a definite diagnosis of syphilis is made possible in as great a number of cases as by any other microscopic method. A series of cases have been examined making use of this method and using Giemsa's and Wright's stains as controls. In every case in which either of the staining methods revealed the organisms the India-ink has demonstrated these in as large numbers and with a smaller expenditure of labor and time. True, the characteristic staining reaction of Giemsa's method is not present, but this loss is more than compensated for by the distinctness with which the morphology may be studied.

Practically only two or, perhaps, four organisms are apparently noteworthy in the differential diagnosis of the *Treponema pallidum* and in lesions elsewhere than the mouth and intestines only the *Spirochæta refringens* comes into thought. This organism, generally easy of differential diagnosis, by all methods, is particularly so when demonstrated by the ink method with its coarse body and broad curves.

In the mouth the *Spirochæta dentium*, the *Spirochæta buccalis* and the spirillum of Vincent may all be found. The presence of the latter along with the fusiform bacillus, together with the larger size and smaller number of its curves, renders confusion almost impossible. The *Spirochæta buccalis* too, with its morphology similar to that of the *S. refringens* is easily distinguished from the treponema with its short deep curve. The *Spirochæta dentium* is more liable to lead to error in diagnosis; its body is finer than the other forms mentioned and the curves shorter and placed more closely together. The body of this organism is, however, always definitely thicker than the treponema and never does one find more than five turns to the diameter of a red blood cell, nor are the extremities drawn out in the manner of the organism of syphilis.

Coles[2] notes a useful point in the diagnosis of the treponema, namely, that if the number of turns of the spiral of the syphilitic spirochete in the length of the diameter of a red blood cell be counted, these will be found to be from six to seven. The distance from the top of one spiral to the next is from 1 to 1.2 microns. The red blood cells measure about 7.5 in diameter so that on the average six or seven turns will be equal that of a red blood cell. The treponema varies in length from 6 to 15 microns or even more, and consequently contains from six to fourteen and sometimes twenty or more turns of the spiral. This measurement of the length of the spiral is usually possible, and is of the greatest value in identifying the treponema. The *S. dentium* rarely has more than four or occasionally five turns; the other organisms mentioned above from two to three, possibly five but never more.

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* From the Pathologic Laboratory of Tulane University.

[1] Hech and Wilenko: Wien. klin. Wchnschr., July 1, 1909, No. 26.

[2] Coles: Brit. Med. Jour., May 8, 1909.

For the absolute diagnosis, as mentioned above, the consideration of the motion of the live organism by means of the dark field is very important. Whereas the saprophytic spirilla, in addition to their different morphology, are actively motile and move across the microscopic field more or less readily, the treponema seems to lie lazily in the material in which it is suspended, swaying its body one way and then another, having at the same time a rotary motion, moving from time to time, too, a little backward or a little forward, but never changing its relative position very markedly.

We have then in the India-ink method a procedure of almost ridiculous simplicity which, if by the prolonged observations of competent workers, it is proved to be reliable, will be a means of putting the microscopic diagnosis of syphilis within the reach of all who have even a moderate knowledge of the use of the microscope.

# PLUGGING NOSTRILS WITH COTTON AS PROTECTION AGAINST DISEASES CONTAGIOUS BY INHALATION

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IOWA CITY, IOWA

There is little doubt that the causative agents of most infectious diseases and especially those that are highly contagious enter the system by being inhaled, and invade the tissues primarily through the mucous membrane of the nose or other portions of the respiratory tract. Recent investigations have also proved that a person who has never had a certain disease may be a "carrier" of the germs of that disease otherwise than by the long recognized modes of carrying the bacteria about on hands, clothing, etc. For instance, a person exposed to diptheria may have his nasal cavity or throat infested with diphtheria bacilli even though not affected by the disease and such person may transmit the germs to another in whom the disease may develop.

The peculiar distribution of cases of epidemic cerebro-spinal meningitis and poliomyelitis, viz., the development of cases in different portions of a locality in individuals who have been in no way associated with each other, while at the same time persons directly exposed often remain unaffected—suggests, first that only a relatively small number of persons are susceptible to infection with these diseases, and, second, that the infective agent is carried about in the nasal cavity of individuals who are themselves not susceptible to the disease but in whom the germs may remain and multiply for a long time. Such indeed has been proved by bacteriologic examinations to be the case with the meningococcus. Association with a susceptible individual may cause the transmission of the disease. Inasmuch as drying readily destroys meningococci as well as other bacteria, or at least attentuates their virulence, it is much more probable that cases developing at long intervals of time may be better explained by coming from the nasal or buccal discharges of a carrier than from the clothing of a person exposed.

It would seem therefore that we should make a special effort to prevent pathogenic germs from being inhaled, both to protect ourselves from such germs and to prevent our becoming a "carrier." The efficacy of cotton as a bacterial filter is well known. That it is quite as efficacious for the nasal cavity as for a test-tube may be demonstrated by simple experiments. There would seem little reason why physicians and those nursing patients who have diseases which are contagious by inhalation should not protect themselves and others by placing a piece of cotton in their nostrils while in attendance on such patients.

221 South Lucas Street.

# EXPERIMENTAL POLIOMYELITIS IN MONKEYS

## SEVENTH NOTE: ACTIVE IMMUNIZATION AND PASSIVE SERUM PROTECTION*

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The experimental investigations of epidemic poliomyelitis, carried out during the past several months, have added a large number of important facts to the knowledge of this disease. These facts relate to the nature of the cause of the disease, the manner of its entrance into and exit from the body, the pathogenesis of the affection, and the existence of an enduring state of resistance to reinfection following an attack of the disease.[1] In the present communication we wish to present briefly certain further results which have been obtained in the course of experiments on active and passive immunization in respect to experimental poliomyelitis in monkeys.

The virus which we are employing in our experiments was derived from Case K,[2] is in its twenty-fifth generation in monkeys, and has attained a high degree of activity. Intracerebral inoculation of even minimal quantities of a filtrate[3] (0.02 to 0.01 c.c.) prepared from the spinal cord of a recently paralyzed animal causes almost invariably the development of paralysis within six to eight days. Recovery almost never takes place. This virus may, therefore, be regarded as of maximal potency.

### ACTIVE IMMUNIZATION

With this virus we have endeavored to produce active immunity in monkeys and, in certain instances, successfully. The virus has been injected subcutaneously in gradually increasing doses over a period of several months, after which the immunity has been tested by a full intracerebral injection of the filtrate. An example is given.

*Macacus rhesus.* Inoculated daily from Jan. 12, 1910, to Jan. 16, 1910, with 0.05 c.c. suspension M.A. virus. Rest of our days. Inoculation from January 20 to January 23 with .05 c.c. virus. . Rest of four days. Daily inoculation for four ays with 0.1 c.c. virus. Rest. Inoculation of successively 0.1 .c., 0.5 c.c. and 1 c.c. virus. On March 23, 1910, 5 c.c. of susension of virus given. No visible effect produced by the virus. pril 2, 1910, intracerebral injection of 2 c.c. filtrate of K irus. No effect. Animal in perfect health May 9, 1910. Conrol animals injected with 0.01 c.c. to 0.1 c.c. filtrate became aralyzed in average period.

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* From the Laboratories of the Rockefeller Institute for Medical Research, New York.

[1] Flexner and Lewis: The Journal A. M. A., Nov. 13, 1909, liii, 1639; Dec. 4, 1909, liii, 1913; Dec. 18, 1909, liii, 2095; Jan. 1, 1910, liv, 45; April 2, 1910, liv, 1140; Jour. Exper. Med., 1910, xii, 227.

[2] Flexner and Lewis: The Journal A. M. A., 1909, liii, 1913.

[3] Flexner and Lewis: The Journal A. M. A., 1909, liii, 2095

In the earlier experiments, before the virus had atained maximum activity, a small number of monkeys ailed to develop paralysis after intracerebral injections f considerable amounts of unfiltered emulsions of the pinal cord from recently paralyzed animals. When hese monkeys were tested subsequently with the more ctive virus they became paralyzed practically without xception. The unsuccessful inoculation does not apear to have increased markedly the natural resistance infection. On the other hand, we have met instances which monkeys have failed to react to the glycerinated irus later resisted successfully an intracerebral inection of as much as 2 c.c. of a filtrate of maximum poency. Glycerin may, therefore, modify, after some me, the virus and render it more suitable for purposes f immunization.

### PASSIVE SERUM PROTECTION

We observed early that monkeys that recovered from e paralysis, either perfectly or with residues, were insceptible to reinoculation with the virus; in other ords, they had developed an artificial immunity. he question, therefore, arose as to whether the imunity principles existed in the blood in sufficient conntration to be capable, first, of neutralizing the virus *vitro* and next, in the body of infected monkeys. he experiments to determine the former were made ith the maximal K virus of which 2 c.c. of a filtrate ere mixed with 2 c.c. of the serum of recovered cases, cubated for one hour at 37 C. and then placed in the frigerator over night. This mixture failed to cause aralysis in *Macacus rhesus* when injected intracereally, although the control animals succumbed in e usual period. Normal monkey serum has no such straining action.[4]

The successful outcome of this experiment suggested at the blood of persons who had recovered from polioyelitis contained similar immunity principles.[5] The ood serum obtained from children through the kindss of Dr. Terriberry, was used for experiments. The onkeys having received the mixtures of filtrate and rum are still well, while the control animals have sucmbed. Since, however, the incubation period, in rare ses, exceeds thirty days, the conclusion that the paralys is prevented and not merely delayed, cannot be ached until the expiration of that period.

In contradistinction to these successful experiments the failure to produce a neutralizing serum in the rse by repeated injections of filtrate. The horse rum, when mixed with the virulent filtrate and incuted as stated above, displayed no power whatever to hibit the action of the virus. The monkeys injected th the mixture of horse serum and virus became ralyzed in the same average period as the controls.

The second series of experiments were conducted ong two lines. One set of monkeys received intracereal injections of the filtrate in doses varying from 0.1 to 0.01 c.c. in the afternoon. The next morning the serums from the monkeys and from the horse were injected into the subdural space and these injections were repeated daily or at somewhat longer intervals. We chose this mode of procedure for several reasons: First, we desired to ascertain whether the virus, once it was established in the body, could be restrained, because, if this proved possible, the outlook for some measure of control of the spontaneous disease in human beings might become hopeful. Second, we had already determined[6] that the virus, however introduced into the body, first establishes itself in the cerebrospinal meninges where it propagates, and induces cellular changes and reactions to which the paralysis, etc., are indirectly due. It seemed rational, therefore, to endeavor to bring the neutralizing serum into direct relation with the virus by intraspinal injection. Next, it has already been determined in the case of epidemic cerebrospinal meningitis[7] that the serum quickly escapes from the subdural space into the blood, and hence, that if it were desired to maintain intimate contact of a serum with the meninges, daily injections must be made. It was believed furthermore that multiplication of the injected virus had already started in the interval between inoculation and injection of the serum and the serum probably would not suffice to destroy immediately all the organisms there present. Finally, we do not possess at present any definite knowledge concerning the injurious action of the virus on other important organs than the nervous system. If such action does occur and can be prevented by an immune serum, the results would probably be equally good whether the serum gained entrance into the general blood from the meninges or subcutaneous tissue. In the other set of monkeys the intranasal mode of inoculation of the virus was employed and the serum treatment instituted immediately afterward.

Before giving, in brief, the results of these experiments, which must still be regarded as of preliminary character, it should be stated that the immune serum obtained from the monkeys, which had recovered from paralysis, had in every instance been subjected to reinforcement by subsequent inoculations, often of large doses, of active virus. Whether any reinforcement is actually accomplished is still an undecided question; but judging from analogy, it should have taken place. The point is under examination.

The indications of our experiments along these lines are (1) that if the quantity of the virus injected into the brain eighteen to twenty-four hours before the serum treatment is begun is not in excess of a given dose, the action of the virus can be prevented; (2) that the infection of the meninges from the nasal mucosa can also be prevented by the serum injections; (3) that normal monkey serum has no such restraining effect; and (4) that the horse serum is entirely without preventive action and tends rather to hasten the onset of paralysis.

April 12, 1910: *Macacus rhesus.* Intracerebral inoculation of 0.01 c.c. filtrate virus K. April 13, 1910 to April 22, daily intraspinal injection of 3 c.c. immune serum. April 27, 1910: Injected 3 c.c. immune serum; May 2, 1910, repeated injection. Animal remains perfectly well.

In the case of the intranasal inoculations, the injections of serum were made immediately after infection was made and at three-day intervals for three injections. The control and the animal treated with horse serum succumbed and the animal treated with immune serum survived.

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[4] Similar observations have been made by Römer and Joseph ünchen. med. Wchnschr., 1910, lvii, 568); and Levaditi and ndsteiner (Compt. rend. Soc. de biol., 1910, lxviii, 311), have reted such a neutralization experiment.

[5] Levaditi and Netter: Presse méd., 1910, xviii, 268.

[6] Flexner and Lewis: Jour. Exper. Med., 1910, xii, 227.

[7] Flexner and Jobling: Jour. Exper. Med., 1908, x, 141.

Experiments are in progress to determine whether the paralysis, after intracerebral inoculation, can be prevented by immune human serum and what the limits of the control of the experimental disease by such sera are. In considering these results and particularly their significance for human pathology, account should be taken of the fact that experimental poliomyelitis in monkeys is a far more severe and fatal disease than epidemic poliomyelitis in human beings.

In view of the fact that the virus of poliomyelitis can enter the nervous system through the abraded mucous membrane of the nose, we have tested the effects on the virus of hydrogen peroxid and some other disinfecting agents. The virus is quickly destroyed by a dilution of perhydrol containing 1 per cent. of hydrogen peroxid.

105 East Sixty-second Street.

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# RAPID BLOODLESS CIRCUMCISION

## OF MALE AND FEMALE AND ITS TECHNIC

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Circumcision, one of our most common minor operations, is bunglingly done in many instances, notwithstanding its simplicity.

This operation, though an old one, is still interesting and means have long been sought whereby it could be more easily and quickly performed and be attended with less hemorrhage, and consequently meet with less objection on the part of parent and patient.

Many a surgeon has lost his best clients, and likewise many a good prospect has gone glimmering because of the unfortunate outcome of this little operation.

The necessity for circumcision is abundantly evidenced, and although it may be needless to state any reasons for doing this operation, nevertheless I will mention a few:

1. Reduced tendency to convulsions in infancy arising from irritable nervous system.
2. Habit of masturbation not so likely to be formed.
3. Lessened irritability of child or adult.
4. Amorosity reduced.
5. A hygienic condition promoted.
6. Venereal diseases not so readily contracted, and consequently:
7. Fewer pelvic diseases in women.
8. For impotency in old men, as has been advocated.

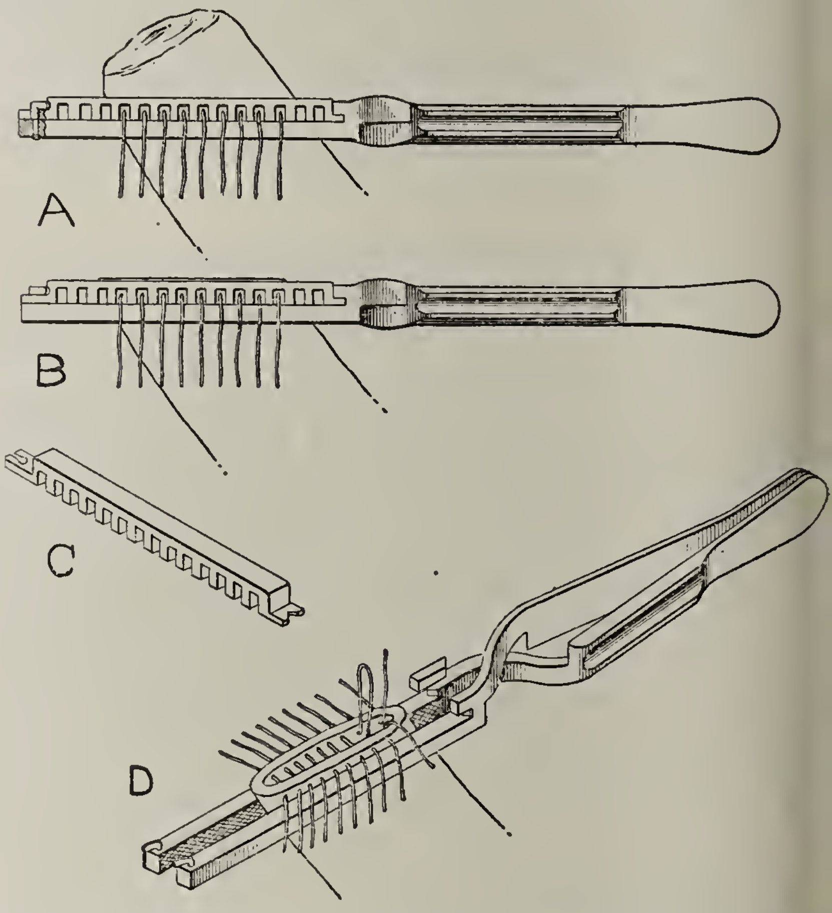
The ease with which this operation can be done by use of the instrument here described is so marked that a person could circumcize himself, provided he did not become faint-hearted. Only one-quarter of time required for other methods is needed. This operation is practically bloodless, as all ligatures are uniformly placed and tied before the clamp is removed.

The illustration shows clamp on and ligatures inserted (A); then the removal of the foreskin (B), and next, the removal of the upper sections of the blades (C), and two ligatures pulled up, one of which has been cut and is ready to be tied (D). The instrument has twelve slots or ports instead of fourteen as is shown in the illustration.

### METHOD OF PROCEDURE

1. Use local or general anesthetic as deemed best.
2. Adjust clamp.
3. Insert sutures.
4. Excise foreskin with scissors or knife.
5. Remove upper section of each blade by releasing at distal extremity and lifting off.
6. Insert a ligature in anterior portion of foreskin in addition to those already inserted, if desired; also inser one posteriorly.
7. Pull each suture up singly, cut loop in center, tie eacl side as indicated, and having tied all ligatures, remov clamp and apply dressing.

If deemed expedient, spear the mucous membrane an draw out as desired before applying the clamp. If th foreskin adheres to glans, split on dorsal aspect t corona, break down adhesions, apply clamp and operat one side at a time, and, having no loops to pull, onl skin and mucosa to unite, you can operate very rapidl A young child may not always require stitches; however, I think it best to insert several, but each operato will use his own judgment in the matter. A bette result will be obtained when the mucous membrane i cut long and the skin comparatively short, as is the cas when this instrument is employed. There is practicall no blood, no anxiety, no misgivings as to results, and the work is done quickly and easily. Frequently too much mucous membrane is removed and too little skin. Leave more mucous membrane and less skin and then an ideal result will be obtained.



Modified phimosis clamp, showing the manner of using it. A clamp applied, sutures placed; B, foreskin removed; C, removabl section of blade; D, sutures ready to be tied.

Many females need circumcision, and the operation is more easily performed than in the male. The clamp is applied singly to such elongated or hypertrophied parts as it is desired to remove, ligatures inserted, part excised, upper part of blades removed, ligatures tied without necessity of pulling up loops, etc., clamp removed and dressing applied.

I have never tried this instrument for protruding pile tumors (of considerable length), but it occurs to me that a beautiful operation could be performed by its use, for the reason that double ligatures could be inserted through the vein posterior to the sacculated portion, and then the set of ligatures used for the vein could be withdrawn from the skin; thus the veins could be tied separately and the skin then closed with the other set of ligatures loosely tied, which would incidentally hold the vein in close contact with the skin.

Other phimosis clamps have been devised, such as those of Tortat, Levis and Skillern, but the advantage of my clamp and its distinctive feature is the notched, removable portion of the blades. This feature gives a smooth surface along which to remove the redundant tissue, leaving just the margin required to hold the stitches securely. The removal of these portions of the blades leaves the sutures free for rapid tying while the remainder of the clamp is still in place.

3146 Vermont Avenue.

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# HEMORRHAGE OF THE SPINAL CORD

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Because of the rather unusual character of the injury I am constrained to report this case.

*History of Injury.*—In a scuffle between two women on a orch one was thrown, striking the back of her neck against he baluster rail. The rail gave way and she fell some four eet to the ground on her head. She was picked up helpless nd carried to her room. A couple of hours afterward I saw er.

*Examination.*—Total paralysis existed below a line extendng from the top of the shoulders across the chest about two nches below the clavicle. She could move her head from side o side, forward and backward movement being somewhat npaired. She could elevate the shoulders and clavicle only lightly. There was slight tenderness on pressure over the egion of the fourth cervical vertebra. Otherwise the patient ad no pain anywhere. No fracture or dislocation of the verebræ could be made out, and the only surface injury was a ruise over the right frontal region. The tongue could be pronded straight. The face muscles acted symmetrically and here was no impairment of speech. The mind remained perectly clear. The pupils reacted normally. There was no disrbance of any of the special sensations. The superficial and eep reflexes were lost in all parts of the paralyzed portion of e body. Voluntary control of the rectum and bladder was st. The bladder emptied itself intermittently, perhaps from verdistention. The bowels remained constipated and did not espond to the strongest cathartics. Enemas served only to xpel partially the gas of an extreme and persistent tympanis. The pulse did not rise above 80, and the temperature emained under 100 F. throughout. Respiration was somewhat nbarrassed at first, becoming more frequent and labored wards the last.

*Diagnosis.*—The lesion was decided to be hemorrhage of the rd, the approximate seat being determined by applying the inciples of spinal localization as follows: The zone marking e paralyzed from the active segments of the body as inditcd above was a line across the chest below the clavicle nteriorly and just above the spines of the scapulæ posteriorly. otion and sensation existed everywhere above this line, and as lost everywhere below it. The groups of muscles reprented by the sternomastoid anteriorly and the trapezius posriorly were active as shown by the ability to move the head nd neck in all directions and to slightly elevate the clavicle nd shoulders. These muscles are innervated by the cervical exus or four upper cervical nerves. The group of muscles xt below represented by the deltoid, the biceps, and triceps ere paralyzed as shown by the inability to move the arms or completely raise the shoulders. These latter muscles receive eir nerve-supply from the brachial plexus or four lower cerical segments of the cord, and therefore the hemorrhage must ve extended as high as the zone between the cervical and achial plexuses or as high as the fifth cervical nerve root. e spinal accessory nerve which in the main supplies the ernomastoid and trapezius muscles receives branches from e cervical nerves as low down as the third segment. Hence was inferred that the lesion was somewhere below the third rvical nerve root. In short, the injury was probably between e third and sixth cervical nerve-roots. That the substance of the cord and not the membranes only was the seat of the hemorrhage was concluded from the following points: In hemorrhage of the membranes there would have been decided pain with a more gradual onset of paralysis; in meningeal hemorrhage we would expect to find the paralysis confined to one or more groups of muscles or involvement of one group after another until there was a complete paraplegia; in meningeal hemorrhage there is more apt to be a gradual improvement in the paralysis with possibly complete recovery; and in hemorrhage of the membranes inflammation is more likely to follow terminal meningitis.

*Autopsy.*—The patient died on the fourth day and the autopsy confirmed the diagnosis revealing the following conditions: There was a fracture without displacement of the tip of the spinous process of the fourth cervical vertebra, also a linear fracture of the left lamina of the fifth vertebra. A considerable amount of dark fluid blood exuded from the cervical tissues and a slight amount of extravasation was found in the dura around the fourth and fifth segments of the cord. A small amount of blood exuded from the subdural space. The central canal opposite the fourth, fifth and sixth segments contained minute blood-clots and macerated cord substance. There was a widespread ecchymosis of almost the entire cross-section of the cord at the level of these segments. The damaged section was limited between the fourth and sixth cervical nerve-roots.

The points in the case of special interest were the following:

1. The differential diagnosis between injury to the membranes and injury to the cord substance is important. In a purely meningeal hemorrhage the blood clot might be removed by a laminectomy, but if the cord substance is seriously involved surgical interference would be futile.

2. The deep reflexes below the seat of the lesion were lost while the automatic centers for the rectum and bladder remained intact; that voluntary control of the bladder and rectum was lost showing that the motor pathway from the brain to these organs was interrupted by the cervical injury.

3. The cause of death was probably paralysis of the phrenic nerve and was not immediate because not all the nerve origin was first impaired.

1316 Washington Street.

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# A CASE OF PELLAGRA IN ILLINOIS

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PEORIA, ILL.

As spring is the time of the year in which pellagra is most prevalent, and as all cases previously reported from Illinois have been asylum cases, the report of a case of that disease in private practice should prove of interest.

*History.*—I was called to see a woman, aged 37, who complained that she had been burned while taking a vaginal douche on March 30, 1910. She was a middle-aged woman, with a peculiar, dejected, staring expression, confined to her bed. Her family history was negative. She had been healthy as a child; was married; had five healthy children; had lived in Peoria last 20 years; had been constipated in childhood; always a light eater, rarely using meats. Her dietary was that of the ordinary laboring family; corn-meal mush served once a week; other corn products used frequently. She had suffered from a puerperal infection after the birth of her first child and had been in poor health since. In February, 1903, her last child lost twenty pounds in last five years. During 1905 she had a paralysis, of short duration, of the left arm and side of the face.

*Present Illness.*—In March, 1903, a rash appeared on the backs of both hands that persisted until the following winter. It came on as large blebs that became ulcerated at the base.

Her general health declined and menstruation disappeared entirely. Each following spring, usually in March, the eruption has reappeared, but dryer, more widespread and of a brownish-black color. These lesions have burned and itched, and sometimes have been quite painful, requiring morphin. During the eruption of 1907 a severe dysentery developed which has since persisted with from three to twelve stools a day. The eruption of 1909 covered forearms, hands, neck, feet and areas of the chest. Blebs under the eyes were lanced. The skin resembled elephant skin and frightened the children at times. The present attack began apparently after a vaginal douche when she thought she was scalded. Her mouth was sore, and the saliva hot and burning. Micturition was frequent and scalding. There were four watery stools daily. Her appetite was poor and she lost twenty pounds in last five years. During 1905 she had a paralysis, of short duration, of the left arm and side of the face.

*Present Condition.*—A small, emaciated woman, confined to bed, with a facial expression of despair; eyes prominent and reddened from weeping; complains of headache and loss of sleep; words are spoken slowly—in a drawl; lips large, protruding and cyanotic. The mucous membrane of the mouth is eroded in patches; the tongue is thick and the papillæ prominent; gums swollen, boggy, with pus exuding around the teeth; profuse watery discharge from nose and mouth; occasional cough; mucous expectoration; breath has foul odor. On sitting she becomes flushed and exhausted. Her feet drag and she settles to the floor on attempting to walk. There is no ataxia. The patellar reflexes are exaggerated. Babinski present. Her mental condition is clouded, memory poor and she is quite despondent. She has a chronic tuberculosis. The abdomen is tender, especially in the epigastrium. The external genitalia are excoriated; the skin is a brownish color, dry and scaly, with tendency to crack. There is no weeping. This condition is especially marked on both forearms and has well-marked outlines at wrists on flexor surface. The skin on the areas affected last year is thin and parchment-like. Urine is negative; stool is liquid, of a brown color, and foul odor. Numerous motile spirilla found. No ameba. Blood: Hemoglobin, 80 per cent.; reds, 4,000,000; leucocytes, 10,000; differential negative; no malarial parasites found.

*Diagnosis.*—The diagnosis seems clear, with recurring skin lesions for seven springs, improving in cold weather, the parchment-like skin, the dysentery and indigestion, the gastroenteritis, the stomatitis, the thickened tongue, the relatively high hemoglobin, the impaired mental condition and the malnutrition.

*Treatment.*—The skin condition has improved under the use of an ointment containing boric acid and salicylic acid. The general condition has improved slightly with improved diet and the administration of iron, arsenic and strychnin. Headache and pain have required morphin.

333 Woolner Building.

## HOOKWORM DISEASE IN KANSAS

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My purpose is to call the attention of the profession in the northern states to the importance of being on the lookout for cases of hookworm disease. It is known that its natural geographical distribution is in the South and its practically complete absence in the North might cause it to be overlooked or diagnosed as one of the numerous other things, such as neurasthenia, which it so much resembles

While traveling in the southern states in September, 1909, through the courtesy of physicians in several places and at one medical meeting I had the privilege of seeing and examining several cases of hookworm disease and the adult worms, and of witnessing a microscopic demonstration of the ova. The knowledge of this disease thus acquired suggested the correct diagnosis in the following case:

*History.*—In April, 1910, a married woman, aged 32, consulted me, complaining of a gradual decline in strength, lac of energy and ambition and gave a list of symptoms tha sounded like a treatise on the symptomatology of hookwor disease. The decline had been gradual, following a tri through the southern states and extending over a period o a couple of months. The patient did not feel ill but was tire out. She said that she had lost little, if any, weight.

*Examination and Treatment.*—The patient appeared to b well nourished, but had the sallow skin, the milky blue ey and the anxious, tired, worn look of the hookworm victi There was a patch of dermatitis on the anterior and externa surfaces of the right leg, which the patient said had bee there for two months. After a cathartic, and a fast, th patient was given thymol, followed by salines; the stools wer examined with the assistance of Dr. Phares and the adul worms and ova were found in large numbers. The patch o dermatitis on the leg began to clear up after the first treatment. The depletion caused by the salines revealed the fac that the plump appearance of the patient was due to a genera edema, which concealed a really marked emaciation.

Since having this experience I recall a patient, young woman from Tennessee, whom I saw in August 1909. She complained of indefinite pains, nervou symptoms, etc., no doubt due to the same cause, whic was unsuspected at that time. Though these cases probably are rare in the North, it is evident from the abov that the infection may exist in individuals coming fro the South, or may be acquired by persons visiting tha section even for a short time, and the possibility shoul be kept in mind.

1223 South Lawrence Avenue.

## VARICELLA AS A CAUSE OF NEPHRITIS

REPORT OF TWO CASES

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The rarity of published accounts of nephritis complicating or following an attack of varicella indicates eithe that the associated conditions are infrequently encountered or that such cases are not reported by those observing them. It is well known that varicella is, in th majority of instances, a mild disease and free from serious dangers but occasionally the disease may be unusually severe or a complication or complications may lea to unfortunate results. When such complications ar encountered it seems well to publish the account o the cases that others may profit.

Among the rare complications of varicella is nephritis. Henoch[1] first called the attention of the profession to this complication of the disease and publishe the accounts of four cases studied by him. Von Jurgensen,[2] Brunner,[3] Rille,[4] Dillon Brown,[5] Hogyes,[6] Janssen and Oppenheim[8] have reported similar cases. I hav had the opportunity of studying two cases which exhibited well-marked nephritis during and after an attack of varicella and in which there seemed good reason for believing that the kidney affection was the result o the primary exanthematous disease. The following cas has been previously quoted.[9]

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1. Henoch: Berl. klin. Wchnschr., Jan. 14, 1884, No. 2.
2. Von Jurgensen: Quoted in Nothnagel's Specielle Pathologi und Therapie, 1896, iv, 294.
3. Brunner: Quoted by Brown in Twentieth Century Practice xiv, 197.
4. Rille: Deutsch. med. Wchnschr., 1891, xvii, 301.
5. Brown, Dillon: Twentieth Century Practice, xiv, 197.
6. Hogyes: Jahrb. f. Kinderh., new series, xxiii, 337.
7. Janssen: Berl. klin. Wchnschr., 1887, xxiv.
8. Oppenheim: Berl. klin. Wchnschr., Dec. 26, 1887.
9. Hare and Beardsley: Typhoid Fever and the Exanthemata Edition 2, 381.

CASE 1.—*History.*—The patient was an Italian girl, aged 6. The parents stated that, with the exception of a slight attack of bronchitis when 2 years of age, their daughter had never been sick. The illness began two days before the patient was seen by me. The child seemed "feverish" and complained of headache. During the evening of the day the symptoms appeared the mother discovered the skin eruption, which she described as being "warts with water in them." Two days following the appearance of the eruption the family noticed that the patient "was not right in her head" and sent to the dispensary for a physician.

*Examination.*—There were forty or fifty varicellous lesions scattered well over the chest, abdomen and back, with a few on the extremities. The temperature was 103.2 F. and the pulse 150. The lungs were resonant on percussion and the breath-sounds, although exaggerated, revealed no further abnormality. The patient was slightly delirious, the breath foul and the tongue thickly coated. The mother stated, on inquiry, that the child had not urinated for eighteen hours and that at the time the last urine was passed it resembled blood. The patient was placed in a hot pack, which soon relieved the delirium, and was later thoroughly purged. The first urine passed was not collected, but a specimen obtained a few hours later was very highly colored, and contained 1.2 gm. of albumin (Esbach's test) and large numbers of coarsely granular casts, many finely granular, a few hyaline casts and a considerable number of red blood cells; specific gravity 1026.

*Course of Disease.*—The day following the first urine examination the child was still slightly delirious and the urinary changes were much the same as before but a larger amount of urine was passed (10 ounces were collected). The casts remained in evidence for six days, after which time they gradually disappeared. The albumin persisted in the urine for two weeks, and then disappeared. Following this illness the child's urine was examined once a week because of her extreme pallor, but no abnormality was discovered for some time. Some six weeks after the initial illness the child was brought to the dispensary to be treated for "stomach trouble." The mother stated that since the illness there was evidence of a "weak stomach" while previously the child could eat any food with impunity. The pallor associated with the history of nausea and occasional attacks in which the patient vomited prompted me to examine her urine again. At this time there was found 0.5 gm. of albumin to the liter with many finely granular and few hyaline casts. This case was studied about one year ago and during the past year I have seen the child four or five times at intervals of several months for what the mother terms "stomach trouble." At each examination of the urine the nephritic condition has been evident. As long as the child is bathed and the diet supervised she remains in fairly good health, but if the vigilance of the inspecting nurse is relaxed and the family becomes careless, the child soon develops toxemic symptoms.

CASE 2.—*History.*—The patient was a colored boy, aged 5. The attack of varicella differed from that in the first case mentioned, in being much more severe, many of the lesions showing petechial hemorrhages. This child was taken suddenly ill with a slight convulsion and later vomited freely.

*Examinations.*—When the child was seen the skin was well spotted with vesicles. The temperature was 103 and the pulse 140. The lungs were clear but the throat was much inflamed. Two days after the rash first appeared many of the vesicles showed hemorrhagic tendencies and the child appeared stuporous. After considerable difficulty a specimen of urine was obtained but not until several days after the child had greatly improved under eliminative treatment. The urine was highly albuminous and contained granular, hyalo-granular and hyaline casts in large numbers. Two weeks later there was no albumin present in the urine but a few hyaline casts were found.

*Course of Disease.*—The urine was examined again six weeks after the initial illness and no abnormality found, but three months later the child developed a frank lobar pneumonia, became very toxemic and an examination of the urine presented the picture of an acute toxic nephritis. Three weeks after convalescence from the pneumonia, casts and albumin were still present in the urine.

From these cases and from the cases quoted from the literature it appears that the kidney structure may be seriously affected by varicella and the necessity of frequent urine examinations during and following even mild attacks of the disease is realized.

2030 Chestnut Street.

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# A DEATH UNDER ANESTHESIA DUE TO STATUS LYMPHATICUS

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*Patient.*—A boy, aged 7, with the following history: Whooping-cough with good recovery at the age of 2 years. No other diseases of childhood. Operation for enlarged tonsils and adenoids, by Dr. J. A. Stucky, three months previously. At this time patient took the anesthetic fairly well except for a slight accumulation of mucus in the throat which, however, was not particularly troublesome. There was no history of any kind of asthma, any difficulty there had been in breathing being entirely relieved by the removal of the adenoids.

*Present Illness.*—For the past three years the glands on the left side of the neck had been noticeably enlarged. They had increased in size rather markedly in the last few months, although their growth had not been uniform from the beginning. Dr. S. B. Marks, who had charge of the case, said that six months previously these glands seemed to become smaller, but on the whole they had grown, until at the time of examination they showed as a marked swelling from the mastoid process to the border of the first rib. At times there had been some temperature disturbance but as this usually disappeared promptly under a dose of calomel, it was supposed that it was due to intestinal ailments. The physical examination showed no other glands palpable; the chest and abdomen were apparently normal. The probable diagnosis of tuberculous glands was made by Dr. Marks, and this was concurred in by Dr. A. H. Barkley, to whom the case was referred for operation. On March 15 the author was asked by Dr. Barkley to administer the anesthetic at the operation for the removal of these glands.

*Operation and Anesthesia.*—As the child was crying and fighting, chloroform was used to begin; it took only a few whiffs to quiet him. Ether was then substituted and was used exclusively from this time on. Dr. Barkley removed the enlarged glands easily and practically without the loss of a teaspoonful of blood. The patient behaved well under the anesthetic, the only untoward symptom being that too much mucus would accumulate in the throat. This was never excessive, however, and on withdrawal of the anesthetic it disappeared. The pupils were at no time dilated and while never down to the pin-point, often seen, were always well contracted. After the anesthesia had continued for an hour and a quarter, when the surgeon had almost finished the operation, the mucus in the throat becoming somewhat troublesome, the patient was allowed to come out so that he might swallow. The cone was removed for about three minutes, when the winking reflex becoming very active, a few drops of ether were poured on the cone and this placed over his face. He took two or three gasps without getting any air into his lungs. The surgeon was informed and artificial respiration immediately resorted to. The sphincter ani was divulsed, the heart massaged by Dr. Marks, who was assisting, the throat cleansed of mucus, and the tongue pulled forward rhythmically. The heart could not be felt to beat and the pupils from being contracted dilated to full size. The patient's color was good and not the least cyanotic, showing that the heart and respiration must have ceased almost simultaneously. The efforts at artificial respiration were abandoned after fifteen minutes, during which time the patient was not induced to take a single breath.

Permission for complete autopsy could not be obtained but we were allowed to remove the thymus, which was found to occupy its usual position behind the sternum. It showed two lobes with a centrally placed isthmus and measured 5 cm. long by 4 cm. wide by 1 cm. thick. It weighed 9 gm. The fifty or more lymph-nodes taken from the neck had a total weight of 92 gm. They ranged from the size of a small pea to that of a small English walnut. On section they were firm and showed no softening.

*Pathologic Report.*—Sections of the thymus and of two of the larger lymph-nodes were sent to Dr. Aldred Scott Warthin, of Ann Arbor, who reported as follows: "As far as I can make out from the slide of thymus, it does not show any special change beyond that of a general hyperplasia. The lymph-nodes are extremely hyperplastic, and may be taken as representing the early stages of a lymphatic struma. There is no tuberculosis in the ones sent, and I think that the diagnosis of status lymphaticus is justified by the sections. There is certainly a marked lymphoid hyperplasia. The preservation of the germ centers in the lymph-glands rules out lymphosarcoma, and the condition is more typical of status lymphaticus than of Hodgkin's disease, though I believe that there is no hard and fixed line between some of the cases of Hodgkin's and those showing the clinical appearance of lymphatic struma."

146 Market Street.

## RARE FETAL MONSTROSITY

### ENTIRE ABSENCE OF ABDOMINAL PARIETES; TALIPES CALCANEOVARUS; SPINA BIFIDA

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While a number of cases of celosoma are reported in medical literature, I could find only one case in which the entire abdominal parietes were wanting.[1]

*History.*—Family history was negative; the mother was a primipara. I was called at about 2 a. m., Dec. 2, 1908. The patient had been in actual labor for about six hours and had passed a clot about five hours previously. Pains were occurring every five minutes. The abdomen was symmetrically enlarged. The fetal back was to right; the fetal extremities occupied upper left quadrant. The anterior shoulder was near middle line, and the fetal head was in the pelvis. Fetal heart sounds were heard in the right lower quadrant—142. The cervix was fully dilated. Position was R. O. A. I ruptured the membranes before removing the examining hand from the vagina. About 3 a. m., the head appeared at the vulva. Soon after, in the interval of pains, there were repeated gushes of blood from the vagina. I suspected a premature detachment of placenta but as the labor was progressing satisfactorily and the patient seemed in perfect condition, I did not interfere. After delivery of the head there was considerable delay in the birth of the shoulders. The hemorrhage continuing, I assisted the delivery of shoulders with fingers in the axilla. Even after the delivery of the shoulders, however, the body seemed to recede and to remain stationary. Slight traction brought fetus and placenta *en masse.*

*Description of Child.*—The head, neck and arms, pelvis, thighs and legs were perfectly formed. Both ankles were in position of talipes calcaneovarus. There was a small meningocele at the base of the sacrum. The abdominal parietes were entirely wanting and were replaced by a thin, transparent serous membrane. This membrane was continuous with both skin and parietal peritoneum at the costal and pelvic margins and along the outer border of the muscles of the back. This membrane also lined the inner surface (fetal) of the placenta and extended over the three blood-vessels near the center of the placenta. The umbilical arteries, the umbilical vein, the liver, gall bladder, stomach, intestines and upper part of bladder were plainly visible. With the exception of a low position of the transverse colon, an apparent shortening of the colon, a positive shortening and thickening of the omentum, all abdominal and pelvic (female) organs seemed to be normal. The child cried lustily but gradually grew weaker and died after about half an hour.

185 East Seventy-first street.

## Therapeutics

### HOW AND WHEN SHALL DRUGS BE ADMINISTERED?

This is a question of vital importance, as even if the diagnosis is correct, the indication for a drug positive, and the selection of the drug needed accurate, all is of no avail if the drug is administered in an insoluble preparation, at a wrong time to accomplish the object aimed at, or in a frequency that is either useless on the one hand or dangerous on the other. To be more explicit, it lacks physiologic and therapeutic sense to administer a drug, that is quickly absorbed and quickly eliminated, when a continuous action is desired, so infrequently that there is only momentary, intermittent effect. On the other hand, it is futile to administer a drug for immediate need that requires hours to act. It is certainly physiologically wrong to administer a drug frequently that requires hours, or even a day or two to be excreted.

The greatest number of mistakes in medication are made in the treatment of inflammations and diseases of the stomach, and in disturbances of the digestion. If simple gastritis is diagnosed, and it is decided to treat it with bismuth, how futile to expect that a few grains given immediately before meals (or, we are sorry to say, often immediately after meals) could do any good in ameliorating the irritation of the stomach mucous membrane. For bismuth to aid in healing this membrane, it must be spread well over it when the stomach is empty. Also, it is well to wash off the mucus which must of necessity form on any inflamed mucous membrane. Bismuth for this purpose should be given an hour before a meal, in a dose of 2.0 or 3.0 grams (30 or 45 grains), taken with a not too large amount of water, and such administration should be preceded a half hour before by a large draught of hot water, with or without a little salt, and perhaps a small amount of bicarbonate of sodium to wash off the mucus and prepare the membrane for the bismuth treatment. Such treatment once a day, combined with a diet regulated to cause the least irritation and the proper treatment of coincident constipation, will rapidly heal simple gastritis. This same treatment is a valuable aid in healing an ulcer of the stomach.

If it is deemed advisable to administer nitrate of silver, how useless, in the first place, to order it in such a form that it will be oxidized before it is taken by the patient, and how useless to give it after a meal. Also, what lack of good sense is displayed when a nitrate of silver treatment is given two or three times a day. How many would touch a canker sore, or other surface inflammation, with nitrate of silver three times a day, or twice a day, or even once a day? A nitrate of silver treatment for ulcer of the stomach or duodenum may be tried once a day, or once in two days, for a few days, but never for any length of time, and then it is best to have the dose of nitrate of silver combined with some inert earth, in capsule, and the capsule uncapped at the moment of swallowing and taken into the empty stomach with a suitable amount of hot water. This will insure, as near as it is possible, an application of the nitrate of ilver to the ulcer.

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[1] Ramsay: Northwest Med. Jour., 1857, new series, vi., 450.

The value of digestants as generally administered is pen to much question. A small amount of pepsin, given fter an ordinary meal, is probably of but little value. The value of dilute hydrochloric acid after meals, when he stomach needs it, is proved, and frequently when epsin is administered it is combined with hydrochloric cid, and it is likely that the hydrochloric acid does the work. A combination of pepsin with bicarbonate of odium, as often seen, is of course absurd. The coincident administration of pancreatin and pepsin seems nworthy of serious consideration. The pancreatin will ot act in acid media, and its activity will doubtless be ntirely destroyed before it reaches the intestine. Sometimes it may be advisable to administer bicarbonate of odium before meals. At this time it may do two things. t may cause the contents of the stomach to be alkaline r neutral longer than without it, thus aiding the starch igestion due to the saliva. If, however, it is in the tomach many minutes before the meal, it would probably quickly stimulate an outpouring of hydrochloric cid to neutralize it. After meals it would doubtless rolong the starch digestion, and temporarily, at least, nhibit the protein digestion. For heart burn or pyrosis ccurring several hours after a meal the bicarbonate of odium is certainly valuable symptomatic treatment to ounteract the hyperacidity. Such acidity, however, is ften due to lactic acid and not to hydrochloric acid. Such reatment is purely symptomatic, and the repeated administration of soda is inadvisable, and the cause of the ondition should be removed if possible.

A large number of drugs, especially alkaloids, even itters, and alcoholic preparations in any amount, will nhibit the digestion more or less. In ordinary doses, owever, the inhibition is probably but slight, and any rug or preparation that is irritant to the stomach hould certainly be administered either directly, or within an hour, after meals. Even bland, non-irritating blets, pills, and capsules should generally be administered after a meal, or at least with a large draught of ater, and the tablets should be crushed before swallowing. Potassium chlorate tablets should not be dissolved the mouth, as the concentrated saliva containing this lution when swallowed, is irritant to the stomach and ay cause inflammation and even ulceration. Certainly ch tablets should never be swallowed into the stomach, d there is no logical or rational reason for ever administering potassium chlorate internally. Bromid tablets, licylic acid or its salts in tablets, tablets containing nmonium chlorid, and in fact most tablets may cause ritation of the part of the mucous membrane on which ey dissolve, if swallowed into the empty stomach, and ost of the above-named tablets should be predissolved, certainly crushed before taking into the stomach at y time. Quinin pills or tablets should never be taken an empty stomach. If in any dose other than a all tonic one, quinin will slow peptic digestion. Consequently, if large doses are administered, it is well to e them between meals, swallowed with a few ounces, ore or less, of milk or other simple, easily digestible od. If a patient does not sleep well, or does not get to sleep readily at night, the possibility of a tonic capsule or pill of quinin, or quinin and strychnin, or strychnin, given after the evening meal being the cause of it should be considered, and the evening dose omitted. Also, many a patient is given hypnotics for insomnia, when the omission of the evening tea or coffee will allow normal sleep. It is physiologically wrong to give a hypnotic to a patient who is ill when he is being hyperstimulated by strychnin throughout the afternoon and evening.

For medication of the bowels with bismuth, large doses, or perhaps better, frequent doses, are always needed, as doses unless very large, given at long distances apart, are likely to pass along with the food and not medicate the bowel mucous membrane at all. It is useless to expect that bismuth administered by the mouth will heal or medicate the mucous membrane of the colon.

If morphin must be administered and the patient is taking nutriment, if possible, it should not be given within one or two hours after a meal, as the digestion will certainly be inhibited.

When cathartics are necessary, it is generally well understood which act rapidly and which slowly, which are to be given at bedtime or better even, often at suppertime for action the next morning, and which given before breakfast for immediate action. However, many combinations are made which combine quickly acting cathartics with slowly acting cathartics. Such combinations are certainly a mistake. Aloin, cascara, podophyllin, euonymus, sulphur, calomel, and rhubarb all generally act slowly, taking anywhere from 6 to 12 hours. The salines and the drastic cathartics generally act in from 2 to 4 hours. Senna may act in from 4 to 6 hours. Of course the size of the dose has a great deal to do with the rapidity of action, but the above is approximate.

It has been supposed for some time that the experiments were conclusive that saline purgatives acted by the fact that they were very slowly absorbed and caused an exudate of water into the intestine so that the fluid in the intestines and the fluid in the blood vessels would become isotonic, and that this mechanical fact, *viz.*, the water with increased peristalsis, was the cause of the large watery stools from salines. Clinically, it has also been noted that salines act better when the patient is up and about than when he is in bed and at rest. This has again seemed to prove that gravity had a great deal to do with the rapidity of the saline catharsis. Lately, however, Dr. Arthur F. Hertz, Assistant Physician at Guy's Hospital, London (*Guy's Hospital Reports*, Vol. LXIII) has shown, by administering bismuth preparations at various periods of digestion and taking $x$-ray pictures of the abdomen at different periods of digestion, that salines are really absorbed from the stomach and upper bowel and probably re-excreted into the lower intestine. Hertz, in cooperation with F. Cook and E. G. Schlesinger, has shown that when food is taken into the stomach it reaches the cecum in about four hours. A saline aperient, on the other hand, may cause an action of the bowels in some instances in even half an hour, and often within two hours. Insoluble bismuth being administered with a meal will show, by radiographs, the exact length of time in which food passes down through the different parts of the intestine. A seidlitz powder or its equivalent, taken at the time of the bismuth, or with the bismuth and food, and then radiographs taken, shows that the movement of the bowels comes long before the bismuth and food reach the cecum and colon. The excess of water excreted, therefore, with such movements cannot come from the small intestine, as otherwise it would wash the meal and the bismuth down with it, but really must be excreted into the lower gut. Saline purgatives also seem to cause no increased acceleration of the passage of the food from the stomach to the cecum. These investigations seem to show clinically that when it is desired to empty the colon and not act on the small intestine, salines are indicated, but when it is desired to cause stimulation for excretion or for increased peristalsis or for drainage of the upper intestine, other cathartics than salines are indicated.

Dr. William Brady, of Elmira, N. Y. *(New York Medical Journal,* Jan. 29, 1910) writes a most instructive article on the administration of drugs. He emphasizes the necessity of knowing the length of time before a drug is absorbed and about the length of time in which it will be eliminated.

Probably in no branch of medicinal therapeutics are more mistakes made than in the treatment of cardiac and circulatory weakness. Brady shows how really futile it is to expect active aid from digitalis in any acute heart weakness, and yet digitalin is constantly used hypodermatically for this purpose. Much of the digitalin on the market is unreliable, and while it is less irritant when used hypodermatically than the liquid preparations of digitalis, it has not been proved that it is any more effectual as a cardiac tonic than a sufficient dose of a liquid preparation of the whole drug. If the cardiac drugs are separated into cardiac stimulants and cardiac tonics (the stimulants acting quickly, but such action not lasting any length of time; the tonics acting slowly, but projecting their activities for a considerable length of time) one will not make mistakes in their use. The cardiac stimulants are, ammonia, camphor, strychnin, atropin, suprarenal and pituitary preparations properly used, and in some instances where only a quickly acting and not lasting stimulation is required, alcohol. The cardiac and circulatory tonics are, digitalis, strophanthus, caffein, and ergot used hypodermatically. Caffein and strychnin are really stimulotonics, both acting rather quickly and having their effects last a considerable length of time. In certain conditions when the heart is failing and the blood-pressure high, nitroglycerin and nitrites will relieve the heart and improve the whole character of the circulation. While nitrites act quickly and such action is theoretically and laboratorily quickly over, if given three or four times a day they will positively project, in most instances, a lowering of the blood pressure over the whole twenty-four hours.

Brady repudiates the so-called Da Costa (nitroglycerin compound) tablet containing digitalis, strophanthus, belladonna, and nitroglycerin, as combining drugs which act quickly with those which act slowly. His criticism is just. At the same time, the nitroglycerin of the second and third dose will doubtless prevent some of the vasomotor contraction of the first dose of digitalis. Consequently, the combined treatment, whether given in one tablet or in separate preparations, is often not bad therapy. Theoretically and practically a little more careful discrimination of the needs of each patient will develop a method of drug administration that will be satisfactory and yet will not require such combination, *viz.,* if the patient needs nitroglycerin, he probably does not need digitalis. On the other hand, if he needs digitalis, and it is inadvisable to contract the blood vessels, a small dose of digitalis may give satisfactory action, and nitroglycerin will not be needed.

Brady emphasizes the well-known but often disregarded fact that oils inhibit digestion by diminishing the secretion of hydrochloric acid. Consequently, if it is advisable to give a patient olive oil or cod-liver oil (and, as urged by Brady, pure, clean cod-liver oil acts just as well and often better than any emulsion), theoretically it should be given two hours after a meal, at about the time when the stomach will completely evacuate its contents into the duodenum. This is theory, and perhaps physiologically correct. Practically, it is very disagreeable for a patient to take oil two hours after meals, even if he were so daily situated as to be able to do so. Also, the contents of the stomach do not all pour, at one stated time, into the duodenum, but more or less frequently during the process of gastric digestion certain amounts are passed into the duodenum, and the oil might be passed into the intestine long before the gastric digestion was completed.

Brady states that hexamethylenamina is eliminated into the cerebrospinal fluid in one-half hour after its administration, and this, he states, in sufficient amount to inhibit staphylococcus growth. So far as we know, hexamethylenamina is harmless when administered in any ordinary amounts for most any length of time; consequently, the drug seems indicated whenever meningitis is present or is likely to develop. This drug is also eliminated and acts satisfactorily in inflammations of the gall-bladder and in inflammations of the urinary tract, especially of the pelvis of the kidney. It would seem advisable to administer it in typhoid fever to prevent localizations of the typhoid bacillus in parts of the body other than the intestine.

As Brady emphasizes, it should not be forgotten that the iodids are absorbed rapidly and are eliminated rapidly, unless they have been given for a long time, when it may take several days for the excess of iodid to be completely eliminated. Bromids, on the other hand, are absorbed rather slowly and are eliminated very slowly, and if taken for a long time, may not be completely eliminated for weeks.

Phenolphthalein is very slowly absorbed and acts very slowly and is best given as a tablet which should be thoroughly masticated before swallowing. Sometimes this drug, even in small doses, causes a great deal of irritation of the bowels.

**Thyroid Treatment of Regularly Intermittent Joint Effusions.**—P. Ribierre gives a historical sketch of regularly intermittent joint effusions, the syndrome, differentiation, etc., and reports a typical case in which analysis of the attacks, their periodical recurrence and the general condition suggested that the thyroid functioning might be at fault. The subsidence of the attacks during pregnancy and various other features of the disease sustain the assumption of defective glandular functioning as the main factor in the etiology, he is convinced. His patient was a woman of 34; under thyroid treatment the general condition improved, the periodicity and severity of the joint affection were materially modified and finally the attacks ceased entirely. Nearly two years have elapsed to date since the last attack. Before the thyroid treatment was commenced they had recurred every ten days for nearly two years, affecting both knees. The thyroid treatment was given at intervals from October, 1905, to March, 1908. The details of the case and of treatment are given in the *Bulletin de la Soc. Méd. des Hôp. de Paris,* 1910, xxvii, 96.

# New and Nonofficial Remedies

SINCE THE PUBLICATION OF THE BOOK "NEW AND NONOFFICIAL REMEDIES, 1910," THE FOLLOWING ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK ARE ASKED FOR.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

(*Continued from page 1545*)

**CHINOSOL.**—Normal Oxychinolin Sulphate.—Chinosol is a normal oxychinolin sulphate $(C_9H_7ON)_2H_2SO_4$.

Chinosol is a yellow crystalline powder of saffron-like odor and burning taste. It melts at from 175° to 177.5° C. (347° to 351.5° F.). It dissolves readily in water but with difficulty in alcohol and it is insoluble in ether. The aqueous solution has an acid reaction.

A drop of solution of ferric chloride produces in a solution of chinosol a marked green coloration. Barium chloride produces a white precipitate. Solutions of alkaline hydroxides precipitate from an aqueous solution of chinosol a white precipitate, consisting of interlaced crystalline needles, which after filtration, washing and careful drying in a desiccator should melt at from 73° to 75° C. On incineration chinosol should not leave a weighable residue.

*Actions and Uses.*—So far as experimental evidence goes, chinosol is nontoxic. It is a powerful antiseptic equal in this respect to mercuric chloride and considerably stronger than phenol. It exerts an antiseptic action in solutions containing 1 part to 5,000. It is a feeble germicide being weaker than phenol and much weaker than mercuric chloride.

*Dosage.*—For internal use 0.3 Gm. (5 grains) three times daily. As an antiseptic the average strength of solution is 1 to 1,000; as a nasal or vaginal douche, it is best given with 1 part to 5,000, and as an eye-wash 1 to 8,000, gradually increasing the strength of the solution according to the sensitiveness of the patient.

Manufactured by Franz Fritzsche & Co., Hamburg, Germany (Chinosol Co., Parmele Pharmacal Co., New York). U. S. patent No. 906,918. U. S. trademark No. 28,750.

**DIGIPURATUM.**—Digipuratum is a purified extract of digitalis, said to contain about 0.4 per cent. of digitoxin and 4 per cent. of digitalin in the form of a tannate. It is standardized biologically by the method of Gottlieb. It is claimed that 85 per cent. of the inactive substances found in the ordinary extract have been removed and that it is free from digitonin and other gastric irritants.

Digipuratum is a greenish yellow, odorless powder of bitter taste. The active constituents of digipuratum are insoluble in cold water and diluted acids, but are easily soluble in weak alkalies.

Digipuratum responds to the following identity test: If 0.1 Gm. digipuratum is underlaid with about 3. Cc. of glacial acetic acid which contains 1 per cent. of a 5 per cent. solution of ferric sulphate, there appears a red band (presence of digitalin) and above this another, at first bright green, later changing to dark green and finally blue (presence of digitoxin).

To determine the digitoxin content, 10 Gm. of digipuratum are dissolved with moderate heat in 50 Cc. of water; 5 Cc. of 10 per cent. ammonia water are added and the liquid is then extracted with chloroform. The chloroformic extractions are filtered into a tared vessel and the chloroform removed by distillation. The residue is dissolved in 3 Gm. of chloroform and mixed with 7 Gm. of ether and 50 Gm. of petroleum ether. The separated flakes are collected on a small filter. Then the residue on the filter is dissolved in absolute alcohol, allowing the solution to run into the tared distilling vessel. The alcohol is then distilled off and the residue dried to constant weight. The digitoxin thus found should not amount to more than 0.04 Gm.

The physiologic activity is determined by the method of Gottlieb: 1 Gm. of digipuratum is dissolved with heating in 19 Cc. of water and 1 Cc. of a 2 per cent. solution of sodium bicarbonate. If now 0.15 Cc., 0.2 Cc., and 0.25 Cc., respectively, of this solution is injected into the femoral lymphatics of freshly caught land frogs (rana temporaria), weighing 30 Gm. each, the exposed heart of the animals should permanently be brought to a stop in the majority of instances (say in five out of six experiments) within half an hour after the administration of a 0.2 Cc. dose. If 0.2 Cc. of the 5 per cent. solution=0.01 Gm. of digipuratum, is sufficient to stop the systolic heart-beat within half an hour, then 1 Gm. of digipuratum will contain 100 units; should 0.25 Cc. of the 5 per cent. solution be necessary, the number of units of digipuratum it contains would be 80; if 0.25 Cc. should not yet prove sufficient, the preparation would be too weak to be effective; and should the systole be arrested after a dose of 0.15 Cc. within half an hour after injection, the preparation would be too strong.

The total physiologic activity having been determined, the relative amount that is due to digitoxin can be determined by using the digitoxin separated in the above quantitative determination and by the difference between this amount and the total physiologic activity the amount due to the digitalin alone can be estimated.

*Actions and Uses.*—The same as digitalis, but it is claimed that it is less liable to disturb the stomach and on account of its exact dosage cumulative effects can be more easily avoided than with other preparations of digitalis.

*Dosage.*—The same as digitalis.

Manufactured by Knoll & Co., Ludwigshafen a. Rh. and New York. U. S. patent No. 943,578. U. S. trademark No. 73,012.

*Digipuratum Tablets, 1 1-2 grains.*—Each tablet is said to contain digipuratum 0.1 Gm. (1 1/2 grains).

**SECACORNIN.**—Ergotin Roche.—Secacornin is a solution of the active principles of ergot in a menstruum consisting of distilled water, glycerin and 7.5 per cent. of alcohol. 1 Cc. of secacornin corresponds to 4 Gm. of ergot U. S. P. and is said to be standardized according to the method of Kehrer (Arch. f. exp. path. u. Pharm., vol. lviii).

Secacornin is prepared from ergot by removing fat by means of benzin or similar solvent and exhausting by percolation with diluted alcohol. The total percolate is then deprived of its alcohol by distillation in vacuo. The resinous mass which separates after cooling is then carefully drained off and the clear filtrate having been evaporated to the consistency of an extract is mixed with the general vehicle.

Secacornin is a dark brown solution, said to be sterile. It is claimed that it does not deteriorate on keeping.

Secacornin responds to the following identity test: 1.6 Cc. secacornin is mixed with 3.0 Cc. distilled water, and 5 drops of 10 per cent. ammonia water, and shaken out in a separatory funnel with 20.0 Cc. of ether. After complete separation of the two liquids, the aqueous solution is allowed to flow off, the remaining ether washed with 2.0 Cc. distilled water, and the wash-water likewise carefully separated. After this the ethereal solution is filtered into an Erlenmeyer flask, and traces of water removed by the use of as much anhydrous sodium sulphate as can be held on the point of a knife. Following this it is filtered into a small glass dish and cautiously evaporated.

The residue is then dissolved in from 1 to 1½ Cc. ferric chloride-acetic acid (1 drop of Liq. ferri chloridi with 200 Cc. acetic acid). To this solution is added with a pipette, cautiously and without mixing, in order to form an understratum, 3.0 Cc. pure concentrated sulphuric acid. At the point of contact of the two liquids a characteristic blue to violet ring forms after a time.

*Action and Uses.*—The same as ergot.

*Dosage.*—0.5 Cc. (8 minims) are equivalent to 2 Cc. (30 minims) of fluid extract of ergot U. S. P. It may be given by intramuscular injection in doses of 0.5 to 1 Cc. (8 to 15 minims).

Manufactured by F. Hoffmann-LaRoche & Co., Basel, Switzerland (The Hoffmann-LaRoche Chemical Works, New York). Not patented. U. S. trademark No. 58,830.

**DESICCATED THYMUS—Armour.**—Desiccated Thymus—Armour, consists of the fresh thymus gland of the calf freed from fat, cleaned, dried and powdered, without the addition of preservative or diluent.

A very light yellow powder, having a peculiar odor. Partly soluble in water.

One part represents approximately 5 parts of the fresh thymus gland. It is rich in nucleoprotein and in lymphoid tissue. Upon incineration, it should yield not more than 12 per cent. ash.

*Actions and Uses.*—See Thymus Gland (N. N. R., 1910, 144).

*Dosage.*—0.13 to 0.25 Gm. (2 to 4 grains) three times daily.

Manufactured by Armour & Co., Chicago. Not patented or trademarked.

*Thymus Tablets-Armour.*—Each tablet contains desiccated thymus 0.065 Gm. (1 grain).

Dose.—2 to 4 tablets three times a day.

(*To be continued*)

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[*For other information see second page following reading matter*]

SATURDAY, MAY 28, 1910

## THE MEIOSTAGMIN REACTION

Immunity reactions are constantly gaining a wider field of usefulness as diagnostic aids, and as new facts are discovered, exact diagnosis will doubtless be a matter of comparative simplicity in a great number of diseases in which one has to rely now on more or less equivocal signs, at least in the atypical or mild forms of disease.

Recently, Ascoli[1] has discovered a new phase of immunity reactions, which is physiochemical in nature and consists in a determination of the surface tension of an immune serum plus its specific antigen before and after incubation at 37 C. for two hours. He employs the stalagmometer of J. Traube for measuring the surface tension; by means of it, one can determine exactly the number of drops in a given quantity of fluid. Since after incubation he finds a lowering of the surface tension and a consequent decrease in the size of the drops (as will be shown later), Ascoli designates the test the "meiostagmin" reaction, from Greek words meaning "small" and "drop."

The first disease investigated was typhoid fever. From patients suffering with the disease, serums were obtained which agglutinated typhoid bacilli in dilutions ranging from a strength of 1 to 80 to that of 1 to 360. For the antigen, an alcoholic extract of typhoid bacilli was prepared, according to the method of M. Neisser and Shiga.[2] The serum was employed in a dilution of 1 to 10, the antigen in dilutions of 1 to 1,000, 1 to 10,000, 1 to 100,000 and 1 to 1,000,000; 0.85 per cent. sodium chlorid solution was always used as the diluent. To 9 c.c. of the diluted serum 1 c.c. of diluted antigen was added, and the number of drops in the mixture was immediately determined. The fluid was incubated for two hours and, after being allowed to cool to room temperature, the number of drops was again determined. When antigen, in dilutions ranging from a strength of 1 to 1,000 to that of 1 to 100,000, was used, a lowering of the surface tension was always found, as shown by the increase in the number of drops by two to three. This constituted a positive reaction. Ascoli found that normal serums, used as controls, when united with typhoid antigen and incubated, showed no decrease in the size of the drops. Similarly, negative result was obtained with typhoid serums when an alcoholic extract of colon bacilli was substituted for the typhoid antigen.

Izar,[3] a pupil of Ascoli, extended the study of the meiostagmin reaction to twelve luetic serums with very interesting results. The antigen was prepared from the spleen of a syphilitic fetus. The serum was diluted with physiologic salt solution, the proportions varying from 1 to 20 to 1 to 100, the antigen being diluted 1 to 100 in all experiments. The two were united in the proportions employed by Ascoli with typhoid. Of the luetic serums tested, eleven gave a positive Wassermann reaction, while with the meiostagmin reaction all were positive, the increase in the number of drops varying between two and five.

For control, other antigens were prepared from material showing tuberculosis, carcinoma, sarcoma, echinococcus and typhoid. All were negative with the luetic serums; the number of drops was never increased more than one. As a further control, serums from patients suffering from a number of diseases other than syphilis were tested with syphilitic antigen. The most interesting of these were two serums obtained from leprous individuals, both of which gave a positive Wassermann reaction. They were sent to Izar with the statement that they yielded a positive Wassermann reaction, and it was only after a negative meiostagmin reaction was obtained that he learned that the patients were leprous and not luetic. The positive reactions, then, included the twelve patients known to be luetic, all controls being negative.

Finally, Ascoli and Izar[4] have sought to apply the meiostagmin reaction to the diagnosis of malignant neoplasms. Preliminary to their observations on human material, they examined the serums of normal and sarcomatous rats; positive reactions were obtained in all of nine sarcomatous animals, while eight normal controls were negative. After obtaining these results, human serums were tested against sarcomatous rat antigen and, in the later cases, against carcinomatous human antigen. (Ascoli and Izar give the preparation of the antigen in detail.) Their material included sixty-two patients suffering with malignant tumors, both carcinomas and sarcomas, a majority of the diagnoses being confirmed by histologic examination of tissue. Of these patients, fifty-eight gave a positive meiostagmin reaction; forty-eight patients suffering with other diseases (including two with lipomas and two with leukemia) all reacted negatively.

Ascoli and Izar are cautious in their conclusions. The results thus far obtained make it appear that the meiostagmin reaction is specific and that its field of application may be extensive. The great simplicity of the technic as compared with that of the Wassermann reaction should bring the method into almost immediate general use, if the results prove to be dependable. It remains, however, for further observations to demonstrate to what extent the reaction may be relied on as an aid to diagnosis.

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[1] Ascoli: München med. Wchnschr., 1910, lvii, 62.

[2] Neisser and Shiga: Deutsch. med. Wchnschr., 1905.

[3] Izar: München. med. Wchnschr., 1910, lvii, 182.

[4] Ascoli and Izar. München. med. Wchnschr., 1910, lvii, 403.

## THE CHINOSOL REPORT

The report by the Council on Pharmacy and Chemistry, which appears elsewhere[1] in this issue, is of more than ordinary interest. The preparation with which the report deals—Chinosol—was originally advertised as a most remarkable antiseptic and germicide free from the dangers of poisoning. These claims were so important that an investigation of the product was undertaken by the Council, the results of which were published as a report in THE JOURNAL Jan. 25, 1908. This investigation verified the statement that Chinosol is a good antiseptic, but it showed, on the other hand, that the germicidal action of the product is vastly inferior to that which was claimed for it. In its report, the Council accepted the conclusions of Weyl—since proven erroneous—that Chinosol has toxic properties and it pointed out that the chemical composition, as given by the American agents, had repeatedly been shown to be false and could be so demonstrated by a very simple analysis.

The American agents, the Parmele Pharmacal Co., having challenged not only the conclusions of the report but also some of the facts, the Council ordered a complete reinvestigation of the disputed points, by an independent bacteriologist, as well as by its original referee. This has extended over two years, and in the meantime additional confirmatory evidence has been obtained by eminent and independent investigators in England and Germany. The conclusions which the Council has drawn from its second investigation are presented in the present report. In brief, it is shown that the work of the original referee and the conclusions based directly on this work, were correct in every particular, but that the Council made a mistake in accepting Weyl's conclusions as to the toxicity of the product.

Regarding the false statements in the advertisements dealing with the composition of the product, the agents have since explained that they quoted *verbatim* from the United States Dispensatory, and that they did not know hat any controversy had arisen as to the chemical composition. As to the matter of toxicity, the headline in he Council's original report, "Not free from danger of poisoning," went beyond the evidence. The Council had not itself investigated this point and was misled by a definite quotation. The experiments which the Council has since conducted have failed to bring out any vidence that Chinosol is harmful. While this, being egative evidence, is not conclusive proof that the prodct is absolutely harmless it must be conceded that so ar as our present knowledge goes, there is no ground or challenging the claim of safety. Public safety and professional responsibility require that claims of absoute freedom from danger shall be supported by incontrovertible and unassailable evidence. The Council takes he attitude that in such cases a large number of negave observations are practically invalidated by a single, well-authenticated positive observation—an attitude which is unimpeachable in principle.

The most important findings of the Council, however, relate to the antiseptic and germicidal action of the preparation. Regarding the antiseptic value there has been no dispute. As to the other point, however, the Council confirmed its first report, that Chinosol is practically valueless as a germicide. This conclusion—and it was really the main issue of the first report—has been abundantly confirmed by independent investigators both at home and abroad, and in regard to it there can be no doubt. The experimental results on which the agents for Chinosol based claims, having been shown conclusively to be vitiated and invalidated by the want of proper experimental precautions. In extenuation, however, it should be said that the company was led into its serious error by a mistake of its technical advisers, a mistake which could be discovered only by experts.

The distinction between germicide or disinfectant and antiseptic or preservative is sometimes lost sight of and yet the difference is a vital one. A substance that is excellent for inhibiting the growth of bacteria (antiseptic) might be valueless as a killer of bacteria (germicide). It is evident, therefore, that to rely on the claims that were previously made for germicidal power would be extremely dangerous, and might more than offset any good that might follow the legitimate use of the article in its proper field as an antiseptic. The physician and surgeon must know exactly the limitations of such a remedy in both directions.

The report illustrates once again the need of independent and critical investigation of all proprietary remedies. It is necessary, not only to prevent fraud, but also to discover false claims made in perfect good faith and on apparently good authority. These last are, in some ways, the most dangerous: A manufacturer who was sincere in his false convictions would be likely to employ his superior material resources in such a way that an isolated independent investigator would scarcely obtain a hearing. It is doubtful whether such claims could be challenged successfully, except by an independent but official organization, possessed of the resources of the Council. The incident also illustrates the pains which the Council takes to get at the truth of disputed points. It shows too, that a manufacturer who has any legitimate grievance against the Council, may be assured that his representations will be considered fairly and without prejudice.

## A NEW COMBINATION AGAINST THE AMERICAN MEDICAL ASSOCIATION

Within the past few days the newspapers of the chief cities of the country have carried large advertisements headed: "Do You Want the 'Doctors' Trust' to be able to Force its Opinions on You?" These advertisements paint in vivid colors—"yellow" predominating—the disaster and general destruction that will follow the formation of a federal department of health. They emanate from, or to be more correct, are signed by, an organization calling itself the "National League for

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[1] Pharmacology department, page 1801.

Medical Freedom." In addition to the regular display advertisements, the press agent is supplying matter for the reading pages, and there is every evidence that the propaganda is not lacking financial support. Of course the American Medical Association is the *bête noir* the "league" seeks to kill; it is the "medical trust" referred to. Members of the Association will be surprised to learn that if a national department of health is created it will result in "denying to the people the right to determine for themselves the kind of medical treatment they shall employ." For this reason, and so far as the advertisements state, for this reason only, the National League for Medical Freedom has been brought into being. As a slogan under which the real reasons for organizing may be carefully concealed, it may serve its purpose. Most people prefer to have their thinking done for them and this alone will prevent the absurdity of such a proposition, as that on which the "league" is ostensibly founded, becoming apparent. Yet every person with the most elemental knowledge of our government knows that the regulation of the practice of medicine and the licensing of physicians is a function of the state and that any law attempting to confer such power on a department of the federal government would be unconstitutional. The proposed department of health would have just as much authority to determine what "kind of medical treatment" the people should employ as the Department of Agriculture has to dictate to the farmer regarding the implement company he shall buy his plows of. Yet, we are asked to believe, apparently, that a national department of health would mean that the free-born American citizen who wanted to have a purulent appendix cured by the "spinal adjustment" route, would have to patronize a surgeon, even though he were a "conscientious objector" to surgery. It would mean, it seems, that the individual suffering from malaria who wished to be freed from this "moral error" by "absent treatment" would be ignominiously dragged to the internist and dosed with quinin. It would mean that the optimist who would cure his rheumatism by wearing a "guaranteed magnetic ring," would have to endure the administration of the salicylates. It would mean—but why pursue these harrowing predictions further?

Seriously, though, there must be something wrong with the mental make-up of the individuals composing this "league" who expect—even by such potent means as the lavish distribution of printers' ink—to persuade a reasonably sane people that any law might, could or would be enacted that would curtail the rights of the public as they have suggested. Of course, the fact is that the moving spirits behind the organization of the "league" have neither an overwhelming solicitude for the public welfare nor any strenuous objection to the formation of a national department of health. The "league's" actual, and fairly evident, *raison d'être* is opposition to and antagonism against the American Medical Association. To disclose the source of this opposition it is only necessary to call attention to some of the members of the "advisory board"—high-sounding title—as reported in the newspapers, to make reasonably clear to the members of the American Medical Association the "power behind" the "league." The publisher of the *Medical Standard* and *Western Druggist,* for instance, has long been known as a defender of, and mouthpiece for the "patent medicine" and proprietary interests. His presence on the "advisory board" is fitting, and the only surprising thing about it is that he should have been guilty of such a tactical blunder as getting into the fierce light of publicity.

That the president of the A. D. S. should be on the "board" was to be looked for, and being looked for, is found. And there are others! Among the lesser satellites in this distinguished galaxy are those who very naturally might be expected to enter enthusiastically into such a campaign—the president of an antivivisection society, some "mental healers" and one or two journalists of varying degrees of obscurity. Of the latter, one has for years been strongly opposed to medical organization and more recently has taken up that mental vagary known as "new thought." Taking into consideration both the objects of the "league" and the personnel of its "board" one feels that the New York *Journal* expressed only a half-truth when it said:

> "The druggists and the proprietary medicine interests throughout the country are said to be chiefly concerned in defeating the Owen bill."

It would have been nearer the facts if for "defeating the Owen bill" were substituted the clause "attempting to disrupt the American Medical Association." A dozen years ago the public might not have been able to see the animus prompting this attack—today it is wiser.

As to the publicity which this sensational and costly campaign will give to the American Medical Association the medical profession may welcome it. One thing that has long been needed is that of directing the attention of the laity to the aims and accomplishments of the American Medical Association. It welcomes investigation—the more the public learns about the work the Association is doing the better for the Association. It has nothing to be ashamed of, but it has a great deal to be proud of; its work in the interests of both public welfare and scientific medicine is and always has been open and above board. The Association needs no defense; it is not only well able to stand on its record, but is proud of that record.

## EFFECTIVE PRACTICAL WORK AGAINST TUBERCULOSIS

Some splendid examples of work that should prove highly effective in the campaign against tuberculosis and the spitting habit are reported from Salem,[1] Mass., and Rochester, N. Y. The carefully laid plans of the

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[1] The Salem campaign was described in The Journal, April 23, 1910, p 1398.

Rochester Public Health Association included a billboard and advertising-sign campaign against the spitting evil, the distribution of small printed slips bearing warning against promiscuous spitting, factory talks of ten minutes each at noon by physicians, night meetings, a Children's Day, when the school children were instructed by prominent physicians on how to avoid disease, talks to fraternal organizations, trades unions, etc. One of the most valuable features was a series of "Tuberculosis Talkettes" in the five daily newspapers of Rochester by prominent physicians of the city, each "talkette" being a brief, terse presentation of a different phase of the tuberculosis question and the spitting evil. These consisted of not over forty or fifty lines in the paper, going directly to the point and telling in language easily understood by the layman the nature of tuberculosis, its cause, methods of transmission or contagion, the relation of the spitting habit to the spread of the disease, the necessity for personal and public hygiene, good habits, food, clothing, air, and various related subjects. All the subjects were treated in a way to show their practical application to the daily life and the welfare of each individual. The campaign reached its climax in a public meeting on April 22, at which Dr. Livingstone Farrand, executive secretary of the National Association for the Study and Prevention of Tuberculosis, Dr. John H. Lowman, Cleveland, O., and Professor Adolphus S. Knopf, New York, all enthusiasts in the fight against tuberculosis, gave addresses on tuberculosis. Following this meeting came Tuberculosis Sunday, observed all over the country, April 24, when the ministers of Rochester addressed their congregations on the work that had been done and the importance of its continuance. A long list of persons from the factories, mercantile establishments, fraternal orders, clubs, etc., was appointed by the Public Health Commission to act as permanent representatives in promoting the work of the Association. Such a vigorous campaign could scarcely fail to reach in some way every man, woman and child in the community, and its value in accomplishing the objects sought cannot be overestimated. Rochester and Salem are to be congratulated on these systematic efforts, which should serve as models everywhere, and then much real progress in the war on tuberculosis would be made.

### IS IT TRUE? ASK YOUR DRUGGIST!

Elsewhere we call attention to the source and character of the opposition that has developed, ostensibly against the bill providing for a national department of health but actually against the American Medical Association. It is said that in the hearing before the committee having the bill in charge, Senator Smoot read a letter from the president of the National Association of Retail Druggists (and of the American Druggists Syndicate), claiming that 40,000 members of the N. A. R. D. were against the bill! If this statement is true it is well that the physicians of the country should know it; if it is false then the president of the N. A. R. D. (and of the A. D. S.) has grossly libeled and misrepresented the retail druggists of the country. We believe the statement, if made as reported, to be unequivocally false. We believe that the vast majority of the druggists who are members of the N. A. R. D. are in hearty sympathy with the aims and efforts of the medical profession to conserve the public health. We believe that while some of the officers of the N. A. R. D., because of their connection with the A. D. S., are bitterly opposed to the American Medical Association and all it stands for, they do not in any sense represent the attitude of the members of the former organization. In fact, it is unthinkable that the decent pharmacists of the United States should be lined up with "patent medicine" fakers, "newthought" faddists, antivivisection cranks, *et hoc genus omne.*

### ORANGE-RED CLOTHING NO IMPROVEMENT

The acquisition by the United States of its island possessions and of interests in Panama and Cuba has raised many new problems concerning the health and comfort of the forces of occupation and administration in tropical climates. Among the questions arising has been the one of suitable clothing. An experiment made in the Philippines among the military forces was the use of orange-red underclothing as a protection against heat, and especially as a preventive of heat exhaustion. This experiment was made following the report of the British officers in India that such clothing was much more comfortable than the white in hot weather. The test clothing was distributed to half the men in each company, the other half wearing white garments of like texture as a control. In all 500 men wore the orange-red underwear, under similar conditions of physique, food and service, and careful records were kept of comparative amounts and nature of sickness among them, their feelings as to comfort or discomfort in the sun, their mental and bodily vigor, etc. The experiments continued for a year and a record of the weights and blood examinations were kept throughout this period. It was found that the record of sick admissions was about the same for both groups, they suffered equally from the heat of the sun, but those of the orange-red group suffered more from excessive perspiration, there was a greater loss of weight in the hot season by nearly a pound per man, and the blood changes noted in tropical climates—increase of red cells and loss of hemoglobin—were more pronounced. The blood pressure also showed a greater loss and the temperature, pulse and respiration showed a slightly higher rate for this group. The admissions for heat exhaustion and febricula were not reduced by the orange-red underclothing and the symptoms due to heat were about the same in the two groups. Only sixteen men out of the five hundred preferred the colored underclothing, and the persistent complaints of greater heat, greater weight and excessive perspiration indicated that the colored garments are more receptive to the heat rays than the white. The conclusion of the board conducting the experiment was that the orange-red clothing added materially to the burden of heat on the system; that while it protected from the chemical ray, the influence of this ray is negligible and it is sufficiently excluded by khaki clothing and the campaign hat, and that no beneficial effect was observed from this clothing.

# Medical News

## CALIFORNIA

**Violates Medical Law.**—Chow Juyan, a Chinaman, was fined $100 by Police Judge Deasy, San Francisco, May 5, with the alternative of fifty days' imprisonment in jail for practicing medicine without a license.

**Children's Clinic Opened.**—A free clinic has been opened by the Pasadena Hospital for children of the Pasadena schools. The clinic, while free to those who cannot pay, will be supported in part by contributions.

**Fraternity Election.**—At the annual election of the Delta Chapter of the Phi Rho Sigma Fraternity, College of Medicine of the University of Southern California, Los Angeles, held April 29, the following officers were elected: President, Dr. Milbank Johnson, Los Angeles; vice-presidents, Drs. Andrew S. Lobingier, Los Angeles, and Rexwald Brown, Santa Barbara, and secretary-treasurer, Dr. W. R. Maloney.

## ILLINOIS

**Fined for Violating Medical Practice Act.**—Mrs. Ernestine Petersen, matron of the so-called Red Cross Sanitarium, Rock Island, on May 4, is said to have been fined $100 and costs on each of ten charges of violating the medical practice act of Illinois.

**Personal.**—Dr. William W. Williams has been elected president and Dr. Kirk S. Shawgo, secretary of the staff of the Blessing hospital, Quincy.——Dr. Edward Bowe has severed his connection with the Maplewood Sanatorium, Jacksonville.——Dr. Orlando F. Scott has been appointed health officer of Summit and Argo.

**Court Doings.**—In the case of Dr. St. Elmo M. Sala, Rock Island, against Charles E. Dempsey, a verdict was returned for the plaintiff May 17, with damages of $112. This case is interesting as the defendant had previously brought suit for $10,000 for malpractice and was non-suited. The litigation has continued for about five years.——In the case of Dr. Paschall N. Bowman, Gillespie, charged with manslaughter by the alleged unskilful performance of an operation, the jury was unable to agree and was discharged.

**Society Meetings.**—At the annual meeting of Brainerd District Medical Society, held in Lincoln April 28, the following officers were elected: President, Dr. Harry G. Hardt, Lincoln; vice-presidents, Drs. Charles W. Carter, Clinton; Chauncey W. Cargill, Mason City, and Edwin P. Sloan, Bloomington; secretary, Dr. Harry S. Oyler, Lincoln; treasurer, Dr. Chas. C. Reed, Lincoln, and censors, Drs. Irving Newcomer, Petersburg; James H. Butler, Hartsburg, and Albert E. Campbell, Clinton. The next meeting will be held in Springfield in July.——The thirty-sixth annual meeting of the Central Illinois District Medical Society was held in Pana April 26. The following officers were elected: President, Dr. Roscoe C. Danford, Pana; vice-presidents, Drs. George J. Rivard, Assumption, and William H. Sparling, Moweaqua; secretary, Dr. Walter Burgess, Pana, and treasurer, Dr. John N. Nelms, Taylorville; censors, Drs. Jacob Huber, Louis H. Miller, and Frederick J. Eberspacher, Pana; Dr. William J. Eddy, Shelbyville, and Dr. Dorwin D. Barr, Taylorville.

### Chicago

**Fined for Misbranding.**—Mrs. Gervaise Graham is reported to have been fined twenty-five dollars by Judge Landis, May 16, for misbranding a dandruff cure. The wrapper bore a printed statement that a cure was guaranteed but the government declared that it is not possible to guarantee a cure for this condition of the scalp.

**Byron Robinson Memorial Services.**—Memorial services in honor of the memory of the late Dr. Byron Robinson were held at Whitney Opera House, May 22. President Charles R. Van Hise of the University of Wisconsin presided and Dr. William A. Evans gave an address on the life and work of Dr. Robinson.

**Personal.**—Dr. and Mrs. David Fiske and Dr. C. Bruce Walls and family have started for Europe.——Dr. Nils Theodore Quales has been awarded, by King Haakon of Norway, the order of St. Olaf.——Dr. Magnus-Levy, Berlin, who is staying in Chicago for a few days on his way West, was tendered a dinner at the University Club, May 23, by a few of his medical friends.

## IOWA

**Fined for Illegal Practice.**—George Corwin, Brooklyn, a so-called chiropractic, charged with the illegal practice of medicine, is said to have been found guilty, April 1, and fined $300 and costs.

**Hospital News.**—The new addition to Graham Hospital, Keokuk, which will cost $15,000, will be completed and ready to receive patients July 1.——Waterloo is to have a new hospital in charge of the Franciscan Sisters. The building will be under construction this summer and will be ready for occupancy in July next year. The institution will be four stories in height, of fire-proof construction, and will accommodate 98 patients.

## KANSAS

**Hospital for Wellington.**—The Commercial Club and soliciting committee for a hospital for Wellington obtained subscriptions of $10,000 in seven days. Of this, physicians of Sumner county subscribed $3,000. The hospital is to be in care of Bishop Frank Milspaugh.

**Fine Increased After Appeal.**—James Black, a negro who was recently fined $200 and given a sentence of sixty days in jail by the police judge in Kansas City for selling cocain, and appealed his case to the district court, had a rehearing, May 2, and was fined $300 and given a sentence of ninety days' imprisonment in jail.

## KENTUCKY

**School Children's Teeth Examined.**—By authority of the health department and health officer of Louisville, the teeth of every school child of the city is to be examined. The actual work will be done by members of the Jefferson County Dental Association.

**Decided Against Physician.**—The suit of Miss Laura Crews, Lexington, against Dr. Benjamin F. Van Meter, is said to have been decided in favor of the plaintiff, with damages of $4,000. The suit was for $25,000 and alleged the unskilful performance of a surgical operation without the consent of the patient. On hearing of the verdict the Fayette County Medical Society at once adopted a resolution of confidence in Dr. Van Meter.

**Society Meetings.**—Warren County Medical Society, at its meeting in Bowling Green, adopted resolutions extending a vote of thanks to the representatives and senator for their assistance in passing the Health Bill through the last legislature, and approving the Owen Bill.——Bullitt County Medical Society held its annual meeting in Shepherdsville April 11, and elected Dr. Walter W. Hill, South Park, president; Dr. Samuel W. Bates, Shepherdsville, vice-president, and Dr. A. Capiston Overall, Mount Washington, secretary-treasurer.——Muhlenberg County Medical Society, at its annual meeting in Central City, April 28, elected the following officers: President, Dr. John P. Walton, Central City; vice-president, Dr. Henry Y. Slaton, Greenville; delegate to the state medical society, Dr. Milton P. Creel, Central City, and alternate, Dr. Thomas G. Turner, Dunmor.——Muldraugh County Medical Society, at its annual session, April 14, adopted resolutions favoring the creation of a national department of health.

## LOUISIANA

**Auto Ambulance.**—A new automobile ambulance, donated to the Charity Hospital, New Orleans, by the members of Mecca Temple Ancient Order of the Nobles of the Mystic Shrine, New York City, at a cost of $9,000, was received from New York, April 11, and was at once put into commission.

**Personal.**—Dr. Charles J. Landfried has been appointed surgeon in charge in the ear, nose and throat department of the Eye, Ear, Nose and Throat Hospital, New Orleans, to succeed Dr. Oscar Dowling, Shreveport, who was recently elected but resigned.——Dr. C. Milo Brady, New Orleans, has returned after several months spent in the study of tropical diseases on the West Coast of Africa.——Dr. and Mrs. Louis A. Meraux, New Orleans, left for Europe May 14.

**Society Meeting.**—At the annual meeting of East Feliciana Parish Medical Society, held at the Insane Hospital of the State of Louisiana, Jackson, April 6, the following officers were elected: President, Dr. Jesse W. Lee, Jackson; vice-president, Dr. William F. H. Hagaman, Norwood; and secretary-treasurer, Dr. Robert P. Jones, Clinton. By unanimous vote, the society dropped from its rolls Dr. Emmett C. McKowen, Clinton, who is said recently to have been found guilty of murder in connection with the death of a patient in the insane hospital.——Claiborne Parish Medical Society, at its annual meeting in Athens, April 27, reelected the following officers: President, Dr. Joseph W. Day, Homer; vice-presidents, Drs.

Phillip Gibson, Homer, Lee T. Waller, Haynesville, and James F. Simpson, Athens; secretary-treasurer, Dr. William L. Stone, Homer, and delegate to the state society, Dr. Lee T. Waller.

## MAINE

**Off for Europe.**—Drs. Oliver W. Turner, Albert H. Sturtevant, Wellington Johnson, William H. Harris and George R. Campbell, Augusta, Dr. Lewis K. Austin, Waterville, and Dr. and Mrs. John G. Gehring, Bethel, have started for Europe.

**Hospital Staff Elected.**—The trustees of the Webber Hospital, Biddeford, have elected the following staff: Surgery—Drs. M. Hubbard Ferguson and Caleb J. Emery, Biddeford, and Jasper D. Cochrane and Clarence E. Thompson, Saco; medicine—Drs. Augustus Thayer, Addison S. Thayer and Charles B. Witherle, Portland, and Dr. Samuel J. Bassford; eye and ear—Drs. John W. Bowers, Dexter J. Clough, Erastus E. Holt, Willis B. Moulton, Albion H. Little and William Moran, Portland, and Dr. Charles M. Sleeper, South Berwick; nose and throat—Drs. John H. Allen and Owen P. Smith, Portland; and obstetrician—Dr. Stanley P. Warren, Portland. The consulting staff includes Drs. F. S. Warren, Biddeford, James O. McCorrison, North Berwick, John L. M. Willis, Eliot, Frank M. Ross, Kennebunk, Harry L. Prescott, Kennebunkport, Joseph W. Gordon, Ogonquit, Jesse A. Randall, Old Orchard, Charles W. Blagden, Sanford, Fred A. Bragdon, Springvale, and Drs. Edville G. Abbott, William H. Bradford, Henry H. Brock, William L. Cousins, Fred H. Gerrish, Arthur S. Gilson, Seth C. Gordon, Alfred King, Charles M. Leighton, Alfred Mitchell, Jr., Willis B. Moulton, Richard D. Small, John F. Thompson, Philip P. Thompson, Walter E. Tobie and Herbert F. Twitchell, Portland.

## MASSACHUSETTS

**Carnation Day at Lynn.**—May 14 was observed in Lynn as "carnation day" and 30,000 carnations were sold for the benefit of the State Tuberculosis Camp, Swampscott.

**Personal.**—Dr. Frank H. Zabriskie has resigned as a member of the board of health of Greenfield.——By the will of Mrs. Annie Preston Lincoln, Boston, Dr. Edward B. Kellogg is bequeathed $25,000.——Dr. Ralph B. Ober, Springfield, is reported convalescent from the effects of septicemia due to a postmortem wound.

**Tuberculosis Camp Opened.**—The camp of the Springfield Association for the Prevention of Tuberculosis was opened for the summer at East Longmeadow, May 12, with six patients in attendance. The present capacity of the camp is twenty-two.

## MISSISSIPPI

**Personal.**—Dr. Thomas J. Mitchell, for many years superintendent of the State Insane Hospital, Asylum, has resigned and will practice in Jackson.——Dr. Waller S. Leathers has been appointed director of public health and sanitation of the state board of health and chief bacteriologist of the state laboratory to be established in Jackson.

**Hospital Appropriation Bill Passed.**—Among the principal appropriation bills passed by the legislature is one appropriating $50,000 for the erection and equipment of a Central State Charity Hospital at Jackson. The bill contains a provision that the city of Jackson and Hinds county shall contribute $25,000 toward the building and equipment fund.

## MONTANA

**Ricketts' Memorial Prize.**—At the closing session of the Montana State Medical Association, a resolution was adopted providing for a memorial medal, in honor of Dr. Howard Taylor Ricketts, to be given to the member presenting the best paper before the society at its annual session.

## NEBRASKA

**Graduation Exercises.**—The College of Medicine of the University of Nebraska held its annual commencement exercises May 19, and graduated a class of seventeen. Robert H. Wolcott, dean of the college, presided, and the doctorate address was delivered by Dr. Woods Hutchinson, New York City.——At the annual commencement exercises of the John A. Creighton Medical College, Omaha, April 30, forty-four were graduated from the medical department. Dean A. Hugh Hipple presided over the program of the evening.

**State Association Meeting.**—The forty-second annual meeting of the Nebraska State Medical Association was held in Lincoln, May 10-12, under the presidency of Dr. P. Harold Salter, Norfolk. The following officers were elected: President, Dr. John P. Lord, Omaha; vice-presidents, Drs. Harry M. Hepperlein, Beatrice, and Charles A. Anderson, Stromsburg; councilors, Drs. Anders P. Ovargaard, Fremont, John C. Malster, Stromsburg, Fletcher A. Butler, Harvard, John P. Gilligan, O'Neill, and Henry B. Lemere, Omaha; delegates to the American Medical Association, Dr. P. Harold Salter, Norfolk, and alternate, Dr. William J. Birkhofer, Goethenburg. The House of Delegates instructed the secretary to telegraph Senator Owen commending his efforts to secure the establishment of a national department of health. The society adjourned to meet next year in Omaha.

## NEW HAMPSHIRE

**State Society Meeting.**—The New Hampshire Medical Society held its one hundred and nineteenth annual session in Concord, May 12 and 13, under the presidency of Dr. Frank Blaisdell, Goffstown. The following officers were elected and installed: President, Dr. Alonzo S. Wallace, Nashua; vice-president, Dr. George W. McGregor, Littleton; secretary (for five years), Dr. Pearl T. Haskell, Concord; councilor for Hillsboro county, Dr. E. Blaylock Atherton, Nashua; trustees, Drs. John M. Gile, Hanover, and John W. Parsons, Portsmouth; medical examiner, Dr. Arthur C. Heffinger, Portsmouth; alternate, Dr. Abram W. Mitchell, Epping; delegate to the American Medical Association, Dr. Ferdinand A. Stillings, Concord; alternate, Dr. John Z. Shedd, North Conway; delegates to state societies, Drs. J. W. Bates, Rochester, to the Maine Medical Association, Dr. Charles A. Morse, Newmarket, to the Massachusetts Medical Society, Drs. Arthur F. Sumner and George C. Wilkins, Manchester, to the Vermont State Medical Society, Dr. William H. Leith, Lancaster, and Ira J. Prouty, Keene, to the Medical Society of the State of New York, and Drs. Edgar O. Crossman, Lisbon, and John M. Gile, Hanover, to the Rhode Island Medical Society; necrologist, Dr. Eli E. Graves, Boscowen, and anniversary chairman, Dr. Charles S. Little, Laconia.

## NEW JERSEY

**Personal.**—Dr. Patrick A. Shannon, New Brunswick, returned from Europe May 8.——Dr. William S. MacLaren has been appointed medical instructor in the public schools of Princeton Borough and Dr. Arthur K. MacDonald in the public schools of Princeton and Lawrence townships.

**Society Meetings.**—The annual meeting of the Medical Society of Hunterdon County was held in Flemington, April 26, and the following officers were elected: President, Dr. George Henry, Flemington; vice-presidents, Drs. Isador Topkins, Califon, and Henry H. Miller, Lebanon; secretary, Dr. Obadiah H. Sproul, Flemington; treasurer, Dr. Isaac S. Cramer, Flemington; and censors, Drs. George L. Romine, Lambertville; George N. Best, Rosemont, and Leon T. Salmon, Lambertville.——At the annual meeting of Salem County Medical Society, held in Salem May 5, the following officers were elected: Dr. George W. Fitch, Darctown, president; Dr. Henry T. Johnson, Pedricktown, vice-president; Dr. Henry Chavanne, Salem, secretary-treasurer; Dr. John F. Smith, Salem, reporter, and Drs. Emerson P. McGeorge, Woodstown; William H. James, Pennsville, and Richard M. Davis, Salem, censors.——The Society for the Relief of Widows and Orphans of Medical Men of New Jersey held its twenty-eighth annual meeting May 11, in Newark, and elected the following officers: President, Dr. Charles J. Kipp, Newark; vice-president, Dr. Archibald Mercer, Newark; secretary, Dr. Charles D. Bennett, Newark; treasurer, Dr. George R. Kent, Newark; custodians of the permanent fund, Drs. Norton L. Wilson, Elizabeth, and Thomas W. Harvey, Orange; and trustees, Drs. James H. Rosenkrans, Hoboken, and Charles F. Underwood, and Edward Staehlin, Newark.

## NEW YORK

**No Tuberculosis Sanatorium at Liberty.**—The State Commissioner of Health, after a careful consideration of the application of the Independent Order of Brith Abraham of the United States of America, for permission to establish a preventorium and camp for the treatment of tuberculosis in the town of Liberty, felt constrained to deny the same, and has so notified the petitioners.

**Practice Training for Health Officers.**—Opportunities for the practical training of health officers in the work of inspection, diagnosis, quarantine, disinfection, etc., actual work of the daily duties of the Quarantine Station, are offered to all the health officers of the state throughout the summer by the courtesy of Dr. Alvah H. Doty, Health Officer of the Port of New York. These facilities are available for six persons at a time.

**Mail for the Insane.**—Attorney General O'Malley has given an opinion which establishes the rights of idiots and lunatics in the state institutions to receive mail. He states that the officers of such an institution have no right to open mail addressed to inmates, but have the right and the authority to make rules and regulations, subject to the approval of the State Board of Charities, preventing the delivery of letters to such inmates, or to prevent letters being sent by them to outside persons, when, in their judgment, this might cause interference with the safe administration of the affairs of the institution.

**Opposed to Metropolitan Life Company's Institution.**—It has been announced that the residents of Somers, within whose limits the proposed site for the sanatorium for the treatment of employees of the Metropolitan Life Insurance Company having tuberculosis lies, will make a vigorous fight against the erection of the proposed institution in this locality. Edward Hatch, the chairman of the pollution committee of the Merchant's Association, states that he considers that the establishment of a sanatorium for the treatment of tuberculosis within the boundaries of the water shed that supplies the drinking water for New York City will endanger the lives of millions of people.

**Bills Signed by Governor.**—Governor Hughes has signed the following bills: A bill providing that the Mount Vernon Board of Health shall consist of the mayor and at least six other persons; the Green Bill, amending the liquor tax law by prohibiting liquor to be sold or even given away except on the written prescription of a physician, to any patient affected with tuberculosis in a camp, colony or hospital established by the state, county or municipal authorities, and a bill bringing the Mohansic State Hospital under the jurisdiction of the State Lunacy Commission and authorizing the commission to provide for the committment of patients from any part of New York to this institution.

**Deciding the Milk Standard.**—The Baumes bill, which provides that the standard of milk in the state shall be lowered by declaring only such milk adulterated as contains less than 11½ instead of less than 12 per cent. of milk solids, has been argued before Governor Hughes. Many milk producers defended this measure, but the health commissioner of New York City was opposed to the reduction of the standard as being against the public interest in New York City. He stated that lowering the standard to the degree mentioned would make it possible to water the milk supply of New York City to the extent of 75,000 quarts daily, which would mean a daily loss of $6,000 to the people of that city. The New York State Breeders' Association also sent a protest against a lowering of the standard.——A bill designed to permit the sale of skimmed milk cheese and skimmed milk powder in New York and Kings counties has been passed by the senate after considerable hesitation. This bill, if it becomes a law, will permit the manufacture of skimmed milk products in New York City. It is stated that Commissioner Pearson of the State Department of Agriculture has given the bill his approval.

### New York City

**Off for Europe.**—Drs. Graeme M. Hammond, Daniel M. Stimson and Frank B. Cross have sailed for Europe.

**New Laboratory.**—Mr. Adolph Lewisohn has given $130,000 to Mount Sinai Hospital for the erection of a pathologic laboratory building.

**Heavy Sentence for Cocain Seller.**—Edward Lewis, a cocain seller who has been arrested four times and convicted twice, has been sentenced to two years in the penitentiary.

**Fellowship Established.**—Mount Sinai Hospital announces the establishment of a second fellowship in pathology, the income of which amounts to $500 per annum, to be known as the Eugene Meyer, Jr., fellowship.

**Open Hospital at Coney Island.**—The Coney Island Branch of the Kings County Hospital was opened on May 18. The building is thoroughly modern and will accommodate 100 patients. Dr. Charles Durning will be Superintendent.

**Measles on Ocean Liner.**—The Cunard steamer, *Carpathia*, from the Mediterranean, was detained at Quarantine, May 10, on account of the presence of measles which necessitated the transfer to Hoffman Island of 40 of the 325 children which were on board.

**Resolutions Regarding Dr. Goelet.**—At a meeting of the Tri-Professional Medical Society of New York, May 17, resolutions were adopted setting forth the careful, accurate and kindly work, the personal magnetism, the warm friendship and the love for truth, of its late member, Dr. Augustin H. Goelet.

**New Building for Medical School Work.**—Work has been commenced on the new hospital building for the New York Postgraduate Medical School. The building will be twelve stories in height and will cost $600,000. It will be provided with ample means for open-air treatment including a roof pavilion.

**The New York Neurologic Institute.**—This institution has just made public the report of its first year's work. During the year 220 cases of nervous disease were registered. The growth of the institution has fully demonstrated the necessity for a hospital and dispensary devoted to diseases of the mind and nervous system. When the hospital was opened it was thought that ample provision had been made for some time to come, but there is already need of more extensive accommodations.

**Dulness and Bad Teeth.**—Dr. Luther H. Gulick, director of the department of child hygiene of the Russell Sage Foundation, states that at least one-half of the school children have defective teeth and that children with defective teeth take half a year longer to complete the eight grades of the elementary course than children who have good teeth. Dr. Gulick has conducted studies on 40,000 school children in New York City during the past two years. He advises further instruction in the public schools regarding the teeth and their care.

**New Buildings of Long Island College Hospital.**—During the past ten years the old Long Island College Hospital has been removed piece by piece and replaced by new buildings. The last section of the old building is now being removed to make place for a new wing. The entire cost of the new building will be about $2,000,000. The section now under construction will contain about 200 beds for male patients and the new hydrotherapeutic and electrotherapeutic equipment. This hospital has its own incinerator for burning garbage and obtains its supply of water from its own wells.

### Buffalo

**Tuberculosis Camp Opened.**—The tuberculosis day camp was opened for the reception of patients, May 25.

**Alumni Meeting.**—At the annual reunion of the Alumni Association of the University of Buffalo, May 24, Dr. J. Clarence Webster, Chicago, delivered the Harrington lecture and a dinner was tendered to Dr. Matthew D. Mann in recognition of his many years of faithful service as professor of obstetrics and gynecology.

**Tuberculosis Work in Buffalo.**—The first annual report of the Buffalo Association for the Relief and Control of Tuberculosis shows that the day camp was open 141 days. During this time 95 patients were admitted, of whom 38 were male and 57 females. The total number of treatment days was 5,545, and the average daily attendance 39.32. Of the cases treated 25 were incipient; 23, moderately advanced; 41, advanced; 2, surgical; and 4 patients came for observation. During the two years the dispensary has been open 1,140 cases have been examined, of which 339 were definite cases of tuberculosis; 89 were doubtful; in 29 there were tubercular lesions other than of the lungs, and 683 patients, or nearly 60 per cent. were non-tubercular.

## NORTH DAKOTA

**Hospital for Minot.**—At a meeting recently held in Minot, $9,000 was pledged for a Benedictine Sisters Hospital to cost about $70,000.

**Health League.**—A public health league was organized at Minot, April 30. Dr. Gustave F. Ruediger, Grand Forks, director of the state public health laboratory, delivered an address, at the conclusion of which the league was organized, with Dr. Andrew Carr, Minot, as vice-president.

**Society Meetings.**—At the annual meeting of the Traill and Steele County Medical Society, held in Portland, Dr. William E. White, Mayville, was elected president; Dr. Annt G. Anderson, Hillsboro, vice-president; Dr. Daniel E. Rogers, Portland, secretary-treasurer, and Dr. Edward C. Haagensen, Hillsboro, delegate to the state society.——A medical association for Burleigh county has been organized at Bismarck.

## OKLAHOMA

**Law Cases.**—The jury acquitted Dr. Thomas E. Shepherd, Tulsa, who was charged with manslaughter.——Dr. Leander A. Riely, Oklahoma City, was sued for $5,000 for alleged failure to locate a broken bone in the leg and the verdict is reported to have been for $750.

**Public Health Officials Meet.**—The meeting of the Oklahoma Public Health Association was held in Tulsa May 10-12. Dr. Herbert L. Wright, Hugo, was elected president; Dr. Charles L.

Reeder, Tulsa, vice-president, and Willis A. Logan, Lehigh, ecretary-treasurer. Before the close of the meeting, Dr. John . Mahr, Shawnee, state commissioner of health, was preented by the members of the association with a diamond ring n appreciation of his work in behalf of the health of the tate.

## PENNSYLVANIA

### Philadelphia

**Honor Retiring Professor.**—Dr. James Tyson who has reently retired from the teaching staff of the medical school of he University of Pennsylvania, was presented with a silver oving-cup and a silver platter by his senior and junior tudents, May 13.

**Cocain Dealer Pleads Guilty.**—Abraham Hall, a colored man, said to have pleaded guilty in Quarter Sessions Court, April 6, to the charge of the unlawful sale of cocain and to have een sentenced to imprisonment in the eastern penitentiary for ot less than six months nor more than two years, and to a ne of $500.

**Resolutions Regarding Dr. Ricketts.**—At a meeting of the ollege of Physicians of Philadelphia, May 13, resolutions ere adopted setting forth the heavy blow sustained by medal science and the public welfare in the death of Dr. Howard aylor Ricketts, briefly noting the research work done by Dr. icketts regarding blastomycosis, immunity, Rocky Mountain otted fever and typhus fever; bearing witness to his remarkble qualities of intellect and personal qualities, and closing ith the statement, "Thus this man died, leaving his death r an example of noble courage and a memorial of virtue, not ly to young men but unto all his nation."

**Labor Union to Fight Tuberculosis.**—The Central Labor nion held a meeting on May 18, for the discussion of plans be adopted in its proposed fight against tuberculosis. The eeting was arranged by J. Byron Deacon, secretary of the ciety for the Prevention of Tuberculosis. Dr. James Tyson esided and addresses were made by Rev. George C. Richond, rector of St. John's Episcopal Church, and P. V. Danay, of Albany, a member of New York State Immigration mmission, director of the labor department of the New York ate Charity Aid. It is proposed to establish a big double mp for day and night uses, where patients may go regularly r fresh air, milk and eggs, and three meals with nurses and ysicians in attendance. In the day camp the patients would e in the open, going home to sleep at night. It would be rt of the duty of the nurses to go to the homes, giving structions there for open air sleeping. A night camp would established for those workingmen who had been cured or ho had the disease arrested and were able to return to the y to work.

## SOUTH DAKOTA

**Hospital Organized.**—The German Baptist Hospital for the kotas was organized in Emery recently, and Dr. Carl A. man was elected chief surgeon.

**Sanatorium Site Selected.**—The State Board of Correction d Charities have selected the Hand Ranch, four miles south Custer, as the most desirable location for the new tuberculsis sanatorium, for the erection of which the last legislature de an appropriation of $10,000. The ranch consists of 160 res, of which 70 are in cultivation.

**Personal.**—Dr. F. A. Van Buren, Edgemont, has been pointed local surgeon for the Burlington System.——Dr. Hayward Coburn, Deadwood, was given a farewell banquet the Black Hills Medical Society on the occasion of his proaching departure for Chicago.——Dr. Francis A. Moore, sterville, has gone to New York City for a year of postaduate work.

**Railway Surgeons Convene.**—Surgeons representing the Chigo, Milwaukee & St. Paul and Chicago & Northwestern railads held their annual meeting in Rapid City, May 11, and cted the following officers: Dr. William E. Moore, Tyndall, esident; Dr. Delorme W. Robinson, Pierre, vice-president; . John L. Foxton, Huron, secretary-treasurer, and Drs. C. W. rgens, Hot Springs, William R. Ball, Mitchell, and Hiram McNutt, Aberdeen, executive committee.

## TENNESSEE

**Personal.**—Dr. William Hardy, a recent graduate of the dical Department of Tennessee University, Nashville, has n ordained as a missionary, and will sail from San Franco to his new field of work in Batang, Thibet, May 24.

**New County Society.**—The McNairy County Medical Society s organized at Selmer, April 21, and the following officers were elected: President, Dr. William H. Hodges, McNairy; vice-president, Dr. James L. Smith, Selmer; secretary, Dr. W. T. Bell, Selmer; and treasurer, Dr. J. R. Smith, Selmer.

**State Association Election.**—At the annual meeting of the Tennessee State Medical Association held in Memphis, May 12 to 15, Dr. John A. Witherspoon, Nashville, was elected president and Drs. Richard A. Barr, Nashville, Joseph J. Waller, Oliver Springs, and J. H. Eugene Rosamond, Memphis, were elected vice-presidents.

## TEXAS

**Medical Directors Meet.**—The Texas Association of Medical Directors held its first annual session in Dallas May 10. Dr. John H. Florence, Houston, was elected president; Dr. John S. Lankford, San Antonio, vice-president, and Dr. Mathew M. Smith, Dallas, secretary-treasurer. The membership includes both medical directors of both old-line life and fraternal insurance companies.

**Alumni Associations Organized.**—At a meeting held in Dallas, May 11, Memphis Hospital Medical College Alumni Association for Texas was organized with the following officers: President, Dr. R. Walter Smith, Moffat; vice-president, Dr Samuel A. Woodward, Fort Worth, and secretary-treasurer, Dr. Andrew B. Small, Dallas.——The Texas Alumni of the University of Pennsylvania organized an association at Dallas, May 11, and elected Dr. Jacob M. Frazier, Belton, president, and Dr. Marion P. Stone, Dallas, secretary.——Graduates of medical colleges of Louisville, Ky., practicing in Texas, met at Dallas, May 11, and organized an alumni association with an initial membership of fifty. The following officers were elected: Dr. James R. Lancaster, Granbury, president; Drs. William C. Crutcher, Mount Vernon, and Samuel E. Milliken, Dallas, vice-presidents; and Dr. Albert M. Gantt, Dallas, secretary.

**Society Meetings.**—Walker County Medical Association was organized in Huntsville, May 6, with an initial membership of seven. Dr. William E. Fowler, Huntsville, was elected president, and Dr. Leonard H. Bush, Huntsville, secretary-treasurer. ——At the annual meeting of Burleson County Medical Society, held in Caldwell, April 27, Dr. James P. Oliver was elected president and delegate to the state association; Dr. Joseph W. Matthews, vice-president, and Dr. Oscar Krueger, secretary-treasurer, all of Caldwell.——At the meeting of Brazoria County Medical Society, April 24, the following officers were elected: President, Dr. Samuel B. Maxey, Angleton; vice-president, Dr. C. C. Hampil, Perry Landing, and secretary-treasurer, Dr. D. C. DeWalt. The society starts out with a membership of twelve.——The physicians of Fort Bend County met in Richmond recently and organized a county medical association, and elected the following officers: Dr. James C. Johnson, Richmond, president; Dr. J. B. Turner, secretary-treasurer, and Dr. J. Mark O'Farrell, Richmond, delegate to the state association.——At the annual meeting of Webb County Medical Society, held in Laredo, May 5, Dr. Edward H. Sauvignet was elected president; Dr. Henry J. Hamilton, secretary-treasurer, and Dr. Albert W. Wilcox, delegate to the state association, all of Laredo.

## VIRGINIA

**Personal.**—Dr. William W. Murray, Suffolk, has been appointed local surgeon for the Southern Railway.——Dr. John Augustine English Eyster, University, has accepted the chair of physiology in the University of Wisconsin.——Dr. Thomas J. Hughes, Saltville, has returned from Europe and located in Roanoke.

**Commencement Exercises.**—The Medical College of Richmond, Va., celebrated its annual exercises, May 18. Dr. Lyon G. Taylor, president of William and Mary College, delivered the doctorate oration and Dr. Simon Baruch, New York City, delivered the address before the alumni on "Some Therapeutic Lessons from Half a Century's Practice." A class of forty-six was graduated.——University College of Medicine, Richmond, held its annual commencement exercises May 17. Addresses were delivered by Major C. Hemphill, editor of the Richmond *Times-Despatch*, and the president of the college, Dr. Stuart McGuire. A class of 25 was graduated.

**Society Election.**—The semi-annual meeting of the Northern Neck Medical Association was held in Heathsville, April 28, and the following officers were reelected: President, Dr. Andrew C. Fisher, Emmerton; vice-presidents, Drs. C. T. Pierce and Loren E. Cockrell, Redville; secretary, Dr. Robert O. Lyell, Warsaw, and treasurer, Dr. Walter N. Chinn, Hague.——At the annual meeting of Alexandria Medical Society, Dr. Samuel B. Moore was elected president; Dr. Robert L. Wilkins, secretary, and Dr. Llewellyn Powell, treasurer.——The physicians of Alleghany County met in Clifton Forge, May 3, and organized a county medical society, with initial membership of ten. Dr. John C. Wysor, Clifton Forge, was elected president; Dr. Orville L. Rogers, Covington, vice-president; Dr. Courtney Edmond, Clifton Forge, secretary, and Dr. John W. Wallace, Covington, treasurer.

## WASHINGTON

**Used Mail to Defraud.**—For using the mail in connection with a scheme to defraud, the managers of the Davis Medical Institute, Spokane, are said to have been sentenced to thirty days' imprisonment in jail and to pay a fine of $500.

**Illegal Practitioners Arrested.**—Detectives in the employ of the State Medical Board, operating under the direction of the prosecuting attorney of Seattle, have arrested eight alleged illegal practitioners of medicine, chiropody and osteopathy, including two Chinamen.

**New Hospitals.**—The cornerstone of the new buildings for the Providence Hospital, Seattle, was laid with appropriate ceremonies, May 1. Since the hospital was organized in 1878, more than 65,000 patients have been cared for by the institution.——The contract for the new two-story annex to the Pierce County Hospital, Tacoma, has been awarded. The building will cost about $4,000.

## GENERAL NEWS AND COMMENT

**Pension for Yellow Fever Victim.**—As a reward for his services in the study of yellow fever, John Kissinger of Indiana, formerly private in the U. S. Army, was granted an annuity of $1,500 by the United States Senate.

**Laryngologic Officers.**—The secretary of the American Laryngological, Rhinological, and Otological Society writes that the Dr. Dudley noted in The Journal, May 14, as one of the vice-presidents-elect should be Dr. William H. Dudley, Los Angeles, Cal., and not William F. Dudley, Brooklyn.

**Meeting of Railway Surgeons.**—The third annual convention of the Association of the Norfolk and Western Railway was held in Norfolk, Va., May 4. Dr. Southgate Leight, Norfolk, was elected president; Dr. Sparrell S. Gale, Roanoke, first vice-president, and Dr. John R. Garrett, Roanoke, secretary-treasurer.

**The Exceptional Child.**—The National Association for the Study and Education of Exceptional Children held its first annual conference at New York University, April 21 and 22, under the presidency of Thomas H. Balliet, Ph.D., dean of the New York University School of Pedagogy. The session topics were "The Recognition of the Problem of the Exceptional Child," "Phases of Exceptional Development," and "The Perspective of the Problem of the Exceptional Child."

**Confederate Surgeons Hold Meeting.**—The thirteenth annual meeting of the Association of Medical Officers of the Army and Navy of the Confederacy was held in Mobile, April 26 and 27, under the presidency of Dr. Gustavus B. Thornton, Memphis, Tenn. Dr. Edwin D. Newton, Atlanta, was elected president, and Dr. A. A. Lyon was reelected secretary-treasurer.

**American Museum of Safety.**—The American Museum of Safety has opened permanent museum headquarters in New York, for demonstrations under power of safety devices to prevent industrial accidents. The museum is for the benefit of employers of labor in factories and industrial establishments and for the public generally, as a means of education in the matter of accident prevention. Approximately, 500,000 persons were killed or maimed in industrial pursuits in the United States during 1909, and 50 per cent. of these accidents undoubtedly were preventable. In a large steel plant employing 6,000 men, there were 40 fatalities in 1906. After installing safety devices there were only 12 fatalities in 1909 in the same establishment which then employed 7,000 men. The American Museum of Safety is an organization doing a practical humanitarian work and should be supported in every way.

**Meeting of Far Eastern Association of Tropical Medicine.**—The first biennial meeting of the Far Eastern Association of Tropical Medicine was held in Manila beginning March 5. Delegates were present from governments and medical organizations from nearly every country and colony of the Far East—the Indias, Ceylon, China, Japan, New Zealand, and from the Philippine Islands. The association held eight sessions and continued until March 14. The convention was a successful one, and the *Bulletin of the Manila Medical Society*, says that never before have so many representative men from so many political entities gathered in conference in the tropics for the purpose of discussing the sanitary problems peculiar to warm climates. Heretofore such large and important meetings have been held in temperate climates away from the environment where the practical side of the questions under discussion could not be made part of the proceedings. Dr. Paul C. Freer, Manila, was president of the association.

**Alumni Entertainments at St. Louis.**—The following is a partial list of alumni gatherings to be held June 7, 1910 during the session of the American Medical Association at St. Louis. Alumni are asked to record their names, either at the Coliseum or at the Southern Hotel or elsewhere, as specified below, between 9 a. m. and 5 p. m., on Tuesday, June 7 The recording at the Southern Hotel will be at a desk, which will be easily found in the lobby.

Barnes University, Medical Department.—Registration a Southern Hotel lobby. Seventeenth annual banquet at Planters Hotel, 8 p. m.

College of Physicians and Surgeons (Columbia University New York).—Registration at Southern Hotel lobby. Reunion Tuesday. Particulars to be announced.

Harvard University Medical School.—Registration at Southern Hotel lobby. Dinner at the University Club, 7:30 p. m., June 7.

Jefferson Medical College.—Registration at Southern Hote lobby. Banquet to be announced later. Information at registration desk or communicate with Dr. A. P. Munsch, 1259 Kingshighway St. Louis.

Northwestern University, Schools of Medicine, Dentistry and Pharmacy.—Registration at exhibit in Coliseum, 9 a. m. to p. m., Tuesday, June 7. Banquet at Planters' Hotel, 7:30 p. m. Tickets for banquet at registration desk, or communicate with Dr. William Engelbach, Humboldt Building, St. Louis.

Rush Medical College.—Registration at Southern Hotel lobby Dinner to be announced.

St. Louis University Medical Department.—Registration at exhibit in the Coliseum, 9 a. m. to 5 p. m., Tuesday, June 7. Banquet at Jefferson Hotel at 8 p. m. Tickets at registration desk, or communicate with Dr. P. H. Swahlen, Metroplitan Building, St Louis.

Tulane Medical School.—Registration at Southern Hotel lobby Banquet at Jefferson Hotel, 7:30 p. m. Tickets for banquet at registration desk or communicate with Dr. H. J. Scherck, Century Building, St. Louis.

University of Nashville and Tennessee.—Headquarters and registration, Rooms 80, 82 and 84, Southern Hotel, 9 a. m. to 5 p. m., Tuesday, June 7. Dinner to be announced.

University of Michigan.—Registration at Southern Hotel lobby. Reunion planned.

Vanderbilt University Medical Department.—Headquarters and registration at the American Hotel, Seventh and Market streets Reunion and banquet at American Hotel, 7 p. m..

Washington University Medical Department.—Registration at Southern Hotel lobby. Smoker for alumni, including Missouri Medical College and St. Louis Medical College, Tuesday, June 7, place to be announced.

## CANADA

**School of Anatomy Incorporated.**—The Hamilton School of Anatomy has been incorporated by Drs. Ingersoll Olmsted, Archibald E. Mallach, and Alexander B. Osborne.

**Unlicensed Practitioner Fined.**—R. G. Galbraith, Spring Creek, Sask., is reported to have been found guilty of practicing medicine without a license and fined $50 and costs. The prosecution was undertaken by the College of Physicians and Surgeons of Saskatchewan.

**Roddick Bill Held Over.**—At the recent session of the federal parliament nothing was done toward amending the Canada Medical Act, known as the Roddick Bill. Action is said to have been deferred on account of solicitations from the medical council of British Columbia.

**Medical Graduates Receive Diplomas.**—At the commencement exercises of the Western Medical School, London, May 2, diplomas and medals were distributed to the graduating class by Dr. Robert Ferguson. Dr. Walter H. Moorhouse presided at the convocation.

**Society Meeting.**—At the annual meeting of the Ottawa Medical and Chirurgical Society, April 1, Sir James A. Grant, M.D., was elected honorary president; Dr. Thomas Gibson, president; Dr. Clarence H. Brown, first vice-president; Dr. John D. Courtenay, second vice-president; Dr. F. W. C. Mohr, secretary; Dr. Arthur S. McElroy, treasurer; Dr. Robert Law, librarian, and Dr. Warren S. Lyman, curator.

**Dominion and Province Societies to Meet.**—The forty-third annual meeting of the Canada Medical Association will be held in Toronto, June 1-4, under the presidency of Dr. Adam H. Wright, Toronto. The entertainment provided includes a smoking concert, and excursions to Niagara Falls and Guelph.——The Manitoba Medical Association will hold its annual meeting in Winnipeg May 26 and 27.——The annual meeting of the British Columbia Medical Association will be held in Vancouver, August 16 and 17, under the presidency of Dr. R. W. Irving, Kamloops.

**Personal.**—Dr. Charles F. Martin, Montreal, has returned from the Mediterranean.——Dr. John W. Stirling, Montreal, has returned from Europe.——Dr. John T. Fotheringham, Toronto, has returned from a trip to Jamaica.——Dr. Frederick A. Clarkson, Toronto, has gone to Germany for the summer.——Dr. George R. McDonagh has returned from the south of France.——Dr. E. A. McCullough, Toronto, has been appointed superintendent of the Sanatorium for Tuberculosis at London, Ont.——Dr. Albert A. McDonald has been elected president, and Dr. W. Harley Smith, secretary of the Academy of Medicine, Toronto.——Dr. Wesley Mills, professor of physiology in McGill University, has resigned.

**Reunion of McGill Graduates.**—The opening of the new medical buildings for McGill University, June 6 and 7, will be a notable event as more than 500 graduates from all parts of the world are expected to congregate in honor of their alma mater. On the first day an informal luncheon will be given at McGill Union by the teaching staff of the university; in the afternoon, the convocation will be held; in the evening the new building will be opened, and a conversazione will be given by the governors of the university. On the second day, clinics and demonstrations will be given in the morning and afternoon in hospitals and laboratories; class reunions will be held and a banquet will be given in the evening by the members of the faculty of the medical department to the alumni.

## FOREIGN

**Memorial Meeting for Pflüger in St. Petersburg.**—A special necting of the national medical Russian association was held recently at St. Petersburg in memory of the late Professor Pflüger of Bonn, the physiologist. The address was made by Professor Pawlow.

**Wölfler Festschrift.**—The pupils and friends of Professor Wölfler of Prague presented him last month with a *Festschrift* n the form of a special volume of the *Beiträge zur klinischen Chirurgie* containing the works of his pupils. The occasion was his sixtieth birthday and the twenty-fifth anniversary of is incumbency of the chair of surgery.

**Circulation of German Medical Weeklies.**—Some interesting ata are found in the current number of the Press Directory ssued by a leading advertising agency in Germany. It states hat there are 352 periodicals published in Germany, Austria nd Switzerland on the medical and allied sciences. The *ünchener medizinische Wochenschrift* heads the list of Geran medical journals with a certified circulation of 12,000 opies. This is followed by the *Deutsche med. Wochenschrift* ith a circulation of 9,500, the *Medizinische Klinik* with cirulation of 9,000, and the *Berliner klinische Wochenschrift* with circulation of 4,000. In Austria the *Wiener medizinische ochenschrift* has a circulation of 3,000, and the *Wiener inische Wochenschrift*, a circulation of 2,400. The total cirulation of these six great weeklies is thus stated to be 39,900.

## LONDON LETTER

(*From Our Regular Correspondent*)

London, May 7, 1910.

### Women as Resident Medical Officers in General Hospitals

The question whether women should be eligible for appoint- ent as resident medical officers in general hospitals, where ey will have to deal with all sorts of emergency cases in ale patients, such, for example, as retention of urine by ricture, has been a burning question for some time in this untry. Recently the board of one of the greatest of the ovincial hospitals, the Manchester Royal Infirmary, decided t to appoint medical women to these posts—a decision which s aroused considerable criticism from both lay and medical urces. A meeting of the Medico-Ethical Society of Manches- r was held to discuss the subject. Some 20 medical women the Northern Association of Medical Women attended by vitation. The case for the appointment of women was ably ited by Dr. Margaret Smith, inspector of midwives in Man- ester. She outlined the history of medicine as a profession women in this country since the admission of the first oman to the Medical Register in 1859. The facilities now ered to women for the study of medicine were now so good, said, that on the whole they compared favorably with ose of men. But after graduation their opportunities were erior. However, they were improving. Women's attempts get experience in the form of general hospital work were t with such objections as "lack of accommodation," oman's inability to agree with ward sisters," objections ich were put at their true worth in one word—prejudice. e questions should be: Is woman a fit and proper per- for appointment to a resident post in a general hos- al? Does she possess the same qualities as entitle a man hold the position? The answer depended on three things: record of work, experience and personal character. As to work, women's college records were often just as good as men's; as to experience, they were handicapped for senior posts, but for junior posts they had equal experience with men—namely, *nil*: as to character, women had the same common sense, kindness and physical capacity for work as men. Women had been found to get on with their colleagues just as well as men —neither better nor worse. It was personality, not sex, which mattered. It was said that women themselves object to a woman doctor, but they accepted them in practice. The argument that for a woman to attend a male was shocking to male modesty cut both ways. Ability and special skill were, after all, the whole basis on which medical attendance, by man or woman, depended. Sir William Sinclair, the well-known gynecologist, president of the society, insisted that in admitting women to medical schools they were necessarily admitted to all positions a male medical student or doctor could occupy. Although the meeting was well attended, there was no debate, for the reason that no one could be found to oppose the proposition. The immense change of opinion which has occurred is shown by the fact that the celebrated physician, the late Sir William Jenner, resigned from the council of the British Medical Association rather than agree to the admission of women to the association. This change is only a particular case of a more general one—the great advance of the movement in favor of the rights of women, i. e., the removal of all sex disqualifications.

### The Cold Storage of Vaccine Lymph

The Medical Officer of the Local Government Board has issued an important report on the cold storage of vaccine lymph. During the past 12 months 400,820 charges of glycerinated calf lymph were issued from the board's laboratory (which supplies all the public vaccinators of the country). In primary vaccination the "case success" was 99.4 per cent., and the "insertion success" was 95.9 per cent., which shows that a high quality of lymph was maintained. Some time ago a preliminary report was published by Dr. Blaxall and Mr. Fremlin on the results of sustained subjection of glycerinated calf lymph to temperatures below freezing point. The present report contains further information on lymph kept in cold storage for periods of 2 years and 6 months, respectively. The 2-year-old lymph was found to be free from extraneous organisms and to give a "case success" of 97.8 per cent. and an "insertion success" of 91.4. Since July, 1908, the lymphs collected from two calves have been divided into two portions, one being placed in cold storage for 6 months and then issued to public vaccinators, the other being issued without being subject to a temperature below freezing. The former gave a case success of 99.6 per cent. and an insertion success of 96.7; the latter was issued 6 to 8 weeks after it was taken from the calves and gave a case success of 99.5 per cent. and an insertion success of 96.5. Thus the results in the two cases were practically identical, showing that the cold storage had not impaired the activity of the lymph. This result is important, as it shows that by cold storage a supply of lymph may be stored to meet any sudden expansion of demand which may arise by reason of an epidemic of smallpox.

## BERLIN LETTER

(*From Our Regular Correspondent*)

Berlin, April 28, 1910.

### Annual Meeting of the Society for Internal Medicine

As usual the Kongress für innere Medizin was held in the latter part of April at Wiesbaden under the presidency of the Berlin clinician, Professor Kraus. As about 180 papers were on the program and only four days available for the meeting, ten minutes or less was assigned for the reading of most of the papers, which consisted of mere abstracts. To be sure, this brief time is not favorable for thoroughness, but no other method is practicable to dispose of the large number of papers. With the new regulations which were adopted at this meeting it will be possible in future to limit the number of papers and so diminish the confusion. The reading of papers before the congress which have been already presented or published in the journals—which has hitherto frequently happened—will thus be prevented. Furthermore, papers which are deemed unsuitable will be rejected by the decision of the executive committee. Moreover, the time for the announcement of papers is limited, so that no papers will be received later than two to three weeks before the beginning of the meeting. It would be very desirable if by these means the excess of papers should be diminished; possibly also the general publication of German works will be favorably influenced.

### SPECIFIC DIAGNOSIS AND TREATMENT OF TUBERCULOSIS

This was the principal topic of this year's session; it was presented by Professor Schütz, professor in the Berlin veterinary school and for some years a co-worker with Robert Koch, and by Professor Penzoldt of Erlangen. According to Schütz the subcutaneous injection of tuberculin gives only 2 to 3 per cent. of failures in the diagnosis of bovine tuberculosis. The other tuberculin diagnostic methods have proved inadequate. Bovine tuberculosis has constantly increased in Germany. In 1904, 17.88 per cent. of the cattle slaughtered in the abattoirs were tuberculous, but in 1907 the number was 21.21 per cent.; from 50 to 70 per cent. of the older milch cows may be regarded as tuberculous. With reference to the treatment of bovine tuberculosis, the method employed by Bang in Denmark, of feeding calves only with boiled milk, has not proved efficient; neither has the method of preventive injections of Behring's bovovaccine or Koch-Schütz' tauroman given satisfactory results. According to the German law regarding infection of cattle, enacted in 1909, all cattle with open tuberculosis are slaughtered and compensation made to the owners. In this way Germany loses annually over $3,600,000.

Penzoldt said in regard to diagnosis that Bloch's method of inoculation of animals by injection into the skin of the abdomen and slight crushing of the inguinal glands had shortened the time required to obtain reliable results. A positive cutaneous reaction he regards as a sure indication of tuberculosis, but the negative reaction is often unreliable. He does not consider any one preparation of tuberculin as unconditionally the best; all preparations are founded on the same principle. He advises to begin with 0.01 c.c. and increase by Sahli's method, avoiding any severe reaction. A rapid progress to large doses is dangerous and, on the other hand, too small doses give no results. The success with tuberculosis serums is inferior to that obtained by the tuberculin treatment. Hygienic and dietetic measures should be thoroughly enforced. Penzoldt has employed a careful tuberculin treatment for twenty years and is well satisfied with the results. A decisive opinion regarding the value of tuberculin cannot yet be given, but the remedy is surely given a higher rank at present than fifteen years ago. This view was supported by most of the following papers and discussions. In addition there were some who gave unlimited praise to the remedy and others who denied it all curative power. Professor Jochmann recommends, in accordance with his experiments made in the Rudolf Virchow hospital under the direction of Koch, to begin with old tuberculin and to continue with bacillus emulsion. Strong reactions are to be avoided by using tuberculin that is derived from bacilli which have been cultivated on media that are free from albumin. The best result Jochmann obtained was in glandular tuberculosis. Professor Sahli repudiates the diagnostic tuberculin reaction on account of its danger. Prof. F. Klemperer recommends immunizing with bovine tubercle bacilli in man.

Payr of Greifswald reported some observations on a peculiar stenosis of the colon at the hepatic and splenic flexures caused by abnormally sharp kinks and adhesions. With acute occlusion from this cause the picture of mechanical ileus may be produced, and the chronic condition may lead to the assumption of a carcinoma of the colon. In acute cases subcutaneous injections of atropin are of service, but in very severe cases and chronic cases operation is indicated. Payr has operated 27 times within six years with 2 deaths in quite desperate cases.

### SECONDARY ANEMIAS

A very interesting report was made by Professor Gerhardt of Basel on the "Origin and Treatment of Secondary Anemias." A large part of the discussion was devoted to the importance of oleic acid as a cause of secondary pernicious anemia, particularly that due to the bothriocephalus. No concord of opinion was reached. Professor Schauman of Helsingfors emphasizes the importance of constitutional taints for the development of bothriocephalus pernicious anemia. Therapeutically great reliance is still to be placed on treatment by arsenic and iron. The transfusion of healthy blood has not produced any positive success, and the same may be said of serum treatment.

## VIENNA LETTER

*(From Our Regular Correspondent)*

VIENNA, May 10, 1910.

### Distribution of Tuberculosis Among Vienna Children

In a report of the board of health some interesting data as regards the presence of tuberculosis among school children in Vienna are given. There were altogether 220,000 children between the ages of 6 and 16 in the Vienna elementary schools, of whom only 16,000 were examined. They con prised the poorer classes in the workmen's districts and tl figures given are therefore selective. A constant increase i tuberculosis can be noted with increasing age. Children 6 t 10 years old were found suffering from one-sided lung diseas in 10 per cent.; on both sides in 4 per cent.; and from bor tuberculosis in 3 per cent. The ages of 10 to 19 showed l per cent. disease of one lung, 3 per cent. of both lungs, and per cent. of other tuberculous infections, while in the ag 14 to 16 practically the same conditions prevailed. The mo tality from tuberculosis increased from 3 per cent. of a deaths in the first years to 12 per cent. of all deaths of tl age 14 to 16. For comparison, it may be stated that a deaths from measles, whooping-cough, scarlet fever and dipl theria combined also amounted to a little over 12 per cen The grave danger to the public disclosed by these figures ca not be overestimated. The private societies engaged in fightir tuberculosis of children are absolutely unable to grapple sa isfactorily with the problem, and state help is at prese negligible. The appointment of school doctors is a me trifle, unless the parents are enabled to make their sick chi dren healthy. This is the aim of the report.

### Report of the Antirabies Institute in Vienna

The institute for antirabies inoculations in Vienna ha recently published its report for 1907 and 1908; the followir figures are worth mentioning: During the period covered, 9 persons applied for treatment and 148 others, who came t the institute for the same purpose, were found to be in r need of prophylactic injections. Seventy-seven per cent. all the persons treated had been bitten by dogs undoubtedl suffering from rabies; 15 per cent. were bitten by anima which showed suspicious symptoms, but in which diagnos was not confirmed by post-mortem findings, and the remain der were bitten by dogs against which suspicion was arous from the presence of rabies in the vicinity. Altogether, 4 children, 366 men and 160 women were treated. Only su persons were received as had suffered a bleeding injury fro the bite. The mortality during the two years was 0.7 p cent. (6 deaths), and if all cases treated in the institute a considered, the mortality is the same, 0.7 per cent. of 3,5 (26 deaths). Another 13 persons died out of this numb during the time of observation, but these deaths were due other disease than rabies. The number of deaths from rabi in the entire empire during the two years was 20 (13 perso not inoculated, 6 inoculated, one died during treatment Since the number of persons injured by animals is unknow a comparison between cases of persons inoculated and n inoculated is impossible. The rule in the institutes is to kee the patients in hospital, sending them home only after definite course of injections has been made. In some case home treatment is given. Of the number mentioned abo 248 were treated as out-patients. There are in this countr only three institutes of this kind, the largest being in Vienn and the public are quite aware of the danger incurred b being bitten by a dog, as the number of persons showed w applied for treatment simply out of fear of rabies.

### Meeting of Austrian and Hungarian Pediatrists

A very interesting and novel congress took place recentl (April 30 to May 1) in Vienna, when Hungarian and Austria pediatrists held a common session, a thing thought impossib before from political reasons. The shortness of time did n permit this first meeting to be as successful as it might ha been, since so many papers were brought in at the very la moment that the time for reading had to be limited. Profe sor Chrobak, after welcoming the congress, explained its ai and showed how political differences of opinions made a ha before science. Professor Escherich spoke about the indic tions and results of specific treatment of infantile tuberculosi which was extremely important in producing so high a mo tality. Docent Dr. Preisich of Budapest detailed the clinic and pathologic findings in tuberculosis in infancy; Profess Kraus read a paper on the use of tuberculin in infants. Pr fessor von Bokay of Budapest detailed his observations chronic hydrocephalus, which he said could be influenc materially by repeated punctures of the brain ventricles; t metabolism of childhood was discussed by von Reuss, Neurat Fuchs, and Necker, and the discussions following these pape showed that much good could be obtained from such exchan of ideas. It was resolved to make such common meetings standing institution.

# Pharmacology

## CHINOSOL

### Report of the Council on Pharmacy and Chemistry

Chinosol, a product for which the Parmele Pharmacal Company is the American agent, was the subject of a Council eport which appeared in THE JOURNAL, Jan. 25, 1908. The ompany took exception to the findings in the report and equested that Chinosol be reexamined. The request was ranted, and the referee who made the first bacteriologic xamination of the product—and who in this report will be alled Referee I—reinvestigated Chinosol. An independent xamination also was made by an expert (Referee II) who as not a member of the Council. The reports of Referees and II were submitted to a third referee (Referee III), who turn transmitted them to the Council. Copies of the eports of the referees were also sent to the Parmele harmacal Company, which objected to certain of the findngs. The report of Referee III, based on the reply of the ompany, and on the findings of Referees I and II, appears elow. The objections raised by the company to the second eport were replied to by the Council, and with its reply were ent the results of the investigations made in Europe by chneider and Seligman and by Charles J. Martin which conrmed the findings of the Council. After considering this furher evidence, the company modified its claims and the Council ccepted Chinosol for inclusion in New and Nonofficial Remlies.[1]

W. A. PUCKNER, Secretary.

The Council on Pharmacy and Chemistry took up the considation of Chinosol on its own initiative and published its report THE JOURNAL, Jan. 25, 1908. The Parmele Pharmacal Co. quested a reconsideration of Chinosol on the ground that ie preparation examined which bore the label of Franz ritzsche & Co., Hamburg,[2] did not come from them, since it d not bear their label. The firm also submitted bacteriogic reports by Dr. W. H. Patterson and by the Lederle Labatories of New York with findings that differed in certain nportant respects from those obtained by the investigation ade at the instance of the Council, and expressed the desire conform to the rules of the Council in the exploitation of ie preparation. In its letter to the Council the Parmele harmacal Co. laid special stress on the report of the Lederle iboratories, and stated that it felt confident "that your feree will find our tests confirmed in every instance and ill not find confirmed his own tests, if he will use Chinosol aring our label."

Assuming that there might be a difference in the two brands Chinosol as claimed, and considering the fact that the mpany had been willing to alter, and had somewhat altered, s advertising matter, removing some of the objectionable atures and had accepted to some extent the criticism of the uncil's first report, the Council granted reconsideration, and iinosol was resubmitted to the original referee, who will be lled Referee I in this report. Referee I having completed s reexamination of Chinosol,[3] the product at the request of e company and under revised rules of the Council, was bmitted also to a new referee, not a member of the Coun-, who acted essentially in a professional advisory capacity the Council, and who will be called Referee II in this port.[2] The reports of both referees having been considered the Council and preliminary action taken by it, the Parmele armacal Co. was, in accordance with the rules of the Coun-, given an opportunity to examine the findings of the uncil and the reports of its referees, and the company subtted statements in reply. These statements and the findgs of its referees having been carefully considered, the Coun- reached the following conclusions in regard to the quesns concerning Chinosol:

#### AN INTENSE ANTISEPTIC

In its first report the Council found that Chinosol "does possess considerable antiseptic action and that it is in this respect superior to carbolic acid. On this point the statements in the circulars[4] are essentially correct." The findings of both our referees in the present investigation confirm this conclusion. As regards *Staphylococcus pyogenes aureus* and *Bacillus typhosus*, Chinosol is a better antiseptic than carbolic acid and equivalent to mercuric chlorid as an antiseptic. The findings of our first report and the claims of the Parmele Pharmacal Co. on this point are thus confirmed. [It should be stated that Chinosol as now marketed is free from 30 per cent. inert matter—potassium sulphate—and is, therefore, proportionately stronger than the brands examined by the Council's experts.]

#### A VERY POOR GERMICIDE

While there was no dispute concerning the antiseptic action of Chinosol, the findings of the Council in regard to its germicidal action disagreed fundamentally with the claims made for it in this respect by the Parmele Pharmacal Co. and with the findings of their experts. While the company had withdrawn its most extravagant claims concerning the germicidal power of Chinosol, it still claimed in the report of the Lederle Laboratories that Chinosol was superior to carbolic acid, and that in its action on *S. p. aureus* it was, in weak acid broth, "stronger than bichlorid" (not under other conditions), and that in general Chinosol resembled more nearly the strength of bichlorid of mercury than it did that of carbolic acid. The three investigations made by our referees (two by Referee I and one by Referee II) lead to the definite conclusion that in aqueous as well as in acid broth Chinosol is much less effective as a germicide than is carbolic acid and vastly inferior to mercuric chlorid.[5]

[NOTE: The Parmele Pharmacal Company has now withdrawn its claim that Chinosol has superior germicidal power to either phenol (carbolic acid) or mercuric chlorid.]

#### DISTINCTION BETWEEN ANTISEPTIC AND GERMICIDE

The striking difference in these results from those reported by the Lederle Laboratories appears to be due essentially to the care taken by our experts to exclude the possibility of *antiseptic* action being mistaken for *germicidal* action (see the reports for details; the precaution consisted simply in inoculating *larger* volumes of culture medium in order to overcome by dilution the intense antiseptic powers of Chinosol). The validity of such precautions appears to be above question—the principle has been recognized and accepted by such authorities, for instance, as Martin and Chick, Riedel and Walker, and others in the field.

> *Martin and Cooper's Results:*—A letter received from the Parmele Pharmacal Company was handed to Referee II for an opinion, inasmuch as the letter quoted the results of Chick and Martin and attempted to show that these favored the stand taken by the Parmele Pharmacal Co. It was seen at once that the results of Chick and Martin in no wise supported the views of the company, but lest any error be committed in interpretation, Referee II wrote to Professor Charles J. Martin, F. R. S., director of the Lister Institute of Preventive Medicine, London, asking for an expression of opinion of the results of his own and Dr. Chick's work in the light of the quotation of the Parmele Pharmacal Co. Professor Martin's attention was also drawn to the fact that in their experiments with Chinosol the *antiseptic action* had possibly been overlooked.
>
> This letter was acknowledged and in a second letter Professor Martin wrote that Mr. A. E. Cooper, working with him, had repeated Referee II's observations on Chinosol and had confirmed the referee's results. Professor Martin expressed regret that he had omitted to ascertain in his first work (with H. Chick) whether Chinosol exhibited inhibition in such great dilution; a large number

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[1] See page 1789. See also editorial comment, this issue.

[2] The Parmele Pharmacal Co. thought at the time the preparaion used had been repacked by some American drug-house other in their own, and did not intend to question the product of Franz ltzsche & Co.

[3] The reports of Referees I and II and the protocols of Cooper l Martin will appear in the reprint of the entire matter, which l be mailed on request if a stamped addressed envelope is sent. e matter will appear in full in the annual reports of the Council Pharmacy and Chemistry.

[4] The circulars of the Parmele Pharmacal Co.

[5] In their work on the germicidal power of corrosive sublimate, Chick and Martin (Jour. Hyg., 1908, viii, 654), in order to avoid the further action of mercury carried over in combination with the bacteria remove it with hydrogen sulphid. As such a subsequent exposure to hydrogen sulphid—which reduces the germicidal efficiency of bichlorid—would, except in the case of disinfection, possibly of fecal discharges, not occur in practice, this behavior does not affect the efficiency of corrosive sublimate as a practical disinfectant ("The value of corrosive sublimate as a practical disinfectant remains unassailed."—Chick). The hydrogen sulphid treatment was therefore not used by our referees. It is quite different with Chinosol, whose antiseptic action can be overcome by subsequent dilution—such as is quite possible or even probable in practice.

of organic disinfectants had been examined by them without their coming across this phenomenon. At the time too, they were not concerned with determining the germicidal value of Chinosol.

The following tables are an abridgement[2] of the work and results of Mr. E. A. Cooper and Professor Martin:

### SERIES I.

Organism used: *Staphylococcus pyogenes aureus,* broth culture 24 hours old. Several drops of this culture were deposited in the dilutions of phenol (carbolic acid) and Chinosol, and by means of a special pipette one drop containing 0.013 c.c. was carried over from each dilution to a tube containing 10 c.c. of broth and incubated.

Apparent Germicidal Results With Chinosol

| Agent. | Dilution Strength. | Time of Exposure in Disinfectant (Growth Results). 15 Min. | 30 Min. | Ultimate Dilution of Agent in 10 c.c. of Broth. |
|---|---|---|---|---|
| Phenol ..... | 7 :1000 | + | + | 1 :109,890 |
| | 9 :1000 | + | — | 1 : 85,470 |
| | 10 :1000 | — | — | 1 : 76,923 |
| Chinosol ... | 80 :1000<br>up to<br>200 :1000 | —<br><br>— | —<br><br>— | 1 : 9,615<br>up to<br>1 : 3,846 |

### SERIES II

To eliminate the inhibitive or antiseptic action of Chinosol on *S. p. aureus,* one drop (0.013 c.c.) of the contents of the first broth tube was removed and deposited in a second one containing 10 c.c., and incubated.

Germicidal Action Absent

| Agent. | Dilution Strength. | Time of Exposure in Disinfectant (Growth Results). 15 Min. | 30 Min. | Ultimate Dilution of Agent in 10 c.c. of Broth. |
|---|---|---|---|---|
| Chinosol ... | 80 :1000<br>up to<br>200 :1000 | +<br><br>+ | +<br><br>+ | 1 :7,396,150<br>up to<br>1 :3,958,460 |

Similarly using *Bacillus typhosus,* it was demonstrated that the antiseptic action of Chinosol was considerably less than on *S. p. aureus,* and germicidal action was absent.

It is, therefore, clear that what Chinosol could not effect on *S. p. aureus,* in strengths of 200:1000 parts, phenol (carbolic acid) accomplished in 10:1000 parts; this effectively demonstrates the superiority of phenol as a germicide over Chinosol.

*Schneider and Seligman's Work:*—Of particular interest and importance in this connection is the work of Schneider and Seligman in the laboratory of Proskauer, *Institut für Infektionskrankheiten,* Berlin (*Ztschr. f. Hyg. u. Infeetionskrankh.,* 58, 412-40). These investigators recognized clearly the importance of *avoiding the mistaking of antiseptic action for germicidal action* in the examination of disinfectants, and write as follows concerning Chinosol: "With Chinosol also, to which a disinfecting power equal to that of corrosive sublimate is ascribed, we obtained poor results by the 'thread method.' Whereas, for instance, only a 10 per cent. solution of Chinosol was able to kill within an hour the staphylococci dried on the threads, the ordinary method of transfer of the mixture of bacteria and disinfectant in the culture medium gave the false appearance of killing the bacteria in approximately the same time already in 1 per cent. to 2 per cent. solutions. That this last result is due only to antiseptic action ('*Entwickelungshemmung*') need not be especially emphasized." Their results (*S. p. aureus* being used) are so characteristic of the question in dispute that they are reproduced here:

TABLE I

Antiseptic Action Not Avoided

| Minutes ............ | 5 | 10 | 15 | 20 | 25 | 30 |
|---|---|---|---|---|---|---|
| 2 per cent............ | — | + | — | — | — | — |
| 3 per cent............ | — | — | — | — | — | — |

TABLE II

Staphylococci Threads; Antiseptic Action Avoided

| Minutes ............ | 10 | 20 | 30 | 40 | 50 | 60 |
|---|---|---|---|---|---|---|
| 3 per cent............ | + | + | + | + | + | + |
| 5 per cent............ | + | + | + | + | + | + |
| 7 per cent............ | + | + | + | + | + | + |
| 10 per cent............ | + | + | + | — | — | — |

The results obtained in Table I were obtained without using the precaution to prevent antiseptic action; those obtained in Table II are the results found when the threads were washed with dilute alkali to remove adhering Chinosol before transferring them to nutrient media. In another set of experiments carbolic acid was used, also with *S. p. aureus.*

TABLE III

Antiseptic Action Not Avoided

| Minutes ............ | 5 | 10 | 15 | 20 | 25 | 3 |
|---|---|---|---|---|---|---|
| Phenol 1 per cent...... | + | + | + | + | + | + |
| Phenol 1.5 per cent.... | + | — | — | — | — | — |

TABLE IV

Threads Washed with Dilute Alkali; Antiseptic Action Avoided

| Minutes ............ | 5 | 10 | 15 | 20 | 25 | 3 |
|---|---|---|---|---|---|---|
| Phenol 2 per cent...... | — | — | — | — | | — |

The Council thus was obliged to confirm its original findings that while Chinosol is a powerful antiseptic, it is a very poor germicide, and the claims made for it in this respect must be rejected. It may be added that the Council has considered the question of physicians being given reliable information as to each of these properties a fundamental one.

#### ITS NON-POISONOUS CHARACTER

In the Council's first report the evidence of T. Weyl was quoted questioning the claim made that the use of Chinosol is free from the dangers of poisoning. Weyl's evidence and reliability having been questioned by the firm and experimental evidence by the Lederle Laboratories submitted contradicting his conclusions, the Council had some experiments bearing on this question carried out by its own expert.[6] It finds that in so far as guinea-pigs and rabbits are concerned Chinosol is devoid of toxic power. The authority quoted in the first report is therefore found to be unreliable and Chinosol must be considered non-toxic.

#### CHEMICAL COMPOSITION OF CHINOSOL

In 1899 Rost-Sonntag showed (*Chem. Zentralbl.,* 1899, ii, 396, and *Arb. a. d. k. Gsndhtsamte,* xv, 288-301), that Chinosol was a mixture. In its first report the Council confirmed the conclusions of Brahm, working in the physiologic institute of the University of Berlin, that Chinosol is not a sulphonate of oxyquinoline, as represented by the promoters of Chinosol, but a double salt or mixture of its sulphate with potassium sulphate. The result of these findings was accepted by the Parmele Pharmacal Co. and the correction made in its subsequent publications; the original error, according to the firm, was due to its accepting the statement of the U. S. Dispensatory, i. e., that Chinosol is an oxyquinoline sulphonate as authoritative in the matter. Chinosol is now no longer marketed as the double salt or mixture of oxyquinoline sulphate and potassium sulphate, but as pure normal (neutral) oxyquinoline sulphate $(C_9H_7NO)_2H_2SO_4$.[7]

#### ANTISEPTIC ACTION VS. GERMICIDAL ACTION

It seems of the greatest importance to the Council that antiseptic power be not mistaken for germicidal power and that physicians should be correctly informed as to these properties of disinfectants[8] recommended to them, so that they may decide for themselves in every given case which action they wish to produce. This seems especially important in the case of a substance, which, according to the findings in three expert examinations on the part of the Council, has very poor germicidal power, not at all comparable with that of bichlorid of mercury, as had been claimed by the Parmele Pharmacal Co. In view of this the Council ordered the publication of this report and refused to accept Chinosol for admission to "New and Nonofficial Remedies" until the claims made for its germicidal action had been modified in accordance with its findings.

[Note: The Parmele Pharmacal Company has re-submitted Chinosol with the advertising matter revised in accordance with the findings of the Council. All objectionable claims having been eliminated the Council reconsidered the product and accepted Chinosol for admission to New and Nonofficial Remedies.]

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[6] These appear in the report of Referee II; see footnote 2.

[7] Zernik: Apoth.-Ztg., 24, No. 63, p. 568.

[8] For example, in the disinfection of hands, instruments, linen or silk threads, etc., germicidal and not antiseptic power would be desired. Chinosol solution as dilute as 1 :1000 had been recommended for these purposes. A glance at the tables, either of the referees or of Schneider and Seligman, will show the danger of assuming that complete disinfection is accomplished by such solutions in a reasonable length of time.

### ASPIRO-LITHINE

Aspiro-lithine is another comparatively new example of the ustom of proprietary manufacturers in putting forward old rugs under a new name and with them bidding for the favor f physicians. An inquiry has been received concerning this ixture. It is prepared by McKesson & Robbins and is said o contain in each tablet 5 grains of acetylsalicylic acid aspirin) and 2½ grains of acid citro-tartrate of lithium. It s recommended for all the purposes for which acetylsalicylic cid is commonly used, and on account of the lithium added s claimed to have much greater virtues than either of these rugs alone or of both combined.

We had hoped that the time had passed for reputable houses o employ such time-worn methods, but probably they will ot stop so long as physicians encourage them by continuing o use such preparations. Acetylsalicylic acid is a good drug, hose value is pretty well known. It is further known that ithium salts do not possess any great medicinal virtue. Just hat acid citro-tartrate of lithium may be is hard to tell, for hemistries do not recognize such a substance. The name resumably is intended to hide the real nature of the preparaion.

But if there be any advantage in combining lithium salts ith acetylsalicylic acid in a prescription, it is a simple propoition and requires no great skill, either on the part of the hysician who writes the prescription or on the part of the ruggist who puts it up, and such mixtures as aspiro-lithine, ith the exaggerated claims made for them, should be avoided the physician's prescribing.

## Correspondence

### Medical Biographical Data Wanted

*To the Editor:*—In my Cyclopedia of American Medical iography, now practically ready for press, there are a few tes still lacking.

Douglas, Richard, Tennessee, parentage and birth place.
Faget, Jean C., New Orleans, date of death.
Pallen, Moses, St. Louis, parentage and birth place.
Denison, Charles, Denver, parentage and birth place.
Guthrie, Samuel, Chicago, date of death.
Van Dyck, Cornelius, Syria, date of birth and death.
Litton, Abraham, Tennessee, date of birth and death.
Gregory, Elisha H., St. Louis, date of death.
Burroughs, Richard B., Florida, date of death.
Cheever, Aug. C., Boston, date of death.
Eve, Joseph A., Georgia, wife; death date.
Entrikin, F. W., Ohio, date of death.
Etheridge, J. H., Chicago, date of death.
Howard, R. P., Canada, date of birth.
Gilmer, George, Virginia, date of death.
Martin, Solomon C., St. Louis, date of death.
Cheever, Abijah, Boston, date of birth and death.
Jones, John, New York City, date of death.

If any readers could help me with these they would receive warm thanks of,

Yours faithfully,
Howard A. Kelly, Baltimore.

### Pituitary Extracts in Hay Fever, Asthma, Etc.

*To the Editor:*—The period of so-called "rose cold" or rnal hay fever"—i. e., vernal, pollenogenic, angioneurotic ma of the air passages—is approaching, or with certain tients, here. Referring to my observations in 1898 conning the use of adrenal preparations in this disorder and asthma (since confirmed throughout the world) I wish to ask physicians to use preparations of the pituitary nd, and more especially of the infundibulum or posterior e. There are at least two, and possibly several, good comrcial preparations now available.

rom the recoveries which I have observed to follow their in Quincke's edema, asthma, recurrent erythema and other ioneuroses, as well as their effects in "opening" the nasal sages, I should expect them to be superior to the adrenal parations in all varieties of hay fever. The action is slower, more persistent.

he pituitary extracts may be used both topically and temically. While more effective by hypodermic injection, they also produce clinical results when administered by the mouth—another advantage over the adrenal extracts.

I shall be much obliged for reports by letter or publication of the experience of those adopting this suggestion.

Solomon Solis Cohen, Philadelphia.
1525 Walnut Street.

## Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

### VALUE OF TETANUS ANTITOXIN

*To the Editor:*—Has the efficiency of antitetanic serum in the treatment of tetanus been sufficiently demonstrated to merit its use in that disease with confidence of positive results?

C. A. Anderson.

Answer.—It has not been found that antitetanic serum has any particular effect on the symptoms of tetanus because these appear as the culmination of the disease when it is too late for anything to have much effect. As a prophylactic, however, antitetanic serum is markedly efficient, especially if accompanied with free opening of the wound and removal of foreign matter. It is important to prevent this foreign matter and the tetanus germs from being sealed up at the bottom of the wound, which often heals superficially. The efficiency of antitetanic serum has secured for it a position in New and Nonofficial Remedies and the Committee of the Section on Pathology and Physiology recommends its inclusion in the Pharmacopeia. The report of this committee appeared in The Journal April 23, 1910, page 1389.

### SOIL POLLUTION AND DISPOSAL OF HUMAN EXCRETA

As further communications have been received concerning soil pollution and disposal of human excreta and wastes by the septic-tank method, about which a query and answer appeared in The Journal, April 23, an additional note on these subjects may be of interest.

In the weekly *Public Health Reports* of the U. S. Public Health and Marine-Hospital Service, April 29, Dr. C. W. Stiles has an article which may be obtained in reprint, on the subject of soil pollution and the sanitary privy, from which extracts are given below.

The importance of the prevention of soil pollution is apparent when it is remembered that diseases having their focus of infection in the intestinal and urinary systems, such as typhoid fever, hookworm disease, eelworm infection, tapeworms, Cochin China diarrhea, amebic dysentery, bacillary dysentery, etc., can be greatly reduced or eradicated by the prevention of such pollution. Dr. Stiles says that it is common knowledge that nearly all animals harbor parasites in their intestinal canals. The eggs are passed in the droppings and reinfect live stock; farmers have learned that animals kept on the same pasture year after year will not thrive on this account. Human beings are also infected with many parasites, and where no sewer systems exist soil pollution must be prevented by the disposal of human dejections in sanitary privies or by the septic-tank method.

Dr. Stiles' paper, while covering much the same ground as the article in The Journal of April 23, goes more fully into details as to the location and construction of sanitary privies and disinfection and disposal of the excreta. The article gives illustrations of such privies, using a receptacle in the form of a can or tub, with top-soil, lime, water and oil, and other materials for deodorizing, disinfecting or destroying the excreta. Full directions are given for building such a privy. It is a good plan to have a double set of tubs so that one set can be removed, treated with the disinfectant, covered and allowed to stand for a week before emptying to allow time for the destruction of the germs, or to allow fermentation to take place when no disinfectant is used. Dr. Stiles says that until it is determined with certainty how long parasites and germs or their spores may live under the various methods of treatment of the excreta mentioned, it is better to bury all human discharges at least 300 feet away and down hill from any well or spring. It would be better to burn such material, and in one instance this was done in the following way: The privy vault was built of cement and the building above hinged to the foundation. Kindling and straw were placed in the bottom of the vault, and each week the upper structure was tipped over—away from danger of catching fire—oil thrown into the vault and the material burned up. If used for fertilizer it should be plowed under and not used on crops of vegetables which are to be eaten raw.

The vacation season will soon be here and many people will spend the summer in temporary residences or camps. The matter of the disposal of waste is important. The human excrement may be disposed of by the dry-earth method already described. Kitchen slops attract flies and afford breeding-places for mosquitoes. A simple and inexpensive way to dispose of this form of waste is to dig a hole in porous earth three feet deep, with short tunnels running off from each side. The pit may then be filled with broken rock, sticks and brush and covered with a top mat of pine needles or other finely divided material. Coarse refuse is screened out and burned in the camp fire each day and the rest of the slops will take care of themselves in the slop pit without odor or inconvenience. The pit should be surrounded by a frame covered with fine mesh cheese-cloth. Dry garbage is disposed of most effectively by frequent burning.

The septic-tank process of disposal of sewage depends on the breaking down of the solid, organic matter of the sewage into simpler substances by the action of anaerobic, putrefactive or liquefying bacteria. It has been found that from 50 to 75 per cent. of the solid matter is destroyed by the process, and where the effluent is discharged into a stream twice as much septic as raw sewage will be received before the point of pollution is reached which will cause a nuisance. The effluent may also be discharged into contact beds, where it is oxidized by aerobic bacteria or into the soil through subsurface pipes.

The details of the process may be understood by describing the construction and operation of a septic tank designed for use by private individuals having in their houses a gravity, compressed-air or other water-supply system. This description, as well as the notes on the disposal of camp garbage, is from the March, 1910, *Bulletin of the California State Board of Health.* It has been found that the bottom of the tank should have at least one square foot of surface for each person in a family. It may be made of either concrete or wood, 4 feet deep and 4 feet wide and of sufficient length to provide the proper surface capacity. It should be located some little distance from the house, connected therewith by a 4-inch vitrified drain tile, which should enter at the top and continue at a right angle to within a foot of the bottom. The outlet pipe on the opposite side of the tank should be of 2-inch tile, located 2 feet from the bottom. The tank may be buried in the ground and should perhaps be covered and have a small vent-pipe in the top. A tight cover is not essential. A baffle or partition 2 feet high, running the full length of the tank should be placed on the bottom 1 foot or less from the side of the inlet, and another suspended edgewise from the top of the tank an equal distance from the side of the outlet and reaching within a foot of the bottom. These baffles insure a uniform distribution of the sewage. This completes the tank, except that the outlet should be provided with a galvanized iron weir of one gallon capacity connected with the outlet tile by means of a galvanized iron pipe, permitting a continuous outward flow. The outlet pipe should be continued into a surface contact bed, a stream, or by loose-jointed branched tile, having a total length of at least 200 feet underneath the surface to conduct away the effluent. Subsurface irrigation is successful only in porous soil. This tank will take care of sewage from the toilet, bathroom, kitchen and the laundry-tubs.

The sewage flows from the house into the septic tank and is held there by the outlet weir for ten or twelve hours. During this time the sewage is worked over by the anaerobic bacteria and broken up, the heavy, inorganic portions sinking to the bottom, the lighter portion rising to the top and forming a feathery mat. but most of it is broken up into gases and materials which dissolve in the water and are carried off. A tank with sufficient area to work successfully need not be cleaned of sludge for three or four years. This tank will cost from $25 to $30. This method is applicable to small cities or towns having a sewer system, and is successful where sufficient area of tankage is provided. The effluent, however, must be discharged into streams or be treated by chemical or contact bed methods.

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# *The Public Service*

## Medical Department, U. S. Army

Changes for the week ended May 21, 1910:

Long, Charles J., dental surgeon, ordered to Fort Thomas, Rhode Island, for duty.

The following named officers of the Medical Corps will report in person, June 20, 1910, to Lieutenant Colonel Henry P. Birmingham, Medical Corps, president of the examining board at the Army Medical Museum Building, Washington, D. C., for examination to determine their fitness for promotion: Majors Henry D. Snyder, Philip C. Bales, Allen M. Smith, Joseph T. Clarke, Merritte W. Ireland, Henry C. Fisher, Henry A. Shaw, Francis A. Winter.

Fauntleroy, P. C., major, granted 10 days' leave of absence.

Vaughan, Victor C., 1st lieut., M. R. C., will proceed from Ann Arbor, Mich., to this city, for the purpose of delivering the address to the graduating class at the Army Medical School on May 31, 1910, and on the completion of this duty will return to his home.

Phalen, James M., capt., ordered to Columbus Barracks, Ohio, for duty.

Love, Albert C., capt., will repair to this city and report i person to the Surgeon General of the Army, for duty in his office

Duncan, William A., capt., relieved from duty at Army Genera Hospital, San Francisco, and from observation and treatment Walter Reed General Hospital, Washington, D. C., and ordered t Vancouver Barracks, Wash., for duty.

Cutliffe, William O., 1st lieut., M. R. C., granted leave of absenc for 1 month.

Miller, Albert L., 1st. lieut., M. R. C., relieved from temporar duty at Fort Robinson, Neb., and to return to station at Fort Meade S. Dak.; granted 24 days' leave, to take effect about May 20, 1910

Hoff, John Van R., col., detailed as instructor in military hygien at the Camp of Instruction for infantry officers of the organize militia, State of Pennsylvania, to be held at Mt. Gretna, Pa., commencing May 17, 1910.

Pipes, Henry F., capt., is assigned to the command of the one half of Co. C, Hospital Corps, to participate in the military tournament at Nashville, Tenn., June 19 to 26, 1910, the camp of instruction at Chickamauga Park, Ga., July 5 to Aug. 2, 1910, and cam of instruction at Fort Benjamin Harrison, Ind., Sept. 1 to 30, 1910.

Bradley, John R., 1st lieut., M. R. C., ordered to duty with Batter E, 5th Field Artillery, from Fort Leavenworth, Kan., to Sparta, Wis

Fauntleroy, P. C., reports on 10 days' leave of absence.

DeLaney, M. A., capt., ordered to proceed to Philadelphia, o official business pertaining to the Medical Department.

The following assignments of officers of the Medical Corps to dut at the camp of instruction to be held at Gettysburg, Pa., during th month of July, 1910, are ordered: Major E. E. Parsons, to comman stationary hospital; Major Charles R. Reynolds, to be medical inspector; Captain George P. Pood, to be sanitary officer, assistant t the medical inspector; Captain William B. Davis, to be sanitar officer, assistant to the medical inspector.

Banister, John M., col., granted 4 months leave of absence, t take effect about Sept. 1, 1910.

Harris, Jesse R., capt., ordered to the Army General Hospital, Sa Francisco, for observation and treatment.

Gunckel, George I., dental surgeon, reports for temporary dut at Fort Barrancas, Fla.

## Medical Corps, U. S. Navy

Changes for the week ended May 21, 1910:

Kaufman, J. B., P. A. surgeon, commissioned passed assistan surgeon from March 24, 1909.

Dodge, A. H., asst.-surgeon, detached from the *California* an ordered to continue treatment at the Naval Hospital, Mare Island Cal.

Halton, E. P., acting asst.-surgeon, appointed acting assistant surgeon from May 16, 1910.

## U. S. Public Health and Marine-Hospital Service

Changes for the week ended May 18, 1910:

Trask, J. W., asst.-surgeon general, directed to proceed to Detroi and Lansing, Mich., and Harrisburg, Pa., on special temporary duty

Woodward, R. M., surgeon, granted 7 days' leave of absence fro May 15, 1910, under paragraph 189, Service Regulations.

Cobb, J. O., surgeon, leave granted for 7 days from May 7, 1910 amended to read 5 days from May 7, 1910.

Stimpson, W. G., surgeon, granted 20 days' leave of absence fro May 15, 1910.

Anderson, John F., P. A. surgeon, directed to proceed to Mariett Pa., on special temporary duty.

Ridlon, Joseph R., asst.-surgeon, relieved from duty on the U. S Revenue Cutter *Seneca*, and directed to proceed to Port Townsend Wash., and report to the commanding officer of the U. S. Revenu Cutter *Manning* for duty.

Gammon, William H., acting asst.-surgeon, granted 4 months leave of absence, without pay, from May 15, 1910.

Hamilton, H. J., acting asst.-surgeon, granted 10 days' leave o absence from May 8, 1910.

Wallace, C. R., acting asst.-surgeon, granted 6 days' leave o absence from May 15, 1910.

Hobdy, W. C., P. A. surgeon, resignation accepted by the President effective May 31, 1910.

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# *Marriages*

Milo Tripp Easton, M.D., to Miss Mary Helen Blackburn, both of Peoria, Ill., May 18.

Louis L. Hoff, M.D., Roxbury, Boston, to Miss Bessie Climan of Hartford, Conn., May 7.

James Thomas Taylor, M.D., to Miss Emily Louise Rankin, both of Reidsville, N. C., May 5.

Jesse W. Taft, M.D., Waukesha, Wis., to Miss Emma Leora Einsel of Toledo, Ohio, recently.

Charles Reuben McCreery, M.D., Tacoma, to Miss Bertha Frances Harris of Seattle, May 14.

Mortimer Elihu Emrick, M.D., to Miss Katherine M. Scanlon, both of Chicago, at South Bend, Ind., May 17.

Craig Thomas Burns, M.D., Oklahoma City, Okla., to Miss Maud Staniland of Buffalo, N. Y., May 17.

George Cummings Albee, M.D., to Miss Mary Robinso West Reed, both of New York City, May 4.

William A. Hulbush, M.D., Philbrook, Mont., to Miss Bertha Isidora Elizabeth Krug of Fond du Lac, Wis., May 16

John W. Kelly, M.D., to Miss Maude Josephine Wolfe, both of Springfield, Ill., May 7.

# Deaths

**Barton H. Potts, M.D.** University of Pennsylvania, Philadel-hia, 1891; a member of the American Medical Association, nd American Otological Society and fellow of the College of hysicians of Philadelphia; resident physician to the Children's ospital, Philadelphia, and Presbyterian Hospital, Philadel-hia; laryngologist and aurist to St. Mary's Hospital; laryn-ologist to the Pennsylvania Training School for Feeble-inded Children and aural surgeon to the dispensary of the hildren's Hospital; laryngologist and aurist and chief of the ose and throat division of the German Hospital; died at his ome in Philadelphia, May 8, from pneumonia, aged 41.

**Alonzo Potter Neale Painter, M.D.** Jefferson Medical College, 390; a member of the Medical Society of the State of Penn-lvania, National Association of U. S. Pension Examining urgeons; formerly president of the Armstrong County Med-al Society, and physician of Armstrong county; staff physi-an to Kittanning General Hospital; secretary of the local nsion board; died at his home in Kittanning, May 2, from e effects of a gunshot wound of the heart, self-inflicted, it believed, with suicidal intent, while despondent on account prolonged illness, aged 41.

**George Henry Kenyon, M.D.** University of Vermont, Bur-ngton, 1866; a member of the American Medical Associa-on and Association of Military Surgeons of the United ates; surgeon of the United Train of Artillery for several ars; made assistant surgeon-general of Rhode Island in 83, and appointed surgeon-general of Rhode Island Militia ith the rank of brigadier-general in 1894; treasurer of the cal board of U. S. Pension Examiners; a veteran of the Civil ar; died at his home in Providence, May 7, from nephritis, ed 65.

**George Arnold Bellows, M.D.** Detroit Medical College, 1881; member of the American Medical Association; physician to e Seneca County (N. Y.) Almshouse from 1884 to 1892; alth officer of Waterloo from 1882 to 1883; U. S. pension amining surgeon from 1887 to 1895; coroner of Seneca unty for several years, and since 1891, a member and sec-tary of the board of trustees of Waterloo Academy; died at s home in Waterloo, May 10, from acute nephritis, aged 53.

**Benjamin Alexander Cheek, M.D.** University of Pennsyl-nia, Philadelphia, 1861; a member of the Medical Society the State of North Carolina, and formerly president of the cDowell County Medical Society; surgeon of volunteers dur-g the Civil War; died at his home in Marion in April, from phritis, aged 72.

**Peter J. McCourt, M.D.** New York University, New York ty, 1890; formerly a member of the American Medical Asso-tion; a member of the Medical Society of the State of New rk, and a fellow of the New York Academy of Medicine; of w York City; a veteran, and crack shot of the Seventh giment, N. G. N. Y.; died at his home in Mount Vernon, Y., May 7, aged 68.

**Henry Warren Fishel, M.D.** University of Maryland, Balti-ore, 1886; a member of the Medical Society of the State of nnsylvania; formerly of Dillsburg; a member of the legis-ture from York county in 1894; ophthalmologist to the essiah Home for the Children and Aged, Harrisburg; died his home in that city, May 9, from cerebral hemorrhage, ed 58.

**Jacob Imboden Leas, M.D.** College of Physicians and Sur-ons, Keokuk, Iowa, 1857; formerly surgeon of the Iowa Cen-l Railroad at Neligh, Neb.; local surgeon and later general nsulting physician and surgeon of the Fremont, Elkhorn and ssouri River Railroad at Chadron, Neb., and mayor of that y in 1891; died at his home, April 22, aged 75.

**Richard Arthur DeKay, M.D.** Bellevue Hospital Medical Col-ge, 1890; a member of the Medical Society of the State of w York; for several years health officer of the town of ckland, and an inspector of the State Department of Health; s found dead in his office in Livingston Manor, May 3, from lmonary edema following influenza, aged 46.

**Emory Ellsworth Stover, M.D.** State University of Iowa, wa City, 1898; a member of the Upper Des Moines, Iowa, d Southwestern Minnesota Medical societies; local surgeon the Northwestern System, and health officer of Bigelow, nn.; died recently at his home in that place from pul-mary tuberculosis, aged 45.

**Tomlinson Fort Brewster, M.D.** Jefferson Medical College, 56; surgeon of the Fifty-fourth Georgia Regiment, C. S. A., ring the Civil War; for several terms a member of the te legislature; superintendent of the Grady Hospital, Atlanta, for fourteen years; died in that institution, May 1, from nephritis, aged 76.

**Walter S. Tingley, M.D.** Medical College of Indiana, Indianapolis, 1884; for twelve years coroner of Campbell county, Ky.; formerly a resident and at one time health officer of Newport; pastor of the Christian Church of Harrisburg, Ind.; died in Speer's Memorial Hospital, Dayton, Ky., May 6, from nephritis, aged 63.

**Wilson Lockhart, M.D.** Jefferson Medical College, 1853; formerly superintendent of the Eastern Washington Hospital for the Insane, Medical Lake; at one time superintendent of the Indiana State Hospital for the Insane; died in his office in Seattle, April 28, from cerebral hemorrhage.

**Paul Mundy St. Clair, M.D.** Medico-Chirurgical College of Philadelphia, 1906; a member of the resident staff of Blockley Hospital, Philadelphia; for two years assistant physician in the Central Indiana Hospital for Insane, Indianapolis; died in Blockley Hospital, May 12, from meningitis, aged 27.

**Lindsay Johnson, M.D.** University of Louisville, 1874; Hospital College of Medicine, Louisville, 1877; a member of the Medical Association of Georgia; for several years professor of anatomy in the Hospital College of Medicine; died at his home in Cartersville, Ga., May 11, aged 58.

**Ezra J. Ayers, M.D.** Eclectic Medical College of Pennsylvania, Philadelphia, 1871; of California, Mich.; for more than 40 years a practitioner of California township, Kent county, Mich.; was injured in a runaway accident near his home, May 12, and died early next morning, aged 70.

**Robert B. Wilson, M.D.** Syracuse University, 1894; for 40 years a practitioner of Tower City, Pa., and publisher of the *Echo*; chief burgess and member of the school board of Tower City; died at the home of his son in Ardmore, May 8, from cerebral hemorrhage, aged 80.

**Samuel Beach Jones, M.D.** College of Physicians and Surgeons, New York City, 1872; a member of the Medical Society of the State of New York and the New York Academy of Medicine; died at his home in New York City, May 13, aged 67.

**Landon C. Johnson, M.D.** Ensworth Medical College, St. Joseph, Mo., 1893; formerly assistant health officer of St. Joseph, and superintendent of the Enworth Hospital; died at his home in Joplin, May 2, from cancer of the stomach, aged 43.

**Isaiah B. Seagley, M.D.** College of Physicians and Surgeons, Chicago, 1896; a member of the American Medical Association; formerly of Scotland, S. D.; died suddenly at his home in Presho, S. D., May 7, from angina pectoris, aged 47.

**Charles Ward Thorpe, M.D.** Gross Medical College, Denver, 1903; acting assistant surgeon in the U. S. Army with Philippine service; formerly of Denver; died at his old home in Nicholasville, Mich., April 16, aged 39.

**Lucius S. Campbell, M.D.** American Health College, Cincinnati, 1882; for many years a practitioner of Marshfield, Mo.; died at the home of his son in Springfield, Mo., April 11, from senile debility, aged 83.

**Thomas Green Duncan, M.D.** University of Louisville, 1868; Bellevue Hospital Medical College, 1870; a Confederate veteran; died at his home in Victoria, Texas, May 13, from cancer of the liver, aged 69.

**James Thomas Polson** (license, Mo., 1883); a member of the American Medical Association; for 44 years a practitioner of Laclede, Mo.; died at his home, April 13, from carcinoma of the thyroid gland, aged 71.

**William D. Scott, M.D.** Rush Medical College, 1866; a member of the Michigan State Medical Society and a veteran of the Civil War; died at his home in Ithaca, May 9, from cancer of the throat, aged 68.

**Benjamin F. Budworth, M.D.** University of Minnesota, Minneapolis, 1902; of Shelly, Minn.; died in the Northwestern Hospital, Minneapolis, May 9, from pneumonia, following pulmonary abscess, aged 41.

**John Eliot Blaine, M.D.** Bellevue Medical College, 1872; in charge of an institution for the cure of alcoholism and the drug habit in St. Louis; died in the institution, May 11, from angina pectoris, aged 59.

**Isaac Carey, M.D.** Botanico-Medical College, Cincinnati; for more than sixty years a practitioner of Grant county, Ind.; died at the home of his son in Marion, Aug. 2, 1909, from senile debility, aged 96.

**William Clark Snyder, M.D.** New York Homeopathic Medical College, New York City, 1906; of Utica, N. Y.; died at the home of his father in Binghamton, N. Y., April 30, from tuberculosis, aged 28.

**Martin Cagle, M.D.** Georgia College of Eclectic Medicine and Surgery, Atlanta, 1894; of Adairsville, Ga.; was crushed between a grain platform and a moving boxcar at Atlanta, May 6, and instantly killed.

**Russell B. Moore, M.D.** Kansas City (Mo.) Hospital College of Medicine, 1885; for 51 years a practitioner of Auburn, Ga.; died at his home in that city, March 18, from intestinal obstruction, aged 76.

**William P. LaFollette, M.D.** University of Louisville, 1880; formerly of New Salisbury, Ind.; died at his home in Mott, Harrison county, Ind., recently, from pulmonary tuberculosis, aged 58.

**Jenkins DeVaney Pope, M.D.** St. Louis Medical College, 1851; formerly a member of the Arkansas Medical Society; died at the home of his son in Monticello, May 1, from senile debility, aged 85.

**Thomas Hall McCorkle, M.D.** Medical College of Ohio, Cincinnati, 1879; of Terre Haute, Ind.; died in St. Anthony's Hospital, Terre Haute, March 29, from nephritis, aged 64.

**Robert L. Duncanson, M.D.** Ensworth Medical College, St. Joseph, Mo., 1892; of Ionia, Kan.; died at the home of his daughter in that city, April 25, 1909, from tuberculosis.

**Patrick H. Perkins, M.D.** McDowell Medical College, St. Louis, 1855; for 45 years a practitioner of Linneus, Mo.; died at his home, April 14, from senile debility, aged 81.

**Lewis A. Denton, M.D.** Long Island College Hospital, Brooklyn, 1876; a member of the Buffalo Academy of Medicine; died at his home, May 8, from pneumonia, aged 60.

**Hezekiah Doster, M.D.** Bellevue Hospital Medical College, 1872; of Poneto, Ind.; died at the home of his daughter in that place, May 11, from paralysis, aged 67.

**Edward Franklin Bittner, M.D.** Eclectic Medical Institute, Cincinnati, 1899; died suddenly at his home in Somerset, Pa., April 29, from angina pectoris, aged 41.

**Simon P. Putt, M.D.** Starling Medical College, Columbus, Ohio, 1878; died at his home in Baltic, Ohio, May 1, from chronic interstitial nephritis, aged 56.

**Robert Franklin Conkle, M.D.** Western Reserve University, Cleveland, 1872; died at his home in Coraopolis, Pa., May 8, after a surgical operation, aged 61.

**Hiram Lee Nease, M.D.** Vanderbilt University, Nashville, 1898; died at his home in Shelbyville, Tenn., May 9, from cerebral hemorrhage, aged 43.

**George W. Wilson, M.D.** College of Physicians and Surgeons, Keokuk, Iowa, 1863; died at his home in Curtis, Neb., May 5, from senile debility, aged 75.

**Irvin J. Bowen** (examination, N. Y., 1874); a practitioner for 51 years; died at his home in Ashville, N. Y., May 12, from heart disease, aged 76.

**Sandapher B. Spickard, M.D.** Vanderbilt University, Nashville, 1882; died at his home in Jackson, Miss., May 7, from cerebral hemorrhage, aged 53.

**Van Wagener, M.D.** Medical College of Ohio, Cincinnati, 1876; died at his home in Bridgeport, Ohio, May 6, from cerebral hemorrhage, aged 56.

**Philip Lloyd Pollock, M.D.** Hahnemann Medical College, Philadelphia, 1901; of Fort Worth, Texas; died in a hospital in that city, May 1, aged 30.

**Charles Treat Lyons, M.D.** New York University, New York City, 1852; died at his home in Waverly, N. Y., May 9, from senile debility, aged 88.

**Robert H. Harmon, M.D.** Tulane University, New Orleans; a Confederate veteran; died at his home in Marion Station, Miss., April 30, aged 66.

**Horace B. Duncan, M.D.** University of Louisville, 1876; of Williamsburg, Ky.; died in the University Hospital, Louisville, May 2, aged 72.

**Joseph Brackbill, M.D.** University of Pennsylvania, Philadelphia, 1869; died at his home in Reading, May 6, from heart disease, aged 65.

**Delma C. Campbell** (license, Miss., 1901); formerly of Hesterville, Miss.; died recently in Chihuahua, Mexico, from tuberculosis, aged 34.

**Walter C. Jackson, M.D.** Tulane University, New Orleans, 1900; died at his home in New Orleans, May 11, from appendicitis, aged 30.

**Buchanan Ramer, M.D.** Indiana Eclectic Medical College, 1890; died at his home in Surprise, Ind., May 8, from nephritis, aged 53.

# *Society Proceedings*

## COMING MEETINGS

American Medical Association, St. Louis, June 7-10.

American Academy of Medicine, St. Louis, June 4-6.
American Assn. of Medical Milk Commissions, St. Louis, June
Americau Association of Medical Examiners, St. Louis, June 5
American Gastro-Enterological Association, St. Louis, June 6-7.
American Proctologic Society, St. Louis, June 6.
American Society of Tropical Medicine, St. Louis, June 11.
American Urological Society, St. Louis, June 6-7.
Assn. of Amer. Teachers of Diseases of Children, St. Louis, June
Maine Medical Association, Bar Harbor, Juue 29-30.
Massachusetts Medical Society, Boston, June 7-8.
Nat. Con. State Med. Exam. and Licensing Bds., St. Louis, June
New Jersey Medical Society, Atlantic City, June 28-30.
North Carolina, Med. Soc. of State of, Wrightsville Beach, June
Rhode Island Medical Society, Providence, May 31.
Wisconsin, State Medical Soc. of, Milwaukee, June 22-24.

## ASSOCIATION OF AMERICAN PHYSICIANS

*Twenty-fifth Annual Meeting, held at Washington, D. C., May 3-5,*

The President, Dr. Henry Hun, of Albany, in the Chair

### Officers Elected

The following officers were elected: President, Dr. F. Forc heimer, Cincinnati; vice-president, Dr. J. George Adami, Mo treal; secretary, Dr. George M. Kober, Washington (reelected recorder, Dr. S. Solis Cohen, Philadelphia (reelected); trea urer, Dr. J. P. Crozer Griffith, Philadelphia (reelected); me ber of council, Dr. George Dock, New Orleans.

### Etiology of Subacute Infective Endocarditis

Dr. E. Libman and Dr. H. L. Celler, New York: Duri the past eight years we have studied 43 cases of subacu infective endocarditis, in 36 of which blood cultures were ma during life. The cases varied in duration from four months a year and a half, and in nearly all the onset was insidio Fever occurred in all. Other frequent symptoms were sweat malaise and gastric or intestinal disturbances. There we progressive weakness and emaciation, and the spleen w nearly always enlarged and palpable. There were pains the joints, bones and muscles. Painful erythematous cut neous nodules appeared to be pathognomonic. No patie recovered. Except for one case of infection by the influen bacillus, there have been found in the blood of these cas two types of organisms, the one resembling the other qui closely. These organisms resemble the pneumococcus in ce tain respects, but most of them more closely resemble t streptococcus. These organisms, when found in the bloo seem to be diagnostic of the disease.

#### DISCUSSION

Dr. Francis P. Kinnicutt, New York: As I understa Dr. Libman, the prognosis in these cases depends largely the results of the blood culture. If this disease can be prov to be infectious and due to the organism he describes, t prognosis must be extremely unfavorable. If we can dete mine the prognosis by means of blood cultures, that should a useful means at our disposal.

Dr. James B. Herrick, Chicago: I would like to ask Libman in what proportion of cases was there a history valvular lesions preceding the chronic endocarditis? Al what relation does the organism he described bear to t so-called organism of rheumatism?

Dr. Frank Billings, Chicago: My experience with cases chronic infective endocarditis agrees with that of Dr. Libm in regard to the clinical course of the disease and the fatali of it. Last year we reported 15 cases of this type, and sin that time we have had 10 or more. One finds the disea more prevalent than is commonly supposed. The disease m be mistaken for malaria, subacute rheumatism, typhoid tuberculosis. I do not think one can make a diagnosis of t condition by taking blood cultures. One may say that he h a case of chronic infective endocarditis to deal with, but o must remember that some of the very important diagnost mptoms are absent at the beginning of the disease. The ood cultures will certainly help us in determining the various rms of endocarditis.

Dr. E. C. Rosenow, Chicago: I am sure we are dealing ith the same disease, although in our studies to differentiate c organisms we differ slightly in the smaller details. During e first year of this work I thought I was dealing with the *reptococcus pyogenes.* Further studies, however, during the st two years have convinced me that I was dealing, not ith the streptococcus, but really with a modified pneumo- ccus.

Dr. F. Forchheimer, Cincinnati: It seems to me the most iportant outcome of this discussion is the fact that one oserver here has isolated a pathogenic organism and another oserver has verified his findings in a disease which we have en taught to believe was due to a number of different ganisms. If this is correct, then we have made an enormous ep forward in the recognition of this disease. I have seen large number of cases which clinically would be considered ıder the head of this form of endocarditis. I have had a ımber of cultures made, and I have found a large number of ganisms. Some of my patients have recovered. Evidently e are dealing with a different form of endocarditis.

Dr. Libman: One should expect a fatal termination in every se in which he finds this organism in the blood. In all the ses that I have had the disease has been superimposed on evious cardiac disease. As to the relationship of the organ- m to the so-called organism causing rheumatism, I cannot ıswer, as no bacteria have been found in the blood in the tter condition. As to the question of other means of diag- osis, we have made studies of the blood microscopically with e hope of finding certain cocci, but we have been unsuccess- l. When these organisms were not found in cultures, they ere not found otherwise.

### The Commoner Types of Functional Cardiac Murmurs

Dr. William S. Thayer, Baltimore: During the past seven ars I have been especially interested in studying cardiac urmurs in individuals who appeared to be perfectly normal. cardiac murmur is but one and sometimes an unimportant e of the links in the chain of evidence leading to the recog- tion of disease of the heart. Certain cardiac murmurs are esent normally in a large proportion of healthy young ople. The common forms of these murmurs are: (a) The sic systolic murmur, heard best in the third left interspace, ıd often all over the area in the recumbent posture. This urmur disappears in the erect posture or full respiration. ) The systolic murmur, sometimes limited to the apex, metimes heard all over the cardiac area in the recumbent sture, disappearing in the erect posture. (c) The cardiac spiratory inspiratory murmurs. The commoner functional urmurs, those heard in healthy individuals, should be care- lly distinguished from those other murmurs which may ise at various orifices, without actual valvular disease, but, vertheless, as a result of pathologic changes in the heart uscle or in the blood. The anemic murmurs, systolic and astolic, depend on the weakness of the heart muscle. A miliarity with the cardiac murmurs common in the normal dividual is at least as important as an acquaintance with ose murmurs which are associated with cardiac disease.

### Epidemiology of Poliomyelitis

Dr. Joseph Collins, New York, read a paper which will pear in The Journal.

### Pathology of Poliomyelitis

Dr. B. Sachs, New York: The examination of pathologic ecimens from cases of acute poliomyelitis bears out the xic character of the disease process. It is vascular in origin, t confined solely to the area of the anterior spinal artery, was once believed, but involves the central gray matter and most the entire cross-section of the cord; at times it volves the lower portions of the brain axis. The disease pends its force chiefly on the ganglion cells of the anterior rns, so that there is still much justification for retaining e old name, poliomyelitis anterior.

DISCUSSION

Dr. M. H. Richardson, Boston: The State Board of Health of Massachusetts began an investigation of this disease three years ago. In 1907 there were 235 cases; in 1908, 185; in 1909 the cases numbered nearly 1,000. That is not essentially a city disease, but rather a rural or suburban disease. Any community which has a severe epidemic one year does not necessarily have a severe one the next. The seasonal incidence of this disease is interesting. In this climate the disease occurs between the months of May and November; in the southern hemisphere it prevails from March to May. In writing to the medical officers in the southern cities and in Cuba a curious fact came out, namely, that the disease in Cuba also had a seasonal incidence from May to October. This shows that temperature alone cannot account for the incidence. We wrote to several institutions in the state in which children are kept, and another curious fact came out, namely, that among 3,600 children in these institutions in the state only one case was found in a child under fifteen years of age. This is interesting in proving that children living in these institutions and protected from those who have the disease do not get it.

A circular letter was sent to physicians in the state recommending that the cases be quarantined and that hexamethylenamin be administered. In every case that came to autopsy in Massachusetts there seemed to be a definite relation between the fatal cases and an enlarged thymus gland. I should like to ask if that is a common experience with others here who have studied the disease.

Dr. B. Sachs: In performing autopsies on these cases other organs besides the thymus gland will yield evidence of a general infection. In the lungs frequently will be found a bronchopneumonia. The liver and the spleen will show distinct evidences of a general infection. In one case I saw every gland in the body was found to be enlarged.

### Congenital Syphilis of the Heart

Dr. A. S. Warthin, Ann Arbor: I wish to call attention to the diffuse fibrosis of the myocardium due to congenital syphilis and the relation of the congenital fibrosis of the heart to cardiac insufficiency in young and early life. Cardiac changes occur in all cases of congenital syphilis in which the liver shows the changes characteristic of congenital syphilis. Infantilism and delayed puberty are associated with this form of heart lesion.

*(To be continued)*

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## ILLINOIS STATE MEDICAL SOCIETY

*Sixtieth Annual Meeting, held at Danville, May 17-19, 1910*

The President, Dr. J. L. Wiggins, East St. Louis, in the Chair

Addresses of welcome were delivered by Hon. Louis Platt, mayor of Danville, and by Dr. Benjamin Gleeson, president of the Vermillion County Medical Society. President Wiggins responded to these addresses.

### The New Officers

The following officers were elected for the ensuing year: President, Dr. Alfred C. Cotton, Chicago; president-elect, Dr. W. K. Newcomb, Champaign; vice-presidents, Drs. J. W. Hamilton, Mount Vernon, and J. E. Stubbs, Chicago; treasurer, Dr. E. J. Brown, Decatur, reelected; secretary, Dr. E. W. Weis, Ottawa, reelected; delegates to the American Medical Association, Drs. W. F. Grinstead, Cairo; E. W. Weis, Ottawa; S. C. Glidden, Danville; J. E. Allaben, Rockford; J. L. Wiggins, East St. Louis; Albert L. Brittin, Athens; alternates, Drs. G. W. Green, Chicago; George F. Allen, Aurora; W. E. Shallenberger, Canton; George F. Butler, Chicago; Frederick A. Tice, Chicago, and M. S. Marcy, Peoria.

Aurora was selected as the place for holding the next annual meeting.

### Medical Treatment of Pelvic Diseases of Women from the Standpoint of the Surgeon

Dr. J. F. Percy, Galesburg: My conception of a medical pelvic case is one in which there is infection, misplacement and distress without fixation. Fixation is Nature's slow way of improving local conditions in the pelvis until either the menopause or surgery removes the conditions which make the fixation necessary. Surgery has won some of its greatest triumphs in the cases where inflammatory fixation was substituted for surgical fixation. Surgery has done some of its worst work or gotten almost negative results in cases of infection. On the other hand, the medical practitioner, in attempting to treat cases, has converted many of them into major surgical cases. The average pelvic case complains more of backache than of any other symptom. There are other adjuncts to the successful treatment of this class of patients than mechanical or medical procedure. The two most important are physical and sexual rest, and second, freedom from worry.

DISCUSSION

Dr. Clifford U. Collins, Peoria: I have very little faith in the local treatment of pelvic diseases. I have held to the views advanced by Dr. T. J. Watkins, who, in 1905, called attention to the inefficacy of vaginal douches and iodin applied to the vaginal vault and tampons put in the vagina for the treatment of inflammation of organs high up in the pelvis, and which have an entirely different blood supply. Such treatments may do good for a time, but the relief is not permanent. I find it advantageous in these cases to call to my aid the internist either before or after operation.

Dr. S. C. Stremmel, Macomb: I want to emphasize rest in the pelvic infections of women. I know of no form of local treatment which does any good in the treatment of these pelvic infections in women. Rest is the best form of treatment for inflammation or infection anywhere, and where it can be possibly secured it may alone do the work.

Dr. Edward Bowe, Jacksonville: In the majority of women who have become neurasthenic from injuries in labor, or in whom a pathologic condition has existed for some time, the neurasthenia has become fixed, and local treatments will only exaggerate the condition and create a degree of introspection bordering on psychasthenia. The best treatment is rest.

Dr. W. F. Grinstead, Cairo: Both the physician and the surgeon are apt to go to extremes and see everything from their particular standpoint. The physician gets in his good work in these cases in the acute stage. He tries to effect a cure before the condition becomes surgical, because in the beginning most of these conditions are medical. When we have an infection that has gone on to the chronic stage, which involves the cervix, or has extended into the corpus or into the tubes, the physician is wasting his time as well as the means of the patient in attempting to restore that patient to health by the usual medical means. We have then a condition which must be relieved surgically.

Dr. Channing W. Barrett, Chicago: The question is one of close study of the pathology of pelvic disease. A patient with pelvic disease is not going to be cured purely by rest, because there are a number of conditions which will not be affected by the rest treatment. The rest treatment is an aid. Pelvic disease is not going to be cured altogether by operative measures because there are a lot of conditions which surgery would not help but injure.

Dr. M. S. Marcy, Peoria: Dr. Percy in his paper made the statement that the physician who treats these patients by local means is imposing on them. I would like to ask him if the physician imposes on a patient when he can by local treatment relieve a backache, a severe pain on the top of the head, etc.

Dr. J. F. Percy: In reply to the remarks of Dr. Marcy, the point I tried to make was with reference to the value of fixation. We should simply follow Nature's methods. Nature fixes these structures for two purposes; first, to get a chance at the infection, and second, to hold the parts as nearly in the anatomic positions as they were when the infection began.

### Two Thousand Blood Examinations for Hemameba of Malaria

Dr. T. M. Aderhold, Zeigler: To avoid errors, accept nothing but the microscopic diagnosis. Anything which lowers the vitality of the individual, whether fatigue, heat, cold, or other disease, predisposes him to malarial infection, or to a relax i he already harbors the parasite. In the locality where thes observations took place malaria was not as prevalent either a a primary disease or complicating other diseases, as it wa thought to be by the profession of the locality. If a perso has more than one attack of malaria within a year, the attack after the first one are more liable to the relapses than reinfections. All malarial patients should be advised to tak three months' treatment. Malaria complicating other disease should be treated as though no other disease were present unti the acute symptoms subside, and then the treatment should b modified. A promise of cure in malaria should not be give until the patient has been more than one year without symptoms.

### Some Diabetic Obiter Dicta

Dr. S. T. Robinson, Edwardsville: We should bear thes diabetic facts in mind: While at the beginning of treatmen there is intolerance of carbohydrate, so an abrupt and radica reversal of diet may produce intolerance also of proteid. Thu there will be a double intolerance and the trouble deepens. Bu it is wholly on the establishment of a tolerance of proteid tha success depends; for it is only after a more or less sever proteid diet that tolerance of carbohydrate will be regained. Once this has been accomplished, the urine may begin to ru sugar-free. If now, with tolerance of such a diet fully established, some weight is gained, he has made a distinct stride forward. Even more notable, if with the same diet, and a urin continuously sugar-free, there is secondarily some loss of flesh he has made much greater progress, for it will be found tha he can again assimilate an appreciable quantity of carbohydrate. Such results are, however, seldom obtained by simply directing the patient to avoid sugar and starch, and to liv mostly on meat, or by handing him a printed diet list. To-day a technic in this matter has developed that calls for much special training. The surgeon exacts a well-appointed hospital fo his operations, so the physician, who must guide and educat the diabetic through a maze of chemical, physiological and dietetic technic, will demand and receive the same helps.

### The Technic and Value of the Wassermann Test in the Diagnosis and Treatment of Syphilis

Dr. W. T. Mefford, Chicago: The technic is so simplified that all physicians can mix the materials and define the results. By the test one is enabled to diagnose active syphilis in all stages, to know whether treatment is being carried on successfully, and how long it should be continued, or when to begin treatment in late syphilis. Its greatest value is to the internist, enabling him to differentiate many conditions presenting complicated clinical symptoms. Active syphilis is often present with many chronic or long drawn-out diseases, as tuberculosis, diseases of the liver, typhoid fever and artery diseases, etc.

DISCUSSION

Dr. F. G. Harris, Chicago: The technic of this reaction is difficult and all the attempts made to modify it with a view to simplifying it have simply created confusion and have brought the Wassermann test in this country into more or less disrepute. The technic of mixing solutions and determining whether one hemolyses or one does not is simple. When we get a tube that hemolyses it may show negative, while if we let another man make the test it may show positive. I am opposed to the drop method of doing a Wassermann. We know that this is a quantitative reaction, and where we are working in drops we are working with unknown quantities.

Dr. Robert H. Babcock, Chicago: The value and necessity of the Wassermann test in ordinary clinical practice have been borne out by my experience this winter. Of a number of cases thus tested, one was a combined pulmonary tuberculosis with aortic insufficiency, the man having attacks of hemoptysi Suspecting there might be a syphilitic basis, I had the test made, and the reaction was positive. He was put on mercury and his physician reported within three weeks marked improvement, with cessation of the hemoptysis.

### Bacteriology and Pathology of Joint Infections

Dr. E. E. Irons, Chicago: In addition to infections of the joints resulting from trauma or direct extension from an adjacent focus of suppuration, or associated with certain specific diseases, such as syphilis and tuberculosis, lesions of the ints, periosteum and tendon sheaths may occur in practically ll the acute infectious diseases, either as an incident in the urse of the disease, or as a more or less remote sequel. The athologic changes in the joint depend on the extent of involve-ient of the articular and periarticular tissues, the duration of ie active stage of the infection, and the relative virulence of ie infecting agent.

(*To be continued*)

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## OHIO STATE MEDICAL ASSOCIATION

*Sixty-fifth Annual Meeting, held at Toledo, May 11-13, 1910*

The President, DR. W. H. SNYDER, Toledo, in the Chair

The officers elected were named in THE JOURNAL, May 21, age 1700.

### Causes and Operative Treatment of Sterility in the Male

DR. FRANCIS R. HAGNER, Washington, D. C.: Sterility in the ale is due, first to aspermia; second, to azoospermia; third, oligospermia; fourth, to anatomic abnormalities which pre-ent the passage of semen through the urethra; fifth, to stric-ure of the urethra. Men with double undescended testicles e almost invariably sterile; and also those whose testicles ve received serious injury, causing destruction of the secret-g structures or occlusion of the efferent ducts. This later a condition which obtains in epididymitis, the inflammatory udate and presence of abscesses in the epididymis, with the nsequent formation of scar tissue cause an occlusion of the ferent ducts of the epididymis. Abscess formation in acute norrheal epididymitis is much more common than is gener-ly supposed, as in 48 cases that I have operated, abscesses ere demonstrated in 80 per cent. Frequent masturbation d sexual excesses, syphilis and tuberculosis, are frequent uses of sterility. Another cause is the $x$-ray. The principal use of sterility in the male, however, is bilateral gonorrheal ididymitis. In this disease the globus minor is the portion the epididymis most involved, and it is in this portion that clusion has the most dangerous results, as there is but one ferent duct, while in the globus major the efferent ducts are merous, and the obstruction of one or two would still leave her channels. Dr. Quinby of Boston has tied off the vas ferens in guinea-pigs at its exit from the globus minor, and en made an anastomosis between the globus major and the s above the ligation, in the method recommended by Martin Philadelphia. In from 10 to 27 days, 3 out of 4 pigs thus erated on showed spermatozoa in the fluid ejaculated by eans of electric stimulation. In dogs spermatozoa reappear from 6 to 8 days.

Anastomosis of the vas deferens is performed by making an cision through the skin and coverings of the epididymis, hich is approached from the outer side so as not to wound e spermatic artery. The artery of the vas is pushed aside d a one-half inch incision is made in the vas deferens on a vel with the globus major, along its axis, care being taken get into the lumen of the tube. A portion of the globus ajor is picked up between two fine forceps and an elliptical ece removed to correspond with the incision in the vas ferens. Four sutures are inserted by curved intestinal edles, one at the upper angle of the wound joining the vas d the cut surface of the epididymis, one at the lower angle, e at the outer and one at the inner side. When these are proximated, a perfect little pocket is formed by the spread-g out of the cut vas deferens and the elliptically cut globus ajor. The wound is then closed and dressed.

### Features in the Surgical Treatment of Gastric Ulcer

DR. M. D. HAINES, Cincinnati: The stomach, duodenum, pan-eas and liver are intimately related embryologically, ana-mically and physiologically, and it may be concluded, there-re, that they are intimately associated pathologically, and at a serious lesion, such as chronic gastric ulcer, will nec-sarily influence in a greater or lesser degree the functions the pancreas and liver. Kaufman showed that chronic olecystitis with acute exacerbations always has a direct luence on ulcer; conversely, alterations in stomach secre-ns cause acute exacerbation in cases of chronic cholecystitis. is a well-known fact that mental conditions influence the dily secretions in general, examples being the influence of the pregnant uterus on the stomach, and Opie's well-known explanation of pancreatitis. It may be concluded, therefore, that the stomach in its secretory functions is no exception to the general physiologic laws, regulating the secretion of organs in general. In view of these facts, in a number of instances I have drained the gall-bladder in conjunction with operative procedures instituted for the relief of chronic ulcer of the stomach. My patients have done better after operation than when a mere gastrojejunostomy or other operative procedure had been done on the stomach for the relief of ulcer.

DISCUSSION

DR. R. B. HALL, Cincinnati: I have some knowledge of Dr. Haines' work in adopting this method of treatment, and his patients recovered better than when drainage was not used. I have drained the gall-bladder in a few instances, and the patient makes an easier and smoother convalescence.

DR. MEANS, Columbus: I can recall some cases in which there might have been some relief to my patient had I drained the gall-bladder. For instance, in the last six months I did a gastrojejunostomy, and the patient within 24 hours from the operation began retching and vomiting bilious matter, and eventually died. It is barely possible that had drainage of the gall-bladder accompanied the operation, the patient might have been relieved, and yet I am not clear as to the theory.

(*To be continued*)

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## AMERICAN THERAPEUTIC SOCIETY

*Eleventh Annual Meeting, held at Washington, D. C., May 5-7, 1910*

### Election of Officers

Dr. Harvey W. Wiley, Washington, D. C., was elected president. The following were reelected: Drs. A. D. Blackader, Montreal, Howard van Rensslaer, Albany, N. Y., and Robert T. Morris, New York, vice-presidents; Dr. Noble P. Barnes, Washington, D. C., secretary; Dr. A. Ernest Gallant, New York, treasurer, and Dr. P. B. Porter, New York, editor of the transactions. The next place of meeting is to be Boston, in May, 1911.

### President's Address: The Progress of Therapeutics

DR. JAMES C. WILSON, Philadelphia: At the beginning of the last third of the nineteenth century the study of causes formed a sure foundation in the facts of science, and empiricism in therapeutics gave way to rationalism. Half a century has not yet elapsed, and the art of healing shows signs of being revolutionized. The modern theories of infection and immunity are established on unassailable facts. The history of the advance of medicine would be but a series of disconnected episodes were it not that it teaches us that here, as in other fields of human endeavor, knowledge ripens slowly, and that failures are the stepping-stones to success. It teaches us another lesson worth the knowing, namely, that the control of efforts can be compassed only through a knowledge of their causes. More than two thousand years of empiricism before reason came to her own in medicine! There were charms and incantations and pilgrimages and votive offerings, but no calamity of plague or pestilence was averted, and no man who was really sick was made well. Drugs there were of all kinds, and many of them potent, but "Not poppies nor mandragora; nor all the drowsy syrups of the East" could touch the ills of mankind at their source. Jenner alone in all time before the era of bacteriology—our era—applied the knowledge of causes to preventive medicine and wrought the wonder of a rescued world. To-day we watch the effects of the antitoxin made possible by the work of Klebs and Loeffler, or those which follow the administration of Flexner's serum, and experience the sensation of having witnessed a miracle. In later times there has been less and less of indirection and a progressively increasing tendency toward practical results. Specialism and organization are complemental. Without the one the other cannot exist, and the new medicine is the product of this union. A comprehensive survey of the work done by the members of this society individually and collectively discovers here also a well-defined tendency to specialism. Three main therapeutic trends have been differentiated: First, the Hippocratic medicine, in which the forces of Nature other than drugs play the most important rôle; second, the subject of psychotherapy and re-education in the management of some of the functional neuroses; third, the general study of therapeutics as comprising the empiric use of drugs, on the one hand, and the rational employment of causal remedies on the other. Our work consists in the application of the means to the end, and the time is now at hand for us to enter on the latest phase of applied therapeutics from this point of view, namely, rational therapeutics based on the latest results of the scientific study of the causes of disease, serum therapy, opotherapy, and the use of bacterin.

### The Treatment of Pneumonia

DR. ALEXANDER MCPHEDRAN, Toronto: It is incorrect to call pneumonia a fever, as is now often done. The disease is only one phase of pneumococcic infection, and in it there is a local, as well as a general infection. Death almost always occurs through the vascular system, the vessels, as well as the heart, being affected; and is due to the depression of the circulatory center in the medulla caused by the toxic albuminoid of the pneumococcus of cardiac failure. There are two groups of cases, the asphyxial and the syncopal. In the first, which is much the more common form, the venous system is surcharged with blood and the arterial undercharged. In the second, all the organs, including the heart, are anemic. In these cases, too, the right ventricle may be found distended, but this probably occurs only in the throes of death. In both classes of cases the aim of treatment is to raise the blood-pressure. There is no specific for pneumonia, and our ability to treat it has not kept pace with our knowledge of the features of the disease. The mortality is extremely high among urban populations, and I have observed that this is especially the case in two cities, Chicago and New York. The two most important causes of this appear to be the excessive heat in the houses and the lack of proper clothing for protecting the body. As regards the matter of prophylaxis, two diseases are particularly productive of pneumonia, measles and influenza, and very careful after-treatment in these would seem to have considerable effect in warding it off. The so-called curative treatment by means of a vaccine or serum has not as yet proved very satisfactory. If a cure is to be effected the agent of this character employed must be a bacterin rather than an antitoxin. A most serious difficulty in this kind of treatment is that there are various strains of pneumococci, and to have it efficient we should know the particular strain that is present in any given case, and then have a bacterin especially adapted for that form. At present, therefore, we have to rely on symptomatic treatment, or, as we had better call it, treatment of the patient. The usual essentials are complete rest, good nourishment, and plenty of fresh, cold air. On the whole, the latter is better than anything else as an element of success. In my experience the results are better in hospital than in private practice, because in hospitals the patient is under the constant supervision of a trained physician. I think too little opium is given in this disease. There is no cardiac tonic equal to opium and its derivatives, and in some cases no remedy but this will produce the desired effect. The cases in which opium is dangerous are not those of pure pneumonia, but rather bronchopneumonia. In the cases in which venesection is indicated this must be early and free in order to be effective.

### Malarial Infections in the Canal Zone

DR. F. N. SHOOK, U. S. N.: In this region the most important malarial infection, from the standpoint of diagnosis and prognosis, is the estivo-autumnal. Single tertian and double tertian infections are common, but quartan very rare. The principal types of estivoautumnal infections may be classified as (1) mild; (2) severe; (3) mixed; (4) pernicious, including the hyperpyretic type. The experience of physicians on the Isthmus emphasizes the following points: (1) In tropical malaria quinin should be given either in solution or capsules, as tablets may not be absorbed; (2) if properly administered, hypodermics of quinin rarely cause abscess; (3) in cases of malarial fever in adults in the tropics which do not show pernicious symptoms the treatment with an initial dose of twenty grains of quinin, preferably in solution, followed by ten grains three times a day, is almost uniformly successfu (4) in the treatment of malarial fever in pregnant women the tropics the safest rule is to disregard the pregnancy ar treat the malaria in the usual manner; (5) after surgic operations in malarial districts in the tropics pernicious mal rial fever may develop unless a prophylactic course of quin is first given.

### Important Therapeutic Indications in the Treatment of Typhoid Fever

DR. J. BLAKE WHITE, New York: To the extent that w succeed in modifying the intestinal morbific process will w not only lessen the thermic changes attending the disease, bu also prevent the various complications formerly so oft encountered. As the fever apparently has its origin in th intestinal inflammation, and the absorption of specific toxin the first therapeutic indication is in the direction of the us of remedies which have the essential quality of modifyin this condition. No disease, in my opinion, is more manageab than typhoid fever, and I have yet to note as prompt or mor constant effects from any kind of treatment in any othe affection than those resulting from intestinal antiseptics i typhoid. As soon as the diagnosis is made, or earlier if ther is any doubt about the matter, the combination used b Woodbridge should be given, though in somewhat larger dos than he recommended. The best manner of administering th remedies is in tablet triturates, each tablet to be followed b two or three swallows of some pure spring water, not aerate After some modification of the fever is observed larger dose of the antiseptic may be given in capsules. Should the cas not be seen until the patient has become delirious and interna medication is impracticable, I give sodium sulphoborat hypodermatically, and subsequently begin the internal anti septic treatment as soon as the patient's condition permit At an early stage, about the end of the second week, whe with rare exceptions, the temperature declines under the anti septic treatment to normal, I usually give some alcoholi stimulant, as well as strychnin, in order to anticipate th debility likely to ensue after such fall. The practice of col tubbing cannot be too strongly condemned, as it is too ex hausting to the patient, and is also irrational, since thi method of reducing the temperature is not intended to hav and never can have, any effect on the pathological causes o the hyperpyrexia. The simple temporary reduction of tem perature has little advantage, and for the toxemia from loca lesions and the general blood dyscrasia we have no bette resource than antiseptic medication, the result of which is permanent reduction of the fever. I am willing to admit however, that ablutions have some useful application i strengthening the vital powers, and therefore approve of an practice regular lavations with sterile water and alcohol. th water being tempered to the enduring capacity of the patient It is of vital importance that regular function of the bowels should be kept up throughout the illness and convalescence and under the antiseptic method laxatives or rectal irrigatio are not infrequently called for. The maintenance of th nutrition is, of course, of the utmost importance, and as t the dietary, eggs, milk and light meat broths may be given. I permit cereals, well boiled, at any time, and the resort t solid food just as soon as the patient's condition warrants it generally at the end of the second week. In the managemen of typhoid much depends naturally on the ability, vigilanc and devotion of the nurse.

### The Treatment of Leukemia by the Roentgen Ray

DR. REYNOLD WEBB WILCOX, New York: The case here reported had apparently lasted about ten years when first observed on Sept. 4, 1909. The patient was a male, 29 years old. The pallor of the skin and mucous membranes were profound, and the spleen, which was hard, occupied the whole of the left abdominal cavity, extending two fingers' breadth to the right of the umbilicus. There was no tenderness over the flat bones, and no enlarged glands were felt. In the use of the *x*-ray, under the direction of Dr. Carl Beck, a hard tube was employed, with fifteen minutes' exposure over the spleen, two or three times a week. Iron and arsenic were also given.

Blood counts made from time to time showed, for the most part, a progressive improvement in the condition of the blood, and on April 28, 1910, the lower border of the spleen was but two finger breadths' below the free border of the ribs. The pallor had largely disappeared, and for the preceding two weeks the patient had engaged in active employment. In this instance the massive enlargement of the spleen, taken in connection with the absence of tenderness over any of the bones, and of any enlargement of the lymphatic glands, would indicate that this particular leukemia was of the splenic type, or possibly of the splenomedullary form sometimes called myelogenous. In this variety the Roentgen ray appears to be more successful than any other mode of treatment, though iron and arsenic are still believed to be of some service.

### High Frequency Currents in the Treatment of Arteriosclerosis

DR. THOMAS E. SATTERTHWAITE, New York: Unless one has a static machine, a high frequency coil is best adapted for this kind of treatment. The powerful waves of the static form of electricity cause short waves of vibration in the capillaries, promote metabolism in an extraordinary way, and do no harm. In my experience, a diminution in the arterial pressure is the regular sequel to the use of the high frequency current, but the seances should not be prolonged beyond the time at which the pressure falls to normal. I have found that while the pressure may not always be reduced at each sitting, there was in all instances a progressive decline under the treatment. This should be given two or three times a week, or until the blood-pressure has fallen to the normal or nearly to it. It has sometimes been advised to use the faradic current as an adjuvant. Intestinal atony is often a complication of arteriosclerosis, and this current, applied over the abdominal walls, may be very helpful in relieving the constipation. In addition, mercurials, iodids, iron and arsenic should be employed according to the indications which may be present in any given case.

### The Further Study of Diabetes as an Infectious Disease

DR. ALFRED KING, Portland, Me.: At the last meeting of this society I expressed the opinion that diabetes mellitus is an infectious disease, due to the presence of the yeast fungus, *Saccharomyces cerevisiæ*, and though, during the year that has since elapsed I have not had the opportunity to experiment on animals or complete my investigations, yet, with considerable additional experience, I have found nothing to disturb my confidence in the theory or my faith that it will be established. I have now examined forty patients and have obtained a pure fungus from the blood of all but one of these.

### The Range of Activity and the Untoward Effects of Certain Spinal Analgesics, Based on Two Thousand Administrations

DR. W. B. BABCOCK, Philadelphia: The two thousand cases included all kinds of operations in all parts of the body. The safety of spinal, or, more properly speaking, nerve-root, anesthesia depends largely on the height in the spine of the nerve-roots which it is necessary to narcotize for any given operation. The higher up they are, the greater the danger. The delicate thing is to have the solution sufficiently light to affect the sensory nerves without involving the motor nerves. It can be made lighter by the addition of 10 per cent. alcohol to 4 per cent. of solution. By regulating the position of the patient's body it is possible to arrest the anesthetic at any point of the spine desired. In all operations in the upper part of the body it is essential to be prepared to perform artificial respiration at any moment. In the cases embraced in this report various anesthetic agents were employed.

### Senile Epilepsy

DR. EDWARD D. FISHER, New York: Under this head I include only those cases occurring in adults (who are neither alcoholics nor syphilitics), especially those in the period of life when physical decline has already begun to manifest itself. The underlying etiological factor is arteriosclerosis, distinguishing it absolutely from essential epilepsy. There may have been few, if any, preliminary symptoms, beyond some fatigue formerly unusual, or a slight weakness of memory, until, as out of a clear sky, an epileptic attack takes place. The course of the disease varies somewhat with the course of life pursued after the first attack. The succeeding ones vary very much in frequency in different instances. After a seizure there may be a localized serous effusion, but this soon clears up, leaving no trace of paralysis or other impairment. There is probably a general sclerosis of the cerebral arteries, and the attacks are no doubt due to temporary occlusion of the vessels —possibly to venous stasis. The general tendency of the disease is towards dementia or premature senility, frequently accompanied by depression. The seizures may at times be very severe, and, in fact, may end in cerebral hemorrhage of the usual type.

### The Routine Use of Autogenous Vaccines (Bacterins) in the German Hospital, Philadelphia

DR. J. C. DACOSTA, Philadelphia: Fifty cases are embraced in the report, of which 17 were classed as septicemia and 33 as local suppurative lesions. By them the following conclusions are suggested: 1. Autovaccines are of distinct service in the treatment of general septicemia, especially in postoperative cases in which surgical measures have been ineffectual. Vaccines are useless in combating a sepsis so intense as to stifle resistance, and in such instances the clinical severity of the infection, rather than the identity of the offending bacteria, is the criterion of prognosis. 2. From the laboratory viewpoint, the prognosis is better in toxemias than in proven bacteremias, and the outlook is hopeless when streptococci invade the circulating blood. 3. Autovaccines produce the best results in local infectious lesions. 4. In the class of infections under consideration autogenous emulsions should be used invariably rather than stock preparations, except in the presence of some acute emergency. 5. The opsonic index cannot be relied on as an indicator for inoculation and reinoculation, which should be governed by the general condition and local signs. 6. The best results follow a moderate initial dose of vaccine, with subsequent doses of greater potency and intervals of from three to seven days between the inoculations. 7. The larger one's experience with inoculation work, the more must one realize how imperfectly the true scope and limitations of vaccine therapy are understood.

### The Delayed Menopause; its Dangers and Therapeutic Indications

DR. A. E. GALLANT, New York: In women with healthy reproductive organs the menopause should be established abruptly, at an age dependent on the age at which menstruation commenced; early, if begun late, and late if begun early. The menopause is "delayed" whenever menstruation is continued after the "approximate age" (using the approximately determined beginning of menstruation as a guide) and is associated with uterine flexion, version, fixation or neoplasm, or with tubal disease, syphilis, etc. In delayed menopause the greatest pathological danger lies in the presence or promotion of the growth of fibroid or malignant tumors. The contributory dangers are due to delay: 1. The patient fails to consult a physician, refuses examination, or refuses operation. 2. The physician delays examination, fails to diagnose the condition, or fails to recognize the importance of early operation. The danger signals are (1) atypical hemorrhage, (2) discharge, and (3) pain; signals which, if disregarded, will lead to disaster and death. At the "approximate age" the woman has reached the limit of fecundity; therefore the prophylactic removal of a useless and probably tumor-breeding organ is wholly justifiable, and the one sure method of putting an end to all the threatening dangers.

### The Treatment of Parasyphilis in the Light of Recent Research; Paresis and Tabes Dorsalis

DR. T. A. WILLIAMS, Washington, D. C.: I believe leptomeningitis to be always present in these cases. In the treatment of syphilis the tendency at present is to rely almost exclusively on mercury. The iodids are considered of service only in dealing with gummata. I am of the opinion that many incipient cases of paresis and tabes may be cured by using mercurials to the utmost extent which the patient can tolerate. They should be employed by means of inunction or hypodermatic injection, as I have not found administration by the mouth efficient. The important thing is that these patients should be seen early by the neurologist.

## SYMPOSIUM ON MATTERS PERTAINING TO THE REVISION OF THE PHARMACOPEIA

### U. S. P. 1910; How May It Be Constructed?

Dr. O. T. Osborne, New Haven, Conn.: In opening this discussion it seems to me I can do no better than to elucidate some of my propositions already in print. As regards my recommendations that the new Pharmacopeia should contain such drugs only as are of positive therapeutic value, the decision as to what drugs are to be retained or deleted; and as to what new drugs are to be admitted, might well be left to a committee of five clinicians selected by the U. S. P. Revision Committee. As to the recommendation that it should give official approval to only the best of the official Galenic drugs, and of the salts of such mineral agents as iron and mercury, this also might be left to the judgment of a committee appointed by the revision committee, but one composed of five clinicians and five pharmacists. Every writer of a prescription, and most assuredly every teacher of materia medica, will approve of the proposition that the new Pharmacopeia should give the most simple titles to all new drugs, especially to the synthetic drugs. The heart-rending and brain-splitting attempt to prevent all possible advertisement of a proprietary drug has been followed by continuous damning all over the country, and has forced the ordering of the drug by its proprietary name, much to the profit of the drug promoter.

[Subsequently, the recommendations made by Dr. Osborne were, with some slight modifications, endorsed by the society and ordered to be transmitted to the new committee of revision.]

### Revision of the United States Pharmacopeia

Prof. Joseph P. Remington, Ph.M., Philadelphia: The controversy which has been going on recently in the medical and pharmaceutical journals, and even in the public newspapers, concerning the scope of the new Pharmacopeia has developed two clearly marked views. On the one hand, there is a decided movement to curtail the list of articles to be admitted; but a powerful counter-movement has been set on foot to greatly enlarge the number of remedies. Both of these ideas will no doubt be ably championed in the coming convention, but it does not require a prophet's vision to foretell that neither extreme will ultimately prevail, and when both sides have been heard the next committee on revision will undoubtedly admit a selected number of the newest articles and will delete many of the older ones which, in the eyes of many members of the medical profession, have outlived their usefulness. The controversies which have for the most part been carried on in an admirable spirit, have been of great value in clearing the atmosphere, and both physicians and pharmacists will have a much clearer conception of the magnitude of the task before them, though they will have, to guide them, a vast amount of information gathered from all sources. While it will be difficult to always wisely make a proper selection, I have the faith to believe that out of the multitude of counsellors there will come wisdom, and that the ninth revision of the Pharmacopeia will prove to be the best that has been written.

### Should the Pharmacopeia Contain Only Useful and Efficient Drugs?

Dr. N. S. Davis, Jr., Chicago: I believe that only useful and efficient drugs should be admitted, and am of the opinion that it would be quite possible for a group of physicians to determine satisfactorily what ones are really useful. Hitherto drugs have been judged by their use, not their utility. I would like also to see an epitome of the pharmacological action of the various drugs inserted in the Pharmacopeia, but suppose we can hardly go as far as that at present. For the good of the physician, as well as the patient, I believe that all compounds should be omitted.

### Suggestions for the Pharmacopeia of 1910; a Brief Consideration of the Subject in Its Relation to the Federal Food and Drugs Act

Dr. F. P. Morgan, Washington, D. C.: The three years which have elapsed since this law went into force have offered an opportunity to test the efficiency of the Pharmacopeia as a legal standard, and, as might have been expected, instances have occurred in which the official standards have not proved altogether satisfactory. Among the changes which, in my opinion, would be desirable, are the following: that the proportion of foreign matter permissible in the crude vegetable drugs should be definitely fixed; that powdered vegetable drugs should be admitted; that with hyoscyamus, belladonna and stramonium the requirements as regards mydriatic alkaloids should be made more definite; and that certain tests which have been worked out for copaiba and balsam of Peru should be made official. It is evident, from the standpoint of the efficiency of the food and drugs act, that the larger the number of drugs described in the next Pharmacopeia the better, provided that the drugs are properly standardized. This proviso is of great importance, because the presence in the Pharmacopeia of drugs without standards, or with inadequate standards, is of little or no advantage so far as facilitating the execution of the law is concerned.

Other papers read at the meeting were: "Hexamethylenamin in the Treatment of Otitis Media," by Dr. W. M. Barton, Washington, D. C.; "The Preparation of Tyroid Glands for Use," by Dr. S. P. Beebe, New York; "The Immediate and After Management of the Puerperant," by Dr. Jesse Sharp, Washington, D. C.; "Asthenia Universalis Congenita," by Dr. C. L. Green, St. Paul, Minn.; "The Further Use of Calcium Creosote in Medicine," by Dr. L. Kolipinski, Washington, D. C.; "Some Points in Bacterial Therapy," by Dr. F. E. Stewart, Philadelphia; "Bacterins; Their Present Status in Therapeutics," by Dr. N. P. Barnes, Washington, D. C.

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## AMERICAN GYNECOLOGICAL SOCIETY

*Thirty-fifth Annual Meeting, held in Washington, D. C., May 3-5, 1910*

(*Continued from page 1714*)

### Gall-Stones During Pregnancy and the Puerperium

Dr. Reuben Peterson, Ann Arbor, Mich.: Gall-stones are most commonly encountered in women between the ages of 20 and 35. Gall-stones are more common in women than in men. There are reasons for thinking that child-bearing has something to do with the frequency of gall-stones in women. This was borne out by finding that in 542 patients in whom the gall-bladder was palpated during the course of abdominal operations, gall-stones were found to be present in 64, or 11.8 per cent. The percentage of patients with gall-stones, who had borne one or more children, was 75, as against 65.7 per cent. in women who had no gall-stones. In the present series of pregnant patients with cholelithiasis, in nearly one-third of the cases the onset of the attack was at the fifth month of gestation, or at the time when the uterus is approaching the level of the umbilicus and beginning to crowd the intestines toward or on the bile passages. In the puerperal cases the onset of the attack in one-half of the cases was during the first seven days postpartum. Chills and elevation of temperature, associated with jaundice are frequent in gall-stones complicating pregnancy and the puerperium. In the series studied, there was a surprisingly large percentage of pregnant patients with jaundice, 15 out of 25, or 60 per cent. Only one out of the ten puerperal patients had jaundice. The operative mortality for the 23 pregnant patients was 13.04 per cent. The operative mortality in the puerperal cases with cholelithiasis was 11.1 per cent. In the pregnant patients with cholelithiasis more than one-half of the stones were in the gall-bladder alone; the same may be said of the puerperal cases. It is probable that there is no greater tendency for gall-stone operations to interrupt pregnancy than is the case with other abdominal operations during various periods of gestation. It is advisable, when cholelithiasis complicates pregnancy and the puerperium, to choose the operative procedure which can be performed in the shortest possible time consistent with the existing conditions. The condition of the pregnant patient as regards the cholelithiasis should be the determining factor as to when the operation should be performed; whenever possible the operation should be postponed until the child is viable. The diagnosis of cholelithiasis during pregnancy and the puerperium will not be difficult in typical cases if the possibility of the complication be borne in mind. Much reliance can be placed on the jaundice which seems to be more prevalent in pregnant than in non-pregnant women with gall-stones.

### DISCUSSION

Dr. W. F. Wakefield, San Francisco: The relationship between pregnancy and gall-stones is interesting. I believe that a large percentage of women have gall-stones, and the curious thing is that in carefully studying the histories of these women in a large percentage of them I could trace the beginning of the symptoms to pregnancy. I think that about 75 per cent. of the women who complain of symptoms of gall-stone disease will date the beginning of those symptoms back to pregnancy. As gynecologists we are neglecting the gall-bladder. The gall-bladder should be examined every time we open the abdomen, and every time we find stones in the gall-bladder they should be removed at that time. It is a mistake to operate on gall-stones during pregnancy if it can be avoided.

Dr. Philander A. Harris, Paterson, N. J.: Any one who operates for gall-stone disease in the course of pregnancy may well wonder whether it is right to do the operation at that time or not, but as near as I can understand from the cases reported, I do not think the decision should depend on whether the patient is pregnant or not. I think the decision should be governed by such other conditions as would govern us in the removal of gall-stones or gall-stone disease, no matter whether it occurred in connection with pregnancy or not.

Dr. Lapthorn Smith, Montreal: I question whether it would be a good thing to operate on a woman for gall-stones who is six months advanced in pregnancy. I think that it is not a good thing to do so at that time because the size of the uterus makes the operation difficult. The pregnant woman should be carried along with morphin and other treatment until she has been delivered, and then she should be operated on for gall-stones.

Dr. W. G. Wylie, New York: I have been watching the gall-bladder whenever I have opened the abdomen through an incision large enough to introduce my hand, and I have found that the percentage of gall-stones is much greater than I had expected. Whenever the gall-bladder is distended with fluid there will be nausea and vomiting after operation, almost without exception in my experience, and when it is flaccid and empty, vomiting is rarely ever severe.

Dr. H. N. Vineberg, New York: A few years ago I was called in consultation in a case of supposed puerperal sepsis. The woman had been delivered ten days before. She was very ill; had a temperature of from 104 to 105 F.; pulse, 120, and complained of pain in the lower part of the abdomen on the right side. She had given no history of gall-stone attacks prior to that so far as one could learn. I examined her carefully and came to the conclusion that the trouble was not with the pelvic organs. I went higher and found a distended gall-bladder. She was transferred to the hospital, was operated on, and the gall-bladder was found full of small stones, with mucopurulent fluid. The woman made a good recovery. I do not agree with Dr. Smith as to the non-advisability of operating on some of these patients during pregnancy.

Dr. Henry T. Byford, Chicago: Undoubtedly many women have gall-stones and may have had them for a long time, pregnancy being merely the cause of the first recognizable symptoms.

Dr. John F. Thompson, Portland, Me.: In January, in my service, I had referred to me from the medical side a patient who was supposed to have had perforation from a duodenal ulcer. The period of illness was about 24 hours. The patient had considerable temperature, and was 3 or 4 months pregnant. The soreness, pain and tenderness gave indications as to the point of election for making the incision. I found perforation of the gall-bladder with stones and pus and some bile, which fortunately were shut off by folds of omentum. The operation was uncomplicated; adhesions were not very dense. With the scissors I removed the edges of the perforation, drained the gall-bladder, and the patient had no interference whatever with pregnancy.

Dr. Henry Hough, New Bedford, Mass.: A month ago I was called in consultation to see a woman in a moribund condition. She had been delivered about ten days before. The first week of convalescence was normal, then symptoms pointed to acute cholecystitis. As the woman was moribund no operation was done. After death several quarts of deeply bile-stained fluid were removed from the abdominal cavity which demonstrated the nature of the case. I have operated in two cases of gall-stones during pregnancy. One in a woman of 23 who was 2 months' pregnant; she had stones in the gall-bladder and in the duct. She also had chronic pancreatitis. When I operated she had just recovered from an attack of acute pancreatitis, as was evidenced by extensive fat necrosis in the omentum. Drainage and removal of the stones resulted in a cure. About one month after operation she was delivered of a three-months' fetus. The other woman was 5 months' pregnant and had acute cholecystitis with gall-stones in the gall-bladder. The gall-stones were removed and she made a prompt recovery, with drainage, and went on to full term.

Dr. Richard C. Norris, Philadelphia: Operations for gall-stones during pregnancy should be determined by the character of the cases. If the case is an aggravated one, the woman should be relieved of the gall-stones independent of the pregnancy, but if it is a case in which we can tide the patient over until labor has been accomplished, it is better to do so. We should apply the same principles of surgery to gall-stones associated with pregnancy as we would to women independent of pregnancy.

Dr. R. Peterson: Dr. Norris has presented in a few words the inevitable conclusion that we must operate on these pregnant women and also on the puerperal woman according to the conditions presented by the gall-stones.

### Anastomotic Repair of the Ureter

Dr. Malcolm McLean, New York, said that cases may occur in which end-to-end anastomosis is desirable and preferable to implantation into a slit wound. He described a method which offers a means of securing anastomosis, and at the same time providing for the safe conduct of the urine past the point of repair during the first critical hours after the operation.

### President's Address: American Gynecology

Dr. Edward P. Davis, Philadelphia: American gynecology had its origin in the crude obstetric practice of fifty years ago. The necessity for repairing the injuries of labor developed the genius of Sims and Emmet, and American ingenuity added a new branch to surgical science. As obstetric surgery has developed and asepsis was introduced, gynecology has become more and more abdominal surgery. This has been the case not only because better knowledge of obstetrics has lessened the injuries of labor, but because women have those abdominal lesions most easily recognized and most frequently occurring. At present, the modern gynecologist operates on men and women alike, the surgeon in turn performing many operations on women. To-day the tendency of development in gynecology lies in the study of the normal relations of the abdominal and pelvic viscera, the determination of the dynamics of the abdomen and pelvis, and the recognition of those causes which produce abdominal and pelvic ptosis. We have learned that the repair of lacerations of the genital tract does not suffice to cure these cases. The pelvic viscera must be brought into such relation with the abdomen and its contents that the dynamics of the abdomen shall maintain health for the individual, and not disease. Modern surgery having conquered the world of technic, seeks other fields of conquest. The operation for cancer seems to have reached its anatomic limitations, but the cause of cancer remains unknown. Gynecology to-day is especially charged with the task of studying the cause and the mode of growth of malignant disease, so that operation may be wisely chosen and performed. The genital tract of woman gives opportunity to study pathologic processes closely akin to malignant disease. Such are the nonmalignant degenerations of the generative organs, of which examples are found in autolysis of the uterus, changes in the Graafian follicles, and corpus luteum, necrobiosis in fibroids, and cystic and calcareous changes in ovarian and fibroid tumors. Protoplasm may thus be studied in its germinal and degenerative changes. The discovery of chorioepithelioma and its identification as a form of malignant disease serve to illustrate this point. Our knowledge of cancer to-day pauses at the phenomena of premature cellular death and degeneration.

In no branch of medicine has so great advance recently been made as in obstetrics. Pathologic chemistry has thrown new light on toxemia and eclampsia and lessened the frequency and mortality of these grave complications of parturition. Obstetrics offers abundant work for the future. Toxemia and eclampsia are but partly understood. It is still not proved that vaginal delivery, after opening the pelvic girdle, is not accompanied by such injuries that abdominal delivery is not better, and even in the repair of lacerations the final word has not yet been spoken. It is still an open question whether in puerperal sepsis we can do more than feed and stimulate the patient. To us is entrusted the physical care of woman in her most important function—the conservation of the race. Our supreme reliance in national crises is the moral sense of the people. But how can this be done unless children be born with a sound brain in a healthy body and trained from the earliest days to a natural life and prompt obedience. If this republic is to endure, its women must bring to its altars not the paste jewels of an artificial luxury, but those gems which made immortal the mother of the Gracchi. Gynecology is an American science, of which America may well be proud. Let us see to it that it serves faithfully the land of its birth.

(*To be continued*)

## SOUTH CAROLINA MEDICAL ASSOCIATION

*Sixty-second Annual Meeting, held at Laurens, April 19-21, 1910*

The officers elected were noted in The Journal, May 7, page 1555.

### Prevention of Blindness

In the House of Delegates Dr. C. W. Kollock, Charleston, made a plea for the enactment of the following bill:

"*Section 1.* Be it enacted by the General Assembly of the State of South Carolina, that should one or both eyes of an infant become red or inflamed at any time after birth, it shall be the duty of the midwife or nurse or person having charge of said infant to report the condition of the eyes at once to the local board of health or county physician of the community in which the parents of the infant reside.

"*Section 2.* That the Secretary of State shall cause a sufficient number of copies of this act to be printed, and supply the same to health officers and health committees, whose duty it shall be to furnish a copy to each person who is known to act as midwife or nurse in the cities and towns for which they have been appointed.

"*Section 3.* Any failure to comply with the provisions of this act shall be punishable by a fine not to exceed twenty-five dollars, or imprisonment not to exceed one month, or both."

### President's Address: Need of More Thorough Education

Dr. John L. Dawson, Charleston: I wish to make a plea for the advancement of the education of the medical man. I desire to see in the State of South Carolina a better educated medical student. If you go to our dear old college and look back at its records you will find the theses which were required from students at their graduation and which have been kept by the college. They are remarkable and show a degree of learning that should make the medical student of the present day blush. Many of them are written in Latin, Greek, German and French, and show an amount of research and study beyond the average ability of our present class of applicants for a medical diploma. There are two reasons for this: the first, the men have not the money to take collegiate courses before taking up a medical course, and the second, the young men want to graduate too early. They study medicine to make a living only, by any means in their power, and if this state of things continues medicine will cease to be a profession and become a trade. The tendency is toward specialism, and the passing of that beautiful character, the family physician. In this present day the men in the profession are making a headlong rush after money and reputation, and they have not time for general education. We often hear men say that the study of the dead languages is not necessary for the study of medicine, and that the study of modern languages is not absolutely essential. How many young men starting out to study medicine ever think of studying along other lines? Is the average medical student of to-day the possessor of even an ordinary education, attainable at a high school of college? Money is essential to existence, and the medical man must make his living by his brain and skill, equally as well as the laborer by his muscle and brawn; but brain without cultivation is a poor possession, and the skill of the uneducated is looked on with suspicion. Many of our young men go into medicine for a living too hastily, and as a result we have an overcrowding of the profession.

Every man who raises a son for any profession in life should start with an early education of the boy. Training for the chosen profession should commence with the earliest school days. It would be a splendid thing if each one of us had taken up some special line of study along with medicine—music, art, literature or the languages—whatever is our bent. One needs more than his profession alone to shine in a company of cultivated people. An educated man in a community must elevate the people with whom he associates, and his cultivation raises him in the estimation of his inferiors and he can thereby accomplish much good; it makes his work more acceptable to his equals; it maintains his own self respect. No matter how good a physician one is, how able a surgeon, he needs something more. Cultivation stands for mental gentility. I would suggest that our boards of medical examiners take the matter in their own hands and correct this evil. They should be equally as well qualified to judge of a candidate's general preliminary education and fitness to apply for a degree in medicine as they are to judge of his medical education only. I suggest that this association take this matter up for serious consideration.

### Serotherapy of Epidemic Cerebrospinal Meningitis

Dr. Charles Hunter Dunn, Boston: Flexner, as one of the committee appointed by the New York health department, investigated the epidemic of 1904 and made a careful study of the pathogenic properties of the diplococcus, showing its brief vitality in cultures, its wide variation in virulence and the rapid autolysis produced by an enzeme which is distinct from the intracellular toxin. Flexner's first experimental work on monkeys and some of the other lower animals did not seem very encouraging toward producing an antiserum, for endotoxins rarely produce sufficient antibodies to neutralize the toxin in an acute infection. But as the diplococcus is easily influenced by unfavorable conditions, and as the curative agent can be applied directly to the lesions, it seemed possible that serotherapy might be successful. It was next demonstrated that immune serum from monkeys would protect infected monkeys. Then a horse was immunized and its serum used for man, as follows: after lumbar puncture, inject through the same needle a quantity of serum equal to the amount of spinal fluid withdrawn. This procedure is carried out on four successive days.

An analysis of 400 cases by Flexner and Jobling shows that the serum treatment of meningitis reduces the mortality from 75 to 25 per cent. This serum is not on the market. It may be obtained without cost from the Rockefeller Institute by anyone who can satisfy Dr. Flexner as to his agility to use it properly, to make the necessary bacteriologic examinations, and to send in an accurate clinical report. Of course, the amount of serum is limited and cannot supply the whole country.

In my series of 86 cases, embracing all types of the disease, 72 per cent. of the patients recovered. These cases, as well as those analyzed by Flexner, show strikingly the advantage of the early use of the serum. Ordinarily, the vomiting, high temperature and mental symptoms disappear rapidly, leaving the rigidity of the neck and Kernig's sign to subside gradually.

The diplococci in the spinal fluid at first become intracellular and then disappear entirely. And last but not least, the occurrence of the much-dreaded sequelæ is greatly diminished.

### Pulmonary Tuberculosis: The Persistent Need of Earlier Diagnosis

Dr. L. B. Morse, Hendersonville, made a strong appeal for earlier diagnosis of tuberculosis, rather than a reiteration of the means by which such diagnosis is made. He emphasized the fact that, in spite of all that has been written in recent years, the average physician does not diagnose pulmonary tuberculosis in its incipiency. The reasons ascribed were believed to be largely personal. Timidity in sufficiently exposing the patients to examine them properly was thought to be a common reason for not carefully examining individuals. He condemned the idea that patients do not want exhaustive examinations, and that examinations render patients oversolicitous and introspective. Patients should be told frankly the facts in these cases, as insuring a closer obedience to the necessary change in the mode of life so essential to a cure. Lastly, he enumerated the conditions of life, and of the individual, wherein a careful man would be more apt to look for tuberculosis.

### Dont's in Medicine and Surgery

Dr. Walter Cheyne, Sumter, read the following axioms:

1. Don't fail to make an exhaustive physical examination in every patient who comes to you. This means heart, lungs, liver, kidneys, abdominal palpation, urine and sputum, when necessary. Your error may not only mean the loss of your reputation, but also the death of your patient.
2. Don't delay an operation for appendicitis after the diagnosis has been made. Don't be influenced by ignorant people to wait until the patient is in danger of death. Pus walled off or walled in you will drain. The removal of the appendix in most cases may be deferred when drainage is established.
3. Don't think an examination of urine is made by intuition. Fresh reagents, exact methods which certainly include filtration, are necessary for you to make a positive statement to an insurance company or to a patient.
4. Don't be surgically careless after a pus case; disinfect as you would after a post-mortem. Pus clings to all tissues; pus germs are not harder to kill than most other germs; therefore, take proper precautions to kill them on your hands and on the places where they originated, if possible.
5. Don't claim to know every skin eruption you see. Perhaps five men in the United States do know such eruptions. If you are doubtful, say so; it won't hurt you, and may do the patient good.
6. Don't tell a man he is cured of gonorrhea unless you know. If you don't know and you tell him he is cured, you may cause a woman's death.
7. Don't think you know all medicine and surgery until you have studied the methods in seven different cities and have practiced conscientiously for twenty-five years. Even then you may turn over in bed at night several times and have doubts as to your knowledge.
8. Don't feed poll-parrot style in typhoid fever. You can starve a patient to death in typhoid as well as have the fever kill him. Anemia must be combated as well as the fever. Better higher fever than a feeble heart.
9. Don't forget that scientific knowledge, added to scientific equipment, plus a practical knowledge of human nature, are the trio necessary to professional success.
10. Don't minimize the value of membership in a medical society. The charlatan cannot get in. Count the number of successful professional men you know who are not members of their state association.
11. Don't use a drug, unless you know it is necessary. If in doubt, leave out the medicine.
12. Don't forget in medicine or surgery the Golden Rule, "Do unto others as you would that they should do unto you."

### The Present Status of Cancer Education

Dr. Southgate Leigh, Norfolk, Va., chairman of the Committee on Cancer Education of the Tri-State Medical Association of the Carolinas and Virginia, appeared before the society chiefly for the purpose of enlisting the cooperation of its members in the campaign of cancer education which the committee is instituting in these states. He called attention to the nature of cancer, its wide prevalence and its incurability in the later stages. Cancer, he said, is preventable or curable in at least 95 per cent. of cases if taken in time, and yet, largely from ignorance and misunderstanding on the part of the public, 90 per cent. of cancer patients die. The real problem is the education of the profession and public alike in the prophylaxis and early treatment. He called attention to the good work of the American Medical Association in disseminating knowledge about "cancer quacks," briefly reviewed the work done by Winter in Koenigsberg, Germany, and referred to various papers published in this country. He also discussed the advisability of disseminating useful information to the public through boards of health, public clinics and women's societies, by distribution of circulars, and also by appropriate articles in public press. He emphasized the fact that the hearty cooperation of the general practitioner was most important.

### Things the Profession Should Know About Cancer

Dr. Le Grand Guerry, Columbia, read a paper on this subject.

DISCUSSION

Dr. J. S. Horsley, Richmond, Va.: The earlier the diagnosis is made, the more difficult it is, but the greater the patient's chance of being cured. Anyone could make the diagnosis in the late stages, but then the case is inoperable and diagnosis can be of no avail. Statistics have shown that the opportunity for cure of cancer by operation decreases with the advance of the disease in almost mathematical precision. For instance, if a cancer of the breast is taken in the early stage, before the involvement of the skin or the glands, radical operation will cure permanently more than 75 per cent. By cure is meant that these patients are well without recurrence 3 years or more after the operation. When the glands in the axilla are involved the percentage drops to 35 per cent. When, in addition to this the skin is involved, the ratio of cure is less than 20 per cent. When the supraclavicular glands become affected there are only from 5 to 10 per cent. of patients cured, and operation is hardly justifiable. Each of these stages represents a definite state in the progress of cancer, which results from delayed operations. It is the duty of the physician to insist on every patient with a growth, the nature of which he does not know, being examined and the diagnosis definitely determined. If he waits until the tumor "develops" he is sacrificing the patient's chances of life with every day's delay. The most prominent single symptom of cancer is the absence of pain. A patient will rush to a doctor with a boil because of pain, but with a growing cancer, which gives no pain until the late stages, the patient will frequently delay consulting a physician until it is too late. If people could be brought to learn that a tumor without pain is more dangerous than a growth with pain, many more lives could be saved. Exploratory incisions for diagnosis of doubtful tumors is always dangerous, unless immediately followed by radical operation. The surgeon should study his own tumors and be his own pathologist, by noting the appearance of the growth at the operating table and following it through the laboratory, noting its microscopic appearance, he will be in a position to decide the nature of a similar tumor the next time he meets it at the operating table, for he will recall the microscopic picture of other tumors that looked and felt like the one he is dealing with. The surgeon should carry practical knowledge of pathology in his own head, and not in the head of some one else, for delay in the pathologic report frequently means that the patient has lost the only chance for permanent cure.

### A Plea for Medical Inspection of School Children in South Carolina: Report of the Work at Seneca

Dr. E. A. Hines, Seneca: While medical inspection of schools has made rapid progress in many parts of the world, the southern states appear not to have become interested until very recently. New Orleans and Atlanta each inaugurated medical inspection in 1909. Seneca was the first place in South Carolina to put in operation such a system, Sept. 23, 1909. The examining board consisted of two general practitioners, two dentists, an eye and ear, nose and throat specialist and a secretary. This combination, with the assistance of the teaching staff at times, resulted in a thorough examination. In all the more serious cases the children were treated by or on the advice of the family physicians. I examined also a representative number of negro school children; 90 per cent. had bad teeth, skin diseases very prevalent, but other defects were similar in general to the whites. I also examined a representative number of cotton mill operatives' children; 90 per cent. of these had bad teeth; not one had a tooth-brush. Other defects were not very different from previous reports. Laws should be enacted looking to enforced medical inspection in South Carolina.

### An Epidemic of Beriberi at Convict Stockade, Ten-Mile Hill, Charles County

Dr. Allen J. Jervey, Charleston: Early in March there developed within a fortnight 17 cases, which were diagnosed beriberi, and the patients sent to the state penitentiary as unfit for work on the county roads and as possible sources of infection to the remaining 14 prisoners. They presented about the following pictures: An edema, starting in most cases about the calves of the legs, with some pain, numbness and paresthesia in this region. The edema was not of the boggy type, but seemed resistant to pressure, and extended rapidly until in the most marked cases it had involved thighs, abdomen, scrotum, front of chest and face. The onset was accompanied with a general feeling of lassitude rather than a distinct malaise. Temperature normal; urine negative. In the more advanced cases there was accelerated pulse, or a pulse which after the least exertion would reach 120 and over. These individuals showed a dilated heart and it was hard to distinguish the heart sounds. Relative murmurs and venous pulsations in the neck were observed. The gait was tired, slow and dragging, but there was no ankle-drop or wrist-drop. Knee-jerk was diminished or lost; in one case noted it was increased. Hookworm ova were found in two out of three patients examined; no other intestinal parasites were noted. One-half of the patients showed white fur coating on tongue. There was a general tendency to constipation.

Is beriberi a new disease here, and what is the source of the infection? I think that beriberi is and has been for several years an endemic disease in the low lands of South Carolina. During the past two years I have seen three distinct outbreaks of what I now know to be beriberi. This statement is borne out by my inspection of the previous attending physicians' records, in which I find beriberi called by various names, as "malaria," "acute nephritis," "cellulitis of legs," "myositis," "undiagnosed," "swollen limbs" and "dropsy." The first patient I treated, in 1908, was very anemic and, finding hookworms, I gave thymol and iron, which brought about marked improvement, but possibly the moving of the camp to a higher elevation may have had something to do with the improvement. In September and October there were two deaths, the first from edema of the lungs as the immediate cause, and the second, rather sudden, possibly from involvement of the vagus. He had been complaining for a few days, had edema and pain in the calves of the legs, but did not stop work. Careful postmortem revealed only an increased amount of fluid in the pericardium and abdomen. Four of my patients went to Columbia and the condition was diagnosed by Dr. Pope as identical with that in patients who come up from the phosphate fields and which was spoken of as "phosphate sickness."

The cause of the infection is yet in a theoretical state. The convict camps are high, sanitary and dry, and are well ventilated. The drinking water is pure. The rice theory does not apply, as rice is excluded from the dietary of the convicts. We have in this camp neither heat nor moisture—supposed to be the cause of this disease. Prior to these outbreaks one gang, composed of the more intelligent negroes, who handled the animals and the road machines, was known as the road gang; the others were concerned with the drainage work chiefly; and their duty is ditching water of various depths in the low, foul bottoms that need drainage. The first ones attacked in each outbreak belonged to the ditching gang, and the symptoms appeared about six weeks after each exposure.

DISCUSSION

Dr. J. C. Sosnowski, Charleston: There are two types of beriberi—the wet and the dry. As an intern in the city hospital at Charleston six years ago I had the good fortune to see an epidemic of beriberi of the dry type. This epidemic occurred on a ship coming from Chili. When the vessel reached Charleston 19 men were infected and 1 died. Most of them had a slight toe-drop and some paresthesia and numbness; but 4 of these were very ill. The one who died developed sometime before he died a marked diarrhea, which nothing could check. The next spring, in the same neighborhood in which Dr. Jervey found his cases, I found a case of multiple neuritis of the dropsical type. I could not make diagnosis of beriberi, as I had only one case, although I thought it was that. The patient told me, however, that there were several similar cases in that neighborhood. Since then I have heard of an epidemic of dropsy. I think the disease has been with us for a long time, and those affected in this neighborhood seem to have the wet type, which would lead us to suspect there are two varieties, not only clinically but etiologically. I think it is probable that when we find the cause we will find that this is an infectious disease. I have heard that there have been epidemics of dropsy throughout the low country for several years, and it is most probably the same disease. I think, as does Dr. Jervey, that the line for us to follow would be to search for some agent of transmission which lives in the ditch water, because every case which we have seen has developed among the negroes who have worked in the mines or ditches.

### What Has Been Done for the Prevention of the Increase of Blindness, and What Can Be Done

Dr. Charles W. Kollock, Charleston, cited the work which has been done in various states, mentioning especially New York, Massachusetts and Ohio. He gave an account of the good work that is being carried on by the New York Association for the Prevention of Blindness, and dwelt especially on the literature that is being widely distributed to the laity, the public lectures delivered and the amount ($5,000) that was appropriated by New York State for this work last year. He quoted the law of South Carolina for the care of new-born infants whose eyes should become inflamed after birth, and criticized it because it applied to cities and towns of 1,000 inhabitants and over and not to the whole state. He urged the amendment of this law at the next meeting of the association, so that it would apply to the entire state. He quoted the statistics of blind persons in various blind institutions who had been blind since birth, and among them that of the institutions at Cedar Springs, S. C., where out of 78 persons 23 have been blind since birth. He spoke of the large negro population in South Carolina, among whom eye diseases are rife and who are eminently careless in all health matters. He urged strict laws and education for these people. He quoted the number of births in Charleston from July 1 to Dec. 31, 1909, that of 213 whites 155 were attended by physicians and 58 by midwives. Out of 225 colored births 30 were attended by physicians and 195 by midwives. He mentioned that those midwives were not only ignorant, conceited, dirty, but very superstitious, and that more stringent laws should govern them. He said that all contagious and infectious diseases should be reported to the health office, according to existing laws, but doubted if we were ready to report a case of gonorrhea or syphilis or gonorrheal ophthalmia, but that there could be no doubt that publicity would lessen the number of cases. He declared that it was a shame that innocent women should be exposed to the danger of those diseases and that every man who desired to marry should be made to present a clean bill of health before obtaining a marriage license.

### Uncinariasis in the Negro

Dr. W. J. Burdell, Lugoff, gave some interesting statistics in regard to hookworm in the negro. His tests were as follows:

Total number of stools examined, 226, from as many individuals. Hookworm ova in from 145 to 65 per cent.; persons examined ranging from 2 to 60 years.

Stools from 178 persons under 20 years of age, 126 contained hookworm ova, 70 per cent.

Three men over 50 years of age showed hookworm ova. They came from the clay lands of South Carolina; 200 individuals presented no symptoms of any disease; 5 were tuberculous and all these had hookworm; 21 "rickety" children under 5 years of age were infected with hookworm.

Of the 226 there was a history of ground itch in 190 cases, 84 per cent.; all went barefoot in summer.

Of 92 girls under 20, 61 were infected; of 86 boys, 65 were infected; 8 men and 11 women over 20 were infected.

He was treating the 5 tuberculous patients as nearly according to the recognized modern method as possible, with this class of patients, and getting very poor results. After finding the ova and removing the worms, three have greatly improved. While not claiming that tuberculosis can be cured by thymol, he stated that one of the reasons tuberculosis is so prevalent, and its course so rapid in the negro, is the fact that he has uncinariasis in what may be called a latent form, and tuberculosis or any other infection may overcome the partial immunity the race has acquired for hookworm, and hence there is a double infection. In the sand-hill district of South Carolina about 65 per cent. of all the negroes have hookworm; uncinariasis is latent in a majority of the negro race, and in the presence of other infections the uncinariasis becomes active and lessens the natural resistence. Uncinariasis plays an important rôle in the causation of rickets in the very young negro child. Hookworm is one of the first causes of the high mortality from tuberculosis in the negro race.

### Report of a Case of Appendicostomy by a Method Devised by Dr. Pettyjohn of the Marine-Hospital Service

Dr. L. A. Griffith, Columbia: This operation was first reported by Dr. Pettyjohn in The Journal A. M. A., March 14, 1910. The abdomen is opened over the right border of the right rectus muscle, the appendix located, a stab wound made over the appendix and the appendix drawn through this stab wound. The abdominal cavity is quickly and effectively walled off. The appendiceal stump is short and straight. Irrigation can be begun at once. This method has all the advantages of appendicostomy as heretofore done, without the bad features. With this method it does not matter if the stump sloughs, and if a cecostomy is indicated this incision of Dr. Pettyjohn's is the most desirable. The danger of hernia and infection is greatly reduced. In the case reported the patient was probably syphilitic. Improvement was rapid, though he had not responded to medical treatment, and had been ill with dysentery more than one year.

DISCUSSION

Dr. J. Shelton Horsley, Richmond, Va.: Cecostomy has an advantage that appendicostomy does not present. The chief advantage, it seems to me, is the location of the cecum, which is in many cases in proximity to the anterior abdominal wall. The appendix has no definite location, but it is more frequently than otherwise found behind the cecum, and in order to bring it up, as Dr. Reed has pointed out, it is necessary to turn over the cecum, which makes a kink or valve and interferes with drainage. It seems to me that we are too likely to look on the appendix as something that has to be made some use of, besides securing the surgeon a fee, and it would probably be a little more preferable to take off the appendix in those cases and treat the stump, simply; tie a string around it without a purse-string suture, which cuts off the blood supply and complicates matters unnecessarily. Let the cecum fall back and bring up the anterior wall of the cecum, make a hole in it, put a purse-string suture around the hole, insert a rubber tube, tie the purse-string, and we have drainage which is very much better and more direct.

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## MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

*Annual Session, held at Mobile, April 19, 1910*

The President, Dr. W. M. Wilkerson, Montgomery, in the Chair

A list of the officers elected was given in The Journal, May 7, 1910, p. 1549.

### Uterine Fibroids Complicating Pregnancy

Dr. R. S. Hill, Montgomery: Although these tumors are found in 20 per cent. of women beyond 30 years of age by postmortem examination, Pinard found them in only 84 cases out of 14,000 pregnancies. The reason for the latter is that the ordinary obstetric examination does not reveal the presence of the tumors unless of considerable size, and that many women with them never conceive. The diseased condition of the tubes, which is present in 50 per cent. of these women, is responsible for the increased sterility and the frequency of ectopic pregnancy in these women. Abortions, which are frequent, are due more to abnormal changes in the uterine endometrium than to pressure of the tumor. The tumor is liable to undergo degenerative changes, simple or sarcomatous. I do not think that the tumor ever disappears, although it may flatten out, if intramural, as pregnancy advances and give the impression of having done so. In treatment, I would oppose abortion on the grounds that it is not curative, and on account of the liability of infection and hemorrhage, making it about as dangerous as the more radical operations. Myomectomy should be done whenever possible. Not only subserous but intramural tumors may be removed by myomectomy. Should hemorrhage become uncontrollable, or should there be a number of tumors present, hysterectomy should be done. However, no operation should be undertaken if the tumor is out of the pelvis or can be lifted out, provided the woman can be kept where surgical measures can be instituted on short notice should conditions arise calling for them.

DISCUSSION

Dr. M. E. Conway, Talladega: Some time ago I had a case of fibroid tumor of the uterus which was complicated by placenta prævia. I reached the woman in about twenty-two minutes after I was called and found an alarming hemorrhage. As she was likely to die from hemorrhage, I split the wall of the uterus up to the uterine artery and delivered a seven-months' child. The child is living to-day. The tumor I removed was pedunculated, but the operation was done subsequently and not at the time the child was delivered.

Dr. I. L. Watkins, Montgomery: It is essential to make an accurate diagnosis and determine the location and character of the tumor which complicates pregnancy. A careful examination should always be made of patients who have fibroid tumor or tumors complicating pregnancy. Such a patient should be kept under constant observation and attended to promptly if necessary. Women with good-sized fibroid tumors in the uterus are delivered of babies but sooner or later it may become necessary to operate on some of them for the removal of the tumors in order that pregnancy may go on to term. When a fibroid tumor so interferes with pregnancy as to cause alarming symptoms it should be removed, as temporizing treatment only increases the possibility of infection.

Dr. A. L. Stavely, Washington, D. C.: With regard to myomectomy, I believe in being rather conservative in the treatment of these cases in which the tumor involves the fundus or upper part of the uterus, or even when there is a pelvic growth. I think it is well to wait until pregnancy is well-advanced because these tumors will sometimes rise in the pelvis and labor will terminate without any complications. I operated on one woman in the seventh month of pregnancy for the removal of a large sessile tumor at the base of the uterus or cervical junction. To get at it, I had to raise the uterus from its bed, and then enucleated the tumor.

### Opsonin and Immune Sera

Dr. H. T. Lay, Montgomery: A moderate dose of vaccine, such as would generally be the most useful dose in connection with a chronic infection produces, after a comparatively short negative phase, a positive phase, which may occur on an average and extend over the interval between two successive inoculations undertaken about ten days apart. A smaller dose would produce an immediate positive phase, but a positive phase would not be maintained for more than a very few days. An excessive dose would produce a negative phase which would last through a large part, if not through the whole of the interval, which usually elapses between the two inoculations.

### Nausea of Pregnancy

Dr. George H. Fonde, Mobile: To present the treatment and its principles, I shall recount the salient features of the Lenhartz treatment for peptic ulcer, which, in the treatment of nausea of pregnancy will call for such modifications as the individual condition of the patient and the principles mentioned may logically determine: First, the patient should rest in bed, with an ice-bag over the stomach, the object being to bring about general rest, and especially of the dynamic and secretory action of the stomach. Second, sweet milk containing a tablespoonful of lime water to the goblet of milk—two tablespoonfuls at each feeding—should be given every hour; the patient should be given the food from a teaspoon and not allowed to feed herself. The milk should be packed neatly in ice, and administered ice cold. Each day the quantity of milk given may be increased by two tablespoonfuls at each feeding—there should be two-hour intervals, in feeding at night. By this increase it is but a short time before the patient is getting three or more quarts of milk daily. In the Lenhartz diet on the third day raw eggs are stirred in the milk, and thereafter on every third day an additional article of diet is added until the patient is given much more food than is needed for the average workman, with the result that the general strength and weight, together with greater resistance of the patient to all morbid conditions obtains, especially in vomiting of the nervous and functional type, such as we so frequently have in the nausea of pregnancy. The objects of these measures in the Lenhartz treatment are obviously explained on a physiologic basis. The excessively and constantly secreted acid gastric juice is neutralized by the milk, forming a bland peptone which soothes the stomach mucosa. The intolerance of the stomach to any solid or any volume is gradually overcome by the minute feedings so gradually increased. The patient being fed by the nurse rather than allowed to feed herself, together with the frequency of feedings, satiates the craving and lowers the psychic stimulus to gastric secretion, which is a great factor in pregnancy as in ordinary hyperchlorhydria. The liver, kidneys and heart and, in fact, the entire system are spared the irritation of toxic matters formed in the stomach and duodenum; while the system is being best nourished, the emunctories are being flushed and nurtured. When combating the hyperchlorhydria by the frequent sips of milk in small quantities, it will generally not be necessary to deny the patient regular meals, but as the periodic flow of gastric fluid attendant on regular meals is often in excess of the albuminous coefficient contained in such meals it is my experience that the patient will need to take the iced milk in teaspoonful sips within a very few minutes after the regular meals. In the treatment of such disorders of pregnancy, I would not overlook the value later of general hygienic and dietetic measures, with fresh air, exercise, and agreeable occupation whenever the condition of the patient will permit.

#### DISCUSSION

**Dr. George E. Pettey**, Memphis: A certain number of women die from excessive vomiting at pregnancy. I give strychnin to keep up active peristalsis, then ipecac and a little belladonna, and some of the secretion-producing agents to overcome the acid condition of the stomach, which does not appear again to amount to anything so long as active peristalsis is kept up.

**Dr. J. S. McLester**, Birmingham: The livers of patients who die from the toxemia of pregnancy show changes similar to those observed in acute yellow atrophy of the liver. I believe that the absorption of toxins from the intestinal tract is the primary cause of the condition.

**Dr. H. S. Ward**, Birmingham: Vomiting of pregnancy, acute yellow atrophy of the liver, and acidosis are so blended one into the other that it is difficult to think of one without thinking of the other. Within three days after vomiting sets in in the pregnant woman one is able to detect acetone in the urine, and if starvation continues many days more, one is almost sure to begin to have autolysis of the liver cells, with all the bad symptoms coming on with an absolute condition of acidosis. This condition is found not only in pregnancy, but in typhoid.

### Diagnosis of Painful and Swollen Joints in Children

**Dr. J. Ross Snyder**, Birmingham: A diagnosis based on joint symptoms alone is entirely untrustworthy. There are few pathologic conditions that can be correctly diagnosed by an examination that includes only the site on which symptoms are most marked. Disease of the joints arising shortly after birth, that is, in the first weeks, and not later than the middle of the second month, is due to septic infection through the umbilicus or to a gonorrheal infection. A form of bone syphilis appearing shortly after birth, usually before the sixth week, is that of an osteochondritis or epiphysitis. The humerus, the radius, and the ulna are the bones most frequently affected, but the disease may appear at other places. In tuberculous knee joint disease there is warmth, obliteration of the depressions on either side of the ligamentum patellæ and atrophy of the thigh and leg, enough almost to confirm the suspicion aroused by the bent knee limp displayed by the child. The frequent mistake is to credit this lameness to injury and to allow the condition to remain without being kept under close observation or treatment. In the diagnosis of tubercular joint lesions, the $x$-ray is regarded of great assistance by some good men. Others equally prominent in the profession minimize its advantages. The tuberculin test is another diagnostic aid which is of disputed usefulness in this particular class of cases.

### Chronic Gastromesenteric Ileus

**Dr. A. L. Stavely**, Washington, D. C., gave a brief summary of gastromesenteric ileus in general, its history, its anatomy, its etiology, and its treatment, and said in part:

In carefully reviewing the literature I have been able to collect 7 cases of the chronic type, including 2 of my own, all of which have been identified as cases of chronic gastroduodenal dilatation. A number of other cases were found in which gastric dilatation was recognized, and in which the symptoms corresponded very closely, but they were not sufficiently conclusive to justify classification. My first case followed an operation about 9 years before, and severe symptoms continued up to the time the woman came under my care in 1907. I anastomosed the duodenum with the jejunum anterior to the mesenteric ligament with complete relief from the symptoms. This is the first time such an operation has been performed for this trouble. The second case was a mixed one due to the presence of a gall-stone, which masked the symptoms. The gall-stone was removed and for a time, until the patient left the hospital, she was free from any discomfort. Then the symptoms recurred intermittently for two weeks at a time up to the present. To try the effect of posture and also to strengthen the diagnosis, I had her take the knee-chest position when the stomach swelled and she reported that after about 10 minutes the symptoms had disappeared. In my table I include 4 cases that are not verified, making 11 in all; 7 patients died of the condition; 4 had been operated on. There were 3 cures, one of them my own.

### Treatment of Pneumonia

**Dr. Henry Green**, Dothan, summed up the treatment of this disease in the following words: A well-ventilated room, isolated as nearly as possible. Rigid prophylactic measures, such as disinfection of sputum and other excretions. The selection of the most intelligent nurse available and the limitation of company. Nourishment of the most palatable and easily digested sort, and medical treatment to be largely for the relief of conditions and symptoms that may arise.

#### DISCUSSION

**Dr. J. F. Jenkins**, Piper: I have noticed that many patients with pneumonia will recover if we leave them alone. Of course, we should pay attention to good ventilation, hygiene, nourishment, etc. Medicine should not be given to these patients in a routine manner, but only when symptoms arise. When the heart is weak, strophanthus or strychnin is indicated, and when the skin is bluish nitroglycerin may be used.

**Dr. L. W. Roe**, Mobile: There is one standard for the treatment of pneumonia, and that is fresh air. Several years ago, when I was practicing medicine in a milling camp, I had the misfortune to have a great many cases of pneumonia among negroes. These negroes were placed in log cabins or rudely constructed houses, and in the winter there was no means of procuring anything like a warm room, regardless of what I did these patients recovered.

**Dr. Hugh Boyd**, Scottsboro: The prophylaxis of pneumonia is a little different in the city from what it is in the country. People in the city have a better system of health laws and carry them out better than do the country people. Country people need to be educated in regard to the dangers of pneumonia, and when there is a case of pneumonia in the house the rooms ought to be fumigated afterward just as much as after typhoid or tuberculosis. When there is a weakened condition of the heart it is well to use digitalis.

**Dr. J. S. McLester**, Birmingham: Fresh air is the main thing in the treatment of pneumonia. The toxin of pneumonia seems to have a special affinity for certain nerve centers. It affects the Gasserian ganglion. In certain cases it causes paralysis of the splanchnic nerve and complete loss of vasomotor tone in the abdominal cavity.

**Dr. Frank S. Meara**, New York: In New York we put patients with pneumonia out of doors. When treating them in the hospital we open all windows wide and properly cover the patients, and they do remarkably well with fresh air treatment.

**Dr. Henry Borst**, Silver Hill: A good deal of harm is done patients with pneumonia from indiscriminate visiting and in robbing these patients of the fresh air which they should have.

**Dr. R. M. Cunningham**, Birmingham: Pneumonia is an infectious disease. Over-work, mental anxiety, exposure to cold, and other things which reduce the resistance of the body invite the pneumococcus. In the treatment one should start in with the idea that pneumonia is a self-limited, infectious, toxemic condition, with the resisting power of the body diminished. The factors which contribute to heart failure in pneumonia are toxemia, increased work that the right side of the heart has to do because of the consolidated condition of the lung, and heart clots. One of the most important things to prevent cardiac thrombi and to overcome exhaustion and collapse is the infusion of salt solution.

### Value of Employment as Treatment in Certain Neuroses and Psychoses

**Dr. William D. Partlow**, Tuscaloosa: Employment is of considerable value in the treatment of those mental and nervous states in which worry, anxiety and kindred sensations are present, because it provides mental diversion and promotes physical health.

#### DISCUSSION

**Dr. H. S. Ward**, Birmingham: If we can find something that will interest these people, something that will get them out of themselves, they will forget their aches and pains. Those nervous people who are broken down from over-work are suitable for the rest cure.

### Pellagra

**Dr. E. M. Mason**, Montgomery, gave a brief summary of the present knowledge of pellagra. He briefly outlined the morbid anatomy, and in discussing the symptoms called attention to the extreme variability in onset and sequence, as well as severity. A low temperature, he said, was not unusual, associated, as a rule, with a disproportionately high pulse rate. He reported the results of blood examinations in a number of cases. These blood cultures had been uniformly sterile. The blood picture had shown nothing more than a secondary anemia, as a rule. He warned against accepting a large mononuclear increase as caused by pellegra without first excluding malaria, and uttered a similar warning with reference to helminthiasis in cases that show eosinophilia. He pointed out the ease of diagnosis in typical cases, but warned against hasty diagnosis in unusual forms, and mentioned the diseases that may have to be excluded. He though that a lower death-rate than the asylum reports of 60 per cent. might be expected in early, uncomplicated cases, in private practice. There was no specific medication for the disease he said, but much might be expected from good food, rest, proper hygiene and change to cold, dry climate. Arsenic was to be preferred to other drugs. Only mildly antiseptic lotions should be used for the skin lesion. Cold baths, packs and douches should be used for the nervous manifestations. Serum therapy had been disappointing and little was to be expected from it. Finally, he called attention to pellagraphobia as a condition that he had frequently seen in both men and women, and advised a spirit of cheerfulness and optimism on the part of the physician in order to counteract the hopelessness and despondency that the popular dread of the disease had engendered in the minds of the people at large. His personal experience embraced the study of about 75 cases.

#### DISCUSSION

**Dr. H. P. Cole**, Mobile: Speaking of pellagraphobia, I have in mind a patient who came to one of the infirmaries here with a burn on the back of his neck, which was simply a dermatitis, but he came 150 miles to be treated for pellagra. Another patient in Tipton, Georgia, was treated for 2 months for pellegra, came to Mobile markedly anemic, insisted on transfusion for what he thought was pellagra, went home and died in three weeks from tuberculous peritonitis, and the case was listed as a death from pellagra.

### Intubation in Laryngeal Diphtheria by the General Practitioner

**Dr. Andrew M. Stovall**, Jasper, reported eleven cases in which he resorted to intubation, with one death, and said a lesson should be learned from the case he lost by waiting for pronounced cyanosis to assert itself. He said: Do not temporize too long, but intubate as soon as signs of labored breathing are manifest. I would not advise the general practitioner, who is so situated as to command the aid of a specialist, to attempt this operation as a routine. But the physician of the rural districts, far removed from the specialist, should so equip and train himself as to be prepared to do this work when the urgent case presents itself.

### SYMPOSIUM ON UNCINARIASIS

**Dr. Herbert P. Cole** and **Dr. Gilman J. Winthrop**, Mobile, presented a joint paper in which they reached the following conclusions:

1. Uncinariasis must be considered not merely a disease of the lower classes, but affects to a large extent all individuals living in the state.
2. The number of infected individuals showing practically no gross symptoms warrants the routine examination of the stools of all persons from infected districts.
3. Further study of the prevalence of hookworm disease among the better classes of people will aid in the final estimate of the extent of the disease in the south.

**Dr. George Dock**, New Orleans, spoke on the prevention and treatment of hookworm disease.

**Dr. Charles W. Stiles**, Washington, D. C., gave an address on uncinariasis illustrated by numerous stereopticon views.

**Dr. Henry G. Perry**, Greensboro, pointed out the importance of instituting an educational campaign against hookworm disease.

**Dr. S. M. C. Howell**, Midland City, discussed the etiology, pathology, symptomatology, and diagnosis of hookworm disease.

### Cesarean Section

**Dr. William D. Jaines**, Lafayette, reported the case of a woman, aged 22, on whom he did a Cesarean section and delivered a living child at full term. Both mother and child were in perfect health. In connection with the operation he resected a portion of each tube to prevent future conception, but the patient told him a short time ago that she had been menstruating regularly for some time.

### Indications for Removal of Faucial Tonsils and the Technic

**Dr. Frank M. Thigpen**, Montgomery, said that in his experience no evil effects have followed the removal of diseased tonsils, and that when the operation is done in a clean, careful and correct manner, the operator will be rewarded not only by the relief given the patient, but by the satisfactory results of his work.

### Acute Endocarditis

**Dr. William W. Harper**, Selma: The treatment of ulcerative endocarditis is preventive. Since it is caused by gonorrhea and septic organisms, we should seek to cure these diseases as promptly as possible. The hope of the future lies in serotherapy. In all streptococcus infections, we should give antistreptococcus serum a thorough trial. Doctors should impress on the laity that gonorrhea is a serious disease and needs prompt and thorough treatment. In the acute stage small and increasing doses of the bacterins are giving good results in the hands of some.

### Diagnosis of Obscure Cases of Appendicitis

**Dr. Mack Rogers**, Birmingham, drew the following deductions:

1. There is a normal involution of the appendix.
2. This is accompanied by a fibroid degeneration of the normal structures of the organ.
3. In this process the nerve fibers are the last to be eliminated and are, therefore, entrapped in the meshes of the contracting fibroid tissue and irritated.
4. This irritation manifests itself both by pain and reflex action upon other organs.
5. This pain calls out and maintains a permanent hyperleucocytosis that protects the appendix from infection.
6. This reflex action may manifest itself on almost any of the vital organs of the economy.

# *Medical Economics*

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

## A CONFERENCE OF OPHTHALMOLOGISTS WITH ORGANIZATION OFFICIALS ON FAMILY PHYSICIAN REFRACTING

By Leartus Connor, M.D.
DETROIT

The promotion of family physician refracting calls for the cooperation of all physicians. It is believed that if these understood its value, all would seek its possession. To promote this understanding the Detroit Ophthalmological Club invited to its meeting May 3, the leading officials of Michigan medical societies and educational institutions. The following guests were present, took part in the discussions and endorsed the resolutions adopted, viz.: Dr. J. H. Carstens, president Michigan State Medical Society; Dr. Winfred Haughey, secretary-editor Michigan State Medical Society; Dr. Frank B. Tibbals, chairman medicolegal committee, Michigan State Medical Society; Dr. Charles T. McClintock, member of committeee on organization, Michigan State Medical Society; Dr. Guy L. Kiefer, health officer of Detroit; Dr. W. C. Martindale, superintendent Detroit public schools; Dr. Gerald Edmonds, Honor, Mich., and Dr. W. C. Garvin, Millington, Mich., family physicians doing simple refracting. The chairman of the council of the Michigan State Medical Society, Dr. W. T. Dodge, sent a letter supporting the movement. Though unable to be present, like support was given by the following: Dr. Victor C. Vaughan, dean medical department Michigan University; Dr. H. O. Walker, secretary Detroit Medical College; Dr. Arthur D. Holmes, president of the Wayne County (Detroit) Medical Society.

The chairman of the meeting, Dr. Leartus Connor, opened the discussion by a paper on "The Economic Value of Family Physician Refracting." He called attention to the fact that in the United States there are about 180,000.000 human eyes; 135,000 doctors; 3,000 ophthalmologists. This averages 60,000 eyes for each ophthalmologist. As every eye over forty years of age needs refracting, most of them several times, and as very many eyes under forty need refracting, we have an explanation of the fact that the ophthalmologists never have been able to meet the refractive needs of all the people in the United States. Because the family physicians never have been trained to supply these needs, salesmen of spectacles entered the field, and gave such satisfaction as to secure large and increasing support. Farther, without realizing the nature of their action, a large number of educated physicians support and patronize the opticians. In the hope of encouraging family physician refracting, the paper pointed out the vast values inherent in its universal adoption; values to ophthalmology and ophthalmologists, to general medicine and the family doctor; to the profession as a whole, in strengthening its organization, in solving the optician problem and in providing such cooperation of ophthalmologist with family doctor that the 180.000.000 of human eyes in the United States may be cared for by educated physicians, obviating the existing necessity for laymen ophthalmologists.

It was urged that if these values were accepted by this conference the members could use their positions to stimulate others to comprehend the facts and master family physician refracting till its enormous values be harvested for both profession and people.

Simple refracting was shown to be an art quite within the reach of every medical student, without neglecting any other of his studies, and of practice by any doctor, not already overburdened with work.

It was pointed out that while ophthalmology has many officers (specialists) it has few soldiers (family physicians) in its army, and so is impotent against the invasion of opticians with their horde of laymen. But an equipment of the entire profession with simple refracting would transfer all physicians to the ophthalmologic army who, in turn, would capture the people, before opticians could reach them.

Every member of the club and its guests took part in the discussion. Some detailed the steps by which they had cast aside the dominant practice and adopted the one presented. Many virile reasons were adduced for the change, and suggestions made for promoting the new doctrine.

Though lasting several hours, the conference never lagged but grew in interest from start to finish. Each saw in a new light a solution of present difficulties, vast benefits to the nation and increased honor to the profession.

Without neglecting aught of present good work, members of the Detroit Ophthalmological Club and its guests of May 3, 1910, adopted as their watchword "Family Physician Refracting" until every physician in the United States is equipped therefor.

Finally the following resolutions, on motion of Dr. Don M. Campbell, professor of ophthalmology, Detroit Medical College, were unanimously adopted by the club:

Whereas, Family physician refracting promotes the cooperation of family physician and ophthalmologist; provides physicians adequate for the people's refractive needs; enriches ophthalmology and ophthalmologists, general medicine and family doctor, strengthens medical organization and solves the optician problem.

*Resolved*, That the Detroit Ophthalmological Club endorses the action of the Section on Ophthalmology of the American Medical Association in promoting "family physician refracting," the action of the Michigan State Medical Society in seeking to qualify its members to meet the people's refractive needs; the action of the Kentucky State Medical Society endorsing the Michigan idea of family physician refracting; the action of the medical colleges in substituting "family physician ophthalmology" for "specialist ophthalmology," and the action of the state registration boards in Michigan, Vermont, Nebraska and Utah in requiring a "working knowledge of simple refracting."

*Resolved*, That the Detroit Ophthalmic Club urge other state boards of registration to require (1) for license, "family physician refracting," and (2) for the right to practice ophthalmology "A Comprehensive Laboratory and Clinical Study" after securing a license.

*Resolved*, That the Detroit Ophthalmic Club encourage family physicians to qualify for intelligent cooperation with ophthalmologists by equipping themselves for simple refracting.

It is suggested that much profit would result from other ophthalmic societies arranging similar conferences with officials of general or county medical societies, or even with groups of family doctors. Indeed, individual ophthalmologists might confer with little bands of family doctors and encourage them to master simple refraction, with the assurance of helpful results.

Finally, family physicians doing simple refracting might so confer with neighbors and local societies, that all become more competent for the refractive needs of their families.

91 Lafayette Boulevard.

## POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
Bowling Green, Kentucky

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

### Tenth Month—Third Weekly Meeting

### Epilepsy

Etiology: Heredity, organic and functional disorders in antecedents. Age, sex, preceding diseases, associated neuroses. Toxic agents, infections, syphilis, traumatism, reflex causes, mental strain.

Pathology: Varying changes found in different regions of brain, in neuralgia, in blood-vessels, in meninges.

Symptom: Prodromes, character, time of onset. Auræ, motor, sensory, psychic, visceral, cerebral, etc. A. Complete convulsion, (a) tonic period, (b) clonic period, (c) period of stertor. Modification of each period. Status epilepticus. B. Incomplete attacks. Petit mal, vertiginous attacks, disturbance of consciousness, epilepsia procursiva, etc. C. Psychic equivalents of epileptic attack, automatism, etc. Post-paroxysmal conditions, tremors, paresis, loss of strength, diminished knee-jerks, petechiæ, headache, changes in urine, mental deterioration, etc.

Diagnosis: Differentiate from hysteria, vertigos, toxic convulsions, organic brain lesions, transitory mania.

Treatment: Hygienic, dietetic. Physiological action of bromids, details of use in epilepsy. Use of other drugs. Patent medicines for "fits."

## Medicolegal

### Unlawful Practice of Medicine by a "D. S. T."

The Supreme Court of Indiana says, in Witty vs. State, 90 N. E. R. 627, that the party appealing, the defendant in the court below, who claimed to be a graduate of an institute of suggestive therapeutics, and in one of his advertisements appended the letters "D. S. T." to his name, was charged with practicing medicine without a license, in violation of the statute. The evidence established that he held himself out and advertised to the public by a sign in his office, and by publication in a local newspaper, that he was a "doctor," and capable and competent to successfully treat all forms of chronic diseases. He notified all persons, through the public press, that he was not only a "doctor," but that as such he was a specialist in the treatment of chronic diseases. He further advised them that he was capable of curing the many diseases mentioned in his advertisement without medicine or surgery, and that there were but few of the many diseases which did not yield to his drugless treatment.

The mere fact alone that in his practice he did not use drugs in any form whatever as a medicine to cure or heal the many diseases which he professed to successfully treat did not place him, in the eyes of the statute, within its meaning in the position of one not engaged in the practice of medicine. The term "doctor," as defined by the lexicographers, signifies or means, in one respect, a person who practices medicine. Consequently, when the defendant held himself out to the public, and advised them that he was a "doctor" located in the city; that he had certain office hours—he gave all persons to understand and be informed that he was at least engaged in the practice of healing or curing suffering humanity of diseases by some method or means adapted to that purpose, notwithstanding the fact he disclaimed the use of medicine of the character of drugs in his treatment of the diseases mentioned. He did not profess in his advertisement to be but a mere masseur engaged in giving massage treatment to all persons who might desire such, or who had been advised by their physician to take such treatment. He undertook to show by his advertisement that he was learned in his profession, and competent to diagnose diseases and prescribe the treatment necessary for a cure.

His counsel insisted that while it was true that he was shown to have had an office, that he advertised and held himself out as a doctor, "and was ready to and did administer to the wants of the sick, he did so exclusively by mental suggestion and by manual rubbing, and did not pretend to practice medicine in any shape or form." But the mere fact that he did not administer to his patients drugs in any form or manner, but confined his treatment to rubbing their afflicted parts, could not be held to exempt him from the provisions of the statute. If he, under the facts in this case, could be held as not coming within the provisions of the statute, then any person unlicensed to practice medicine might hold himself out to the public as a doctor, and treat all classes of diseases without administration of drugs, and not offend against the statute. Such a construction of the law would be inconsistent with its letter and spirit. The very object or purpose of the statute is to protect the sick and suffering and the public at large against the ignorant and unlearned by prohibiting them from holding themselves out to the world as doctors or physicians without having acquired any knowledge whatever of the human system, or the diseases and ailments with which it may be afflicted.

The defendant under the facts was properly convicted, and the judgment of conviction is therefore affirmed.

### Operations from the Viewpoint of a Personal Injury Case

The Supreme Court of Iowa says, in White vs. Chicago & Northwestern Railway Co., 124 N. W. R. 309, that, of course, no one can be said to owe the duty of submitting to an operation, especially where the administration of an anesthetic is necessary in order that it be performed. No right is held more sacred, or is more carefully guarded by the common law, than is the right of every individual to the possession and control of his own person, free from all restraint or interference from others, unless by clear and unquestionable authority of law. As is well said by Judge Cooley: "The right to one's person may be said to be a right of complete immunity; to be let alone."

Whether an injured person shall submit to a further mutilation of his person is essentially a matter of personal choice. This is necessarily so, for experience has demonstrated that every operation is performed with some risk. But when pain may be obviated, and the condition of the injured member improved, by an operation without injury and at small expense and slight inconvenience, the person injured ought not to be recompensed on the theory that he will not avail himself of the benefits of modern surgery. Nor, on the other hand, is compensation to be limited to the reasonable cost of surgery as though the injured person were a chattel being put in state of repair. The feasibility of an operation calculated to obviate pain and improve conditions is to be considered by the jury, not owing to any duty of the injured party to submit his person to the surgeon's knife, but as bearing on the nature and extent of the injury and the probable consequences when accorded such treatment as ordinary prudence shall dictate.

It was requested that the jury be instructed in this case that if they found from the evidence that the injured man's fingers, at the place of amputation, still caused him pain, and that such pain could be obviated by a new amputation, at small expense, and without serious danger to him, then it would be his duty to have such new amputation, and he would in no event be entitled to recover for any pain or suffering that such new amputation would prevent. The instruction was refused, and it was not without fault, but the attention of the jury might well have been directed to the feasibility and probable effect of the operation as bearing on the amount of damages to be allowed.

## Current Medical Literature

Titles marked with an asterisk (*) are abstracted below.

### Medical Record, New York

*May 14*

1 *Newer Conceptions of Myocardial Disease. T. E. Satterthwaite, New York.
2 The Crux of the Tuberculosis Problem. L. E. Flick, Philadelphia.
3 Phthisiophobia. J. H. Lowman, Cleveland, O.
4 Amebic Dysentery in New York. H. S. Patterson, New York.
5 Fatal Uncinariasis Infection. B. Lee and H. Brooks, New York.
6 What the Fight Against Tuberculosis has Accomplished. S. J. Maher, New Haven, Conn.

1. **Newer Conceptions of Myocardial Disease.**—To the classification of myocardial disease presented several years ago, Satterthwaite adds another form—atrophy of the heart, which is, however, very rare. His classification is as follows: (1) Acute parenchymatous myocarditis; (2) acute diffuse myocarditis, including the tuberculous, syphilitic and suppurative forms; (3) chronic myocarditis; (4) the fat heart; (5) the fatty heart; (6) hypertrophies, and (7) atrophies. Neither dilatation nor spasm is included in the table. Satterthwaite says that they are incidents which occur at times in any of the varieties mentioned, and cannot, therefore, be considered separately. He discusses the pathology and diagnosis of the various forms and their treatment.

### Boston Medical and Surgical Journal

*May 12*

7 *Circulatory Failure in the Acute Infections of Children: Causes and Treatment. J. Howland, New York.
8 The Interpretation of Certain Cerebral Symptoms with Reference to v. Monakow's Theory of Diaschisis. E. W. Taylor, Boston.
9 Late Results Obtained by the Submucous Resection of the Nasal Septum. O. A. Lothrop, Boston.
10 *The Diagnostic Value of the Search for the *Spirochæta Pallida* in the Umbilical Cord of the New-Born Infant. A. B. Emmons, Baltimore.
11 Proctoclysis. P. W. Harrison, Boston.

7. **Circulatory Failure in Acute Infections of Children.**—Critical clinical observation and animal experimentation, says Howland, are in accord in referring the cause of circulatory disturbance in acute infections to a failure and final collapse of the vasomotor center. There is also almost complete agreement obtained by animal experiments and by modern methods of determining the human circulatory capacity as to the drugs and methods most useful in this circulatory disturbance. He says that from the knowledge at present available it seems that the continuous use of cold air, the use of caffein and camphor reinforced by digitalis, with infusions of salt solution and the careful administration, not too often repeated, of adrenalin, are our best methods to combat this dangerous condition.

10. **Spirochæta Pallida in Umbilical Cord of the New-Born Infant.**—Emmons studied the cords in 30 cases suggestive of syphilis. When the child was born alive, the portion of the cord immediately adjoining the ligature was studied, and in stillbirth cases the portion between the ligature and the abdomen. Whenever possible, autopsy was done, and in each case the routine microscopic examination of the placenta gave a clue as to the probable diagnosis. The tissue was imbedded in paraffin and the sections stained by the method of Levaditi. Whenever the livers from the corresponding children were obtainable, they were imbedded at the same time, so that sections could be compared with those of the cord. When positive results were obtained, the liver sections showed the abundant presence of a well-stained spirochete, and in such cases numerous sections of cord were studied and a negative report registered only after a most prolonged and careful search.

From this study, Emmons draws the following conclusions:

1. *Spirochæta pallida* is rarely found in the cords of the syphilitic new-born infants. When positive results are obtained, they are present in considerable abundance in the muscularis of the umbilical vein in sections taken from the neighborhood of the umbilicus.

2. A large proportion of syphilitic new-born infants, as shown by microscopic examination of the placenta, as well as by characteristic autopsy findings with spirochetes demonstrable in the liver, show that spirochetes could not be found in the cord even after extensive search. Accordingly a negative diagnosis cannot be made by this procedure alone.

3. Occasionally the search for spirochetes in the cord may be of positive value as a clinical test. But the much greater frequency of negative findings hardly justifies its adoption as a routine procedure.

### New York Medical Journal

*May 14*

12 Provision for Drunkards and Inebriates in New York. F. Peterson, New York.
13 The Contractile Elements in the Connective Tissue. J. Wright, New York.
14 The Nursing Problem. T. Potter, Indianapolis.
15 The Diet in Pulmonary Tuberculosis. C. Rayevsky, Liberty, N. Y.
16 Problems in the Non-Institutional Treatment of Pulmonary Tuberculosis. T. Howard, Brooklyn.
17 Molluscum Contagiosum: Ten Family Epidemics and Forty-one Cases in Children. F. C. Knowles, Philadelphia.
18 The Caloric Method of Infant Feeding. S. A. Blanner, New York.
19 Acute Anterior Poliomyelitis. J. W. Cokenower, Des Moines, Iowa.
20 Serodiagnosis of Syphilis (continued). V. C. Pedersen, New York.

### Lancet Clinic, Cincinnati

*April 30*

21 Intracranial Neoplasms: Diagnosis and Indications for Treatment. T. A. Williams, Washington, D. C.
22 Tuberculosis and its Prevalence in Cincinnati. B. F. Lyle, Cincinnati.
23 Operative Treatment of Tuberculous Joints. H. J. Whitacre, Cincinnati.
24 Medical College Management. J. K. Sendder, Cincinnati.

### American Journal of Medical Sciences, Philadelphia

*May*

25 Vaccine Therapy in Colon-Bacillus Infection of the Urinary Tract. F. Billings, Chicago.
26 *Paroxysmal Arteriospasm with Hypertension in the Gastric Crises of Tabes. L. F. Barker, Baltimore.
27 *Five Hundred and Fifty Cases of Typhoid in Children. S. S. Adams, Washington, D. C.
28 Arterial Hypertension. A. R. Elliott, Chicago.
29 Use and Abuse of Gastroenterostomy. J. B. Deaver, Philadelphia.
30 Have we Made any Progress in the Treatment of Gonorrhea? L. B. Bangs, New York.
31 *Helminthiasis in Children. O. M. Schloss, New York.
32 An Epidemic of Noma. H. Neuhoff, New York.
33 The Antitryptic Activity of Human Blood Serum: Its Significance and its Diagnostic Value. R. Weil, New York.
34 *The Wasserman and Nognchi Complement-Fixation Tests in Leprosy. H. F. Fox, New York.
35 *The Effect of Tuberculosis on Intrathoracic Relations. A. P. Francine, Philadelphia.

26. **Gastric Crises of Tabes.**—A woman, aged 49, complained of severe pains in the back and stomach, and also of headache. Except for vague "rheumatic" pains for some 10 years she suffered from no disease until the present trouble began. About eight years ago she began to have attacks of pain in the back, indigestion and pains in the joints, especially in the shoulders and knees. The pain in the small of the back was tolerably severe, and was sometimes associated with nausea. She has suffered much from headache, frontal and occipital, and she thinks that her eyesight has failed during the last few years. The individual attacks begin with a feeling of a lump in the throat which cannot be swallowed (globus?). Vomiting soon comes on, so that nothing can be retained in the stomach, and she has extreme pain in the back and abdomen and complains of sensitiveness of the skin of the trunk. The pain is so severe that she usually weeps violently and tosses about in bed, grinding her teeth. She has never lost consciousness in an attack, nor has there been any disturbance of the sphincters. Her mind seems clear during the attacks. Since about a year ago there have been nearly two attacks a week, each lasting from a few hours to three days. She has noticed palpitation of the heart during some of the attacks. In the crises from which this woman suffered the pain was situated in the upper abdomen and radiated into the back. The pain was accompanied by paroxysmal arteriospasm, with great elevation of the maximal arterial pressure. That the hypertension depended on the arteriospasm was evident from the effect of amyl nitrite, which reduced the maximal pressure promptly to 90 mm. Hg., though as soon as the effects of the nitrite had worn off the hypertension reappeared.

27. **Typhoid in Children.**—There were 65 deaths, a mortality rate of 11.8 per cent. in this series reported by Adams. Taking the periods separately, we see the greatest reduction in the last decade and a half, which he thinks is unquestionably due to the methods of treatment employed. From 1892, the beginning of the third decade, to 1898, inclusive, the treatment followed was hydrotherapy, antiseptic and antiperiodic. During this time 88 patients were treated; 10 died, a mortality of 11.36 per cent. At the beginning of 1899 the purely hydrotherapeutic treatment was begun and has been strictly followed throughout the remainder of the decade, with the result that of the 164 patients then treated, 18 died, a death rate of 10.97 per cent. Four patients of the last series died of pulmonary tuberculosis either during or directly following a typical course of typhoid. Excluding them from the mortality list, the death rate will be 8.54 per cent.

Some slight changes in treatment have been instituted during the last half decade. The diet was augmented in nutritive value by the addition of cereals, eggs and bread to the prescribed routine of milk and broths. The patient's ability to digest such "soft food" was carefully watched and only two or three instances were recorded in which the semisolid food had to be discontinued. By adopting this method, Adams says that most of the heart-rending scenes of the sick-room will be avoided. The otherwise patient child no longer begs and cries for "something to eat;" there is no longer progressive emaciation until the little skeleton is covered by loose skin hanging in folds; relapses become less frequent; convalescence is shortened, and complete recovery replaces prolonged invalidism.

31. **Helminthiasis in Children.**—Twelve of 30 children who suffered from unexplained nervous or gastrointestinal symptoms were found by Schloss to harbor intestinal worms. Consecutive examinations of 280 children showed that 80 (28.57 per cent.) harbored intestinal worms; 5 of the children harbored 2 species of parasite, giving a total of 85 infections. Thirty-one (11.07 per cent.) of the children harbored *Trichuris trichiura*, 23 (8.21 per cent. harbored *Oxyuris vermicularis*. 20 (7.14 per cent.) harbored *Hymcnolepis nana*, 6 (2.14 per cent.) were infected with *Ascaris lumbricoides*, and 5 (1.78 per cent.) with *Tænia saginata*. Only 1 of 33 children infected with *Trichuris trichiura* (from both groups of examinations) suffered from symptoms. Thirty-five of the 51 children infected with the other parasites (from the consecutive examinations) suffered from symptoms. The eosinophil blood cells were not increased in cases infected with *Trichuris trichiura*.

34. **Wassermann and Noguchi Fixation Tests.**—It is claimed by Fox that a positive Wassermann reaction is frequently

obtained in cases of leprosy giving no history or symptoms whatever of syphilis. The reaction is at times very strong, inhibition of hemolysis being complete. It occurs chiefly in the tuberculous and mixed forms of the disease, especially in advanced and active cases. In the cases of the maculoanesthetic and purely trophic type the reaction is generally negative.

35. **Effect of Tuberculosis on Intrathoracic Relations.**—Francine's report deals with the changes brought about in intrathoracic relations as shown by skiagrams of 60 patients with pulmonary tuberculosis, studied clinically before and after the taking of the skiagrams. Frequently in advanced pulmonary tuberculosis the aorta is displaced as well as the heart and in the same direction, usually to the right. In the present series, many of which were advanced or far advanced cases, the heart in the majority of instances was not displaced. Absence of displacement is much more common, in fact, almost the rule, in acute infiltrations and consolidations, before fibrosis and contraction have taken place. In many instances, even when the lesions were widespread and often destructive, the heart was not displaced. When the pulmonary lesions are of fairly symmetrical character on both sides, the heart is more commonly displaced to the right than to the left. In these cases there is usually evidence to show that the primary and older lesion is on the right. When the lesion is more extensive on the left the heart is not so regularly displaced nor to the same extent, as in corresponding right-sided lesions. Rarely the fibrosis of the lungs and pleura may be so great or of sufficient density to obliterate the boundaries of the heart. In many cases the skiagrams show an interesting feature which is not demonstrable clinically, namely, that during systole of the heart there is an area between the lower boundary of the heart and the diaphragm of about the extent of one centimeter, which distinctly transmits the *x*-rays. The limits or extent of the cardiac excursion may also be seen in many cases. In four cases, distinct pericardial adhesions could be seen.

The heart appeared normal in size, both in the skiagrams and to physical examination in all the cases, with four exceptions. In three of these the enlargement was practically confined to the right side, and the lungs were markedly emphysematous. In one case there was a general hypertrophy. There was no evidence of an organic valvular lesion in the series, though in some cases soft systolic murmurs were audible in the mitral and pulmonary areas. The skiagrams were taken under full nspiration. In 29 cases (48.33 per cent.) the diaphragm was unaffected by the pulmonary lesion. The diaphragm was affected in this series in 51.66 per cent. of the cases. In every case in which the heart was displaced the diaphragm was elevated on the side toward the displacement, and in the cases n which the heart assumed the anteroposterior position the diaphragm was elevated on both sides. The diaphragm was affected in 9 cases in which the position of the heart was normal.

In every case in this series the cervical glands were enlarged o palpation. In 51.66 per cent. of the cases enlarged glands ould be seen in the plates. With the exception of about 6 cases all those in which enlarged glands were visible, were either early or moderately advanced, without the breaking down of tissue; while in the majority of the advanced cases the glands did not show. It would appear as if there were wo explanations for the absence of glands in the majority of plates in which they were not visible, namely, that their presnce was concealed by the area of involvement, or what appears more likely that with the advance of the disease the glands had softened or broken down and so failed to give rise o a shadow. There were usually only 3 or 4 glands noted in any one plate, and in a number of instances they appeared to be calcified.

The presence of calcareous infiltration in the costal cartilages was noted in only 8 cases. It was usually confined to the ostal cartilage of the first rib, though in one instance it nvolved all the cartilages. In the majority of advanced cases the involvement was of sufficient density and extent to have oncealed the presence of calcification in the cartilages of the first rib, but there was no evidence of calcification in the costal cartilages which could be properly studied.

### Medical Herald, St. Joseph

*April*

36 The Physical Basis of Mental Disease. F. P. Norbury, Hospital, Ill.
37 Cataract. F. B. Tiffany, Kansas City, Mo.
38 Scarlatiniform Erythema. W. Frick, Kansas City.
39 Tumors of the Female Breast. F. H. Clark, El Reno, Okla.
40 Conservation of the Mucous Membrane in Intranasal Surgery. T. C. Todd, Oklahoma City, Okla.

### Maryland Medical Journal, Baltimore

*May*

41 *An Unusual Surgical Case under Local Anesthesia. G. Steele, Cambridge, Md.
42 The Advancement of Medical Education. G. M. Linthicum, Baltimore.
43 Historical Sketch of Dr. Elisha Perkins, Inventor of the Metallic Tractor. J. T. Smith, Baltimore.
44 The Newer Methods of Treating Fractures. A. McGlannan.
45 Hahnemann. H. M. Cohen, Baltimore.

41. **Unusual Surgical Case Under Local Anesthesia.**—Steele records a case of irreducible, congenital, left inguinal hernia in a child 20 months old, with undescended testicle and appendix in the hernial sac, complicated with double bronchopneumonia. Operation for radical cure of hernia, and removal of appendix was done through left inguinal ring under local anesthesia, with recovery of the patient.

### Archives of Pediatrics, New York

*April*

46 Pneumothorax: A Clinical and Radiographic Study. F. Hueber and I. S. Hirsch, New York.
47 Meningitis and Conditions Simulating Meningitis. F. S. Meara, New York.
48 Influenza Meningitis. L. C. Ager and O. T. Avery, Brooklyn.
49 Pulmonary Abscess Following Septic Deglutition Pneumonia. S. Seilikovitch, Philadelphia.
50 Cerebrospinal Syphilis. K. Schlivek, New York.

### American Medicine, New York

*April*

51 *History and Occurrence of Pneumonia: Brief Statistical Data. H. E. Lewis, New York.
52 Differential Diagnosis of Lobar Pneumonia. H. Stern, New York.
53 Symptomatology, Complications and Prognosis of Pneumonia in Children. H. Heiman, New York.
54 *Pneumonia in Children. LeG. Kerr, Brooklyn.
55 Pneumonia as a Sanitary Problem. C. E. Woodruff, U. S. Army.
56 Treatment of Pneumonia. B. Robinson, New York.
57 Treatment of Pneumonia. G. F. Butler, Chicago.
58 *Use of Vaccines in Treatment of Pneumonia. F. E. Stewart, Philadelphia.
59 Diet in Pneumonia. W. H. Porter, New York.
60 Pneumonia as a Postoperative Complication. R. T. Norris, New York.
61 Pneumonia in the Aged. R. W. Wilcox, New York.
62 Meningitis Complicating Pneumonia. A. Hymanson, New York.

51. **History and Occurrence of Pneumonia.**—All available statistics, says Lewis, point to the fact that pneumonia is increasing. Especially does this seem to be so in certain localities, as, for instance, in Chicago. During the last 40 years the mortality from pneumonia has increased from 4.4 to 19.95 per 10,000 inhabitants. The last U. S. Census shows that pneumonia, next to tuberculosis is responsible for a larger number of deaths each year than any other disease. Of 12,098 cases, 8,881, or 73.41 per cent., occurred in males, and 3,217, or 26.59 per cent., in females. Among 10,159 cases, the disease terminated by crises in 5,397, or 53.1 per cent.; in 1,042 cases, 21.7 per cent., the crises occurred on the seventh day; in 625 cases from the tenth to the seventeenth day.

Among 2,613 cases death occurred as follows: Before the fourth day, 161 cases; fourth to twelfth day, 1,483; twelfth to eighteenth day, 403 cases. The greatest number of deaths occurred on the seventh day, 230.

54. **Pneumonia in Children.**—The one drug recommended by Kerr in bronchopneumonia is belladonna, but to be effective, he says, it must be given in doses large enough to cause flushing of the face; it may be continued for the first few days. Small doses are of no value and its protracted use is not indicated. There must be secured for the child (1) the best hygienic surroundings possible; (2) a diet reduced but of such quality as properly to support the system; (3) free administration of water; (4) regularity of the bowel function; (5) abundance of fresh cool air day and night; (6) strict cleanliness of the body, and particularly the nose and mouth; (7) as perfect physical and mental quietude as possible. The cautious use of the internal emetics is sometimes attended with benefit, and while an initial vomiting may prove beneficial in clearing away the bronchial mucus, this method must not be persisted

in. Counterirritation with mustard paste is valuable, and it is not wise to wait until pulmonary collapse is suspected, for used early it gives relief from the dyspnea and cough. Everything that weakens should be avoided; everything that strengthens encouraged. Stimulation is not alone wise, but absolutely necessary after the first few days. Delay until the necessity is present means much lost ground, for everyone of these patients needs stimulation practically throughout. Kerr's preference is for a combination of small doses of camphor and whisky; the camphor being given in sweet almond oil (¼ grain to 5 drops) and the whisky well diluted with water. Tonics should be given just as early as possible, for delay in this matter, as in the case of stimulants, may mean lost ground.

58. **Vaccines in Pneumonia.**—Stewart holds that the pathologic conditions resulting from an acute pneumococcic infection can be relieved, removed or modified, by injecting subcutaneously killed bacteria of the species causing the diseased condition.

### Annals of Ophthalmology, St. Louis

*April.*

63 Classification of Eye Diseases. A. Duane, New York.
64 Gonorrheal Iritis Successfully Treated by Gonococcus Vaccines. E. A. Shumway, Philadelphia.
65 Successful Extraction of Senile Cataract from the Eyes of Lepers. T. J. Dimitry, New Orleans.
66 Vitiligo Iridis—Report of Two Cases. A. C. Sautter, Philadelphia.
67 Complete Albinism: Changes in the Diameters of the Lens as Seen Through the Iris. G. F. Libby, Denver.
68 Retinal Phlebitis Following Influenza. E. S. Thomson, New York.
69 Perfect Optical Work. W. M. Richards, New York.
70 Treatment of the Lacrimal Sac. W. McE. Brown, Neustadt, Ontario, Canada.

### Monthly Cyclopedia and Medical Bulletin, Philadelphia

*April*

71 Modern Views on Irregular Heart Beat. H. Sewall, Denver.
72 *Substernal Respiratory Squeal: A Hitherto Undescribed Adventitious Chest Sound Heard over the Region of the Heart. R. G. Curtin, Philadelphia.
73 The Pension Claimant and Visual Impairment. S. D. Risley, Philadelphia.
74 Diet and Climate. W. M. Gibson, Utica.
75 The Significance of Sense Deception as a Symptom of Insanity. W. W. Hawke, Philadelphia.

72. **Substernal Respiratory Squeal.**—The sound described by Curtin was discovered accidentally. It is the *"bruit du diable,"* or venous hum of the veins of the neck in extreme anemia, which hum it seems to resemble more than any other sound. It resembles to some extent the hissing squeal or singing of a boiling tea-kettle. It is more like a shrill musical whistling than a humming sound. It is remittent when strong, is loudest on inspiration, and becomes faint or is lost on expiration.

The continuousness of this sound, says Curtin, shows that it is not produced at the aortic, pulmonary or tricuspid orifice; otherwise it would cease when the blood current is stopped by the shutting of the valves at these orifices. The only places in the heart at which there could be a continuous sound, such as the one described, would be in the blood flowing into the right or left auricle, and these two places in the heart are the only ones where the respiration has a perceptible modifying influence on the flow of blood; but, again, the shutting of the mitral and tricuspid valves has a modifying influence on the current, which would be perceptible in an abnormal sound connected with it.

The point of greatest intensity of the sound is a little to the left of the median line of the sternum at or just below the second cartilage. Curtin therefore locates the sound at or near the upper part of the left auricle where the pulmonary veins empty into it. The sound is louder, stronger and coarser (indicating a larger vessel and a more active flow of the blood) than the sound heard at the base of the neck, when the jugular is pressed with the stethoscope; but it is of the same general character. Its location under the sternum places it beyond the reach of any pressure. It is not influenced by the action of the heart; that is, one cannot find any change in the sound with the systole or diastole. During inspiration there is a marked change. Just at the commencement of inspiration the sound becomes gradually louder and more pronounced until the beginning of expiration, when it begins to diminish. In some cases it was not audible after the commencement of the act of expiration.

### Annals of Otology, Rhinology and Laryngology, St. Louis

*March*

76 Nasal Tuberculosis Involving the Right Ethmoid Bone, with Recovery After Operation. O. T. Freer, Chicago.
77 Extension and Flexion in Direct Laryngoscopy. R. H. Johnston, Baltimore.
78 Hemophilia with Remarks on Hemorrhagic Diathesis. T. Hubbard, Toledo.
79 Casts of the Infantile Pharynx: Special Reference to the Eustachian Tube. W. C. Braislin, Brooklyn.
80 The Larynx of Mycetes Seniculus (Howling Monkey). J. Holinger, Chicago.
81 Zoology of Mycetes Seniculus. F. C. Baker, Chicago.
82 The Various Inflammations of the Ethmoid Bone as Advanced by Uffenorde in His Work *"Die Erkrankungen des Siebbeines."* R. H. Skillern, Philadelphia.
83 Eustachian Obstruction. W. C. Braislin, Brooklyn.
84 Partial Bibliography of Recent Papers Relating to the Eustachian Tube. W. C. Braislin, Brooklyn.
85 Why the Failures After Radical Mastoid? J. F. Barnhill, Indianapolis.
86 Intranasal Measurements Which Indicate that Palatal Expansion Increases the Width of the Nasal Fossæ. E. E. Foster, New Bedford.
87 Sinus Thrombosis of Otitic Origin and Its Relation to Streptococcemia. E. Gruening, New York.
88 Recurrent Mastoiditis with Involvement of the Labyrinth. H. B. Blackwell, New York.
89 Sinus Thrombosis, Cellulitis of the Foot and Acute Inflammation of the Thyroid Cartilage. T. L. Saunders, New York.
90 The After-Treatment of Accessory Nasal Cavities Operated On. H. Horn, San Francisco.
91 Latest Advances in the Study of Tinnitus Aurium. D. B. Delavan, New York.

### Interstate Medical Journal, St. Louis

*May*

92 Prognosis in Operations for Appendicitis. M. Savariaud, Paris, France.
93 Cardinal Principles for Successful Feeding of Infants. T. M. Rotch, Boston.
94 *Direct Transfusion of Blood—Its Indications. L. H. Hempelmann, St. Louis.
95 Therapeutic Value of the Carlsbad Cure, Especially in Diseases of the Digestive Tract. L. V. Aldor, Berlin, Germany.
96 A Probable Cause for Extrauterine Pregnancy. F. A. Glasgow, St. Louis.
97 *Standardization of Disinfectants. R. B. H. Gradwohl, St. Louis.
98 Dysmenorrhea of Uterine Origin. S. J. McMamara, Brooklyn.

94. **Transfusion of Blood.**—Direct transfusion, according to Hempelmann, is indicated in postoperative hemorrhage, hemorrhage of typhoid, gastric ulcer, purpura, hemophilia, hemorrhagic disease of the new-born infant, illuminating gas poisoning, and possibly in pernicious anemia. It has been found useless in cancer, Hodgkins' disease, uremia, leukemia and in infectious diseases.

97. **Standardization of Disinfectants.**—Gradwohl endorses the Rideal-Walker method of standardizing disinfectants which is now used and insisted on in Great Britain and throughout Europe as an official standard, bearing the endorsement of the Admiralty, War Office and Local Government Boards of Great Britain. He urges that local, state and government boards in the United States should adopt it and require all manufacturers of disinfectant solutions to label their products clearly to show the carbolic-acid coefficient. If manufacturers are honest in their claims, they should be willing and eager to have official bacteriologic checking of their products with the Rideal-Walker technic. Physicians and laymen should likewise insist on manufacturers showing the carbolic-acid coefficient of their respective products when they desire patronage. In this way the honest manufacturer may make his dishonest competitor come out into the light and be exposed. Only those who are making false claims will oppose this procedure. It is fair to the maker, to the consumer and to the bacteriologists.

### Quarterly Bulletin of Northwestern University, Chicago

*March*

99 Pain in the Ear and Its Diagnostic Significance. J. G. Wilson, Chicago.
100 Gram Stains of Feces in Pellagra. W. H. Duhlig, Chicago.
101 Leucocytosis of the Lymphocyte Type. W. H. Buhlig, Chicago.
102 Puerperal Infection. T. J. Watkins, Chicago.
103 "Laparotomies" of the Knee-Joint. E. W. Andrews, Chicago.
104 Operative Removal of Cervical Ribs. S. C. Plummer, Chicago.
105 Cervical Ribs: Six Cases from the Clinic of Dr. W. E. Morgan. C. F. Sawyer, Chicago.
106 Retroflexion and Retroversion of the Gravid Incarcerated Uterus. H. M. Stowe, Chicago.
107 Gastric Carcinoma with Metastases in the Cervical Glands Simulating Clinically Glandular Tuberculosis. W. H. Buhlig and W. L. McClure, Chicago.

### American Journal of Surgery, New York

*May*

108 *An Improved Method of Preparing Catgut Ligatures. E. McDonald, New York.
109 Methods of Posterior Urethroscopy: Description of a New Cystourethroscope. L. Buerger, New York.
110 Coming Rural Surgery. E. A. Ayers, Branchville, N. J.

111 Scotland's Contribution to Medical and Surgical Development. R. G. Eccles, Brooklyn.
112 Chronic Catarrhal Inflammation of the Middle Ear. L. A. McClelland, Brooklyn.
113 Extirpation of the Rectum for Adenocarcinoma by the Kocher Method. E. Stachlin, Newark, N. J.
114 Lymphangioma: A Case of Macroglossia and One of Macrochellia. A. A. Kerr, Salt Lake City.

108. **Improved Method of Preparing Catgut Ligatures.**—McDonald has adopted the following method of preparing catgut: (1) Iodin 4 per cent. in acetone, 8 days; (2) wash in acetone, 4 days; (3) preserving solution, acetone, 85 per cent.; Columbian spirits, 10 per cent.; glycerin, 5 per cent. The glycerin should first be dissolved in the alcohol and then added to the acetone, as acetone itself is not a solvent of glycerin. This method is said to possess the following advantages: The solutions are fat solvents and antiseptics; the iodin is used in greater strength than in Claudius' method and it impregnates the gut so that the ligatures are black and well saturated with iodin when they are placed in the clear acetone solution. The pure acetone abstracts the excess of iodin from the gut, leaving the gut clear and white. The preserving solution of acetone, alcohol and glycerin completes the bleaching, and at the same time softens the gut, which is not much softened by the pure acetone. The latter, however, does not harden the gut, but abstracts the water from it and leaves it of the same flexibility as gut that has been preserved in chloroform, as in the well-known commercial process. The addition of the glycerin and alcohol to the acetone in the preserving solution is sufficient in amount to soften the catgut; at the same time the dehydrating power of the acetone prevents the gut from swelling up, as it does when it is placed in alcohol solution. Acetone itself, he states, is also a very strong antiseptic.

### Bulletin American Academy of Medicine, Easton, Pa.

*April*

115 Report of the Delegate to the Conference of the Council of Medical Education of the American Medical Association. H. B. Hemenway, Evanston, Ill.
116 Report of the Delegate to the Annual Meeting of the Association of American Medical Colleges. C. McIntire, Easton, Pa.
117 Influence of Diet on Infant Mortality. J. P. C. Griffith, Philadelphia.
118 Relation of Syphilis to Infant Mortality. R. A. Urquhart, Baltimore.
119 Curative Powers in Human Milk. J. M. Taylor, Philadelphia.
120 Excessive Child-Bearing as a Factor in Infant Mortality. A. Hamilton, Chicago.
121 Infant Morbidity and Mortality with Special Reference to French Methods. C. R. Henderson, Chicago.

### New York State Journal of Medicine, New York

*April*

122 *Elements of Prognosis in Chronic Valvular Diseases of the Heart. R. Abrahams, New York.
123 *Dilatation of the Heart. W. T. Mulligan, Rochester.
124 Significance and Value of the Cammidge Test in Pancreatic Diseases. S. R. Blatteis, New York.
125 Need of Special Schools for Crippled Children. P. Le Breton, Buffalo.
126 Pathology and Treatment of Skin Tumors. F. R. Ford, Utica.
127 Clinical Significance of Subfebrile Temperature in Pulmonary Tuberculosis. A. T. Laird, Albany.
128 Diagnostic Value of Eosinophilia. I. S. Wile, New York.
129 Significance of Amblyopia. G. M. Gould, Ithaca.

122, 123. Abstracted in The Journal, Feb. 19, 1910, p. 643.

### Journal of Medical Research, Boston

*April*

130 Hypersusceptibility of Anaphylaxis. E. R. Baldwin, Saranac Lake, N. Y.
131 Passive or Transferred Anaphylaxis. A. K. Krause, Saranac Lake, N. Y.
132 The Acquired General Sensitiveness of Normal Guinea-Pigs to Tubercle Protein as a Result of Preliminary Intradermic Injections. A. K. Krause, Saranac Lake, N. Y.
133 *Effect of the Administration of Preparations of Tuberculous Lymph Glands on Experimental Tuberculosis. E. L. Trudeau and A. K. Krause, Saranac Lake, N. Y.
134 Differences in Precipitins Produced by Tubercle Bacilli. E. R. Baldwin, Saranac Lake, N. Y.
135 The Question of Cattle Immunization and the Transformation of the Human Bovine Type of Tubercle Bacillus. E. R. Baldwin, Saranac Lake, N. Y.
136 Use of Antiformin for Detection of Tubercle Bacilli in Sputum, etc. R. C. Paterson, Quebec, Canada.
137 Pathologic Cytology of Surgical Shock. D. H. Dolley, Chapel Hill, N. C.
138 Cytology and Life History of Trypanosomes. E. N. Tobey, Boston.
139 Further Transfusion Experiments. S. P. Beebe, New York.

133. **Action of Preparations of Tuberculous Lymph Glands on Experimental Tuberculosis.**—The experiments conducted by Trudeau and Krause fall into four series; two with homologous gland extracts, and two with extracts of human lymph glands. They found that guinea-pigs treated with material from homologous tuberculous glands are not immunized against the development or spread of experimental tuberculous injection. The gland material in this series probably contained tubercle bacilli. Guinea-pigs treated with filtered extract of homologous tuberculous glands do not resist experimental tuberculosis. This extract was used in a comparatively fresh condition. The experiment was not regarded as a fair test because of the high dilution of the extract and the small number of doses that the animals receive. Guinea-pigs treated with filtered extract of tuberculous human glands showed an apparent resistance to the spread of tuberculous infection. This resistance was probably only apparent. The extract was from glands in various stages of the disease—hyperplastic and necrotic. Treatment was fairly thorough, and the use of the extract was begun immediately after preparation and continued for 6 weeks. Guinea-pigs treated more thoroughly with filtered extract of tuberculous human glands acquired no immunity against infection from tuberculosis or its development. The extract was from glands that showed various grades of disease, from early to advanced. It was concentrated and its use was begun three months after its preparation.

### Old Dominion Journal Medicine and Surgery, Richmond

*April*

140 Hypernephromata. L. B. Wilson, Rochester, Minn.
141 What May Be Learned of Cardiac Disease from Multiple Tracings. W. N. Berkeley, New York City.
142 Acid Intoxications and Their Therapeutic Indication. D. Vanderhoof, Richmond.
143 Nephritis Regarded as a Disorder of Metabolism. E. B. Claybrook, Cumberland.
144 Diphtheria. C. S. Webb, Bowling Green, Va.

### Bulletin Medical Chirurgical Faculty of Maryland, Baltimore

*May*

145 *The Importance of a Thorough Teaching of Infectious Diseases in the Medical Curriculum. C. F. von Pirquet, Baltimore.

145. Abstracted in The Journal, May 21, 1910, p. 1719.

### Journal Indiana State Medical Association, Fort Wayne

*April*

146 Vaccination Prophylaxis in Typhoid. M. M. Eckelman, Elkhart.
147 Four of the More Common Diseases of the Eye and Their Management. C. M. Howard, Warsaw.
148 Degenerate Tonsils: Causative Factors in Producing Nose, Throat and Constitutional Affections. D. W. Layman, Indianapolis.
149 Sketches of the Medical History of Indiana. G. W. H. Kemper, Muncie.
150 Case of Lead Poisoning. E. M. Hoover, Elkhart.
151 Melena Neonatorum. G. B. Lake, Wolcottville.

### Albany Medical Annals

*May*

152 A Critical Analysis of a Series of 180 Cases of Acute Intraperitoneal Infections. E. MacD. Stanton, Schenectady, N. Y.
153 Rational Treatment of So-Called Inoperative Uterine Tumor. W. B. Chase, Brooklyn.
154 Definitions of "Contagious" and "Infectious." G. E. Gorham, Albany, N. Y.
155 *Hemolysis *in Vitro* and *in Vivo* as a Means of Diagnosis of Carcinoma. A. Krida, Schenectady, N. Y.

155. **Hemolysis in Diagnosis of Carcinoma.**—Of a total of 1,812 observations reported by 10 different workers, 472 cases were carcinoma, and of these 317, or 67 per cent., gave positive hemolytic reactions; 79 were benign tumors, of which 1 or 1.25 per cent. were positive; 507 observations were made in a variety of diseases, 74, or 15 per cent., of which presented positive reaction; 509 observations were made on normal individuals; 14, or 2.6 per cent., were positive. In 40 postoperative carcinoma cases without clinical recurrence, the reaction was uniformly negative. One hundred and eighty-eight tests were performed on tuberculous patients; of these, 82, or 44 per cent., presented Crile's "reverse" hemolysis. Krida has made 76 tests. In 12 cases of carcinoma, the reaction was positive in 9, or 75 per cent. In 4 cases of carcinoma without clinical recurrence the reaction was uniformly negative. In 23 cases of a variety of diseases, 1, or 4 per cent. (chronic ulcers), presented a positive reaction. Of 25 clinically well patients, 2, or 8 per cent., responded positively to the reaction. In a certain small number of cases not clinically carcinomatous, a positive

reaction was obtained. There were in all 5 such cases, in all of which Krida applied a second test 2 or 3 days after the first. The second test was positive in 3 of the cases; one of these was a case of chronic ulcers; 2 individuals were normal. In the remaining 2 patients, clinically well, the test proved negative. The hemolytic reaction occurs in so great a percentage of carcinoma cases and in so small a percentage of normal individuals and patients with other diseases, which conditions can usually be differentiated, as to make it of material diagnostic assistance in doubtful cases, especially in doubtful cases of carcinoma of the gastro-intestinal tract. Especially as it is so simple of application, Krida holds that it should be performed in all suspected carcinoma cases. The *"in vivo"* or "skin" reaction, because of its better scientific basis, and because it is technically less difficult and time-consuming, Krida regards as the clinical method of choice.

### Southern Medical Journal, Nashville

*April*

156 Philosophy, Therapeutic Value and Present Status of Mental Suggestion. J. D. Quackenbos, New York.
157 Treatment of Simple Fractures. D. Eve, Nashville.
158 The Great Black Plague. R. W. Weaver, Nashville, Tenn.
159 Examination of Infant Stools with Special Reference to So-Called Casein Masses. R. G. Owen, Iowa City.

### American Journal of Physiology, Boston

*May*

160 A Quantitative Study of Faradic Stimulation: IV. The Make and Break Key. E. G. Martin, Boston.
161 *Effects of Distilled Water and of Various Solutions on the Weight and Length of Striated Muscle. E. B. Meigs, Boston.
162 Modifications of the Method in Use for Determining the Quantity of Mono-Amino Acids Yielded by Proteins when Hydrolyzed with Acids. T. B. Osborne and D. B. Jones, New Haven, Conn.
163 Exchange of Air in the Eustachian or Guttural Pouches of the Horse. P. A. Fish, Ithaca, N. Y.

161. **Effects of Distilled Water and of Various Solutions on Muscles.**—Meigs' investigation shows that the sarcostyles of the striated muscles of frogs are so constructed that any increase in their volume brings about, as a necessary mechanical result, a decrease in their length. All forms of muscle rigor are due to the swelling produced by an accumulation of acid within the muscle. The removal of rigor with salt solution, and particularly by salt solutions which contain small quantities of sodium bicarbonate, is explained by the removal of the acid reaction of the muscle. The conclusion of McDougall seems to be correct, that the contraction of striated muscle is the result of the swelling of the sarcostyle, which in its turn is brought about by the examination within them of the minute quantities of lactic acid.

### Journal of Arkansas Medical Society, Little Rock

*April*

164 The Collection of Morbidity and Mortality Statistics in Relation to the Control of Tuberculosis. D. S. Warren, Washington, D. C.
165 Presentation of Tuberculosis Patients. A. E. Sweatland and D. C. Walt, Little Rock.
166 Prevention of Disease. E. G. Epler, Fort Smith.
167 Removal of a Grain of Corn from the Entrance of the Left Bronchus of a Child Four Years Old. R. H. T. Mann, Texarkana.

### Wisconsin Medical Journal, Milwaukee

*April*

168 Is There a Phthisical Conformation of Chest? W. H. Washburn, Milwaukee.
169 *Extrauterine Pregnancy at Full Term. Report of Cases. H. Greenberg, Milwaukee.
170 Present Status of the Ocular Tuberculin Reaction. S. G. Higgins, Milwaukee.
171 Chronic Auriculoventricular Heart Block in the Dog. J. Erlanger, Madison.
172 Extradural Hemorrhage. P. F. Rogers, Milwaukee.

169. These cases were reported in an original article by this author, published in The Journal, May 7, p. 1517.

### University of Pennsylvania Medical Bulletin, Philadelphia

*April*

173 Reversion of the Starch-Dextrin Reaction. E. T. Reichert, Philadelphia.
174 A Circulation Schema. E. Lodholz, Philadelphia.
175 The Medical Side of Benjamin Franklin. W. Pepper, Philadelphia.
176 Experiments to Determine the Toxicity of Chromic Acid in Dilute Aqueous Solutions when Injected Intramuscularly and Its Antidotal Value for Rattlesnake Venom. W. H. Welker, Philadelphia.

## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### British Medical Journal, London

*April 30*

1 *The Less Common Aspects of Pneumonia. T. Oliver.
2 *Points Concerning Pneumonia and Pneumococcus Infections in Childhood. T. R. C. Whipham.
3 *Hospital Infection of Tuberculosis. J. E. Squire.
4 Meningitis in Children. G. Rankin.
5 An Immunizing Subinfection in Scarlatina. A. D. Edwards.
6 *Results of Thyroid Treatment in Infantile Wasting. J. W. Simpson.

1. **Less Common Aspects of Pneumonia.**—Oliver has not seen any striking result follow the use of pneumococcus serum, nor can he recall a case of pneumonia having been saved by the inhalation of oxygen. Strychnin and digitalis have given him the best results. With pneumonia, he says, as with many other illnesses, it is not the disease solely that requires to be treated, but the patient with the disease.

2. **Pneumonia in Childhood.**—Whipham emphasizes the fact that while bronchopneumonia is the more frequent type in early life, the lobar variety is commoner than is often supposed. Thus among 150 of his own cases he found that 65. or 43.3 per cent., were of the lobar type. The chief clinical distinction between the two are these: (1) lobar pneumonia is almost always primary, while bronchopneumonia is very frequently secondary; (2) the onset of lobar pneumonia is sudden and the symptoms are well-marked, whereas bronchopneumonia begins insidiously as a rule; (3) the temperature in the lobar form tends to be more uniformly high and to end by crisis, whereas in the other the course of the fever is prolonged and irregular and rarely ends abruptly; (4) lobar pneumonia usually affects a localized area of one lung, at any rate to begin with, while bronchopneumonia is bilateral and more extensive; (5) bronchopneumonia tends to occur at a slightly earlier stage than lobar. Lobar pneumonia, according to Whipham's experience, is most frequent during the second. third and fourth years, 56.9 per cent. of his cases occurring during those years, whereas bronchopneumonia chiefly occurs during the first three years of life, as many as 70.6 per cent. of his cases being found in infants under 4 years of age. In lobar pneumonia one or other of the bases is most frequently attacked, most commonly the left, but in children it is not unusual for the apex of the lung to be affected. It is a remarkable fact that if one apex is involved—primarily and not as the result of the extension of the disease from the lower lobes—it is practically always the right apex which is attacked.

3. **Hospital Infection of Tuberculosis.**—It would appear from the experience of the Mount Vernon Staff, of which Squire is a member, that the risk of infection with tuberculosis in a special chest hospital is very small, and is apparently little, if at all, greater than in a general hospital. It is, perhaps, doubtful if there is any greater risk to the workers in any well-ordered hospital than among the general mass of town dwellers of similar social position. Infection with tuberculosis does occasionally occur as a result of the duties of a nurse, but probably not more frequently among the nurses in a hospital for consumptives than among the general body of nurses. Every occupation has its special risks, and the possibility of infection is one which members of the medical and nursing profession accept as a matter of course. The risk of tuberculous infection, even in a hospital for consumptives, appears to constitute a very slight danger.

6. **Thyroid Treatment in Infantile Wasting.**—Out of a total of 80 patients treated with thyroid by Simpson, 72 were infants under 9 months, and their history was usually one simply of wasting. In the 8 over this age the wasting had supervened after some acute disease. Out of the total (80), 12 died and 5 did not return to the hospital after treatment had been carried on for 2 or 3 weeks. In the 12 cases which ended fatally, 2 children were extremely ill. In both these children the weight was 4 pounds, and both showed evidence of failing

circulation, edema of legs, etc. One died 2 days, and the other 4 days, after being first seen. Two others suffered from marasmus due to congenital syphilis; of the other 8 who died 1 improved for some little time, but eventually died of tuberculous meningitis, 2 were from the country and were only seen a few times, while the remaining 5 did not react to treatment in the slightest degree. The remaining 63, however, all did well. No doubt a number of those infants would eventually have improved on dieting alone, but the fact remains that they failed to put on weight for the first 2 or 3 weeks on such treatment, and that on the addition of thyroid (the same dieting being continued) a number of them at once increased rapidly in weight, while some who remained stationary for a week or two showed beneficial results after that time. Five of Simpson's patients were syphilitic, and wasting was a marked symptom. Mercury was at first given without any effect on the weight, then alone with mercury, thyroid was administered. The result was that 3 out of the 5 infants began to gain and eventually recovered. The other 2 (already noted) did not react at all and death ensued. Of 8 children over 9 months old who were suffering from malnutrition, following an attack of an acute disease, 6 improved on thyroid treatment, 1 died of tuberculous meningitis, and 1 was lost sight of. Simpson has only mentioned 8 cases of older children, but in the last 6 months he has used thyroid frequently for such children suffering from debility after such acute diseases as pneumonia, measles, and whooping-cough. The results have been favorable, except in those cases which proved to be tuberculous; in such cases thyroid treatment would seem to be contraindicated. In the treatment of children under 9 months, Simpson begins with ⅓ grain thyroideum siccum once daily. In older children, he goes up to 1 grain once daily, according to the age of the child. In the giving of thyroid it is advisable, he says, to test the feces to see whether they are acid or alkaline. In 2 cases in which thyroid appeared to produce no good results, he found that the stools were very markedly acid. Sodium bicarbonate was then given 3 times a day, and shortly afterward both children began to improve.

### Lancet, London

*April 30*

7 Amputations at the Hip and Shoulder. C. B. Lockwood.
8 Further Work on the Pressor Bases of the Urine. W. Bain.
9 The Obstruction of the Ileum which Develops in Chronic Intestinal Stasis. A. Lane.
10 Sigmoiditis and Mesosigmoiditis. R. P. Rowlands.
11 Vicious Circles Associated with Disorders of the Nervous System. J. B. Hurry.
12 Origin, Scope and Authority of the British Pharmacopeia. H. W. Gadd.

### Journal of Tropical Medicine and Hygiene, London

*April 1*

13 A Microfilaria in the Blood of a Horse at Khartoum. A. Balfour.
14 The Pathogenesis of the Female Crescent Body. H. M. Neeb.
15 Malaria Treated with Calcium Permanganate. G. A. Stephens.
16 Trichiniasis in a Native of Sierra Leone. D. Burrows.

*April 15*

17 Bilharzia of Large Intestine. A. W. Jones.
18 The Daily Variation of Body Temperature in Health. M. D. O'Connell.

### British Journal of Children's Diseases, London

*March*

19 Investigation into the Occurrence of Adenoids in Three of the London County Council Elementary Schools (continued). M. Yearsley.
20 Bilateral Cervical Rib in a Child. S. Barling.
21 The Control of Zymotic Enteritis. J. Allan.

### Glasgow Medical Journal

*April*

22 *Carcinoma of the Stomach with Metastases in the Bone-Marrow, and a Blood Picture Suggestive of Pernicious Anemia. A. W. Harrington and J. H. Teacher.
23 Gonorrheal Arthritis Treated by Vaccine Therapy. W. R. Jack.
24 Cases Treated by Injections of Bacterial Vaccines. J. Miller.
25 *Case of Merycism. J. Lindsay.

22. **Gastric Carcinoma with Bone Metastases.**—In this case the emaciation of the patient and the melena, with a history of occasional dyspepsia, and on one or two occasions of vomiting of brownish material, were sufficient to arouse suspicion. Still the gastric symptoms were not clamant, and on examination of the abdomen nothing abnormal could be made out beyond some distention. No enlarged glands could be felt. The patient's general condition vetoed gastric analysis. The only complaint was of pains in the back and thighs. There was some tenderness in the sacral region and over the left thigh. Any movement of the body or lower limbs appeared to cause great pain. The appearance of the patient was that of a woman who had been losing blood and weight for some time, and her emaciation during her hospital residence was rapid. Carcinoma of the stomach seemed a probable diagnosis. The blood picture was foreign to that usually seen in the anemia of cancer of the stomach, and was suggestive of pernicious anemia. Postmortem showed the tumor of the stomach to be a carcinoma. The secondary growths in the kidney, bone marrow and lymphatic glands showed a tendency to atrophy of the epithelial element and development of fibrous stroma. The white tissue filling the ribs and cancellous heads of the long bones proved also to be tumor. Some parts of the tumor in the bones showed young cellular carcinomatous tissue, but the greater part was more or less degenerated, showing shrunken cells, and a large amount of fibrous stroma. Many large areas consisted of fibrous tissue only, but the nature of this was easily made out by tracing the stages in the transformation between it and the young tumors. Most of the red areas in the ribs were found to represent hemorrhage, but a few were red marrow. The head of the femur likewise contained much more tumor than red marrow; and the vertebral bodies showed a large proportion of marrow, but on the whole, rather more tumor. The red marrow had, in fact, almost entirely disappeared from its normal sites.

25. **Merycism.**—Lindsay's patient, aged 56, had regurgitated and remasticated his food since boyhood. He began his working life as a baker, and was the fourth generation of his family to follow that occupation. He suggested that the hurried meals and irregular hours attaching to the work of a baker in the country may have had something to do with the habit; but he admits that it had begun while he was still a boy at school. Haste in eating is, however, associated with regurgitation; for the solid portions of a meal that has been imperfectly masticated usually return to the mouth, sometimes half an hour, sometimes three or four hours after being first swallowed. The regurgitation is altogether involuntary, and when his appetite is poor it may not occur for a week at a time. It is not preceded by any feeling of discomfort or other evidence of indigestion. The remastication is pleasurable, the food, he says, being softer and sweeter than when first taken.

### Indian Medical Gazette, Calcutta

*March*

26 The Causation of Diseases of the Heart and Aorta in Europeans in India. J. W. D. Megaw.
27 Gleanings from the Calcutta Postmortem Records. L. Rogers.
28 Technic of Intracapsular Extraction. W. E. McKechnie.
29 Prevention of Hydrophobia. F. A. Smith.
30 Transmission of Plague in the Absence of Rats and Rat Fleas. E. A. Walker.

### Australasian Medical Gazette, Sydney

*March*

31 Medical Inspection. G. H. Hogg.
32 Physical Education. A. B. Brockway.
33 Scope of Hygiene in Modern Education. M. Boot.
34 A Trial of Nastin. J. A. Thompson.
35 *A New Method of Ether Anesthesia. R. W. Hornabrook.
36 Treatment of the Varied Manifestations of Tuberculosis. H. C. Hinder.
37 Cervical Laminectomy for Trauma of the Neck: Recovery. H. R. Cope.
38 Chorioepithelioma Malignum. C. E. Todd.
39 Lymphatic Leukemia in a Child of 3½; Blood Examination. E. C. Chisholm.
40 Extrauterine Pregnancy with Enormous Enlargement of the Fallopian Tube, but no Rupture. E. F. Sezke.
41 Raynaud's Disease. R. W. Stewart.

35. **New Method of Ether Anesthesia.**—The method used by Hornabrook is one of open ethyl chlorid followed by open ether. The mask used is an ordinary wire frame, covered with one layer only of very thin flannel. The mask is placed on the patient's face, and the patient told to breathe quietly and naturally; that there will be no unpleasant sensation of suffocation, and that after a few drops of the anesthetic have been placed on the mask a pleasant floating sensation will come over him. The ethyl chlorid is dropped, not sprayed on to

the mask. If ethyl chlorid is sprayed on, it freezes on the mask, does not act so well on the patient, and more is used than necessary; the drops should be rapid and spread over a wide area; from 3 to 8 c.c. are generally required. Hornabrook has never seen any sign of collapse under this open ethyl chlorid method, and in one case 25 c.c. were dropped on the mask to try its effect on the patient. The patient passes under the anesthetic rapidly and pleasantly, without any feeling of suffocation or discomfort. After 5 c.c. of ethyl chlorid have been dropped on the mask, a few minims of ether are dropped—that is in ordinary women or anemic men; if the patient is full-blooded or alcoholic, it is better to pass from ethyl chlorid to chloroform before going on with the ether. As a rule not more than 30 minims at the most of chloroform are necessary before muscular relaxation is obtained, and ether can then be substituted. Muscular relaxation when once obtained does not return to rigidity except in very rare instances, and even if it does, a few drops of chloroform will reduce it. The time taken to place the patient under anesthesia ready for the knife is from three to five minutes from the first drops of ethyl chlorid. A patient can be maintained under this open ether for any length of time. There is practically no secretion of mucus, so that the air passages remain clear; the breathing is quiet and easy; the color of the patient remains excellent, it being very rare to see blueness, even in prolonged cases; the patient recovers from the anesthetic very quickly; the pupils should be maintained very active and of medium size throughout; and the upper lid should remain elastic to the touch. Care must be taken that the anesthetist has two masks, for after a time a coating of moisture forms on the under surface of the flannel and this acts as a barrier between the patient and the ether, so that the patient gets none or very little ether in spite of the quantity poured on the mask, and the patient then commences to come out. The mask should be changed for a dry one before this happens, and the old one wiped free from moisture to be used again later; it may be necessary in a prolonged operation to change the mask more than once. The amount of ether poured on the mask varies with the length of the operation, but, speaking generally, about 20 minims every half minute, the quantity used is from 4 to 5 ounces in the first hour and less in the second. The state of anesthesia induced is light, the muscular relaxation good, and even should there be rigidity, as may be the case, it is easily overcome with a few drops of chloroform. The patient can be brought out of the anesthesia very easily and rapidly, in fact, it many respects it resembles sleep rather than deep narcosis of an anesthetic, the shock of even a very prolonged and severe operation is well-borne, the patient being in no way depressed as he would have been under chloroform, or irritated by concentrated ether vapor and excessive secretions of mucus as under a closed method.

### Australasian Medical Journal, Melbourne

*March 20*

42 Relative Value of Chloroform and Ether as General Anesthetics. E. H. Embley, Melbourne.
43 Ether Anesthesia. T. Sutherland.
44 *New Method of Ether Anesthesia. R. W. Hornabrook.
45 An Apparatus for the Continuous Administration of Saline and Other Fluids by Rectum. J. Ramsay.
46 Infantile Gastroenteritis. R. L. Forsyth.
47 Rouleaux Formation of the Blood Cells. A. E. Taylor.

44. See abstract No. 35.

### Annales des Maladies des Org. Génito-urinaires, Paris

*March 20, XXVIII, No. 6, pp. 481-576*

48 False Passages Caused by the Catheter. (Des fausses routes.) F. Leguen.
49 *Value of and Indications for Pyelotomy for Removal of Calculi in the Renal Pelvis. C. Périneau. Commenced in No. 4.
50 Advantages of Suprapubic Incision with the Bladder Empty. (La taille hypogastrique à vessie vide.) F. Lastaria.
51 Gonococci and Pseudogonococci. L. Wormser.

*April 1, No. 7, pp. 577-672*

52 *Pathogenesis of Renal Hematuria. B. Motz.
53 Case of Hydronephrosis from Obstruction of Ureter with a Stone Afterward Partially Absorbed. E. Hauch and J. E. Lohse.
54 Pathogenic Rôle of Abnormal Renal Arteries. A. Pousson.

49. **Superiority of Pyelotomy.**—Périneau advocates this operation as no more serious than nephrotomy, while it spares the kidney parenchyma and there is less danger of hemorrhage and tendency to a fistula later. Calculi are more frequently found in the renal pelvis and the pyelotomy permits retrograde probing of the upper ureter to determine the presence of other stones. He declares that, accompanied by Roentgen-ray examination, pyelotomy is destined to take the first place in operations for calculi in the calices, pelvis and upper ureter. His article is based on 103 operations of the kind done at the Lariboisière hospital.

52. **Hematuria.**—Motz ascribes renal hemorrhage to some inflammatory lesion rather than to mere congestion.

### Archives des Maladies de l'App. Digestif, Paris

*March, IV, No. 3, pp. 113-176*

55 Two Cases of Stenosis of Esophagus and Pylorus from Action of Caustic. P. Duval and G. Pascalis.
56 *Indirect Method for Estimating Total Amount of Gastric Content. (Modification de la méthode de Mathieu-Rémond.) A. Laboulais and R. Goiffon.
57 Remote Results of Gastroenterostomy in Non-Cancerous Stenosis of the Pylorus. T. Papadopoulos.

56. **Simplification of Mathieu Method of Determining Amount of Stomach Content.**—The technic was mentioned in The Journal, April 2, 1910, page 1175.

### Archives de Médecine des Enfants, Paris

*April XIII, No. 4, pp. 241-320*

58 *Importance of Sterilizing Infants' Clothing. (Emploi de linges stérilisés chez le nourrisson.) E. Weill.
59 Mechanical and Bloodless Method of Inducing Albuminuria and Nephritis in Rabbits. R. Fischl.
60 *The Meningeal Reaction in Chronic Encephalopathies in Children. R. Voisin and G. Paisseau.

58. **Importance of Sterilizing Infants' Clothing.**—A similar article was abstracted in The Journal, Dec. 18, 1909, page 2136.

60. **Meningeal Reaction in Encephalopathies.**—Voisin and Paisseau report three cases which emphasize the necessity in every case of meningeal symptoms for inquiry as to the inherited taints, the course of the birth, mental development and development and functioning of the legs. Lumbar puncture is useful to exclude meningitis. Any casual intoxication or infection is liable to rouse an old silent lesion of the nerve centers or at least render it clinically appreciable.

### Bulletins de la Société de Pédiatrie, Paris

*March, XII, No. 3, pp. 129-187*

61 Symmetrical Vascular Nevi. C. Leroux and R. Labbé.
62 Enlarged and Indurated Thymus in Boy of 4. Thymectomy, Tracheotomy and Resection of the Manubrium. Fatal Mediastinitis. M. D'Oelsnitz, Prat and Boisseau.
63 Severe Erythemas in Course of Typhoid. L. Ribadeau-Dumas and Harvier.
64 Meningeal Reactions in Scarlet Fever. G. Paisseau and L. Milhit.
65 Determination of Stercobiline as Aid to Prognosis. (Recherche de la stercobiline par le sublimé acétique comme élément de pronostic.) E. C. Aviragnet and Dorlencourt.
66 Occult Intestinal Hemorrhage and Helminthiasis in Children. (Entérragies occultes et helminthiase intestinale chez les enfants.) G. Railliet.
67 Steeple-Shaped Head with Atrophy of Optic Nerve. (Oxycéphalie avec atrophie optique.) F. Terrien.
68 *Hemorrhage in Suprarenals Due to Chloroform. M. Savariaud, Pellot and Tinel.

68. **Hemorrhage in Suprarenals After Chloroform Anesthesia.**—The patient was a boy of 8 requiring a 20 minute operation to correct eventration 18 months after appendicectomy. The operation and anesthetization proceeded smoothly but soon afterward the child became very restless and signs of acute intoxication became apparent—green diarrhea, vomiting, profound depression, drop in the blood pressure, extreme tachycardia and tendency to erythema; the little patient died in six days, the syndrome in general suggesting acute suprarenal insufficiency of a pseudoperitonitic form. All the organs were found congested but the suprarenals had been the seat of extensive hemorrhage.

### Lyon Médical, Lyons

*March 27, XLII, No. 13, pp. 677-744*

69 The Physiologic Value of the Leucocytes, and Its Appreciation by Means of "Vital Staining." A. Policard.

*April 3, No. 14, pp. 745-796*

70 Bronchoesophagoscopy. A. Sargnon.

*April 10, No. 15, pp. 797-852*

71 Operative Treatment of Hypertrophy of the Thymus Plus Tracheal Stenosis in Four-Months-Old Babe. E. Weill, M. Péhu and J. Chalier.

### Presse Médicale, Paris

*April 20, XVIII, No. 32, pp. 289-296*

72 *Albumin Reaction in the Sputum. (Albumino-réaction des expectorations.) H. Roger and Levy-Valensi.

*April 23, No. 33, pp. 297-312*

73 Experimental Research on Acute Epidemic Poliomyelitis. C. Levaditi.
74 Primary Tumors of the Blood-Producing Tissues. (La lymphadénie atypique.) M. A. Clerc.
75 Sympathetic Aches and Hyperesthesia of the Abdomen. (Les algies sympathiques et l'hyperesthésie de l'abdomen.) M. Loeper and C. Esmonet.
76 Fracture of the Base of the First Metacarpal Bone. S. Rolando.
77 Serotherapy of and Vaccination Against Acute Articular Rheumatism. G. Rosenthal.

72. **Albumin Reaction in Sputum.**—Roger and Valensi state hat sputum from the tuberculous always contains more or ess albumin, while a mild, simple bronchitis or pulmonary mphysema does not add this albuminous element to the putum. Its presence indicates a deeper inflammation or xudation. The absence of albumin thus permits tuberculosis o be excluded; its presence has less decisive value as there re a number of processes that may cause albumin to appear n the sputum. They relate experiences to show the simlicity and ease of the albumin sputum test. The sputum is ollected in a dry recipient, as free from saliva as possible, ever using sputum containing blood. The sputum must be resh, as decomposition splits the mucin and liberates albumin. t is mixed with an equal amount of water, stirred and a few rops of acetic acid added to coagulate the mucus. The ixture is then filtered through ordinary filtering paper and eated to coagulate the albumin; a little sea salt has to be dded to ensure the coagulation of the albumin in the absence f electrolytes; other means can be used to test for the resence of albumin. In 64 cases of tuberculosis and in 29 eported by Oddo the findings were almost invariably positive. his was particularly important in 31 cases in which the diagosis was wavering and the finding of albumin in the sputum ided in differentiating the disease; the diagnosis was conrmed by the course of the cases later. In one case the test as negative as also the tuberculin test until a large dose of uberculin was given when there was a febrile reaction and lbumin was found in the sputum, but as soon as the reaction ad subsided all the findings were negative again and the atient has been in good health since. This case demonstrates e value of the albumin reaction, as negative findings, even ith tuberculous infection, show that the process has been rrested.

### Revue de Chirurgie, Paris

*March, XXX, No. 3, pp. 327-562*

8 Gunshot Wounds of the Knee. (Des corps étrangers "projectiles" de l'articulation du genou.) E. Quénu.
9 Arteritis and Arterial Embolism with Uterine Fibroma. A. Schwartz and L. Bory.
0 *Caries of the Hip Joint without Effusion in Relation to Deforming Juvenile Paralysis. (La carie sèche de la hanche et l'arthrite déformante juvénile.) G. Rottenstein and G. Houzel. Commenced in No. 2.
1 Tumors of the Submaxillary Gland. M. Chevassu. Commenced in No. 2.

*April, No. 4, pp. 563-750*

2 *Continuous Stream of Oxygen in the Treatment of Abdominal Disease. (De l'emploi du courant continu d'oxygène en chirurgie abdominale.) T. Weiss and L. Sencert.
3 *So-Called Idiopathic Hematuria. (Sur les hématuries dites essentielles.) R. Robinson and J. Jacoulet.
4 *Ischemic Paralysis and Contracture of Volkmann. (Quelques notions fondamentales sur la retraction musculaire ischémique de Volkmann.) A. Binet. Commenced in No. 3.
5 *Paralysis with Dislocation of the Shoulder. (Les paralysies dans les luxations de l'épaule.) P. Delbet and A. Cauchoix.

80. **Dry Caries of the Hip Joint.**—The authors state that is special form of tuberculous arthritis in the hip is analous to that known as Volkmann's dry caries of the shoulder. e lesions have been described under the heading of juvenile forming osteoarthritis or torpid or atypical coxalgia. Pain, nctional impotence and muscular contracture are the main atures at first; the absence of fungous granulations and of usion is also characteristic. The affection tends to a sponneous cure by ankylosis, the course lasting two years at st. In three of the ten cases mentioned operative treatment s applied on a mistaken diagnosis, but continuous extension th plaster immobilization to favor ankylosis in a good position is the treatment recommended. The article is accompanied by the bibliography.

82. **Continuous Current of Oxygen in Treatment of Abdominal Disease.**—Weiss and Sencert discuss the value and the mode of action of the application of a constant stream of oxygen in the treatment of surgical abdominal affections. The hundreds of cases in which the method has been applied abundantly confirm the advantages of this method, which is based on the biologic properties of oxygen, the results of experimental research and histologic examination demonstrating that in the presence of microbes the oxygen promotes the diapedesis of white corpuscles, augments their phagocytic properties, and stimulates the vitality of the reparative elements. They have applied the method in gaseous gangrene, suppurating arthritis, purulent pleurisy, diffuse phlegmon and osteomyelitis and chronic suppuration with compound fractures—the results were always good but it was after operations that it proved most beneficial. They review their experience in detail, reiterating that oxygen injected into the abdominal cavity has an important stimulating action on the cardiovascular and respiratory system; it prevents the formation of adhesions, induces hyperemia and promotes healing, and in case of intraabdominal septic effusions, arrests absorption of septic fluids. Its curative action is enhanced if it is transformed *in situ* into ozone by Roentgen-ray exposures. The oxygen is introduced in a continuous flow through a buttonhole in the anterior abdominal wall and it flows out through various drains, the cavity thus being continually flushed by the gas. It forces out along with it pus and serous effusion, aiding materially in the draining and cleansing of the cavity. Weiss and Sencert give the details of 5 cases in which oxygen irrigation was applied, and will continue their report in the next number of the *Revue*.

83. **Idiopathic Hematuria.**—Robinson and Jacoulet discuss hematuria of angioneurotic, toxic, portal and varicose origin and hematuria from efforts, showing that medical treatment may give good results in all these forms of so-called idiopathic hematuria. It is beyond question, they state, that hematuria may occur without any lesions in the kidney, and that medical treatment will generally prove successful. If operative interference becomes necessary, nephrotomy is the best technic for the purpose, followed by suturing. Nephrotomy seems to have a double action, relieving congestion at once and later reducing the arterial afflux by obliteration of some of the vessels. The functioning of the kidney does not seem to be affected by incision and prompt suturing of the kidney, owing to the compensating hypertrophy of the intact parts of the organ. The various experiences that have been published are reviewed in detail. The view formerly accepted that some lesion in the kidney always preceded the hematuria has been disproved, the authors assert, by the later experiences and researches.

84. **Ischemic Paralysis and Contracture of Volkmann.**—Binet's monograph is based on 141 cases including one from his own experience, and discusses the cause and treatment. He states that the physician cannot be regarded as responsible for this syndrome except in case of great negligence. In treatment the best technic is by a plastic operation on the tendon with resection of the radius and ulna, which seems to be the only means for radical treatment of this ischemic retraction.

85. **Paralysis from Dislocation of the Shoulder.**—Delbet and Cauchoix insist on the importance of operative treatment as early as possible before the sclerous perineuritis completely destroys the conducting power of the nerves. They have found thirty-six cases on record which they review in detail with the technic for operative treatment.

### Revue de Médecins, Paris

*April, XXX, No. 4, pp. 233-344*

86 New Research on the Intestinal Poisons. H. Roger and M. Garnier.
87 Rôle of the Leucocyte Ferments in the Resolution of Pneumonic Exudate. (Etude de la crise pneumonique.) N. Fiessinger and P. Baufle.
88 Remote Propagation of Pericardial Friction Sounds. (Propagation des frottements péricardiques.) J. Pavlot and J. Delachanal.
89 Scarlet Fever. III. (La scarlatine à l'hôpital Claude-Bernard en 1908.) A. Gouget.
90 Myelogenous Osteopathies. (Rachitisme.) L. Bernard.

### Semaine Médicale, Paris

*April 27, XXX, No. 17, pp. 193-204*

91 Relative Rarity of Acute Tuberculosis Among the Jews. (La tuberculose chez les juifs.) L. Cheinisse.

### Beiträge zur Geburtshilfe und Gynaekologie, Leipsic

*XV, No. 2, pp. 166-316. Last indexed Jan. 29, p. 417*

92 Relation of the Lower Segment of the Uterus to Placenta Prævia. H. Bayer.
93 Anatomic-Physiologic Reasons for Capacity for Breast Nursing or the Lack of It. (Stillungsfähigkeit und ungenugende Stillfähigkeit aus anatomisch-physiologischen Gründen.) K. Hegar.
94 The Causes of Infantilism. F. A. Kehrer.
95 Decidua Cells and Their Importance. F. Ritter.
96 *Graft Metastasis of Cancer in Laparotomy Incision. (Zur Frage der Implantationsmetastasen in der Laparotomiewund nach Extirpation karzinomatöser Genitalorgane.) H. Raabe.
97 Failure of Methods for Predetermination of Sex. (Zur Frage der Vorausbestimmung des Geschlechts beim Menschen.) W. Weinberg.
98 *Histologic Changes in the Ganglion Cells of the Human Spinal Cord in Spinal Anesthesia. (Veränderungen der Ganglienzellen des menschlichen Rückenmarks bei der Lumbalanästhesie.) J. Ogata and G. Fujimura.

96. **Operative Graft Metastasis of Cancer.**—Raabe reports a case of primary carcinoma in a Fallopian tube with metastasis in the abdominal wall, and another of a carcinomatous tubal cyst with metastasis in the ovary. According to his compilation, the first is the eighty-second case on record of a primary tubal carcinoma and the other the thirteenth tubo-ovarian cancerous cyst. From his study of the anatomy of the parts and of the literature he is convinced that there is no case on record of true operative graft metastasis in the laparotomy wound after removal of carcinomatous genital organs.

98. **Transient Changes in Spinal Cord After Spinal Anesthesia.**—Ogata and Fujimura were able to demonstrate histologic changes in the ganglion cells after spinal anesthesia. The course of the two cases studied and the findings in the animals, however, indicated complete restitution after a certain interval.

### Beiträge zur klinischen Chirurgie, Tübingen

*March, LXVI, No. 2, pp. 193-461*

99 *Hernial Sac Tissue for Substitution of the Dura and Its Importance for Operative Treatment of Jacksonian Epilepsy. (Ueber den plastischen Duraersatz und dessen Bedeutung für die operativen Behandlung der Jackson-Epilepsie.) H. Finsterer.
100 Unusual Case of Internal Incarcerated Hernia. (Fall von innerer eingeklemmter Hernie.) H. Finsterer.
101 Perforation of Rectum with Consecutive Peritonitis. A. Kimmerle.
102 *Ultimate Result of Operative Treatment of Traumatic Jacksonian Epilepsy. K. Cluss.
103 Autoplastic Substitution of Finger Tendons by Tendons from Back of Hand. (Autoplastischer Ersatz der Streck- und der Beugesehnen der Finger durch entbehrliche Sehnen des Handrückens.) V. v. Hacker.
104 Compound Traumatic Injuries of the Bladder. (Zur Kasuistik der offenen traumatischen Verletzungen der Harnblase.) P. Wolfer.
105 Radioscopic Examination of Fracture in Child's Skull. (Ueber Schädeldachbrüche bei Kindern im Röntgenbilde.) H. G. R. Denks.
106 The Leucocytic and Fluid Defenses of Human Organism against Bacterial Infections. (Die leukocytären und humoralen Kampfmittel des Menschen gegen bakterielle Infektionen.) H. Rubritius.
107 *Tuberculous Stenosis of the Pylorus. H. v. Tappeiner.
108 Local Anesthesia Supplemented by Epinephrin Anemia, Especially for Operations on Head and Throat. (Zur Anwendung der Lokalanästhesie und Suprareninanämie.) F. Peuckert.
109 Experimental Research on Surgery of the Bronchus. M. Tiegel.

99. **Operative Treatment of Jacksonian Epilepsy.**—Finsterer reports that he introduced a piece of hernial sac under the dura to prevent the latter's growing to the pia and brain below. This was done at a second operation, the first having been done to remove a splinter of bone, and the second to correct the adhesion of the dura to the brain. Hacker has been using for some time pieces of hernial sac, obtained at a herniotomy on another patient, as an effectual means for preventing the growing together of tissues in operations on tendons and nerves, and experiments on animals have confirmed the advantages of this material for use under the dura. The results have been followed for a year to date in some of the experiments. In conclusion, Finsterer reports a second case in which the subdural implantation of a piece of hernial sac has also put an end to the disturbances to date; it was done at the fourth operation in this case, the implantation of a celluloid plate not having arrested the convulsions for more tha a year.

102. **Ultimate Outcome of Operations for Jacksonian Epilepsy.**—Cluss reports a case in which the patient was operate on over 18 years ago for Jacksonian epilepsy and has had n further signs of the trouble since the operation. The patien at the time of the trauma was 24 years old; the first operatio revealed a subdural cyst in the cortex which was excised. A few mild seizures were observed during the first six month after the operation but none since then. In connection wit this case he reviews 21 others in the literature in whic operative treatment has been followed by a cure for mor than 3 years. Recurrence has been known even after an interval of 3 or 5 years of apparent health. Patients under th age of 30 are more liable to complete recovery after operatio The duration of the latency or active phase of the epileps does not seem to have a decisive influence on the results o surgical treatment. The prospects of benefit are better whe there are gross local changes than in the absence of such Temporary resection of the skull is advisable, he believes, t obtain insight into conditions. The dura should be incised, bu it is not necessary to make a dura valve, and neither is i indispensable that the center involved should be resected Paralysis from resection of brain substance generally disappears entirely after a time.

107. **Tuberculous Stenosis of the Pylorus.**—Tappeiner report a case in which a boy of 12 had suffered for about 9 month from pains in the stomach and vomiting, rare at first bu gradually becoming more frequent until they occurred afte every meal and the child lost 17 pounds in weight. On th diagnosis of pyloric stenosis gastroenterostomy was done, an great improvement followed. The stenosis proved to be, a suspected, of a tuberculous nature but the child's condition di not permit resection. In 26 similar cases of tuberculous stenosis in the literature, resection was done in 8 cases, and i the others gastroenterostomy, excision of the ulcer, pyloroplasty or merely an exploratory laparotomy. Nearly all th patients succumbed within a year to the progress of th tuberculosis in other organs. In 4 cases the patients wer under 20, in 7 over 40.

### Correspondenz-Blatt für Schweizer Aerzte, Basel

*April 1, XL, No. 10, pp. 289-320*

110 Serodiagnosis of Syphilis. (Betrachtungen über die Serodiagnostik der Syphilis auf Grund praktischer Erfahrungen un statistischer Ergebnisse.) G. Seiffert and P. Barteczko. Concluded in No. 11.
111 Cammidge Reaction Not Specific for Pancreatic Disease. E Bernoulli.

*April 10, No. 11, pp. 322-352*

112 *Preventive Serotherapy of Tetanus. (Zur Präventivimpfung bei Tetanus.) E. Bär.

112. **Preventive Serotherapy for Tetanus.**—Bär reports tw cases in which preventive injection of 10 c.c. of antitetani serum did not prevent the development of the disease, although in one the symptoms were restricted to the arm, the local tetanus running its course to recovery in a week. In the other there were no symptoms for four weeks when fulminating general tetanus developed.

### Deutsche medizinische Wochenschrift, Berlin

*April 21, XXXVI, No. 16, pp. 737-784*

113 *Treatment of Hysteria. E. Romberg.
114 *Differentiation of Neurasthenic Pains, Palpitations and Angina Pectoris. (Zur Diagnostik der neurasthenische Schmerzen. Nervöses Herzklopfen und Angina pectoris.) J. Kollarits.
115 *Material Bases for and Prognosis of Traumatic Neuroses afte Concussion of the Brain. (Kommotionsneurose.) M Friedmann. Commenced in No. 15.
116 *Comparative Research on Wassermann and Globulin Reaction and Lymphocytosis with Organic Nervous Disease. (Wassermannsche Reaktion, Lymphozytose und Globulinreaktio bei Erkrankungen des Nervensystems.) A. Wolff.
117 Muscle Rigidity and Light Touch Palpation as Signs of Lung Disease. (Rigidität der Muskeln und die leichte Tastpalpation als wichtige Zeichen zur Erkennung der Lungenkrankheiten.) F. M. Pottenger and A. Wolff-Eisner.
118 *Dilatation of Prostatic Urethra in Treatment of Hypertroph of the Prostate. (Zur Behandlung der Prostatahypertrophi durch Prostatadehnung.) F. Kraemer.

113. **Nature and Treatment of Hysteria.**—Romberg explain hysteria as a congenital morbid disturbance in the course o

associations; in hysterical anesthesia the periphery feels, the spinal cord conducts and the central convolution receives, but the complicated phenomena on the other side of the cortex are lacking. No conscious impression results. If it is possible to restore the association here normal conditions return, and some slight impetus may restore the consciousness which awakes like the sudden remembrance of a word that has momentarily escaped the memory. In children and in persons whose mental development is not much beyond that of childhood, this restoration occurs particularly easily because the physiologic development favors the reception of new associations. Thus the child hangs on the words of the story-teller while it is difficult to fasten the interest of adults. In treatment it is important to accept the disturbances as real. It is wrong to exhort patients to exert their will; the aim should be to divert attention from the disturbances. He remarks that many cases of hysteria in children are really only the hysteria of the mothers. It is important, he adds, to seek to train the abnormally functioning associations, especially by light systematically increasing work. This diverts the mind, which pleasure, theaters, etc., fail to accomplish. The measures which cure by a sudden impression are more liable to be effectual with children and persons with uncultivated minds. The after-treatment is extremely important following a cure of this kind, not allowing from any one expressions of surprise or suggestion that the trouble had been due to the lack of will power. The recovered functioning should be promoted by systematic exercise. The main point is to have the physician win the confidence of the patient and avoid everything tending to mysticism, especially hypnosis.

114. **Differentiation of Neurasthenic Pains.**—Kollarits calls attention to the fact that neurasthenic pains are generally improved by movement, contrary to the pain in true rheumatism and arthritis. This applies also but less constantly to neurasthenic palpitations and pseudoangina pectoris. The physician should ask whether the pain is increased by movements or walking or becomes less, with care to refrain from suggesting the answer. With the attack of neurasthenic pain, the patient generally jumps up and walks to and fro, during which the pain subsides. The attack of pain is often accompanied by general restlessness, palpitations and sweating. The neurasthenic pain in a joint is not very violent but is more a sensation of pressure or smarting. Neurasthenics are generally extremely sensitive to heat and to constriction from ight collars. Nervous pains are not benefited by hot water reatment; exercise in the open air is the main reliance. Kollarits adds that if digitalis is given at all, it must be given with great care as it is liable to do harm if the patient knows he is taking digitalis, this confirming him in the idea of organic heart disease.

115. **Traumatic Neurosis After Concussion of the Brain.**—Friedmann states that no one needs to be spared so much as a atient during the first two years after a concussion neurosis. ncreasing experience with industrial accidents has taught that he course is toward gradual improvement to complete recovery, even with concussion of the brain. After from 4 to 7 ears from 60 to 70 per cent. of the patients may be regarded s essentially cured. The worst factor in the matter of traumatic neuroses, he declares, is not the patient's weak will nor is desire for sick pay, but it is the attitude of the employers who dislike to employ these semi-invalids. Partial earning apacity is therefore about equivalent with total incapacity nd the injured workingman has every reason to strive to btain the highest possible indemnity, especially if he is near he age of 40.

116. **Comparative Research on Wassermann and Globulin eactions and Lymphocytosis in Differentiation of Nervous isease.**—Wolff tabulates the findings with these three tests pplied to the spinal fluid, remarking that the globulin reaction the most instructive as it is invariably negative when there no existing parasyphilitic or metasyphilitic nervous affection, ven with a history of old syphilis. (The globulin reaction or phase I" was first described by Nonne and his work on the ubject was published in The Journal July 24, 1909, page 39.) The Wassermann and globulin reactions in the spinal uid were constantly negative in 6 cases of neurasthenia and 6 of epilepsy, while the globulin reaction was always positive in 40 cases of tabes, 30 of paralytic dementia, and 7 out of 8 cases of cerebrospinal syphilis.

118. **Treatment of Hypertrophy of the Prostate by Dilatation of the Prostatic Urethra.**—Kraemer followed Bayer's advice as a last resort in a recent severe case of enlarged prostate, the patient having refused to submit to an operation, and began systematic dilatation of the constricted upper end of the urethra. The patient was a man of 66 who after a five-day attack of ischuria was unable to void normally a drop of urine for more than five weeks. Then dilatation was commenced, using first a Béniqué sound, caliber 23, 24 and 25 French. In the course of 11 days and 8 sittings the caliber was increased gradually and the dilatation was finally completed with a rapid dilator, the lumen thus being opened to a caliber of 44, equivalent to a lumen of 1.6 cm. When any blood was noticed in the urine a retention catheter was introduced and left for a day or two. By the end of the 11 days the patient was urinating spontaneously without trouble, and when last heard from, a month after the dilatation, he was spontaneously voiding an average of 2 liters of urine daily. Bayer uses a special dilator with which he is able to dilate the lumen to 2 cm. without injury of the urethra as he determined by tests on the cadaver. In his 11 cases, 4 of the patients were permanently cured, he states, and 3 materially improved, but no benefit was derived in 3 other cases with extreme hypertrophy and cystitis. Kraemer did not attempt the dilatation until after he had cured the complicating cystitis by appropriate measures in his case.

### Medizinische Klinik, Berlin

*April 24, VI, No. 17, pp. 653-690 and Supplement*

119 Operative Treatment of Extreme Myopia. (Operation der Kurzsichtigkeit höchsten Grades.) W. Goldzieher.
120 *Thickness of the Adipose Tissue in Abdominal Wall as Index of Condition of Nourishment in Adults. (Die Fettpolsterdicke als index der Ernährungszustandes bei Erwachsenen.) G. Oeder.
121 Transplantation of Tissues. (Zur Gewebstransplantation.) C. Ritter.
122 *Diagnostic Importance of Occult Gastrointestinal Hemorrhage. (Zur diagnostischen Bedeutung okkulter Magen-und Darmblutungen.) L. Kuttner. Commenced in No. 16.
123 Origin of Laryngeal Tuberculosis. (Entstehung der Kehlkopftuberkulose.) E. Brandenburg.
124 Therapeutic Indications for Vichy Thermal Waters. Chabrol.
125 *Pericarditis with Effusion. (Zur Klinik der Pericarditis exsudativa.) R. Bernert.

120. **Thickness of the Abdominal Wall as Index of State of Nourishment.**—Oeder has been seeking for years for some means to express the general state of the nourishment of patients and has tabulated the findings in regard to height, weight, size, chest measure, etc., but no formula that he was able to work out from them seemed to express the actual condition of the nourishment. On the other hand, the thickness of the layer of adipose tissue in the abdominal wall seems to be directly proportionate to the general state of the nourishment. In 1,920 separate examinations he found 936 persons of the lean type, 607 of the normal and 377 of the fat type. He estimates the thickness of the fat by taking up a fold to the right of the umbilicus and measuring it with calipers. With the lean type the fold measures from 0.75 to 3.5 cm., averaging 1.1 cm. or nearly half an inch; with the normal type about 2.75 cm., or 1⅛ inches, and with the fat type, 4.41 cm., or 1¾ inches. All adults therefore with this index larger than 2 inches should be regarded as abnormal, as also those with an index of less than ⅜ inch. The difference for sex, age and height is so small that it can be disregarded. This index may throw light on individual indications, whether more nourishment is needed or more exercise, and when normal conditions have been attained under dietetic or other treatment.

122. **Occult Hemorrhage in Gastrointestinal Tract.**—Kuttner reviews the information to be derived from discovery of occult blood in the stool or stomach content but he warns that many causes may be responsible for it. Occasionally the occult bleeding may give the clue to the correct diagnosis, but, as a rule, its discovery does not throw light on the diagnosis but tends to make it still more laborious.

125. **Pericarditis with Effusion.**—Bernert reports 4 cases of pericarditis with effusion in which there were a number of

atypical features. The patients were young men between 21 and 24 and the extensive effusion occurred again and again, but seemed to be entirely absorbed during the intervals. The intermittent-remittent effusion developed and was reabsorbed with remarkable rapidity. In one case there was nothing left of the large effusion by the end of the week; then it rapidly returned but subsided anew within 2 days and not a trace was left by the end of another 3 days. Another striking feature of the cases was the sac-like protrusion of the left lower side of the pericardium. In some of the cases the pulse was smaller in the left carotid and radial arteries than in the corresponding vessels on the right side, but this sign of compression from the large pericardial effusion disappeared as the effusion retrogressed. The same cause may induce transient dilatation of the pupil on one side from irritation of the sympathetic. The involvement of the phrenic nerve may entail paresis of half of the diaphragm and hiccough and involvement of the vagus, vomiting and violent coughing. He discusses in detail the percussion findings with this atypical intermittent form. There was a history of acute articular rheumatism in only one of the four cases reported; the others were evidently of tuberculous origin. Enlarged glands at the hilus of the lung were manifest in each. In all the cases the affection progressed to adhesive pericarditis.

### Monatsschrift für Geb. und Gynäkologie, Berlin

*April XXXI, No. 4. pp. 415-546*

126 Slowing of the Pulse During the Puerperium and its Cause. (Pulsverlangsamung im Wochenbett und ihre Ursache.) L. Lewisohn.
127 Axial Torsion of the Gravid Uterus. (Achsendrehung des schwangeren Uterus.) L. K. Glinskl.
128 *Treatment of Rupture of the Uterus. E. Issel.
129 *Rupture of the Symphysis During Delivery. L. A. Kriwski.
130 *Indications for and Advantages of Cold Irrigation of the Vagina. (Ueber kalte Scheidenirrigationen.) T. Alexandrow.
131 Intraperitoneal Shortening of the Round Ligaments. (Ueber intraperitonealer Verkürzung der Ligamenta rotunda.) M. Hirsch.

128. **Treatment of Rupture of the Uterus.**—Issel reports 9 cases of rupture of the uterus during delivery. The 2 fatalities were from peritonitis resulting from the reduction of the intestines prolapsed into the vagina, five hours before the operation, in one case, and from hemorrhage on the operating table in the other case. Immediate ligation of the hypogastric and ovarian veins on both sides is an important factor in treatment; it spares the patient further loss of blood and the operation proceeds in a bloodless field. He advocates prompt abdominal hysterectomy, as fatal rupture is peculiarly liable at a later pregnancy when the first rupture was given merely conservative treatment. The communication issues from Krönig's obstetric service at Freiburg. The general practitioner is advised to send the patient to a hospital as soon as the rupture is discovered, refraining from any attempt to complete the delivery. The experience of Schütte, Petren and others that these ruptured women are able to stand transportation even from a considerable distance was confirmed in Issel's cases, one patient being brought from a neighboring town to the clinic. The patient either succumbs at once to the hemorrhage—which is rare—or small repeated hemorrhage occurs, allowing time for the woman to be taken to a hospital. If conditions are favorable, the abdominal hysterectomy can be done in the home. If institutional care is not attainable, the delivery can be cautiously completed, followed by tamponing, or if the hemorrhage is not severe, by merely draining the wound cavity. With one exception, a primipara of 29, his patients had all borne from 5 to 8 children. In this case the posterior vault of the vagina was accidentally perforated about 3 hours after spontaneous childbirth, during an attempt to separate the placenta by hand. The abdomen was opened and the vaginal wall found torn from the uterine cervix; the tear was readily sutured and the abdomen closed without further interference. The patient was discharged cured after passing through a severe puerperal fever. Hysterectomy was done in all but one of the other cases, with or without leaving the adnexa intact on one or both sides.

129. **Rupture of the Symphysis During Delivery.**—Kriwski's patient was a woman of 33 who had already borne 6 children, the deliveries being normal and unusually rapid. The seventh pregnancy had been preceded by typhoid; after the onset o labor there were two attacks of convulsions and labor wa prolonged for over 24 hours. Then forceps were applied and very large child delivered. A cracking sound was heard durin the traction with the forceps, and after extraction of the chil blood issuing from the urethra directed attention to th rupture of the symphysis; two fingers could be inserted in th gap. The hemorrhage soon ceased spontaneously and th patient recovered without further mishap except for persistence of tenderness in the sacral region and incontinence o urine. She did not complain of pain or tenderness in th symphysis at any time. The tendency to incontinence seem to be growing less; it is probably the result of some tear i the urethra near the sphincter.

130. **Application of Cold in the Vagina.**—Alexandrow uses coil of tubing wound so as to fit over the cervix and agains the deeper vaginal walls, and sends ice water through th tubing. His experience with this cold irrigation, he says, ha been gratifying in the suitable cases. He describes some of hi clinical experience and his experimental research in this line reiterating that both cold and hot applications should b regarded as important therapeutic measures in treatment o the female sexual organs. Cold irrigation is indicated to enhance the action of unstriped muscle, either in the vessel wall or in the supporting ligaments. Hot irrigations are useful t increase the absorbing power of the vascular apparatus, a the arterial hyperemia induced favors absorption of effusion in the pelvic connective tissue or peritoneum. The cold irrigations are useful, he states, with subinvolution of the puerpera uterus from weakness in the uterine musculature and vesse walls. The temperature in the region is reduced much mor than by application of an ice bag outside. In one of the case reported the gravid uterus had become incarcerated and th cold irrigation was applied twice for half an hour to prepar the uterus for the supposed inevitable operation, but this proved unnecessary, the cold having evidently caused such contraction of the uterine musculature that the organ, thus reduced in size, had spontaneously righted itself.

### Münchener medizinische Wochenschrift

*April 19, LVII, No. 16, pp. 833-888*

132 Experiences with Tuberculin in Diagnosis and Treatment i Pulmonary Tuberculosis. F. Rolly.
133 Influencing of Local Tuberculin Reaction by Acute Febril Processes. H. Krannhals.
134 Calcium Chlorid Method for Enriching Tubercle Bacillus Cultures. (Neues einfaches Anreicherungsverfahren fü Tuberkelbazillen.) A. Zahn.
135 *The Meiostagmin (Drop-Forming) Reaction in Typhoid, Tuberculosis, Echinococcus and Ankylostoma Disease. G. Izar.
136 *Etiology of Carcinoma. A. Theilhaber and S. Greischer.
137 Operative Treatment of Double Thumb. (Zur operative Behandlung der Daumenschere.) H. Hilgenreiner.
138 Does the Side-Chain Theory Harmonize with Known Facts? (Ist die Ehrlichsche Seitenkettentheorie mit den tatsächlichen Verhältnissen vereinbar?) I. Bang and J. Forssman.
139 The Wassermann Reaction and the General Practitioner. F. Plaut.
140 Treatment of Most Frequent Gastrointestinal Disturbances in Infants. (Behandlung der häufigsten Magen- und Darmstörungen der Säuglinge.) H. Dörfler. Commenced in No. 15.

135. **The Meiostagmin Reaction in Typhoid, Etc.**—In this communication Izar gives the details of the application of the test for changes in the drop-forming property of the serum in various diseases, this being the material on which the preliminary report was based, mentioned in The Journal, April 2, 1910, page 1177.

136. **Nature and Treatment of Carcinoma.**—Theilhaber and Greischer discuss the statistics gathered by F. Theilhaber which showed that carcinoma of the uterus is comparatively infrequent among the rich and among Jewish women, while mammary carcinoma is far more frequent among the unmarried, the rich and Jews. He ascribed this fact to the lesser number of pregnancies, tight lacing and racial peculiarities. Greischer has also found gastric cancer more frequent among the poor and especially frequent among cooks, while rectal cancer is more liable to be encountered in the rich, and most frequently of all in men holding high official positions. As a whole, they state, there are more cases of cancer among the rich, and the disease develops at a later age. Cancer is more frequent among the Jews, they believe, all organs inclusive. The mortality from cancer has doubled at Munich during the last

forty years. Theilhaber ascribes great importance to cicatricial tissue as a factor in the development and especially in the recurrence of cancer. Trauma and cicatrix disturb the metabolism in the mesodermal tissue and this permits encroaching proliferation of ectodermal elements. Normally the mesoderm holds them in check and he suggests that possibly an extract of mesodermal tissue might prove effectual in checking the growth of incipient cancer or preventing recurrence. He adds that possibly in the attempt to remove all morbid tissue the operative trauma has been made unnecessarily extensive. It is certainly suggestive, he remarks, that Schröder had 19 patients radically cured after an interval of 4 years out of 96 who had survived resection of the cervix 30 years ago on account of cancer. This incomplete operation evidently left morbid elements but the organism was able to cope with them. As a logical consequence of his view he suggests the advisability of means to prevent development of cicatricial tissue and to promote normal conditions in the region by artificially inducing hyperemia with application of heat, electricity, stasis and suction devices, wet cupping and, with uterine carcinoma, hot vaginal douches and ingestion of ovarian substance.

### Wiener klinische Wochenschrift, Vienna

*April 21, XXIII, No. 16, pp. 573-612*

141 Rôle of the Liver in Resorption of Fat. (Experimentelle Untersuchungen über die Bedeutung der Leber bei der Fettresorption unter normalen und pathologischen Verhältnissen.) G. Joannovics and E. P. Pick.
142 Comparative Serologic Research on Tuberculosis and Syphilis. R. Müller and E. Suess.
143 Nature and Causal Treatment of Exophthalmic Goiter. (Morbus Basedowi.) S. Federn.
144 Relations between Uterine Myoma and Goiter. E. Ullmann.
145 Test for Adrenalin in the Blood. (Ueber Adrenalinämie.) M. Selzer and G. G. Wilenko.

### Zeitschrift für Geburtshülfe und Gynäkologie, Stuttgart

*LXVI, No. 1, pp. 1-213. Last indexed February 19, p. 661*

146 Review of 1,558 Obstetric Cases. (Wochenbetts- und Säuglingsstatistik.) Sanders.
47 *Operation for Total Uterine Prolapse. R. Jolly.
48 *Adenomyoma of the Uterus. M. Yamasaki.
49 Present Status of Theory in Regard to Placental Origin of Eclampsia. F. Schenk.
50 Congenital Displacement of Uterine Mucosa in the Cervix. (Kongenitale Heterotopie der Uterusschleimhaut in das Kollumgewebe. Ein Beitrag zur Lehre der Adenomyome.) A. Labhardt.
51 *Cesarean Section plus Tubal Sterilization. (Drei Fälle von Kaiserschnitt.) M. Flesch.
52 Ovarian Sarcomas and their Complications. A. Wermuth.
53 Nodular Hypertrophy of Fallopian Tubes. (Zur sogenannten Salpingitis isthmica nodosa.) J. Wallart.
54 Bacteriologic Data as Aid in Abdominal Operations for Cancer. (Weche Hinweise geben uns bakteriologische Untersuchungen für die Methodik der Wundversorgung bei abdominalen Gebärmutterkrebsoperationen?) W. Hannes.

147. **Operation for Total Prolapse of the Uterus.**—Jolly escribes with illustrations his technic for operative treatment f total prolapse of the uterus which he has applied in thirty-hree cases in Olshausen's gynecologic service at Berlin. The ethod, he says, is similar to that recently published by olk, but he operates exclusively by the vaginal route. Two f the patients succumbed to pulmonary embolism, another to iabetic complications. The high mortality from embolism ay be due, he thinks, to the injury of the veins in the floor f the pelvis during the posterior colporrhaphy. Pulmonary nbolism occurred in 6 out of 500 other operations requiring is colporrhaphy during the last few years in the service hile in a preceding series of 634 cases there were only 2 aths from this cause. Not until the last few years has it en the practice to take the deep suture in the musculature the floor of the pelvis, and it is a question, he remarks, hether the advantages of this technic outweigh the danger pulmonary embolism. Simple removal of the prolapsed erus alone does not protect against recurrence, but with the chnic described it seems to be possible to ensure a solid and ell-shaped vagina. The ultimate results have been excellent all the cases in which it has been applied.

148. **Adenomyoma of the Uterus.**—Yamasaki concludes from e case reported and what he has learned from the literature at total hysterectomy is the only means of certain cure in enomyoma of the uterus.

151. **Cesarean Section.**—Flesch protests that the question as the best technic for Cesarean section is merely that as to e possibility of simultaneously sterilizing the woman so as to prevent further conception. When conditions are so serious as to demand Cesarean section and there is no prospect for future normal deliveries, he combines tubal sterilization with the operation. The question of a supplementary sterilizing operation should be considered in cases of manifest deformity, severe rachitis, osteomalacia and a tendency to placenta prævia, but not for eclampsia, as this affects predominantly primiparæ although serious chronic impairment of the kidneys may afford an argument in its favor in some cases.

### Zentralblatt für Chirurgie, Leipsic

*April 16, XXXVII, No. 16, pp. 569-600*

155 Synthetic Suprarenin. H. Braun.
156 *Plastic Operation after Resection of Shaft of Long Bone. (Ueber Knochenplastik nach Resektionen an langen Röhrenknochen.) W. Bittner.

156. **Plastic Operation After Resection of Shaft of Long Bone.**—Bittner resected the lower half of the tibia down to the epiphysis on account of sarcoma. The gap thus left was filled with a corresponding piece cut out of the remaining upper half of the same bone. With the wire saw and chisel the tibia was cut in half up into its tuberosity, and the portion thus mobilized was turned over downward, bringing the upper part down to the epiphysis where it was sutured. A wire also held the lapping ends of the bones together in the center. The leg was put in a plaster cast for some time, with which the child, a girl of 13, was allowed to be up and about after the sixth week. The result has been satisfactory; the leg is scarcely 1.5 cm. shorter than its mate and can be normally used. The illustration accompanying the article is stated in a later issue to be incorrect, and a corrected view of the technic is given on page 644.

### Zentralblatt für Gynäkologie, Leipsic

*April 16, XXXIV, No. 16, pp. 529-560*

157 Extraperitoneal Cesarean Section. (Extraperitonealer Kaiserschnitt nach Latzko.) S. Cholmogoroff.
158 Technic for General Anesthesia. (Zur Frage der Narkoseasphyxie.) O. Burckhardt-Socin.
159 *Digital Compression of the Aorta to Control Postpartum Hemorrhage. (Die Digitalkompression der Aorta als blutstillendes Mittel bei Nachgeburtsblutungen.) E. Engelhorn.
160 Proposed Compilation of Data for Protection for Women at Childbirth. (Zur Statistik für Wochenschutz.) A. Buecheler.
161 Improved Forceps for Seizing the Uterus. (Uterushaltezange mit abnehmbaren Griffen.) M. Hirsch.

159. **Digital Compression of the Aorta for Postpartum Hemorrhage.**—Engelhorn comments on the hard, retracted condition of the uterus when there has been much loss of blood, Nature evidently striving thus to arrest the hemorrhage. The frequency of this explains the great rarity of directly fatal postpartum hemorrhage. Momburg's belt constriction arrests postpartum hemorrhage by the same means, the shutting off of the blood supply starting vigorous retraction in the uterus. He is convinced that the same effect can be realized by systematic compression of the aorta with the fingers, pressing it back against the spine until the femoral pulse ceases to be perceptible. In two normal cases in which this compression was applied for 150 pulse beats, the uterus contracted vigorously and the placenta was early expelled. This also occurred in a case in which extreme atony had been the rule in three previous pregnancies with threatening hemorrhage each time. Immediately after the birth of the child the aorta was compressed in this way for 150 beats and the uterus contracted normally. At any sign of relaxation the compression was applied anew for a minute or so. Each time the uterus responded with a contraction and there was no abnormal hemorrhage. Similarly good results were obtained in another case in which part of the placenta had to be removed by hand. Engelhorn adds that to Momburg belongs the credit of calling attention anew to the advantages of this simple method of controlling uterine hemorrhage and the means of control by the femoral pulse becoming imperceptible.

### Zentralblatt für innere Medizin, Leipsic

*April 16, XXXI, No. 16, pp. 393-416*

162 *Etiology of Glycosuria. (Zur Aetiologie der Glykurie.) F. Rosenberger.

162. **Glycosuria of Nervous Origin.**—Rosenberger reports a case in which diabetes developed after a severe nervous strain,

and also a case in which periods of excitement or worry were always followed by transient glycosuria.

### Gazzetta degli Ospedali e delle Cliniche, Milan

*April 17, XXXI, No. 46, pp. 481-496*

163 Recent Italian Research on Smallpox and Vaccine. (Le recenti osservazioni Italiane sul vaiolo e sul vaccino.) E. Bertarelli.
164 Hernia not an Industrial Accident but an Industrial Disease. (Il concetto dell' ernia quale infortunio sul lavoro non ha il suffragio anatomico.) F. Bindi.

*April 19, No. 47, pp. 497-504*

165 Petroleum and Benzin for Surgical Sterilization of the Skin. C. Zatti.

*April 21, No. 48, pp. 505-512*

166 Morphologic and Cultural Characteristics of the Parasite of Infantile Splenic Anemia. (Sui caratteri morfologici e culturali del parassita del anemia splenica infantile.) G. Di Cristina and S. Cannata.

*April 24, No. 49, pp. 513-528*

167 *Gynecologic Expert Testimony in Murder Case. (Una perizia ginecologica.) L. M. Bossi.
168 Occult Blood in Stools with Trichocephalus. (A proposito della "reazione di Weber e tricocefalo." M. V. Carletti.

167. **Gynecologic Expert Testimony in Murder Case.**—Bossi gives the bases for his testimony in a recent murder case at Venice in which for the first time a gynecologist was called on for his specialist opinion. The accused was a Russian woman with a history of insanity in the family, married at 16, the menses always irregular and painful. She had been left with chronic inflammation in the adnexa after her second pregnancy ten years before; the uterus was three times the normal size and bound down in retroflexion, interfering with the bladder and intestine functioning, and thus entailing more or less stagnation of the intestinal content and of the urine and of the secretions in the abnormally flexed uterus. He testified that the resulting persisting autointoxication must have had an injurious effect on the material and psychic functioning of the nervous system.

### Policlinico, Rome

*April 24, XVII, No. 17, pp. 515-546*

169 *Shortened Technic for Exclusion of the Pylorus. (Nuovo metodo per l'esclusione del piloro.) G. Parlavecchio.
170 Dire Results of Trusting to Asepsis Alone in Home Deliveries. (La teoria della sola asepsi nell'assistenza al parto e le sue conseguenze.) L. M. Bossi.

*April, Medical Section, No. 4, pp. 145-192*

171 *Treatment of Infectious Nephritis. U. Arcangeli.
172 Metabolism of Lime, Magnesium and Phosphoric Acid in the Healthy and in the Gouty. (Il ricambio del calcio, del magnesio e dell'acido fosforico nell'uomo sano e nel gottoso.) P. Ciuffini.
173 The Mechanism of Gallop Rhythm. (Sul meccanismo del ritmo di galoppo.) C. Pezzi.

169. **Shortened Technic for Exclusion of the Pylorus.**—Parlavecchio comments on the advantages of exclusion of the pylorus under certain conditions but states that the operation is so long and tedious that many shrink from it on this account when otherwise it might be indicated. He now proposes a simpler method than the von Eiselsberg technic hitherto generally used. On dogs it required only from 2 to 4 minutes longer than a simple gastroenterostomy. Instead of cutting off the pylorus from the rest of the stomach he merely throws a ligature around it at the point where the incision would be made by the usual technic, thus shutting off the region of the pylorus as completely as if it had been resected. He uses a strong, non-elastic ligature and proliferation of cicatricial tissue soon completely shuts off the part beyond.

171. **Treatment of Infectious Nephritis.**—Arcangeli analyzes his experiences with nephritis at the Rome policlinic, his conclusions being that the specific drug indicated should be used without paying too much attention to the influence it may have on kidney functioning; especially in syphilitics it is hard to know whether the nephritis is of syphilitic nature or not. With negative Wassermann findings, he advises against mercurial treatment. Diphtheria antitoxin is useful, he states, in the nephritis that accompanies diphtheria. In streptococcus or staphylococcus nephritis he advises vaccines used according to Wright's technic; this may also prove useful in nephritis from the diplococcus, etc. In acute nephritis with fever his experience warns against the use of drugs to reduce the fever and also of heat to induce sweating, but the fever should not be left untreated, and for this he advises cold hydrotherapy, graduated to the intensity of the fever.

### Ugeskrift for Læger, Copenhagen

*April 14, LXXII, No. 15, pp. 417-452*

174 *Successful Operative Treatment of Megacolon. (Et Tilfælde af Hirschsprung's Sygdom, behandlet med Tarmresektion.) J. Schou.

174. **Successful Operative Treatment of Megacolon.**—Schou's patient was a boy of 14 who had had intestinal disturbances from early childhood. They finally became so serious that his abdomen became enlarged to measure 106 cm. while the rest of the body was much emaciated. The enlarged segment of the colon included the flexure, the descending and part of the transverse colon, all of which were removed, the segment measuring 90 cm., nearly a yard, in length and as large around as a man's thigh. The child has developed normally since the operation and has a daily movement of the bowels unaided.

## *Books Received*

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

APPLETON'S NEW PRACTICAL CYCLOPEDIA. Edited by Marcus Benjamin, Ph.D., Editor of the United States National Museum, Washington, D. C., assisted by Arthur E. Bostwick, Librarian of the St. Louis Public Library; Gerald Van Casteel, Chief of Editorial Staff; George J. Hagar, Expert Compiler and Statistician, with an Introduction by Elmer E. Brown, Ph.D., United States Commissioner of Education. In Six Volumes. Cloth. Price, $18 the set. Pp. 3000 (about). New York: D. Appleton & Co., 1910.

THE PRODUCTION AND HANDLING OF CLEAN MILK. Including Practical Milk Inspection. By Kenelm Winslow, M.D., M.D.V., B.A.S. (Harv.), Chairman of the Committee on Milk of the Washington State Medical Association. And Essentials of Milk Bacteriology. By H. W. Hill, M.D., Minnesota State Board of Health Laboratories. Cloth. Price, $3.25. Pp. 367, with 101 illustrations. New York: W. R. Jenkins C., 1910.

DIE INDIKATIONEN ZU CHIRURGISCHEN EINGRIFFEN BEI INNEREN ERKRANKUNGEN. Für den Praktiker bearbeitet von Dr. Hermann Schlesinger, k.k. Primar-Arzt im k.k. Allgemeinen Krankenhause in Wien. Mit einem Anhange von Dr. Julius Schnitzler, k.k. Primar-Arzt im k.k. Krankenhause Wieden in Wien. Paper. Price, 12 marks. Second Edition. Pp. 614. Jena: Gustav Fischer, 1910.

THE HARMFUL EFFECTS OF ACETANILID, ANTIPYRIN AND PHENACETIN. U. S. Department of Agriculture, Bureau of Chemistry, Bulletin No. 126. By L. F. Kebler, M.D., Chief, Division of Drugs, with the Collaboration of Drs. F. P. Morgan and Philip Rupp, Assistant Chemists. Paper. Pp. 85. Washington: Government Printing Office, 1909.

DIE SPINALE KINDERLÄHMUNG. Eine klinische und epidemiologische Studie. Von Dr. Eduard Müller, Direktor der Medizinischen Universitäts-Poliklinik in Marburg, mit Unterstützung von Dr. med. M. Windmüller, Assistenzärztin der Poliklinik. Paper. Price, 6 marks. Pp. 170, with 21 illustrations. Berlin: J. Springer, 1910.

HARMFULNESS OF HEADACHE MIXTURES. By L. F. Kebler, M.D., Chief, Division of Drugs, Bureau of Chemistry, and Drs. F. P. Morgan and Philip Rupp, Assistant Chemists. U. S. Department of Agriculture. Farmers' Bulletin 377. Paper. Pp. 16. Washington: [Superintendent of Documents] Government Printing Office, 1909.

HABIT-FORMING AGENTS: Their Indiscriminate Sale and Use a Menace to the Public Welfare. By L. F. Kebler, Chief, Division of Drugs, Bureau of Chemistry. U. S. Department of Agriculture. Farmers' Bulletin 393. Paper. Pp. 19, with 5 illustrations. Washington: Government Printing Office, 1910.

MEDICAL ELECTRICITY AND RÖENTGEN RAYS. With Chapters on Phototherapy and Radium. By Sinclair Tousey, M.D., Consulting Surgeon to St. Bartholomew's Clinic, New York City. Cloth. Price, $7 net. Pp. 1116, with 750 illustrations. Philadelphia: W. B. Saunders Co., 1910.

ANNUAL REPORT OF THE BUREAU OF HEALTH FOR THE PHILIPPINE ISLANDS. By Victor G. Heiser, M.D., Director of Health, Passed Assistant Surgeon, United States Public Health and Marine-Hospital Service. July 1, 1908, to June 30, 1909. Paper. Pp. 193, with illustrations.

PROCEEDINGS OF THE NINTH ANNUAL CONFERENCE OF SANITARY OFFICERS OF THE STATE OF NEW YORK. Held at Convention Hall, Rochester, Nov. 10-12, 1909. Paper. Pp. 296. Albany: New York State Department of Health, Division of Publicity and Education.

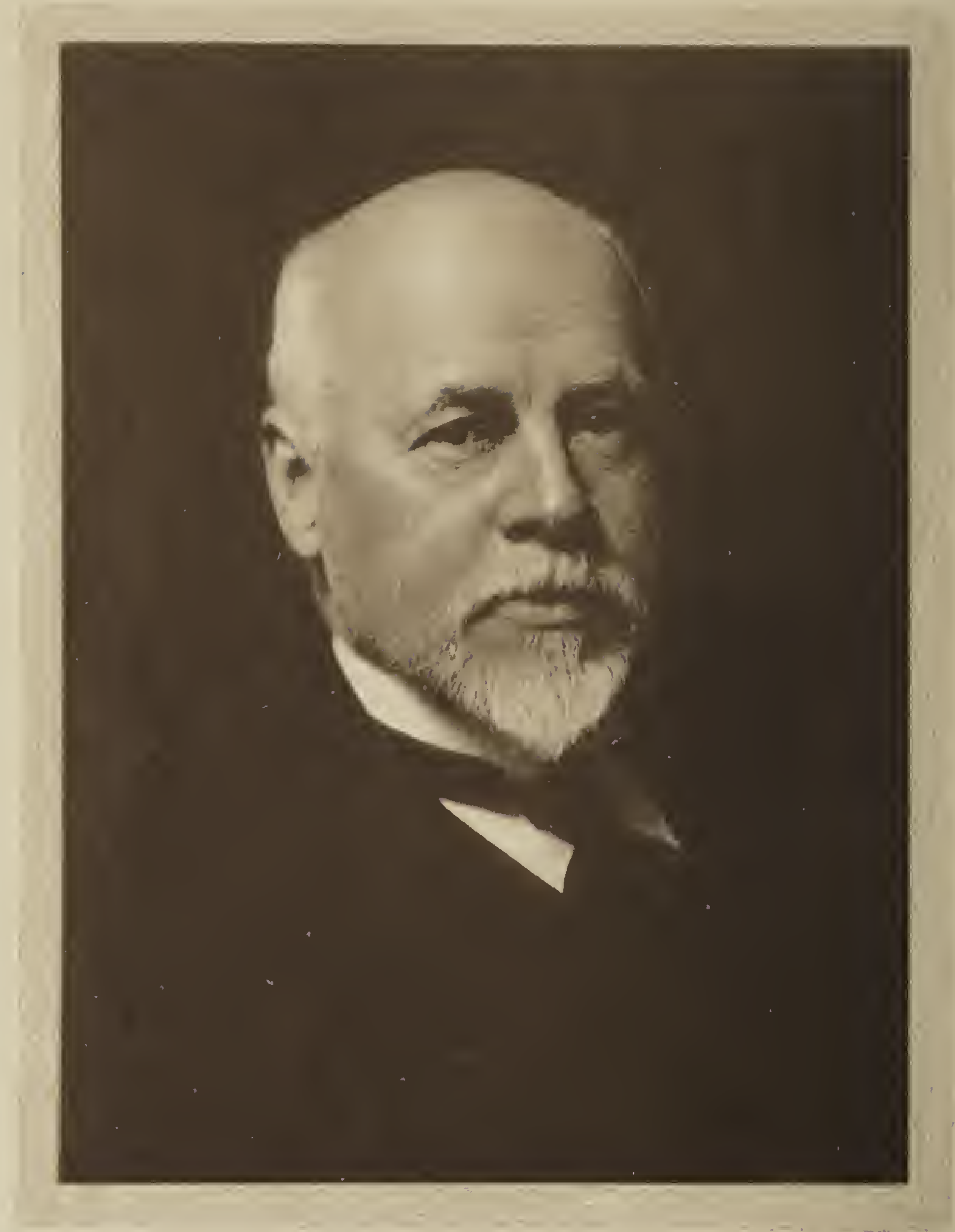
THE PATHOLOGY OF THE LIVING AND OTHER ESSAYS. By B. G. A. Moynihan, M.S. (Lond.), Honorary Surgeon to Leeds General Infirmary. Cloth. Price, $2 net. Pp. 260. Philadelphia: W. B. Saunders Co., 1910.

SIXTEENTH ANNUAL REPORT OF THE MANAGERS AND OFFICERS OF THE CRAIG COLONY FOR EPILEPTICS, SONYEA, LIVINGSTON COUNTY, N. Y. Transmitted to the Legislature Jan. 5, 1910. Paper. Pp. 143.

THIRTY-SECOND ANNUAL REPORT OF THE DEPARTMENT OF PUBLIC HEALTH, AUGUSTA, GA., 1910. For the Fiscal Year Ending Nov. 30, 1909. Paper. Pp. 85.

FOURTEENTH ANNUAL REPORT OF THE STATE MEDICAL BOARD, STATE OF OHIO. For the Year Ending Dec. 31, 1909. Paper. Pp. 68.

ANNUAL REPORT OF THE HEALTH DEPARTMENT OF THE CITY OF RICHMOND, VA. For the Year Ending Dec. 31, 1909 Paper. Pp. 110.



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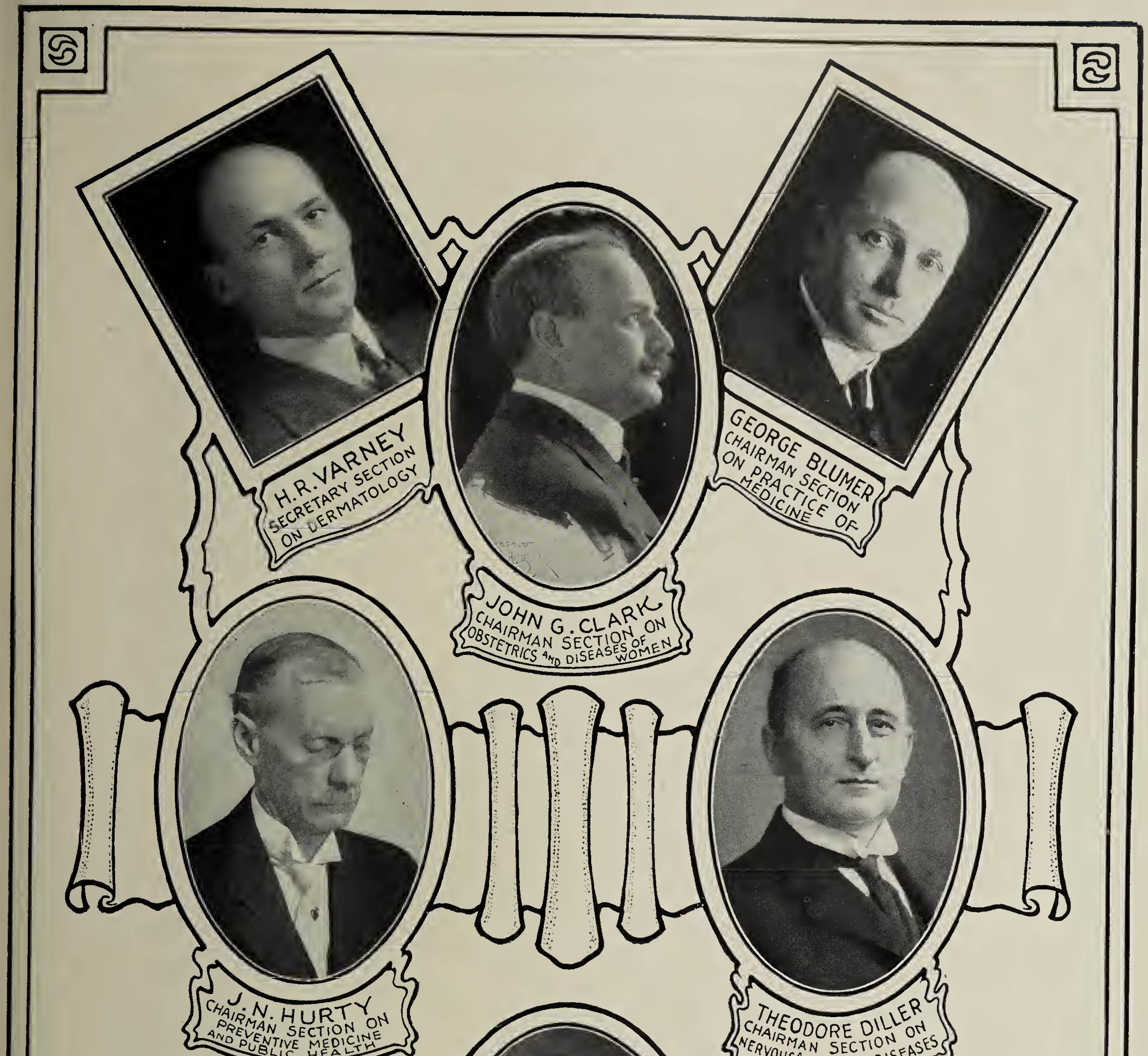
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## Address

## SOME PUBLIC HEALTH PROBLEMS*

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BALTIMORE

In view of the present active crusade for increased efficiency in all lines, I feel it pardonable to bring to your attention at this time some matters pertaining to health. Not that I can add to your knowledge of the subject, but only by frequent iteration is it possible to impress on the public mind the importance of these questions. General information is only of slight value, beyond adding to our self-complacency, and deluding ourselves as to what we really know. It is only when we analyze our information that we learn how vague our ideas are.

Hence my plea for indulging in a somewhat frayed-out topic is, that in reviewing the literature of our state and national health conditions, one is struck with two great truths: first, how enormous has been the success in dealing with many dread diseases, such as smallpox, plague, typhoid fever, cholera and yellow fever, all of which has been made possible by scientific investigation and data obtained largely through the labors and sacrifices of our profession; second, with the great fields yet to be cleared which are growing up daily from the seed sown by the previous crop of tares, and that these huge problems of health, state and national, are to be solved, I feel, largely by the medical profession, the biologist and the biologic engineer; and the latter must in course of his preparation pass through a medical training to understand his work.

To these achievements of the past I shall refer briefly in order that the possibilities of the future may be forecasted.

### SMALLPOX

The marvelous results of vaccination are incomprehensible to present-day physicians. I have seen but three cases of smallpox in sixteen years of practice, and the patients were in quarantine. Before Jenner's discovery, slightly more than a century ago, the toll demanded from the human family was one-tenth of the deaths from all causes. During the eighteenth century it is computed that at least 50,000,000 persons died of this one disease. Prior to compulsory vaccination in Prussia in 1874, it having been used intermittently up to that time, the death-rate was 24.4 per hundred thousand; during the next decade it fell to 1.5 per hundred thousand.

As early as 1826 Denmark had compulsory vaccination, and has enforced it so vigorously that not a case has occurred in ten years. Havana for eight years prior to its occupancy by the Americans reported 3,123 deaths from smallpox. In 1899, a year after our entry, there were four deaths and only three in the next seven years, a practical elimination of a scourge which had always existed prior to this time. This illustrates two factors—the entire prevention of a disease by a scientific immunizing agent, and the need of such laws as will protect the whole people, though this to some appears as a sacrifice of individual rights.

This plea for personal liberty, arising in the Old World, has invaded our land, and groups of obsessed and hysterical individuals have formed a society for attacking vaccination. These people band themselves together under the head of antivaccination societies, and by specious arguments endeavor to influence the uninformed as to the possibilities of disease being inoculated into them by vaccination. It remains for us then, to enlighten the people at large relative to the facts concerning vaccination, that their misleading arguments may be forestalled.

The freedom from smallpox which has been brought about only through vaccination is being used as an argument for legislation against the very agent which has made the controversy possible.

### YELLOW FEVER

Yellow fever in 1793, during a period of six and a half weeks killed one-tenth of the entire population of Philadelphia. Since that date approximately 500,000 cases have occurred in the United States, one-fifth of which terminated fatally. In 1900 experimenting by Lazear and Carroll Reed on themselves—having a certain species of mosquito (*Stegomyia*) inoculate them—confirmed the work of previous and coincident workers as to the true carrying agent of this malady, but sacrificed their noble lives that the world might be informed and many lives saved. So to-day as a result of this sacrifice, our country is practically free from this disease.

Havana has paralleled the elimination of its smallpox by reducing its cases of yellow fever from a death-rate of 639 to 100,000 people in 1896 to 4.3 to 100,000 two years later. These results have been due to protection from the mosquito and the general cleaning up and enforcing of the sanitary measures by General Wood and Colonel Gorgas.

Panama, under Colonel Gorgas, has been changed by sanitary means from a region fatal to life by virtue of disease into one as free of disease as the average country. Indeed, it may truly be said that sanitary science is building the Panama Canal, that its completion will be the most enduring monument to preventive medicine; and as the two great oceans commingle their waters, and as the world gazes on the majestic ships as they pass to and fro, it will perhaps be realized that the power of man is supreme over inanimate matter. This will give to all mankind the true faith and belief that the knowledge of sanitary engineering will increase, so that as the Panama Canal represents the completion of an undertaking of vast proportions, so will the causes of diseases be eventually circumvented.

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* President's Address to the Members of the Medical and Chirurgical Faculty of the State of Maryland Annual Meeting, April 26, 1910.

### CHOLERA, SCURVY, TYPHUS AND DIPHTHERIA

Cholera, formerly the scourge of the Atlantic seaboard, is now, since the discovery of its cause, practically a thing of the past.

Scurvy, which in the eighteenth century decimated the armies and navies of Europe, has been eliminated by the discovery of its cause, which was proved to be faulty nutritive and metabolic processes dependent on the deficiency of vegetable juices.

Typhus fever, popularly known as ship fever, jail fever, a scourge which ravaged the civilized world for centuries, is so rare now that I question if there is a practitioner in this audience who has seen a case in his whole experience. A disease of filth, overcrowding and lack of sanitation, its elimination has required only cleanliness, light and air.

Diphtheria, the very name of which brought terror to the heart of the mother and blanched the cheek of the father, has been robbed of its fangs, the mortality having been reduced from more than 40 per cent. to as low as 4 in cases recognized early.

### LABORATORY INVESTIGATION

Here improved sanitation has not availed in its arrest, but the laboratory has brought about a curative serum, to which method alone we must give full credit for relief from this dread disease. I can do no better than to quote the closing remarks of a paper read by Dr. William H. Welch in 1895, for it emphasizes two factors so well; the value of laboratory methods, and animal experimentation:

> The discovery of the healing serum is entirely the result of laboratory work. It is the outcome of the studies of immunity. In no sense was the discovery an accidental one. Every step leading to it can be traced, and every step was taken with a definite purpose and to solve a definite problem. These studies and the resulting discoveries mark an epoch in the history of medicine. It should be forcibly brought home to those whose philozoic sentiments outweigh sentiments of true philanthropy, that these discoveries which have led to the saving of untold thousands of human lives, have been gained by the sacrifice of the lives of thousands of animals, and by no possibility could have been without experimentation on animals.

Indeed, with the vast amount of material facts already collected, and with the results thus far obtained, the retrospect is assuring for the future.

The health problems present two phases which should be considered, as they are of equal importance, from both an economic and a humanitarian view-point. The improvement in our vital resources will result in increasing the span of life as well as decreasing disease during life, thereby prolonging the period of productiveness, and at the same time adding proportionately to the well days during life, in the same ratio as disease is lessened. Thus, as it has been said, we add to the breadth as well as to the length of life.

### SANITARY SCIENCE AND PREVENTIVE MEDICINE

If one compares countries where sanitary science and preventive medicine have sway with those not so regulated, the results are astounding. In India the average lifetime is less than twenty-five years. In this country it is forty-four years, taking Massachusetts as a criterion, this being the only state with a long accurate vital statistical record. The increase from century to century shows the marked effect of sanitation. India remains stationary. In Europe the average lifetime has doubled in three and a half centuries. The increase was approximately four years per century during the seventeenth and eighteenth centuries, while the first half of the nineteenth century showed an increase of about nine years, and the latter at least seventeen years.

Germany, the country of advanced sanitation and prevention, shows an increase of about twenty-seven years in a century. In this country, Massachusetts as a basis, the increase is only about half that of Germany.

When we compare the average lifetime in India with that in Sweden, and find it only half; and when we further compare all the intermediate statistics of various countries, we find that the length of life is directly proportional to development of sanitation. The conclusion is obvious, that the length of the human life can be prolonged or shortened by a change of those conditions on which it directly depends.

It is estimated that in the United States at least 3,000,000 persons are seriously ill all the time. Of this number one-sixth or 500,000 are sick of tuberculosis, of whom 150,000 die annually. It is believed that at least three-quarters of this number could be saved by preventive measures. The death-rate from tuberculosis in England is now only one-third of what it was seventy years ago.

This gradual decrease of deaths from tuberculosis, giving England a lower rate for this cause than any other country, is explained by Dr. R. W. Phillips of Edinburgh. He states that:

> The legislation of the past three-quarters of a century with regard to the dwellings of the poor, lodging-houses, work-shops and factories, and other public health enactments, have paved the way for the more direct attack. Through the influence of these measures mortality from tuberculous diseases has as steadily lessened as that from other infectious conditions. There can be no doubt that the housing question, using that phrase to include all considerations relating to dwellings, lodging-houses, schools, factories, etc., must occupy a chief place in the preventive program against tuberculosis.

This phase of the subject is one which needs more attention, particularly in this and other southern states where tuberculosis is so prevalent and so fatal in the negro race. When we realize that a large majority of people, estimated at 90 per cent., are all, at one time or another, affected with tuberculosis, and that but 10 per cent. die, enormous as this makes the grand total, we are justified in saying that in few diseases not self-limited is there a greater tendency to recovery than in tuberculosis. This one problem must be solved by a full realization on the part of those in legislative power of the possibility of prevention, by the enactment of suitable regulations, and appropriations of sufficient funds to properly enforce them. I feel that Maryland has been no laggard in this fight, and that its work will show remarkable results in another decade.

### PROTECTING WATER-SUPPLY

Typhoid fever exists throughout the United States to an enormous extent, the most of which has been directly attributed to the water-supply. Aside from the great financial loss and distress of mind in the care of cases of typhoid recovering, it causes 2 per cent. of all deaths, and it is generally conceded that Hazen's theory is correct, that every life saved from typhoid by better water-supplies, means two or three lives saved from other causes. The improvement of the water-supply of various cities has enormously reduced the occurrence of cases.

But there is a feature of the disease which we, as physicians should not lose sight of. It is to-day largely a rural disease, because of the proximity of wells to habitations; and the well in which hung the old oaken bucket has been the cause of many of the sad scenes of our childhood. The purification of these sources of water-supply cannot be attained by measures in rural districts corresponding to those employed in large cities, such as expensive filtration plants.

This condition can and should be met by the physician, first of all he should recognize the disease; and this in most instances may be more readily done by the improved methods of diagnosis. Secondly, he should realize that the disinfection of feces and urine will destroy the possible contamination of the drinking-water. Thirdly, he should make sure of protection from the "typhoid fly" carrying the germ from patient to food and drink. Finally, the usual sick-room precautions should be observed. Thus can we as physicians be the greatest factors in this fight. When we destroy the source of contamination, all water-supplies will remain pure.

I do not deprecate the necessity for modern sanitary water-supplies for large centers; they are of vast importance; but suitable precautions taken will reduce this disease to a minimum, even under the present arrangement.

We know that typhoid is a water-borne disease. The pollution of interstate waterways is the cause of a tremendous loss of life, and it is a problem which has led to the question of the power of the government to eliminate this evil without interference with state rights. Without exhaustively discussing this legal constitutional question, I may only quote without giving details, an opinion given by ex-Congressman George Shiras, son of Justice Shiras, to Surgeon General Wyman:

> The right of a government to regulate and control the extent and character of water pollution is a primary one and may, in the United States, be divided into two general classes: First, local waters, or those lying wholly within the confines of a single state. Second, interstate waters, or those traversing or lying within the territory of two or more states. In the first division, the sanitary jurisdiction over local waters is limited to the state courts, and all remedial or corrective legislation is vested solely in the law making body of the state. In the second division, however, the jurisdiction over the interstate waters may be a concurrent one of the state and federal governments, or at times, when the conflicting interests of the state in such common waters requires the intervention of a final arbitrator, the federal government becomes supreme in its determination of what constitutes an unreasonable and unnecessary pollution of waters common to two or more states. Thus it simply remains for the people to realize this danger and demand the proper protection.

The pollution of water-supplies from sewage is becoming daily a more and more serious problem. With the extension of rapid and convenient transportation, the suburban sections are becoming crowded; cities as dwelling-places are no longer appreciated; the tendency is to go to the country. In consequence of this there are many communities located along streams furnishing drinking-water to other communities, where no adequate provision is made for the disposal of the sewage, resulting in a constant saturation of the soil and pollution of streams. There must be some way of solving this problem. Health ordinances must be enacted for the suburbs as stringent as those for the city, if a serious condition of affairs is to be prevented. The pollution of streams within the state must be prevented by state authorities, and it is regrettable that it often seems difficult to enforce such measures. The people have the power in their hands. Public sentiment must be aroused.

### PNEUMONIA

The number of deaths from pneumonia is somewhat greater than that from tuberculosis. This disease causes 11 per cent. of all deaths in the United States, as shown from the mortality statistics of the registration area by the last census. Our knowledge of it is confined to its cause, its communicability and the wide distribution of its germs. The predisposing causes have been observed to be those things which lower the vital resistance, such as alcoholism, acute or chronic, exhaustion, exposure, and insufficient clothing or food. The means of its prevention by health measures, other than maintaining a high condition of vitality, are not known. It is therefore, a formidable problem for the laboratory man to solve as he has solved that of diphtheria.

### MALARIA

Malaria is preventable and is decreasing rapidly throughout the country. It can be absolutely eliminated in one of three ways: first, by eliminating the parasite from the blood by quinin or other therapeutic measures; second, by preventing the mosquito from biting a malarial patient and becoming inoculated, or by preventing the mosquito which has become inoculated from biting the non-inoculated person; third, by destroying all mosquitos by sanitary measures. I believe the first method, by the unstinted use of quinin, has thus far been the chief factor in the reduction of malaria, and I believe the cheapening of quinin to make it available was one of the greatest economic blessings the American people has ever had. Malaria is not a disease with a high mortality, but wherever and whenever it prevailed, the country or state of the country was markedly backward in its development. It is said the decline of the Roman Empire dated from the time the people discontinued the custom of anointing their bodies with olive-oil, thereby permitting the mosquito to bite and inoculate them with malaria, for a mosquito declines to bite through a film of oil.

While I am sure that everyone feels that malaria was only one of the many factors in the decadence of those wonderful seats of civilization, and that social degeneracy was really the beginning, perhaps this led to neglect of many sanitary measures, of which this was one. Malaria, while not of a high death-rate, is doubtless responsible for many of the disabilities of the South where its elimination has been neglected. Dr. L. O. Howard has estimated that there are annually 3,000,000 cases in the United States, most of which are in the South, practically all of which are preventable.

### PLAGUE

In plague we have a disease which has for centuries baffled sanitarians in their efforts to prevent its occurrence and spread. It was formerly believed to be communicated through the air and by the agency of fomites. The line of attack has been in the way of disinfection, with very inadequate results. It has been observed for many years that coincident with epidemics of plague, there was noticed a great mortality among the rats from an epizootic attack, and in 1894 Yerzin discovered that the *Bacillus pestis* was the cause of the attacks, and that the plague in man and rats was identical. By further investigation it was shown by Simonds in 1897 that the rat flea was the responsible transmitter of the disease. It is now generally admitted that the disease is primary in rats, and secondary in man, and by a process of elimination, the flea has been fixed as the intermediary. Then, as Dr. Richard H. Creel, who did so much work in San Francisco during the recent epidemic, says, the elimination of the rat is the only satisfactory method of getting rid of this disease.

It is well worth while to destroy all fleas possible, yet if those infesting the rat population escape, the effort will have had little effect in preventing the spread of plague. Major Morehead states that effort at rat destruction, (referring to such measures as trapping and poisoning, when those methods alone are used) is of doubtful value. The most efficient means thus far for the eradication has been that adopted by the Marine Hospital Service—building the rats out of homes; constructing in such way as to leave no nesting-places, keeping their number down by depriving them of food and breeding-places. The various experiments of developing a destructive micro-organism, or poisoning or trapping, have all been found inadequate.

### THE RAT

The rat is a recognized carrier of a number of diseases. He is subject to leprosy, cancer, trichinosis, plague and other serious maladies. Rats are of absolutely no value and are now recognized by the whole world as a menace to health and as carriers of disease, not only from one community to another, but from one country to another, as they are noted travelers, especially by vessels. From their great propensity to travel, the rat, from his native home in China, has over run the entire world. To-day a serious problem is the elimination of the rat both as an economic, as well as a health measure.

### HOOKWORM

The hookworm disease in the south has been investigated by Dr. Charles W. Stiles of the public Health and Marine-Hospital Service. Hookworm disease incapacitates for about one-quarter of the time; it is popularly called "the lazy disease," and is responsible for the so-called "poor white trash" of the South. It is curable by suitable drug treatment, and its elimination from the South will be of incalculable benefit.

### MENTAL DISEASES

Mental diseases are on the increase, judging from the data of Dr. C. L. Dana of New York, who sees, during the past twenty-five years, an increase from one case in 450 persons to one in 300, a ratio which seems to be about the same in North America as in Europe, where similar conditions prevail. This increase is doubtless due largely to the increase of alcoholic and drug habits and syphilis. It is estimated by Sanborn that the number of insane in the United States exceeds 250,000.

These diseases alone need a method of prevention, for it is recognized that nine-tenths of the inmates of institutions are incurable.

The line of attack must be against the predominant causative agent, heredity, alcohol, syphilis and environment. More enlightment of the profession as to early symptoms and a better knowledge by the laity will add to the possibilities of prevention by early methods of treatment. The elimination of the procreation of the insane, the criminal, the idiotic, is a timely subject. Such methods have already been adopted in Indiana, Connecticut and Michigan. Indiana has gone even to the extent of prohibiting the marriage of all persons suffering from any transmissible disease. This subject should be taken up by our Faculty and its possibilities and feasibilities thrashed out, before the next general assembly. We are fortunate in having a phase of it presented to-night by Dr. Barker as a preliminary to its future study. With the consent of the faculty I shall appoint a special committee to give serious consideration for our future endorsement or rejection to vasectomy in its relation to eugenics.

### DRUG HABITS

Closely associated with this doubtless one of the most serious medical problems of modern times is that of drug habits, which are far more prevalent in a variety of forms, than is usually realized. The commonest form of intoxication is alcoholic. This problem has been attacked largely along moral lines, and perhaps much good has been done, yet it seems to be one that should be approached from the medical side, and by educational methods as well.

The popular impression as to the harmlessness of alcohol in moderate quantities is erroneous. It is shown by scientists that the white corpuscles, the natural defenders, are weakened by its use. The alcoholic is more susceptible to the infectious diseases, because of a lowered resistance. There is hardly a disease to which it is not a contributory factor, nephritis, arteriosclerosis, cirrhosis of the liver and many others, besides all the possibilities of transmission to the offspring of various insanities and mental afflictions. From an economic view, alcoholism was found, on investigation by Prof. Henry W. Farman of Yale University, to be responsible for 25 per cent. of all cases of poverty coming under the eyes of the charity organizations, and 37 per cent. of all cases in alms houses. It was directly responsible for 31 per cent. of the criminals, and indirectly of 50 per cent.

The Massachusetts Bureau of Statistics in 1895 indicated that 84.41 per cent. of crime, 48 per cent. of pauperism and 35 per cent. of insanity were the results of alcoholism.

### VENEREAL DISEASES

The effort on the part of societies for moral prophylaxis to reduce venereal diseases is meeting with a degree of success in the education of the young people, and will doubtless prove of enormous value in the reduction of the incidence of such diseases. And while we know full well that continence is compatible with health, yet we all realize that continence is not as generally practiced as might be hoped. The question has presented itself, is it not better to recognize this fact, in this fight against the black plague and to teach a method of prevention although it may appear as condoning an unlawful act.

From these few facts I have endeavored to show that there has been a gradual increase in longevity. From the knowledge of past achievements it is fair to assume that, with the possibility of medical discoveries, the number of diseases which will be added to the preventable list will certainly increase.

Such diseases as cancer, nephritis and diabetes, are increasing, and the real causative factors are not recognized. The problems are yet to be solved. Cancer, regarded as a fatal disease of unknown origin, is now engaging the attention of medical scientists, and while the facts thus far gathered are very vague and indefinite, yet with the great minds of the scientific world centered on it, the secrets of its cause must ultimately be ascertained.

### GENERAL HEALTH PROBLEMS

The great problem of the future is the betterment of health by the education of the whole people as to its possibilities, teaching them the simple laws regarding food, drink, air and sleep. Our knowledge to-day is sufficient in itself, if it were employed, to increase human life at least fifteen years. Simply enacting laws will, in itself, be of little or no value, but such laws enacted and their value demonstrated to the people at large, preferably before their passage, will be beneficial just in proportion in which they are intelligently comprehended. The ideal time for teaching preventive medicine is in childhood; every school should provide some instruction along this line. The impressions of childhood are the effective, lasting ones.

The problems of health are not given great consideration by the usual adult. If he is an alcoholic, and has lived three-score years, this is attributed to the morning drink; if he were a smoker, tobacco has preserved him; if he were an abstainer, it is because of his abstemiousness. No one attributes it to a high degree of vitality; and here is the real problem in the fight against the usual diseases which decrease the breadth, and at the same time, while not in themselves fatal, lessen the length of life. The real problem, then, is to build up a constitution by prevention of diseases which we know to be preventable by sanitary means; to increase the efficiency of every individual by increasing his vital resistance, thereby establishing a bulwark against the inroads of many troubles which follow a depleted or lowered standard.

Another line of attack in the preventive measures should be an endeavor to prevent many diseases which lower the vitality, produce suffering and render soil suitable for the more serious maladies. Particularly is this true of influenza, and doubtless many of the nonfatal cases of infectious diseases in early childhood, which develop later into tuberculosis, nephritis or some other highly fatal disease.

### PHYSICIAN AS AN ADVISER

Why should not the physician bear the relation of an adviser in health? Would it not be a wise and economical move on the part of the public to have an inspection of their vital resources at regular intervals, as they do of their physical resources? Is it not customary in mechanics to have a close watch kept over the machinery to prevent accidents and to maintain them in a high standard of efficiency? I believe that many diseases orginate in early childhood, causing much suffering in after-life, which could be arrested by such examination. The insidious attacks of many diseases of adult life, such as nephritis, diabetes and others, would be disclosed and suitable early treatment instituted, so as to prevent their extension. How often we are consulted about tuberculosis too late to be of much service, while an early examination would have discovered it in its incipiency.

How hopeless is cancer unless there is early recourse to operation! Examinations should be regularly made, often in early and late life, not so frequently in middle life. They should be suitably compensated for, and the physician in return should give a close study to diets, clothing and exercise, that each might be suitably individualized.

### LEGISLATION

Along the line of health measures, which through the efforts of this state medical organization have become laws, I can make brief allusion to only a few. I would, indeed, be derelict in my duty were I not here to publicly congratulate the members of the General Assembly on their attitude on the health measures submitted to them for their consideration. The law-makers have realized that the public health is one of the most important assets of the state, and they have been guided by the views of the profession.

The presence of members of our profession on both sides of the house was of inestimable good in the cause of health, because of their ability to give lucid explanations to the lay members, and the profound confidence which their professional standing engendered.

The committees of this faculty on health legislation were indefatigable, and to them we owe a debt of gratitude for their untiring efforts.

The passage of the pure food law, drafted by the governor's commission, of which I was the chairman, was satisfactory to our faculty as represented by the committee. This law embraces every feature provided for in the faculty law to a most satisfactory bill, in that it includes a special proviso for standardizing disinfectants.

The passage of the bill for the state care of the insane places Maryland in the front rank of humanity, and corrects a condition which has been a discredit to the spirit of progress for which Maryland is noted. The measure will not only care for those who are incurably ill mentally, but will be the means of curing many early cases through supervision under trained specialists.

The enactment of the bills for the reorganization of the State Board of Health will systematize its work into bureaus, and thereby enable a closer watch to be kept on all the measures which protect the health of the people. Its appropriations will enable the bureaus to appoint specialists to watch over the departments, the water-supplies, sewerage, milk-supplies, and tuberculosis.

The passage of the midwifery bill as prepared by the committee, will be a great gain in the protection of mothers from incompetent and unintelligent women practicing midwifery. It will at the same time be the means of reducing enormously the percentage of blindness, for it has been demonstrated that nearly one-fourth of the cases in the Maryland blind schools have been in children delivered by midwives. The law was opposed by some who perhaps believed it impracticable, and for a time its fate was in the balance, when it reached the governor. His signature was secured only after the assurance of its practicability and value.

It, however, has brought it up squarely before the faculty, where they must endeavor to provide a way for its effective administration. We have now a law excellent in every detail; it demands that applicants to practice midwifery shall, to a degree, be instructed. At the present time we have no place for their instruction. The future committee on midwifery should endeavor to secure the cooperation of all hospitals with attached maternities, in order that such a course of instruction can be given. The Society for the Prevention of Blindness is fully alive to this immediate need, and will conjointly work with our faculty in this crusade against ignorance and disease.

With such results obtained by our faculty in its endeavor to secure legislation for the good of the people, demonstrating that we have secured the confidence of the law-makers, it only remains for us to continue our campaign of education in matters of health, and to demonstrate our knowledge of disease and that will enable us to secure all the legislation needed for the future.

At the present time we must realize that measures which are inimical to the progress and dignity of the profession are often times introduced for mercenary purposes, as in the recent optometry bill, or through the efforts of the misguided or neurotic, as in the antivaccination bill, both of which measures were defeated.

### ANIMAL EXPERIMENTATION

Such legislative efforts should remind us that it is incumbent on us to fully enlighten the public as to the true significance of vivisection, as there is a wave of opposition to its practice, sweeping over the country, fostered by deluded and misguided individuals, with their hysterical attacks of falsehood and calumny. Their grotesque and misleading exhibits all tend so to arouse the sympathy of the people as to inflame them to a radical and erroneous legislation. I believe it wise to take some heed of this mild form of insanity, which would arrest absolutely, the future advance of medicine.

Perhaps a small committee of hospital or college men to explain the means, significance and humane methods of experimentation on lower animals to the public by lectures, or through the daily press, would educate the people sufficiently, and offset the ravings of those so perverted as to believe that animal life is worth more than human, yet they themselves may not be vegetarians.

### NATIONAL DEPARTMENT OF HEALTH

To correlate all these forces working for the uplift of man, to increase his health and thereby his happiness, there can be no greater assistance than to elevate the profession to the highest honor to which it is entitled, and there is no more potent way to increase its field of usefulness, to engender for it the confidence of the people, to spread the gospel of health, to discredit fads and quackism, than to harmonize all departments under a national department of health. For this every physician, and every county and state society, and finally the national association should strive.

### PROMISE FOR THE FUTURE

Thus, when we look down the long vista of time and see one disease after another mastered by the science of medicine, and recall those reassuring words of Charles Darwin, "It is those who know little, and not those who know much, who so positively assert that this or that problem will never be solved." I feel, indeed, that the future holds many promises for the betterment of the human race.

330 North Charles Street.

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**Positive Tuberculin Tests in Syphilitics.**—Nicolas and Favre state that they obtained a positive response to the von Pirquet cutaneous and to the Mantoux intradermal tuberculin tests in 75 and 93 per cent. respectively of 28 and 47 syphilitics free from any suspicion of tuberculosis. This proportion of positive responses is as high as is obtained among the confirmed tuberculous, and consequently, they assert, neither of these diagnostic tests is able to differentiate tuberculosis from syphilis.—*Bull. Soc. Méd. des Hôp.*, March 17, 1910, page 239.

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## *Original Articles*

# THE EFFECT OF STOVAIN ON THE NERVOUS SYSTEM*

WILLIAM G. SPILLER, M.D.,
AND
SAMUEL LEOPOLD, M.D.
PHILADELPHIA

As stovain produces temporary anesthesia, it occurred to us that repeated injections of the drug probably would produce anesthesia of gradually increasing duration until finally we might obtain a persisting loss of sensation, which would be the result of organic change. Whether the same may be said of any other drug has not as yet been determined. We desired to ascertain whether a systemic degeneration of the posterior roots and their continuation in the posterior columns of the cord is the common result of the repeated use of stovain. It was important, moreover, to determine whether the paralysis that occurs in stovain anesthesia is of a motor or sensory type, i. e., whether it is produced by changes in the peripheral motor neurons, or is the result of abolition of all afferent impulses which normally pass over the posterior roots. Reflex action and all recognition of tonicity or relaxation of the limbs, and necessarily of the position of the limbs, are lost if all peripheral afferent impulses are cut off.

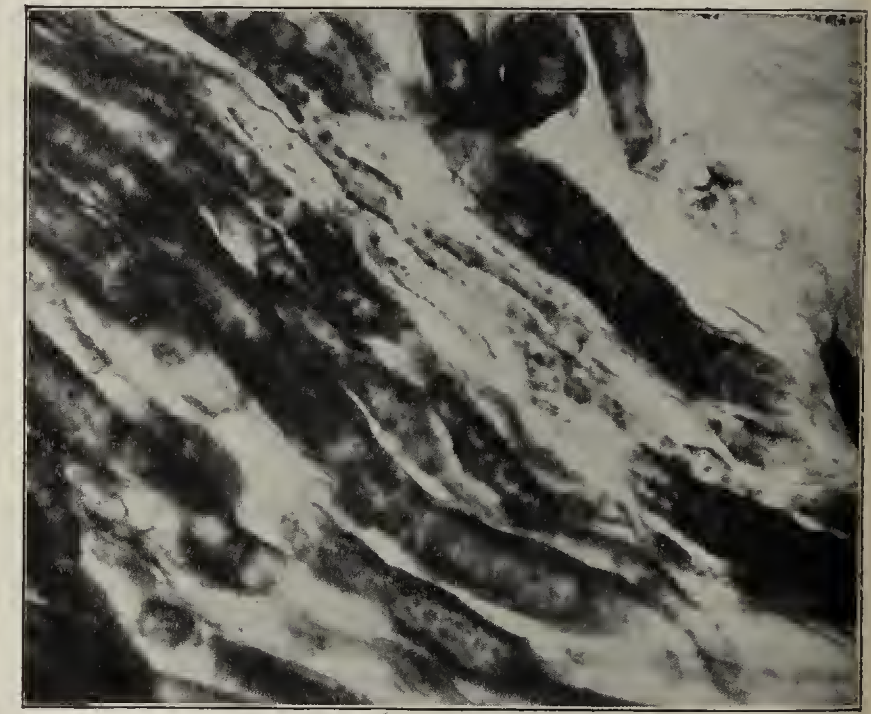

Fig. 1.—Section through a lower spinal ganglion, showing degeneration as small black dots, in the nerve fibers.

Some investigations regarding the effects of stovain on the nervous system have been made, but they are not numerous, and in certain respects the results do not fully correspond with those obtained by us.

Spielmeyer found changes in the cells of the anterior horns from stovain poisoning in man, the dog and the ape, of the character of reaction at distance. In man the cells of the spinal ganglia were not affected. He regards the cellular changes as primary notwithstanding their character. The alteration was seen only in scattered cells. He has never seen degeneration of the white matter in the cord of man; at most he has found changes in the nerve cells of retrograde type. He has had five cases, three in apes and two in dogs, in which the degeneration was confined to posterior root fibers and their continuation in the cord, so that it would appear that stovain degeneration may at times be confined to the posterior roots. He seems to have depended on the Marchi method chiefly, and there is no mention of teasing of nerve fibers and of staining them in the fresh state. The degeneration affected the short fibers of the posterior roots, the reflex collaterals more than it did the long fibers. The stovain, he thinks, attacks the extramedullary portion of the posterior roots, and the degeneration of the intramedullary portion is secondary to this. This process differs from tabes, in Spielmeyer's opinion, because in tabes the degeneration begins in the intramedullary portion of the posterior roots.

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*From the Department of Neurology and the Laboratory of Neuropathology in the University of Pennsylvania.

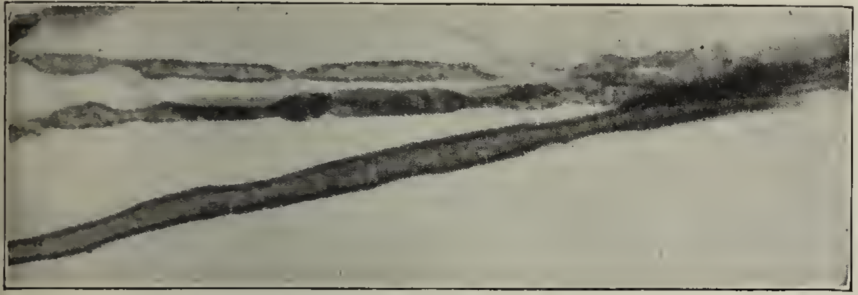

Fig. 2.—Fibers of a lumbar posterior root teased and stained with osmic acid, showing degeneration.

Spielmeyer states that the posterior roots outside the dural sac were intact, in contrast to the greatly degenerated cauda equina within the dural canal. In the spinal ganglia not only the peripheral but also the central nerve fibers appeared normal by osmic acid stain, so that changes were not noticed in the posterior roots until the roots had entered the intradural space and come into direct contact with the stovain. The degeneration of the anterior roots, in the cases in which the process was more extensive and was not confined to the posterior roots, began where the anterior roots made their exit from the cord, and the intramedullary portions of the anterior roots were intact. In both the posterior and anterior roots the products of disintegration were soon absorbed. The anterior roots were degenerated secondarily also in the portion beyond the dural sac, so that the anterior root in contact with a spinal ganglion frequently appeared degenerated while the ganglion and its nerve fibers at each end were intact. In ten experimental cases that Spielmeyer examined the posterior roots were predominantly or exclusively affected; he therefore concludes that stovain selects especially the posterior roots. He states that scar formation or inflammation plays no part; also that the degree of degeneration is not proportional to the amount of stovain used.

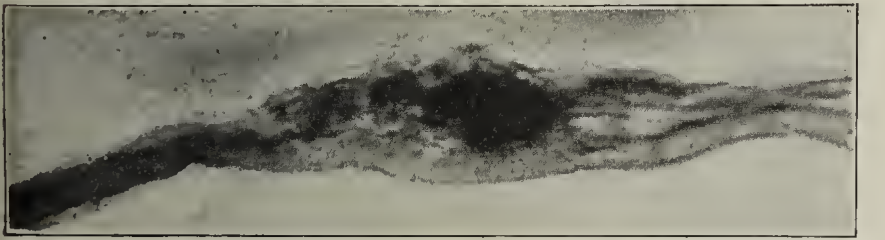

Fig. 3.—Fibers of a lumbar anterior root showing larger masses of degenerated myalin.

The changes in the cells of the anterior horns he found in man, as indicated in his illustrations, were pronounced. He found in animals swelling, displacement of the nucleus, and chromatolysis in the cells of the spinal ganglia. He thinks that the sensory and motor disturbances that occur after stovain anesthesia in man may be caused by similar changes in the spinal roots and in the periphery of the spinal cord, as are the temporary ocular muscle palsies from cellular changes; but pathologic studies are wanting in these cases.

Root degeneration has not been found in man, although Spielmeyer[1] studied the specimens from sixteen cases. In half of these cases death occurred too soon to permit the Marchi method to be employed. These findings are remarkable, as root degeneration was obtained in all his injected animals. The symptoms following injections in apes were not very positive. In dogs he observed temporary paraplegia with disturbance of sensation and of micturition.

The investigation as conducted by van Lier[2] and Wossidlo,[3] showed that the cellular changes were temporary. Wossidlo found, after injection, paresis of the posterior limbs, restlessness, frequent respiration and clonic spasm of the posterior limbs. Usually these symptoms disappeared after artificial respiration. In some instances opisthotonos occurred. The lumbar region was examined one to twenty-four hours after the injection, and he found chromatolysis and swelling of the cell. When stovain was used the most pronounced changes were seen after one hour. Scarcely any normal cells were found in the anterior horns. The changes were more pronounced after two hours, and improvement was noticed in the cellular condition after six hours. The cells were normal after twenty-four hours. Van Lier's findings were similar. They used rabbits. Wossidlo concluded that tropacocain was less dangerous than stovain or novocain and that changes occurred in the cells in lumbar anesthesia, but that they were not serious enough to prevent the use of drugs in this method.

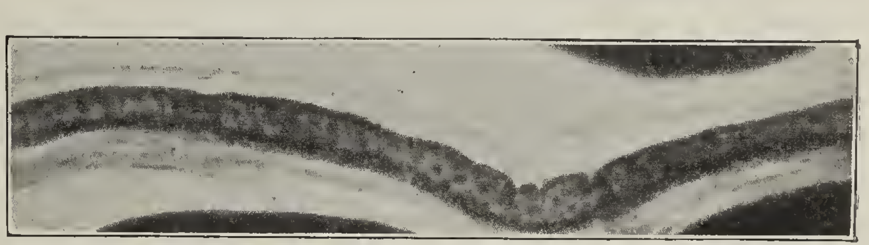

Fig. 4.—Fibers of a peripheral nerve from a hind limb, showing degeneration. In many fibers the degeneration was more advanced.

Rehn could not demonstrate any changes in the cells of the anterior horns until after three days; then they were found in the lumbar, thoracic and cervical regions, and yet only a few cells in any one section were altered. The alteration began at the periphery of the cell, and the nucleus became peripheral. Animals that had lived ten to twenty-one days showed by the Marchi method, degeneration in the entire periphery of the cord and in the entire posterior columns, in the latter apparently systemic in character. Only cells in the anterior horns were affected; sensory cells were intact. Rehn's report[4] is of findings obtained by Klose and Vogt.

The technic of our experiments consisted in performing lumbar puncture on five dogs with careful avoidance of infection. The stovain solution used on Dogs D and E was boiled. The dose of each stovain injection varied from 0.05 gm. to 2 gm. and except in Dogs A and B, in each of which only one injection was given, the injections were usually at intervals of two to three days.

The symptoms may be divided into the temporary and the permanent. The temporary consisted of flaccid paralysis and complete or partial sensory loss. The hind limbs showed flaccid paralysis, while the entire body frequently showed the loss of sensation, implicating even the ear. Bladder and rectal control was lost, and the tendon reflexes were either diminished or absent. These symptoms occurred immediately or several minutes after the injection was given, and persisted from one to several hours.

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[1] Spielmeyer: München. med. Wchnschr., Aug. 4, 1908, p. 1629; Neurol. Centralbl., Jan. 16, 1909, p. 69.

[2] Van Lier: Beiträge zur klin. Chir., 1907, liii, 413.

[3] Wossidlo: Arch. f. klin. Chir., 1908, lxxxvi, 1017.

[4] Rehn: Arch. f. klin. Chir., 1909, xc, 329.

The permanent symptoms consisted of ataxia, decreased sensation, and, in Dog E, loss of patellar reflex. The symptoms became permanent after the third injection, remaining until the end of the experiment. The ataxia was recognized by the irregular gait, and the tendency to stand with the hind legs well apart, and the peripheral part of the hind limbs well on the ground.

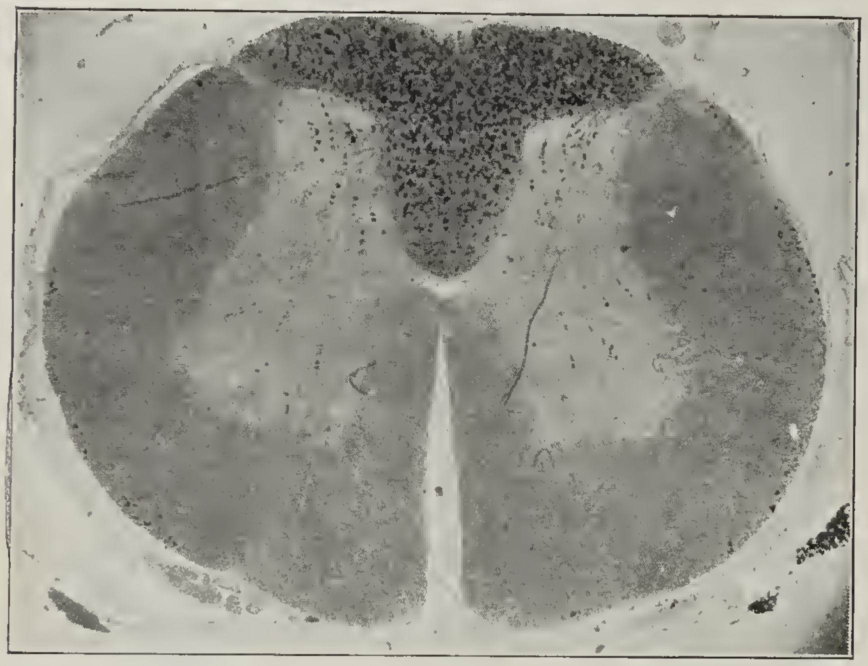

Fig. 5.—Section through the lumbar region (from retouched photograph) showing intense degeneration of the posterior columns.

Sensory disturbances were demonstrated by the clip test. Dog A lived one hour after the injection, Dog B four hours, Dog C seventeen days, Dog D 2 months and Dog E forty-two days. The investigations have not been completed, but the results obtained are interesting.

The alterations of the cells of the anterior horns were not important in any of the five dogs; in some slight central chromatolysis, and displacement and swelling of the nucleus were found. Dog D showed degeneration in the columns of Goll, more marked on one side, but dog E gave the most important results, and the following description is from the sections obtained in this case.

### LUMBAR REGION

Axis cylinders in the periphery of the anterolateral and posterior columns were found here and there considerably swollen; some were of large size; swollen axis cylinders were seen in the root entrance zones of the posterior columns, but otherwise not in the posterior columns except near the periphery. A moderate degree of cellular reaction to the stovain was detected in the pia and roots of the cord in the form of round cell infiltration, but never as cells of polynuclear type. This is not a surprising finding and resembles what is seen in tabes. One would expect some cellular reaction to a poison affecting the nervous system as does stovain. A very slight perivascular round-cell infiltration was seen here and there in the cord; it was so slight as to be of no importance, and its existence was disputable. The swelling of the axis cylinders in the anterior and posterior roots was very distinct, and the swelling affected most of these axis cylinders. One forms the impression that the axis cylinders were more swollen in the anterior than in the posterior roots.

The posterior columns in the lumbar region were degenerated, as shown by the Marchi method, throughout a transverse section, but much less so in the ventral zones. The reflex collaterals were also much degenerated, and the degenerated fibers could be traced forward into the anterior horns. Small black dots were found along some of the anterior roots within the spinal cord, and this finding indicates a moderate amount of degeneration here. A slight degeneration was found by the Marchi method along the periphery in the anterolateral columns; it was far less intense than in the posterior columns. In the thoracic region the degeneration of the posterior columns was confined to the columns of Goll; the columns of Burdach seemed to be intact. The degeneration of the anterolateral columns in the thoracic region was insignificant. The lumbar sections were taken fully one and a half to two inches above the point of injection.

Anterior and posterior roots taken between the dural cavity and the posterior ganglia were teased in the fresh state and stained with a 1 per cent. aqueous solution of osmic acid. They presented considerable degeneration, chiefly in the form of minute black granules within the neurilemma sheaths, and the degeneration was more advanced in the anterior roots. One could not conclude from this finding that stovain affects the anterior roots more than the posterior; rather the finding would seem to imply that, the roots having been affected by the stovain within the dural sac, secondary degeneration would be found in the portion of the anterior roots examined, and retrograde degeneration in the portion of the posterior roots examined. Nerve roots taken from within the interior of the dural canal unfortunately were not examined by this method.

The nerve fibers in one of the lower spinal ganglia, placed in the fresh state in 1 per cent. osmic acid solution, showed intense degeneration of the fine granular variety. The cells of the ganglion presented little degeneration.

A nerve taken from the hind leg appeared intensely degenerated, when placed in the fresh state in osmic acid.

The method of studying nerve fibers in the fresh state with osmic acid, employed by us, does not appear to have been used in previous studies with stovain injections: it has given most satisfactory results. It is probably because of the employment of this method that we have obtained distinct degeneration in the posterior roots between the dural cavity and the ganglion as well as in the ganglion itself—findings not obtained by Spielmeyer. Our results differ from those obtained by others in the absence of important alteration of the cells of the anterior horns, although we employed the thionin stain for examining these cells.

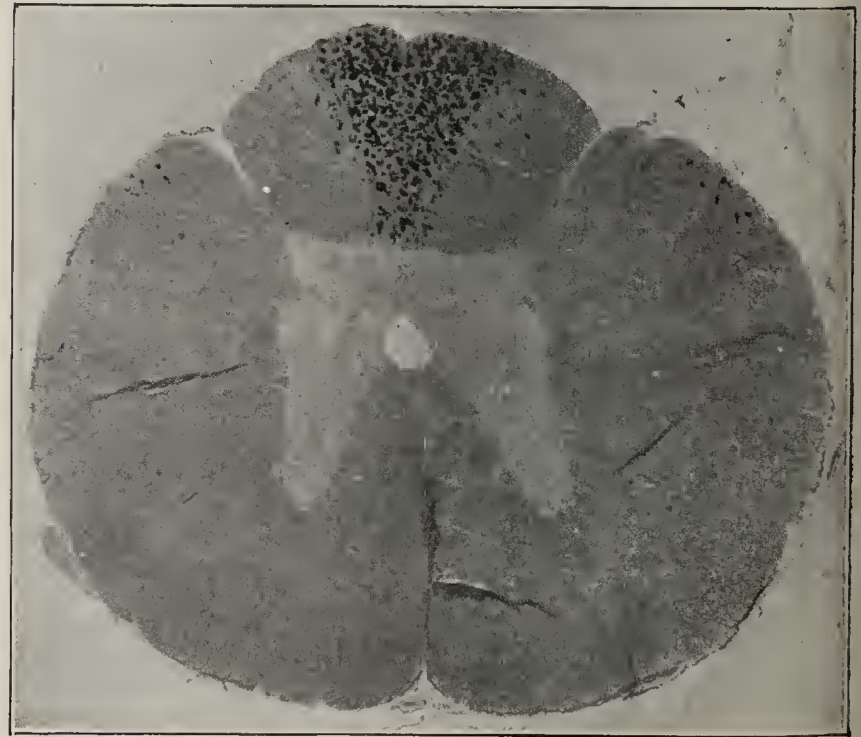

Fig. 6.—Section through the thoracic region (from retouched photograph) showing degeneration confined to the columns of Goll.

It seems clearly demonstrated that stovain affects especially the anterior and posterior roots; the degeneration of posterior root fibers in our sections was intense; what is worthy of note, the degeneration of the intrameullary portion of the lumbar and sacral posterior root bers in the thoracic region was still intense. The pos- rior thoracic roots were unaffected. Stovain evidently so causes slight degeneration in the periphery of the iterolateral columns, but has less effect here than on ie nerve roots.

These lesions obtained by us could not have been pro- iced by the trauma of the needle, as the sections of e lumbar region examined were one and a half to o inches above the point of injection, and yet the sterior and anterior roots were greatly degenerated. It would be unwarranted to apply these findings too rictly to man, as no grave changes have been found as t in the human spinal cord. At most our findings uld show that repeated injections of stovain might injurious, and would make one cautious in employ- several injections within a short time in the same bject. We do not know whether stovain has more ect on the nervous system of the dog than on that of n.

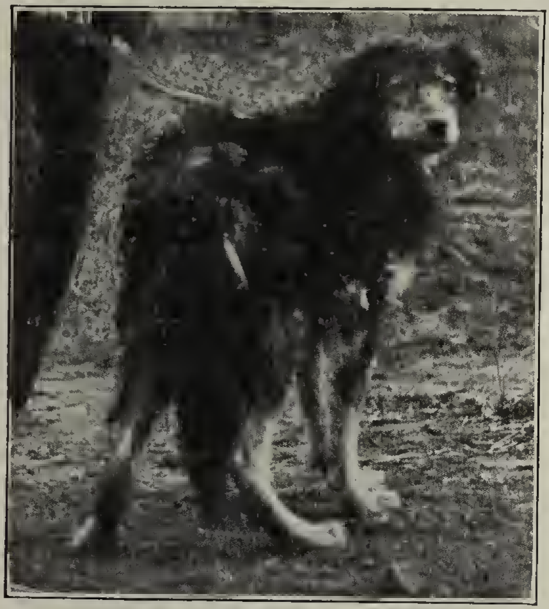

Fig. 7.—One of the dogs (Dog D) experimented on, showing xia of hind legs.

The investigations show further that the paralysis duced by stovain is of the motor type, as the anterior ts were greatly degenerated.

OTE ON CORRECTING THE PROOF.—Investigations made with gnesium sulphate have not given clinical results similar to sc obtained with stovain. Four injections of ten drops each saturated solution of this drug have been made into the al cavity of a dog, extending over the period from March 31 he present time. No ataxia has occurred, the dog walks the hind legs close together, and the reflexes are normal, sensation of the hind legs seems to be slightly diminished.

Ve are indebted to Dr. Allen J. Smith for the photo- phs.

)06 Chestnut Street—1632 North Franklin Street.

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**ampaign Against Uterine Cancer in the Argentine Republic.** he *Sociedad de Obstetricia y Ginecologia* of Buenos Aires ending out a blank circular to the general practitioners and ecologists throughout the country asking for data in rd to the number of patients with uterine cancer that e in their charge during 1909. Details are asked in regard he operability, operations, results of operation: survival less than one year, less than 2, 3, 4, 5 or more years; hs from the operation or complications, from other affec- s, or the ultimate outcome not known. The number of hs from cancer of the genital organs in Buenos Aires unted to 31 per cent. of the total female mortality from tions of the genitourinary apparatus during 1908. The al is published in the *Semana Medica*, 1910, xvii, 96.

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# FRACTURE OF THE PATELLA

## THE OPERATION OF CHOICE*

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### TYPES OF FRACTURE

Before the birth of antiseptic surgery Severino, the brilliant Neapolitan surgeon, in 1598 performed the first open-suture operation on a fractured patella. His patient died. Three hundred years later, Lord Lister, the father of antiseptic surgery, repeated the same operation. His patient lived. This bit of history is conclusive of little but suggestive of much.

Most frequent between the thirtieth and fiftieth year, rare under the twentieth, fracture of the patella is scarcely ever seen in children under 10. Eighty-eight per cent. of the cases are found in men. Of all bone fractures that of the patella represents 1.4 per cent. The decade between 40 and 50 years yields the highest number of cases.

We may distinguish the open and the closed types, the transverse and the longitudinal, the oblique, the stellate, and the comminuted. As many as nine fragments have been found in this fracture. Avulsions of the tip and of the basal margin are reported.

The line of division is central, or more commonly below rather than above the middle of the bone. The prepatellar fibrous tear may be above or below the line of bony separation. Often the lower end is ruptured; rarely the upper. Twofold and threefold transverse fractures are reported, the latter the result of refracture. In the compound fracture the T or Y-type is occasionally seen. The longitudinal form is rare. Comminution is frequent in direct violence, which constitutes 80 per cent. of all fractures of this bone. A fissure fracture may extend to the cartilage without involving it. The fracture may be simply subaponeurotic, with neither displacement nor other symptoms and discernible only through the *x*-ray.

Associated injuries are common and very significant. The dense ligamental fascia over the bone is almost always ruptured, the tear extending into the capsule, internally into the reinforcing tendinous fibers of the vastus internus and externally into the fascia lata—the extensor lateral expansion of the leg. With this condition the prepatellar bursa may be contused and there may be an effusion of blood into the joint.

The line of the ruptured aponeurosis is not always identical with that of the fractured bone. More frequently it lies above or below it, an intervening tab preventing bony union. This was the clinical observation of Macewen and König, afterward verified by Hoffa in his experiments on the cadaver. Barlöcker reported 28 cases with operation, in every one of which he found the fibroperiosteal intervention.

### ETIOLOGY

The condition is usually the result of a fall, a blow, or a gunshot wound. Bähr and Rossi's statistics show that the effect of muscular contraction has been overrated. This variety of fracture can occur only when the knee is extended. Rossi held that ruptures of the quadriceps tendon or of the ligamentum patellæ was infrequent, and that fracture, therefore, was due to a pathologic condition of the patella, or to a combination of muscular contraction and of indirect violence.

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* Read before the Medical Society of the District of Columbia, Feb. 9, 1910.

### SYMPTOMS AND DIAGNOSIS

The bone breaks with a sudden snap, heard as well as felt by the patient. The limb cannot be extended. There may be no displacement of the fragments; the separation may be very slight or, as seen in transverse fractures, lie from ½ to 3½ inches apart, with a very appreciable transverse groove between. Usually the greater the separation the greater the hemorrhage into the joint. If on the other hand the fracture is partial or only subaponeurotic, the lateral portions of the capsule intact, the patient may walk without great difficulty. A prepatellar hemorrhagic bursitis may entirely conceal a fracture. Here the *x*-ray is essential to diagnosis, as it is in the rare incomplete and subaponeurotic form. Unless the fragments can be pressed together, crepitus is absent. With fracture of the patella hemorrhage into the joint is constant. Occasionally it is so great as to rupture the upper portion of the capsule and diffuse beneath the quadriceps. As an aid to diagnosis we have the history of the accident, localized pain and tenderness, disability, abnormal mobility with or without crepitus; the knee-joint is swollen and distended with blood; often the finger sinks readily between the fragments. Commonly we see swelling of the knee-joint, pain, palpable separation of the fragments, loss of extension; the patient cannot elevate his heel from the horizontal position, while lying, or, standing, lift the injured limb from the ground. Mobility of the fragments is the rule; crepitus is less common. In the attempt to coapt the fragments, the pain may be marked. There is an independent lateral movement of the fragments, pressure on either of which is painful.

We must differentiate the swelling of the knee-joint, in this condition greatest after eight hours, from a recent traumatic bursitis. In the former, the normal depressions about the joint are obliterated, the fluid is intra-articular; in the latter, the bulging is circumscribed and superficial. The one condition may complicate the other.

### PROGNOSIS

Aside from age and complications, especially the extent to which the capsule is involved, the prognosis depends on the treatment. The greater the tear in the capsule and reserve extensors, the greater the loss of the power of extension, and therefore the graver the prognosis.

Atrophy of the quadriceps, absence of fibrous union and adhesion of the upper fragments to the femur are resultant deformities.

Fracture predisposes to refracture.

Refracture of the patella is more frequent than that of any other bone. In 250 cases of fractured patella, there were 30 recurrences, 11 after operative treatment, 19 after the non-operative. In 60 cases treated operatively, there was recurrence in one only.

Full use of the limb is rare; complete extension is seldom attained; limited flexion is the rule. In actual disability the thigh muscles are atrophied; in full return of function the loss by atrophy is regained, together with the normal size of the thigh.

Refracture is common, seen oftenest during the first few weeks of renewed activity; almost invariably it is within the callus. With refracture may be a complicating reopening of the joint. A refracture with the freshened edges sutured may give a subsequent bony union.

Thiem's studies would lead one to believe that bony union never takes place. Hoffa and others assert that it does. I can see no reason why bony union is not as possible, as probable, here, after exact coaptation and suture of the fragments, as it is in any other bone on which equal care and precision of adjustment have been exercised. One cannot doubt, however, that it is less common in the transverse than in the oblique or longitudinal varieties. In cases without operation especially cases of the transverse fracture, we may safely count only on fibrous union.

Union is generally secured at the end of the sixth week. Normal function is materially aided by the hypertrophy of the lateral expansion, and the contraction of the quadricipital and ligamentum patellæ fibers. The latest authorities on the subject say that while bony union has occurred, "it is very rare in transverse fracture" (Keen). "Even in some operative cases which have again come to direct inspection after many months, the union which was so close that no independent mobility could be recognized has been found to be fibrous" (Stimson).

Boeckenheimer in 55 cases of fractured patella found lacerations of the accessory ligaments present in 48.

### TREATMENT

#### *Non-Operative and Operative*

Five factors contribute to improper coaptation of the parts: (1) contraction of the extensors; (2) tear of the lateral aponeuroses; (3) intra-articular hemorrhage; (4) fibro periosteal interposition; (5) tilting of the lower fragment, forward or backward. Proper treatment therefore must correct all five of these defects.

#### *The Non-operative Method*

In the absence of rigid aseptic technic, no one at all familiar with these conditions will deny that non-operative procedure is best; especially in the aged and in those cases in which accurate approximation is without difficulty and in which contusion is so great as to preclude primary union of the bone. The leg and thigh should be raised to an oblique angle with a well-padded posterior splint, a little wider than the limb, extending from the hip beyond the heel, with the heel itself thickly covered to prevent pressure soreness. Absorption is thus hastened. Aspiration under antiseptic precautions with elastic compression and massage, ten minutes three times a day, are valuable aids. After an elapse of five or six days when the effusion has subsided, with the limb still extended so that the quadriceps is relaxed, the fragments should be brought into accurate apposition by means of six or eight one-inch adhesive strips applied three or four above, three or four below, the line of fracture, each overlapping one-half the other and all brought around and fastened to the posterior splint. Finally an additional strip, broader than the rest, should be applied over the center of the fracture to prevent any tilting upward or forward. It is advisable to leave these firm and untouched for six weeks. An excellent substitute for the posterior splint is a removable plaster mold extending from the groin to the toes, split in the median line after hardening, and held tight by a spiral roller bandage running full length. This permits removal for examination at will and is easily reapplied. With the aid of crutches at the end of six weeks the patient first places his foot lightly on the ground, and gradually, as the days elapse, permits it to withstand his weight. It is best to continue this protection and support to the knee for six months, following passive and active motion at the end of the sixth week. Crutches are discarded at eight weeks, the cane and removable splint at six months. Due care during all this time should be exercised to avoid falls, sudden and jerking movements to prevent refracture.

Hemorrhage, if imminent, may be retarded, if not prevented, by wet compress, bandage, and elevation in the Volkmann splint, to relax the extensor; or the region of the knee may be firmly bandaged from below upward with a rubber elastic bandage and put on a well-padded posterior splint, unmolested for forty-eight hours. If there is much distention about the joint Schede aspirates.

If open suture is inexpedient Bardenheuer and Lichtenauer use weight extension, 30 to 40 pounds, to relax the extensors, continuing this from four to six weeks until union is accomplished.

Fibrous union often occurs with a limited extension and flexion, as is seen in the protracted fixation of a plaster splint, with such sequelæ as shrinkage of the capsule, adhesions, and atrophy of the quadricipital group.

Where the lateral expansions have not been involved, on the other hand, only a small amount of functional impairment may follow the fibrous cicatrix.

Metzger, Tilanus, and others, have recommended early massage and mobilization. Tapotement and kneading are begun during the first forty-eight hours following the injury, directed to the joint as well as to the muscles of the leg and thigh—the fragments held the while by an assistant. The upward stroke aids in blood resorption. Individual cases are helped by the faradic current. Under this treatment passive motion is begun at the end of the first week; the patient is allowed up at the end of the second, when light exercise is instituted; first walking on crutches, then with a cane; finally at the end of the sixth week, he is discharged.

The extreme methods of zum Busch and of Kraske are not to be recommended. For as observed by Soutter, the value of massage is unquestionably overestimated. True, it does aid resorption of intra-articular, peri-articular and intramuscular diffusion. Increase and preservation of muscular tone can only be accomplished through exercise. If the reserve extensors are ruptured entirely or even for the greater part, loss of function leads to inevitable atrophy of the extensors in spite of ample massage and early exercise. Further, the muscular contraction under these circumstances separates more widely the fragments and adds to the labor of operative procedure later on.

Aspiration of the blood is unsatisfactory because of the debris, clots, etc., and is attended with the danger of infection.

To despair of bony union at the outset is for the physician to acknowledge a misplaced confidence on the part of the patient. On the contrary it would seem advisable in most cases to attempt exact coaptation and ossific union by the direct method, and to prevent ill results by instituting muscular massage at the beginning, followed by passive motion during the first week, and active motion after the second.

### *The Operative Method*

Trendelenburg recommended a delay of eight days in the operation with a view to determine the chances of recovery without it and to allow for subsidence of the swelling. If open suture is clearly indicated why should we delay twenty-four hours unless it be to impugn our present-day technic? Do we not get the patient out just eight days earlier by an eight days' earlier operation?

As a rule the operation should be as early as possible. Various incisions are in use, such as the transverse—the longitudinal |, the semilunar with convexity upward ∩ , the semilunar with convexity downward ∪ , the semilunar with convexity inward ), the semilunar with convexity outward (, and modifications of all six of these.

Some use drainage, some do not. Intra-articular drainage except in plainly septic cases is to be condemned.

Some irrigate the articulation, some use the dry sponge, some do neither. The solutions used are bichlorid, 1:1500; phenol in various strengths, physiologic salt solution, and sterile hot water.

For suturing both hard and soft structures, materials of both absorbable and non-absorbable character are in use. Some use pegs. Most common of the absorbable sutures may be mentioned plain and chromic catgut, and kangaroo tendon; of the non-absorbable, silver wire, iron wire, aluminum bronze wire, copper wire, Pagenstecher thread and heavy silk.

Men of equal surgical skill and ability differ widely as to their methods of operation. What then is the best method? The answer to this question should be based not only on theoretical grounds but on the study of the pathologic conditions found and on the final results.

When operation is clearly indicated I believe it done best when done most quickly. What is the operation of choice for fracture of the patella? Having observed and followed up a number of cases I would humbly suggest the following as the operation of choice:

The time should be as soon as possible after the injury; the operation should be done under ether anesthesia, with the strictest aseptic technic, gloves and exclusively instrumental handling; the semilunar incision with convexity downward should be used, commencing a little above the fracture line internally and carrying the oval incision downward and below the tibial tubercle and up on the external lateral surface to a point opposite that of the beginning. The flap should be turned back on itself to expose both the fractured bone and the ruptured aponeuroses, and the interposed fibroperiosteum removed. The joint should be thoroughly and completely irrigated and all clots and liquid blood removed with hot sterile physiologic salt solution (or 1:5000 bichlorid, followed by sterile water, if there is the slightest suspicion of infection). Stout bone-forceps now hold steadily the fragments while the bone-drill, directed obliquely through two thirds its thickness and always avoiding the joint, is passed through each fragment, the holes in the upper and lower fragments being in exact alignment and always as few as possible. Both points of entrance and points of exit in each bone should correspond with those of the other. The drill-holes throughout are from without inward and, as stated, always as few as circumstances will permit, and just large enough to accommodate wire of the smallest diameter practicable. All drilling is completed before inserting the wire. The wires, preferably silver or iron, passed, they are grasped with blunt-nosed forceps, and while the assistant carefully approximates the margins, the surgeon tightly twists the wires three or four times on themselves, cuts them off a quarter-inch long, bends them down and buries them beneath the fibroperiosteum, which is then sutured above. If the fibro-periosteum be interposed and is ragged when drawn out, its edges should be neatly trimmed of roughened projections, carefully coapted after the bone is sutured, and stitched, first with interrupted chromic catgut and reinforced with a continuous suture of the same material. The rent in the capsule, so common on either side of the fractured bone, is repaired with equal carefulness and with the same suture material. An additional continuous suture of fine chromic gut is used to repair the fibrous covering of the patella incised in raising the oval flap. The skin flap is then sutured with three light silkworm-gut sutures, the first in the center at the tibial tubercle, followed by one each at the halfway point on the ascending lateral line of incision, and this in turn followed by a continuous fine plain catgut suture of the entire skin wound. No drainage is used; a moist bichlorid compress over the site of the wound is followed by a sheet-cotton bandage from toes to middle thigh, and over this a light removable split plaster mold, applied with the limb in complete extension, in which it is kept, heel slightly elevated, with as little interference as possible for two weeks. Then massage is used, passive motion, light exercise, walking on crutches, then with a cane, and then with mold splint alone; and finally, at the end of the sixth week, without any support whatever, the patient is discharged as cured.

In support of this method the following points of advantage may be cited:

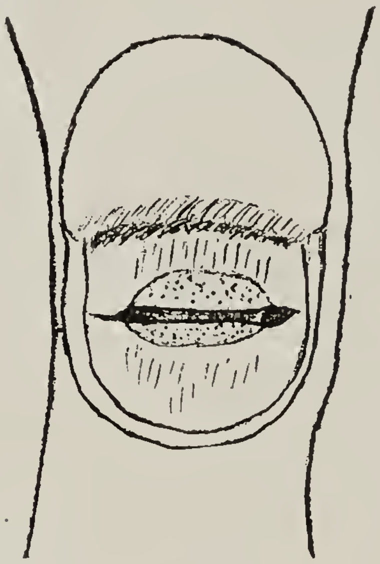

Fig. 1.—Incision of the author's choice.

There is no loss of time; the safest anesthetic is used; absolute exposure of the entire field of injury is obtained, especially of those most important structures, the lateral expansions; the articulation is made perfectly clean with a non-irritating solution; a suture too small to excite irritation is used and one that is non-absorbable, therefore effective to hold till union has had abundant time to take place; there is no necessity for post-operative drainage; activity is too late to fear fracture recurrence, too early to invite atrophy; and though of exceptional occurrence, a tear of the accessory ligaments with no separation of the bony fragments noticeable on inspection or palpation would be exposed. Immediate operation admits of union by first intention.

Fibrous union leaves a weakness, an uncertainty, an instability, a timidity on the part of the patient, frequently resulting in his falling, which in turn induces refracture. Absolute functional recovery in fibrous union is exceptional.

Small incisions fail freely to expose the operative field, render difficult the cleansing of the joint and the repair of the lateral capsular and aponeurotic tears.

The vertical incision leaves a cicatrix exposed to pressure on kneeling and remains tender, limits the field of operation, makes difficult the passage of wires; the rents in the lateral expansion are not easily reached; and manipulation of the fragments is difficult.

The transverse incision is open to the objection that often the osseous and cutaneous cicatrices correspond, increasing the facility for compound refraction; infection, too, passes readily from the outer to the inner wound; a stitch abscess may produce a septic arthritis; drainage is difficult.

A flap with convexity downward has a better arterial and nerve supply; it admits most easily of drainage.

Irritating antiseptic irrigations, such as phenol, bichlorid, etc., are injurious to the joint endothelium, lower its resistance to infection, and predispose to inflammation. Physiologic salt solution accomplishes the same purpose as the irritants without any of their disadvantages. Dry sponging, in cases in which the parts may readily be reached, is preferable to either.

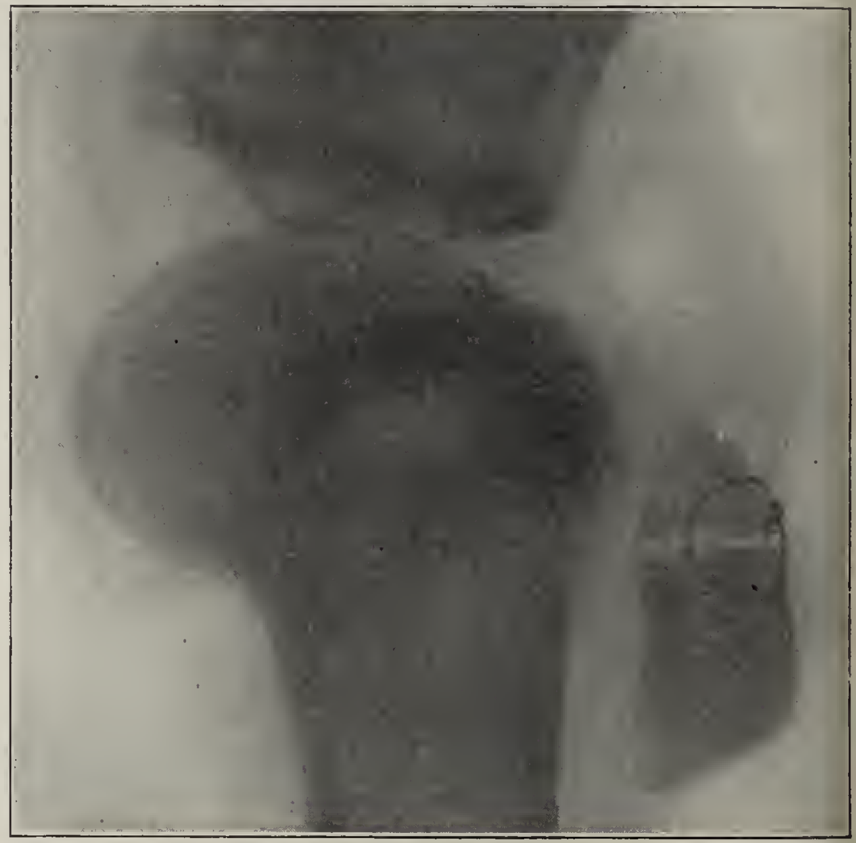

Fig. 2.—Author's method of wiring. Joint radiographed day after operation by Dr. T. A. Groover; the wire does not enter the joint; its head is turned down and buried beneath the fibroperiosteum.

Patient (for whom author is indebted to Dr. George Tully Vaughan), A. H., aged 20, male; on the afternoon of July 14, 1909, while running, stumbled, fell to the ground, and was unable to assume the upright position afterward. He was brought to the Emergency Hospital, where examination showed transverse fracture of patella, fragmentary separation 2 inches, showing considerable involvement of the lateral expansions; knee-joint much swollen, painful, and distended with blood; extension lost; wide lateral movements of the fragments. Operation next morning—open method, wired—patient discharged, cured, Aug. 21, 1909. The technic, operative and post-operative, was that described herein.

The question may be asked, when the open operation is indicated, when contraindicated. It is indicated in fractures productive of functional joint impairment, such as those in which fragments have entered the articulation; in the one-legged, in whom ankylosis following fracture would produce complete inability to walk; in bilateral fracture of the patella; in refractures; in ununited fractures, the result of attenuated fibrous union or faulty position; in unrepaired aponeurotic laceration.

The open method may be confidently recommended in the presence of an aseptic environment, a competent surgeon, safe suture material, favorable physical condition of the patient, bad position of fragments, in all compound fractures, all comminuted fractures, in profuse intra-articular effusion, hemorrhagic or inflammatory, in interposition of the fibroperiosteal tissues.

In compound fracture the necessity for open suture is self-evident; so, too, if bandaging fails, and also in the presence of a weak, extensile fibrous repair.

When is it contraindicated? In the diabetic, in advanced tuberculous disease, in chronic cardiac, renal, or hepatic disease, in longitudinal fractures of the closed type and without displacement, in simple subaponeurotic or incomplete fractures, and those in which separation of the fragments is so slight as to be barely detectible.

Malgaigne's clamp and Trélat's modification thereof are to-day merely historic.

To the subcutaneous work of von Volkmann, in 1868, of the earlier labors of Kocher, Ceci, Heusner, Butcher, Barker, and the rest, I am compelled to make the same objection as to every other subcutaneous method, namely, that the interposition of the periosteum and the lateral tears are disregarded; further, that the joint may be opened. The only point in its favor is the fact that it was the forerunner of the direct suture method.

As between Lister's transverse incision at the fracture ine, and a longitudinal or transverse incision not in line with the fracture, the latter is to be preferred.

Strict asepsis is the first requisite and the last indispensable point in the technic of the open operation. Nowhere are results better with it; nowhere worse without t. An infected arthrotomy is more to be dreaded than n infected laparotomy. Palpation with a gloved hand hould be reduced to the minimum. If possible the peration should be entirely instrumental.

If the quadriceps is much retracted and the attempt o approximate the fragments fails when the thigh is exed, the muscles fully relaxed, and the knee extended, hen a plastic operation may be done by division of the gamentum patellæ or the quadriceps.

Where separation is considerable, Rosenberger, Helerich, Wolff, Tenderich, and others have recommended steoplastic operations with varied results. All methods iling, strong elastic bands may be made to duplicate ie action of the extensors and must be permanently orn. Ankylosis following resection of the patella is etter for those who cannot afford expensive apparatus –a last resort it is true, but to be preferred to a limb icapable of extension.

Suture of the ruptured peripatellar and parapatellar poneuroses is of the utmost importance. Whether it be f the quadriceps tendon or of the ligamentum patellæ, is an injury the repair of which is equal in importnce to that of fracture of the patella itself. Immeditely following fracture of the patella the lateral exnsion of the rectus, vasti, and sartorius, together with he fibers of the fascia lata proceed at once on the carious function of extension.

Following are statistics of thirty cases treated in the assachusetts General Hospital, in which final results ere noted:

Unsutured, 6 cases, as follows:

| Result. | Cases. | Per cent. |
|---|---|---|
| Perfect | 3 | 50 |
| Fair | 1 | 16.5 |
| Poor | 2 | 33.5 |
| Serviceable knees | .. | 66.5 |

Sutured, 24 cases, as follows:

| Result. | Cases. | Per cent. |
|---|---|---|
| Perfect | 17 | 65.5 |
| Fair | 5 | 19.0 |
| Poor | 4 | 15.5 |
| Serviceable knees | .. | 84.5 |

### CONCLUSIONS

As between the operative and non-operative methods, in the absence of a competent surgeon with all antiseptic precautions, the non-operative, conservative, treatment should be the rule. On the other hand operative procedure obtains a better functional result and obtains it much more quickly than the non-operative procedure, and may be confidently relied on in the hands of those who have formed the habit of taking all the necessary precautions.

With operation, the chances for bony union are far greater; the torn aponeuroses can be repaired and there is far less danger of refracture. The most satisfactory results are obtained by the oval incision, convexity downward, and suture of the patella; by this method joint diffusion is promptly relieved by irrigation or dry sponging; the fibroperiosteal interposition is entirely removed; apposition of the fragments is exact; tilting is corrected; massage and passive motion can be begun earlier, the whole process of repair, recuperation and convalescence is hastened. It admits of prompt and complete removal of all detached bony fragments; all articular effusions, and all extravasated blood, intra-articular or extra-articular, liquid or clotted.

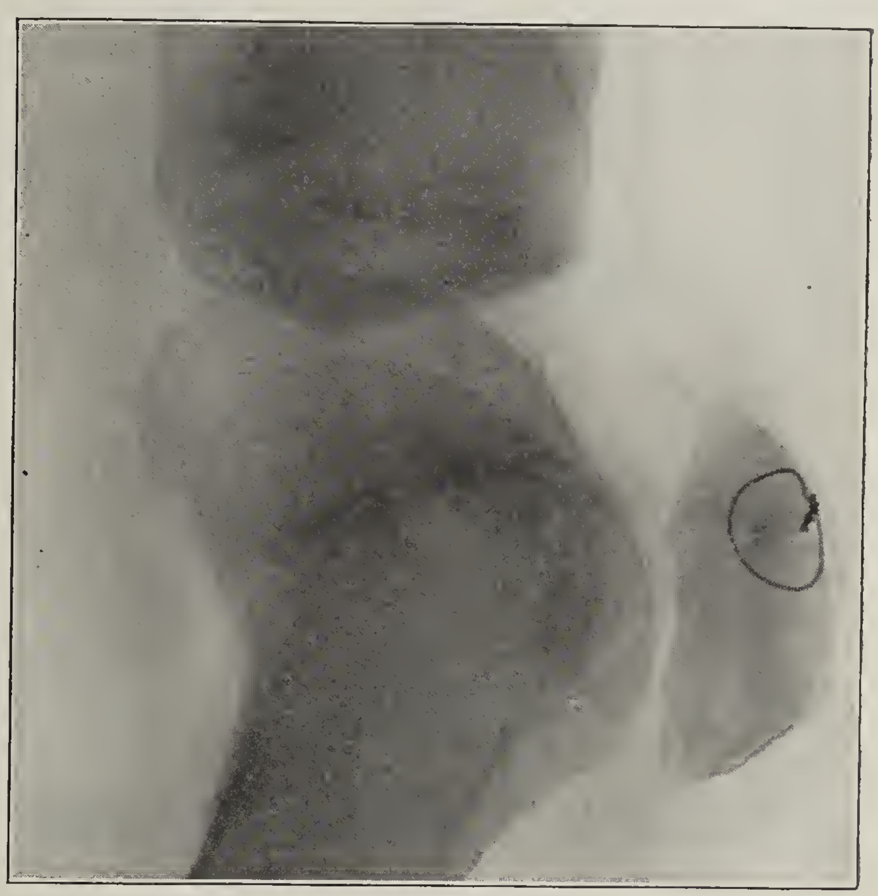

Fig. 3.—Same case as shown in Figure 2. Joint radiographed seven months after operation by Dr. T. A. Groover; illustrating bony union; function almost perfect, flexion 45°, extension 180°, respectively. No atrophy of the quadriceps; patient goes up and down stairs without difficulty.

The subcutaneous operation is to-day obsolete. Its latest chief advocates, König and Kocher, are now most enthusiastic in their adoption of the open method.

The circumferential loop has few followers, as has that method by which the bony fragments are simply apposed and the suturing confined to the peripatellar tissues.

The dangers of the open method, done under proper precautions and by competent men, are practically *nil*. A point deserving of special emphasis is the after-care of the patient—an absolute requisite to success.

In interposition, operation is imperative.

Wire should never be carried deep enough to penetrate the joint as it will irritate the cartilage and produce an arthritis.

Impaired function results in union from faulty position.

The combination of the interrupted and reinforced continuous chromic catgut suture is the making of assurance doubly sure.

Absolutely accurate coaptation and repair of the accessory extensor aponeuroses are vitally essential—in some cases even *more important than coaptation and repair of the bone itself.* Eminent authorities to the contrary notwithstanding, bony union of the transverse fracture—the one most difficult of functional repair—can certainly be accomplished if the carefully sutured bone is reinforced by an equally carefully sutured aponeurosis.

If exposure is decided on at all then ample exposure of the field of injury under aseptic precautions is always justifiable.

Other things being equal, the oval incision, convexity downward, admits of the best drainage, should necessity for drainage arise; while at the same time it retains anatomically the best arterial and nerve-supply.

The most progressive European and American surgeons are in one accord that by far the best results are obtained by the open method and suture.

The suture material, if non-absorbable, should be the smallest consistent with the requirements, and the possibilities of pressure-necrosis should be reduced to the minimum by complete extension of the limb held in the oblique position, which insures the great desideratum of every method of treatment—complete inactivity of the quadriceps extensor.

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# A WATER-CURTAIN FOR COOLING ROOMS

## PRACTICAL FOR CROWDED WORKROOMS, FACTORIES, HOSPITAL WARDS, TENEMENT HOUSES, AND FOR COLLECTING DUST

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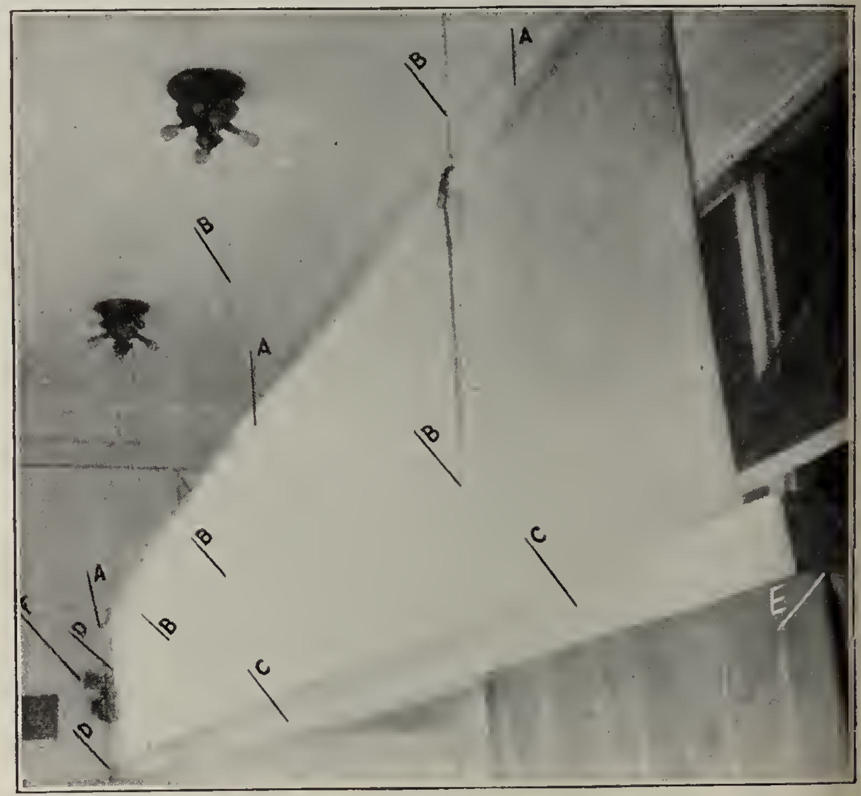
It is intended to show, by the illustration here presented, a simple, cheap, but effective, method for reducing the temperature and collecting dust in sick-rooms, crowded factory workshops, tenement houses, etc., during the summer in large cities, which may also be adapted to residences in tropical countries.

Various methods have been in vogue for cooling purposes in large buildings by the use of ammonia and brine coils, but they are very expensive to instal, often costing thousands of dollars, and are heavy and cumbersome. There are other possible objections to be urged against the refrigerator method. For instance, all windows in the rooms must be kept closed, and for this reason, in the subtraction of moisture from the atmosphere, there is a possibility that with the condensation of the aqueous vapor in the form of frost on the coils other necessary normal constituents of the atmosphere are extracted and withdrawn at the same time. Too great a chill may be produced in contrast to the hot weather and high temperature elsewhere existing outside the building in which the ammonia system has been installed, with, of course, disastrous results, so far as health is concerned, to employees or occupants of the building on emerging into the heated atmosphere from the cooler air, or the rapid cooling of a perspiring body on sudden, incautious entrance into a chilled room.

The simple, safe, old-fashioned method of shaking out wet towels in the sickroom and hanging them over the head of the bed to cool the temperature, as practiced for many years in country districts, gave me the first idea on which I have attempted to elaborate somewhat and to utilize and adapt it in a large way to modern living and working conditions in large cities during the hot season.

The system is one of absorption of moisture by the atmosphere and varies, of course, with the humidity present in the air as to the amount of water taken up by evaporation. The tests were made in the emergency room at the Government Printing Office, Washington, D. C., which is approximately 45 by 15 feet in size. I have been enabled to reduce the temperature from day to day, the reduction varying from 6 to 11 degrees F., through the amount of humidity present and temperature of water during the past summer. When a temperature of 96 F. or 98 F. exists, in the shade, the reduction mentioned is very much to be appreciated.



Water-curtain for reducing temperature in sick-rooms, factories, etc.

The water-curtain is made up and consists of a tin speaking-tube (*aa*), the sections of which have been soldered together and perforated with one-eighth-inch holes at a space of one inch, to make the required length of 40 feet for the experiment. The speaking-tubes, of course, by adding sections, can be made any required length up to even 300 or 400 feet, if necessary. From this hangs suspended a strip of cotton twill some 3 feet in width and 40 feet in length. In the top of the curtain a large hem has been taken, through which the perforated tin speaking-tube is run, somewhat like a window-blind stick in a window-curtain. The tube is connected at one end with an inlet (*dd*), consisting of a piece of rubber tubing connected, in turn, with a water-faucet on the wall, the other end of the described tin tube being blind. Perforations in tin tube can be made with a nail. The rubber tubes at *dd* and *ee* are connected with trough and tin speaking tube within them, respectively, by means of tin "thimbles" or small tubes surrounding the orifices made for outlet and inlet.

A box suspended against the wall over the curtain and lined with zinc to prevent leakage may be utilized, if there is no running water in the room, and may, in addition, be filled with ice, which will serve to give a egree or more lower temperature than the city water- ipply. A wash-boiler with faucet on the end will an- ver nicely for this purpose.

At the bottom of the cotton fabric is a tin trough c), in the center of which, at the bottom, are soldered e screws, which, in turn, connect with an iron rod ushed through a hem taken in the lower part of the ırtain or fabric. This enables the curtain to be drawn ut and hang directly down into the trough (*cc*) and events dripping from the sheet above to the floor.

The water-curtain is suspended from the ceiling by ıains or rods (a clothesline answers very nicely), hich, affixed to the ceiling, continue downward to the be (*aa*) and thence down to the edge of the trough c), thus giving the necessary balance and stability to e whole scheme, as shown in *bb*.

The trough is set slightly at an incline to give the cessary runway for drainage purposes through the pe marked *ee*, which may be allowed to run waste or conducted back by a siphon effect to *dd* and there mix th the cold fresh water and be utilized over again.

At the point marked *f* an electric fan is placed rectly at one end of the curtain, which serves to sten the rapid evaporation of the water from the cur- in by a continuous series of serpentine or wave-like ovements imparted to the sheet its entire length; but cases in which the fan cannot be employed, the same ect (a continuous lowering of the temperature) is tained, but almost twice the length of time is required reduce the temperature in the room to the same gree.

One of the advantages of this method is the fact that will continue its work without further interference manipulation during a hot night, in a noiseless man- r, and requires no more attention than the simple rning off or on of the spigot or faucet on the wall nnected with the rubber tube (*d*).

The curtain, by means of the water escaping by capil- y attraction downward, is kept in a state of satura- n to an excess, and it is, therefore, constantly soaked d dripping with water.

Formalin or similar agents may be conducted into the et (*d*) from a container placed somewhat higher up the wall than the curtain, in such proportion as to x with the water at a given percentage, and, in addi- n to the reduction of temperature, accomplish germi- al results.

The well-known natural law of the attraction of aller bodies toward a larger mass is taken advantage in the collection of dust in the air, which is held in ce by the cohesive wet surface of the curtain. The ric may be removed for washing purposes in a few ments' time after it has been covered with dust in manner described, and a clean, duplicate fabric sub- uted.

No method, feature, or appliance has been patented in nection with curtain, and it may be freely utilized individuals or hospitals for their respective needs.

t will be noticed that the whole system is very inex- isive, the tin speaking-tube costing but two cents a t, the necessary trough five cents a square foot (con- ıcted by any tinner), the cotton twill six cents a d, and the rubber tubing eight cents a foot.

his opportunity is taken to thank my assistant, Dr. D. P. h. for interest shown and for valuable services rendered ing the construction of curtain and while conducting the eriment.

246 Eleventh Street.

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# THE TREATMENT OF GONORRHEA WITH REFERENCE TO THE QUESTION OF STERILITY*

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CHICAGO

In 1901 there were approximately 162,372 patients suffering from venereal disease in New York.[1] Although we have never had any investigation to compile statistics here in Chicago, I have no doubt that the number of venereal patients is equally great. In New York 15,969 cases of gonorrhea were reported, of which 1,941 were in women. The proportion of men to women is about 15 to 1; of these one-third were in women who were infected after their marriage.

While it does not seem possible to limit promiscuous sexual intercourse, it does lie within the bounds of possibility to limit the transmission of the disease by "bacillus-carriers" through a careful and systematic management of cases from the microscopic standpoint of the discharge.

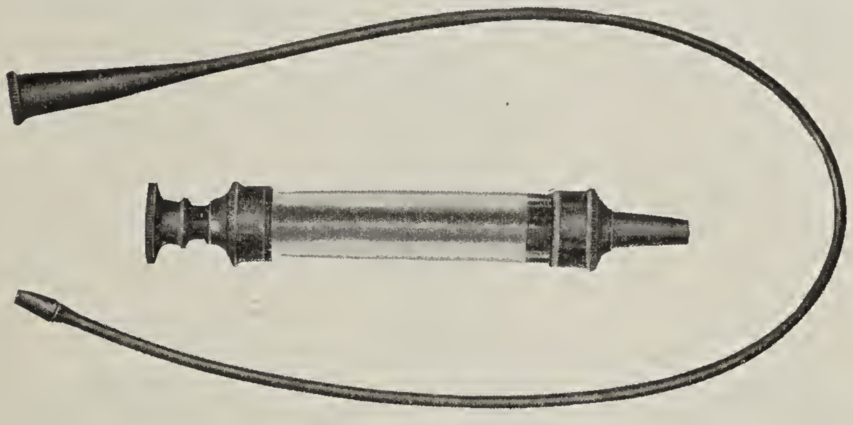

Fig. 1.—Guyon capillary syringe.

The gonococcus has its own peculiar characteristics which enable it to be differentiated from other organisms. It grows best on ascitic fluid agar and its macroscopic appearance is fairly characteristic. The colonies when grown twenty-four hours at 37 C., appear circular, resembling dewdrops, are grayish blue and transparent, slightly iridescent, and about 1 mm. in diameter. In gonorrheal pus the prevailing form of the diplococcus is the "coffee bean" or "roll" shape.

The gonococcus is particularly characterized by being found within the protoplasm of the pus cell and never in the nucleus. Although appearing in thick smears to be within the nucleus, the bacilli are in reality on top. This position is less frequent in the early stages, but it is the rule in the stage of excessive purulent inflammation. In the later stages there are fewer leucocytes and the cocci are found in the epithelial cells or often free in groups. In acute and chronic cases the cocci are often extracellular.

In recent gonorrheal infections of the genital mucosa, the microscopic demonstration of the gonococcus is not difficult. The many methods for staining the gonococcus have no advantage over Loeffler's methylene blue, because they are of no value in differentiating it from other organisms, as they all take the stain. By the addition of a little ammonia to Loeffler's methylene blue, the leucocytes, epithelial cells and cocci are all intensified and as a consequence the picture is made more vivid.

The only staining method which possesses any certain value for differential diagnosis of the gonococcus, however, is the Gram method. If the smears have been made evenly thin and have been properly stained, the gonococcus in gonorrheal pus and in cultures is always completely and rapidly decolorized. In the same manner they can be differentiated particularly from a number of cocci, including some diplococci, which occur under the normal[2] conditions in the male and female genital tract.

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* Portion of a paper read before the Chicago Medical Society, March 2, 1910.

[1] Med. News, 1901, lxxix, 962.

Nevertheless, microscopic examination in gonorrhea, especially in chronic cases in which a few suspicious cocci are found, is not always dependable. In such cases it may be necessary to culture the organism.

The most frequent cause of sterility in the male is gonorrheal epididymitis.

If the epididymes are attacked by inflammation, complete obliteration of the ducts not uncommonly results. It is immaterial from what cause the inflammation develops, the results are the same; all depends on the degree and extent of the inflammation. An injury to the epididymis, syphilis, tuberculosis, carcinoma and sarcoma may produce an occlusion, but these conditions are indeed rare in comparison to gonorrheal epididymitis, which, according to statistics,[3] occurs in 7 to 14 per cent. of all cases.

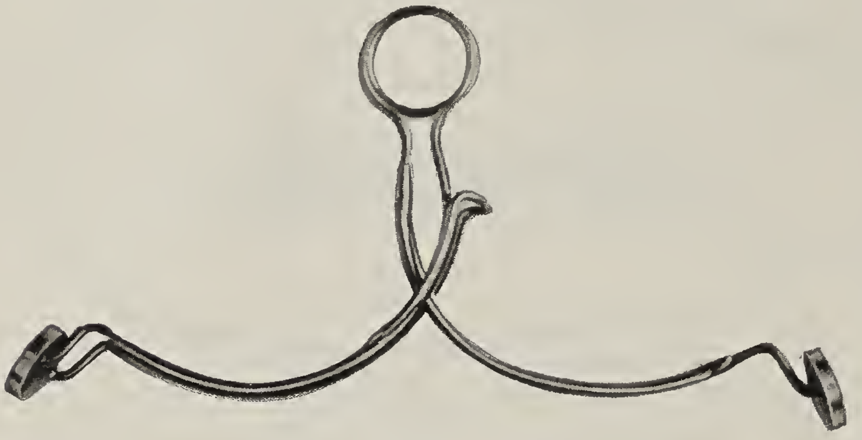

Fig. 2.—Urethral clamp.

### ANTERIOR URETHRITIS

With the passing of the irrigation treatment for acute specific anterior urethritis, the attending posterior urethritis with its complications is fast diminishing. During the past three years I have treated about 200 cases of urethritis in private practice and the resulting involvement of the epididymes was less than 0.5 per cent. The management of the cases was as follows:

#### Instruments and Materials

##### I. INSTRUMENTS

1. Capillary Guyon syringe.
2. Large glass syringe with blunt nozzle holding about 10 c.c.
3. Set of sounds or flexible bougies.
4. A suitable clamp for holding the meatus.

##### II. MATERIALS

Two per cent. stock bottle albargin in dark-colored bottle.

Four dark one-ounce bottles containing respectively 0.25 per cent., 0.5 per cent., 0.75 per cent., and 1 per cent. nitrate of silver.

Having satisfied myself that I have a specific urethritis to deal with I proceed as follows:

The patient is instructed to urinate in two glasses (this test is of no value unless the patient has held his urine for at least four hours). In a large majority of acute cases, if seen before the fifth day, the infection has not yet become posterior, as will be seen by the urine glasses, the first will be cloudy with specks, the second clear, showing that the case is one of a simple anterior urethritis.

If the cases are handled according to the following method, there will be no further trouble:

The patient is placed on his back (or if one prefers to have him stand there is no objection, unless there is an extreme grade of inflammation). Ten c.c. of a 2 per cent. solution of albargin heated to 104 F. are gently injected into the anterior urethra by means of the glass syringe. Pressure is made at the juncture of the anterior and posterior urethræ to keep any fluid from passing backward. This is especially important in cases of relaxed external sphincters. This solution is held in the anterior urethra three to four minutes, by means of a small clamp that gently holds the meatus together. After allowing the injection to flow gently out, a loose dressing is placed over the penis to allow for good drainage. On no consideration is the patient allowed to crowd cotton between the folds of the prepuce to check the discharge.

The patient is next given a hand injection, either 0.25 per cent. protargol, or 0.1 per cent. albargin, and instructed to use it four or five times a day, care always being taken not to use any force and to make pressure at the posterior end of the anterior urethra during the injection. For the high-grade local inflammation that is always present and which is exaggerated by the warm injection, the patient is instructed to immerse the penis in a glass of hot water for fifteen minutes, two to four times on the first day, always using great care to keep the water as hot as possible the whole time. This procedure will rapidly take out the inflammation and permit the continuance of the treatment.

On the second day the discharge is examined and carefully noted, to see if the gonococcus is still present. Occasionally, when the duration of the urethritis is under thirteen hours, one injection is sufficient to drive the gonococci out of the urethra. Whether they are present on the second day or not, however, I continue the treatment for four days; 2 per cent. albargin hot in the anterior urethra at the office and the hot immersions and injection at home. If for any reason on the second or third day there is the slightest suspicion of a hemorrhage, cold 2 per cent. albargin solution is substituted for the hot solution, and the patient is told to reduce his hand injections to one or two times a day, but to continue the hot immersions as previously.

On the third day the discharge is again examined and a careful search is made for the gonococcus. If cocci are absent, the same treatment is continued for another day (four days in succession); on the other hand, if they are still present, the treatment is continued until the organism is absent and has remained so for four successive days, great care being always taken to discontinue the 2 per cent. albargin entirely if the hemorrhage is in the least persistent. If the hemorrhage is at all severe, all local treatment within the urethra is suspended, but the suspension in hot water is continued.

We now assume one of the following: Either (1) that the gonococcus has disappeared entirely from the urethra, or (2) that it has invaded the deeper layers of the mucosa or glandular tissue and does not appear in the discharge.

Now, provided the organism has been absent for four successive days and the local inflammation has subsided, a 1 per cent. nitrate of silver solution is gently passed into the anterior urethra. With this solution in place the urethra is gently massaged, the same precaution always being used about constricting the anterior urethra at its junction with the posterior urethra. The

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[2] Kütscher Berl. klin. Wchnschr., 1909, xlvi, 2059.

[3] Finger: Blennorrhœ, Leipsic and Vienna, 1905, p. 309.

1 per cent. nitrate of silver acts as a harrow; it causes a arge amount of desquamation and in so doing may disodge any organisms that have invaded the deeper layers of the mucosa.

The patient is instructed to continue his hand injection for two days, at which time he presents himself for another microscopic examination. If on the second day after the 1 per cent. of silver injection, the gonococcus again makes its appearance, it is necessary to start from the beginning, treating this acute exacerbation as an acute attack, and to proceed all over again. On the other hand, if no organisms are present, a well-lubricated bougie (one that just fits into the meatus snugly) is passed the length of the anterior urethra, care being aken not to produce any traumatism. With this in place the urethra is gently massaged. This is followed by a 2 per cent. albargin injection cold.

The patient is then instructed to use his hand injecton for several days longer, and at the end of which time, f there are no organisms present, he is given a rest for ive days, being instructed to return at the end of the ifth day. If the microscopic examination of the discharge shows no gonococci at this time the patient is instructed to dring some beer; if this does not cause a return of the discharge in thirty-six to forty-eight hours, he can be considered well.

In all cases of simple anterior urethritis in which here are no complications, the patient is instructed to discontinue the use of alcoholic drinks for one month after his test drink, as they tend to aggravate a "postgonorrheal catarrh." In a large percentage of cases when you have removed the cause (the gonococcus) all hat is necessary is to keep the functions of the body active and the discharge will cease.

Astringents are to be emphatically condemned, as a discharge that persists in spite of careful dietetic and hygienic care is sure to contain cocci and suppression of he discharge only tends to lock the gonococci tighter within the urethral mucosa.

In a few exceptional cases, especially after a prolonged ourse of treatment, a catarrhal condition of Littré's lands which calls for astringent treatment may occur.

### POSTERIOR URETHRITIS

Few patients with simple anterior urethritis, if seen arly and treated in the above manner, acquire posterior involvement.

When the two-glass test shows an involvement of the posterior urethra, I proceed as follows (always having the patient empty his bladder before treatment): Depending on the severity of the symptoms, 0.25 to .75 per cent. nitrate of silver are passed into the posterior urethra, by means of the Guyon capillary syringe. f there is the slightest irritability and tenesmus, only he weakest solution is used; following this the anterior rethra is injected with hot 2 per cent. albargin, the ame precaution being used not to let it pass posteriorly. The anterior treatment is continued daily with he same limitations as for acute anterior urethritis, but he posterior treatment is not resumed until the third ay. Should the irritability and tenesmus increase in severity, all treatment, both anterior and posterior, are iscontinued, and the patient is given a saline laxative, ot sitz baths and rectal suppositories containing the ollowing:

℞.

| | gm. | |
|---|---|---|
| Extracti belladonnæ<br>Extracti opii, āā | 0\|25 | gr. iv |
| | | or |
| Ichthyolis<br>Iodoformi, āā | 2\|50 | gr. xlv |
| Butyræ cocæ q. s. | | |

M. Fiant suppos. rect. No. X.
Sig.: Insert one every six hours.

On the third day, provided the acute posterior symptoms have all subsided, the prostate is gently massaged and 0.25 to 0.5 per cent. of nitrate of silver is given by the Guyon catheter, followed by the anterior treatment. No matter how slight the posterior infection may be, there is always a corresponding involvement of the prostate, and the posterior infection will not clear up unless the prostate receives its corresponding attention. In acute cases it is seldom necessary to use stronger solutions than 0.75 per cent. nitrate of silver posteriorly. When the urine clears in the second glass and the prostate shows no pus microscopically, a bougie is passed all the length of the urethra, but the 1 per cent. nitrate of silver is omitted in the posterior urethra. If this does not produce a recurrence, the beer test is applied. If the gonococci are still absent and the urine glasses clear, the patient can be considered well. In the event that the gonococci appear again, however, it is necessary to start as from the beginning.

In all cases of acute posterior urethritis it is advisable to put a good snug-fitting suspensory on the patient—not the ordinary suspensory that simply holds the scrotum together, but one that raises the testicles well up toward the pubes.

I have intentionally omitted all reference to the internal treatment and the management of complications, as space does not permit their discussion here.

For the management of acute infections of the epididymis, you are referred to the excellent works by Belfield, Hagner and others.

### CONCLUSIONS

1. Specific urethritis is increasing in frequency.
2. More attention should be paid to its detailed diagnosis and treatment.
3. Methods of treatment should aim at the easiest and simplest way of combating the disease.
4. With this in view the spread of specific urethritis will be greatly lessened.

100 State Street.

## A STUDY IN RENAL SENESCENCE*

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PHILADELPHIA

In a study of the kidneys four years ago I thought I noticed a fact which I had never heard mentioned, namely, that as age advanced there was a thickening of the interstitial tissue at the apex or papillary end of the pyramids and that this thickening was reasonably uniform. Further study on one hundred and fifty kidneys from individuals of all ages dying from many different diseases (though the majority died from tuberculosis of the lungs) added confirmation. I then showed a number of unselected specimens, the identification of which was withheld, to Dr. McFarland, who was so successful in determining the ages of the patients by the criterion mentioned that I have thought it worth while to prepare the following notes for publication.

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* From the Laboratory of the Henry Phipps Institute; read before the Philadelphia Pathological Society, Feb. 24, 1910.

The condition is practically one for demonstration rather than for description, yet the specimens shown at the time of the reading of the paper might be described as follows: The specimen from the child one month old showed through a ⅔ lens the tubules at the apex of the pyramids practically in juxtaposition with so little interstitial tissue between them that it was practically invisible; in the 9-year old specimen there were one or two fine lines of interstitial tissue between the tubules; in the 27-year-old specimen three or four lines; in the 35-year-old specimen five or six; in the 69-year-old specimen eight to ten lines and in the 99-year-old specimen ten to twenty lines.

Moreover, the study revealed that this thickening of the interstitial tissue was not dependent on the accompanying pathologic condition of the kidney, but occurred apparently only as a result of age. All kinds of pathologic conditions were found in the one hundred and fifty kidneys studied, namely, cloudy swelling, acute parenchymatous nephritis, chronic parenchymatous nephritis, focal interstitial nephritis, the various kinds of general interstitial nephritis, amyloid degeneration, pyelonephritis, etc. It was found that pyelonephritis and hydronephrosis injured the pyramids and increased the interstitial tissue in them to such an extent as definitely to obscure the comparatively slight increase due to age; in these cases, therefore, the age could not be told from the appearance.

In addition it was found that a general or a marked focal interstitial condition which is commonly only studied and described from the appearances in the cortex affected also the pyramids and hence increased the interstitial condition at the apex of the pyramids so that the thickening at this point did not correspond exactly with the age. Comparison of many such kidneys, however, showed that it was not difficult to learn from the condition in the cortex how much of the thickening at the apex of the pyramids was to be attributed to the pathologic condition and how much to age. In other words though interstitial nephritis modifies the amount of interstitial thickening at the apex of the pyramids, this modification can be recognized and taken into account. In regard to the question which naturally arises as to how reliable is the differentiation of age from this thickening of the interstitial tissue, I would say that it is almost as reliable as the appearance of the face; though we can generally give a pretty good idea of the age of an individual by looking at him we are sometimes mistaken in middle life to the extent of ten or even fifteen years and in old age rarely even to the extent of twenty years.

In deciding the age of the individual from the thickening of the interstitial tissue at the apex of the pyramids the following precautions should be taken: First, the apex of the pyramid should be in view. Sometimes a cross-section of the kidney is made in such a way that we see a long stretch of pyramid but instead of one we are looking at two pyramids end to end; in other words, a specimen may be cut across two pyramids in such a way that the apical portion of one pyramid will run into the apical portion of the other so as to make the end of the specimen actually near the second cortex though the second cortex is not in view. Second, edema must be differentiated from thickening of the interstitial tissue. Third, the amount of interstitial tissue should be estimated, not from one single location, but from several fields of a ⅔ lens. Fourth, interstitial nephritis increases the amount of interstitial tissue at the apex of the pyramid and must be accounted for. Fifth, pyelonephritis and hydronephrosis obscure completely the thickening due to age.

### SUMMARY

1. There is a gradual increase in the amount of interstitial tissue at the apex of the renal pyramids so uniform with advancing age that the age of the individual is evident from the amount of interstitial tissue found.

2. This relation of the amount of interstitial tissue to the age is lost in cases of pyelonephritis and hydronephrosis; and modified by interstitial nephritis, though this modification can be accounted for, so that the age remains evident.

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## THE UNCINARIA AMERICANA IN GEORGIA

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Since the investigation of uncinariasis in the South by Dr. Stiles in 1902, a number of examinations have been made for this disease by the Georgia State Board of Health and individual investigators in Georgia. The information so obtained has established with fair degree of certainty the geographical distribution of uncinariasis in this state, but has furnished little positive knowledge of the extent to which the disease prevails. An investigation was begun in this laboratory a little more than a year ago which has led to approximately accurate conclusions on this and certain other phases of the hookworm question.

### METHOD OF INVESTIGATION

For the purpose of this investigation the state was considered in two divisions, the northern and southern, the former representing that portion of the state lying north of and including the foothills, and the latter the remainder of the state. From these divisions counties eleven in all—were taken typical of different local areas. From the counties thus chosen groups were selected representative of that portion of the white population subject to hookworm, and then a complete microscopic examination was made of each whole group. The results so obtained are given in Table 1.

The groups referred to above are schools, the examination of which I was enabled to make through the kind cooperation of the principals in charge. In the northern division, Group 1 is a rural school in the mountainous section, and likewise Group 2 which, however, is situated farther west. Both are situated south of and adjoining the Blue Ridge. In these sections a heavy gravelly soil exists with occasional loamy and ferruginous areas. The winters, for this latitude, are rather severe. There is much rainfall during the summer seasons. Group 3 is a school situated in a small town in north central Georgia. Here is found in the main, a light sandy soil locally known as "gray land." Group 4 is a school in a town of about 4,000 inhabitants which has had for the past few years a partial system of sewerage and pavement. The town is situated in middle Georgia just north of the foothills. Group 5 is a rural school located in another section of middle Georgia. Here a light gravelly and sandy soil predominates. In the southern division, Group 1 is a rural school and Group 2 a school in a small town. Both are situated in counties adjoining the state of Florida. Group 3 is a school in a small town near the central part of the southern division. A sandy soil prevails in all three of these localities and the rainfall during the summer seasons is less than that of the mountainous districts of the northern division for the same season. The sanitary conditions prevailing in the different sections of the state represented by these groups, except Group 3 in the northern division, are approximately the same. In the small towns some sort of a surface closet system exists, while the country schools visited were not found to have so much as this to their credit.

In Table 1 the groups already discussed are arranged in order, 1, 2, 3, etc., and each group is subdivided into two classes, A and B. Class A includes examination of persons from 6 to 16 years of age, and Class B of persons from 17 to 26 years of age. The signs + and — signify positive and negative results of examinations for eggs of the uncinaria.

PERCENTAGE OF POPULATION INFECTED

From the data in Table 1 may be calculated the approximate percentage of hookworm infection in this state. The white population of the northern division exclusive of that of Columbus, Macon, Augusta, Athens and Atlanta as estimated from the United States census report is as shown in Table 2 and the white population of the southern division exclusive of that of Savannah is given under Table 3.

TABLE 1.—HOOKWORM INFECTION IN GROUPS INSPECTED

| Group | Class A, Age 6-16 inclusive | | | | | | | | | Class B, Age 17-26 inclusive | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Males | | | Females | | | M. and F. | | | Males | | | Females | | | M. and F. | | |
| | + | — | %+ | + | — | %+ | + | — | %+ | + | — | %+ | + | — | %+ | + | — | %+ |
| NORTHERN DIVISION | | | | | | | | | | | | | | | | | | |
| 1 | 5 | 5 | 50 | 6 | 13 | 32 | 11 | 18 | 38 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 3 | 0 |
| 2 | 11 | 12 | 48 | 11 | 25 | 31 | 22 | 37 | 37 | 2 | 11 | 15 | 3 | 12 | 20 | 5 | 23 | 18 |
| 3 | 5 | 1 | 85 | 4 | 2 | 67 | 9 | 3 | 75 | 15 | 28 | 35 | 11 | 38 | 22 | 26 | 66 | 28 |
| 4 | 19 | 53 | 26 | 5 | 0 | — | 24 | 53 | 31 | 1 | 4 | 20 | 0 | 0 | 0 | 1 | 4 | 20 |
| 5 | 5 | 4 | 55 | 0 | 0 | 0 | 5 | 4 | 55 | 4 | 6 | 40 | 2 | 0 | — | 6 | 6 | 50 |
| Total | 45 | 75 | 38 | 26 | 40 | 39 | 71 | 115 | 38 | 22 | 51 | 20 | 16 | 51 | 23 | 38 | 102 | 27 |
| SOUTHERN DIVISION | | | | | | | | | | | | | | | | | | |
| 1 | 8 | 0 | — | 4 | 0 | — | 12 | 0 | — | 24 | 18 | 57 | 8 | 9 | 47 | 32 | 27 | 54 |
| 2 | 14 | 8 | 64 | 22 | 11 | 67 | 36 | 19 | 65 | 7 | 2 | 78 | 2 | 0 | — | 9 | 2 | 82 |
| 3 | 7 | 4 | 63 | 11 | 5 | 64 | 18 | 9 | 67 | 4 | 0 | — | 9 | 2 | 50 | 6 | 2 | 75 |
| Total | 29 | 12 | 71 | 37 | 16 | 70 | 66 | 28 | 70 | 35 | 20 | 64 | 12 | 11 | 52 | 47 | 31 | 59 |

TABLE 2.—WHITE POPULATION OF NORTHERN GEORGIA, EXCLUSIVE OF CHIEF CITIES

| | |
|---|---|
| Total | 876,225 |
| Class A, age 6-16 inclusive | 311,264 |
| Class B, age 17-26 inclusive | 215,495 |

TABLE 3.—WHITE POPULATION OF SOUTHERN GEORGIA, EXCLUSIVE OF SAVANNAH

| | |
|---|---|
| Total | 223,268 |
| Class A, age 6-16 inclusive | 79,312 |
| Class B, age 17-26 inclusive | 54,909 |

From Table 1, 38 per cent. of Class A and 27 per cent. of Class B in the northern division, and 70 per cent. Class A with 59 per cent. of Class B in the southern division have uncinariasis. This gives a total for the state of 264,378; or exclusive of the six cities named above, approximately 24 per cent. of the total white population in Georgia have hookworm.

AGE PERIOD OF INFECTION

Infection was not found among children 5 years of age and under, and to no great extent among persons over 27 years of age, though it should be stated that a very small number of either of these classes was examined. The relative percentage of infection was found to increase with age up to about 16. It then remained almost constant to the age of 22. From this it decreased until at the age of 27 it became almost negligible.

SYMPTOMATOLOGY AND TREATMENT

For unavoidable reasons in many cases no record was kept of symptoms. From those which were recorded the following conclusions are drawn:

1. In a great many cases, particularly among the young, the symptoms heretofore ascribed to uncinariasis by competent investigators were very pronounced though they were little if at all in evidence in fully one-half of all cases examined.
2. Thymol is a positively effective anthelmintic if its administration is repeated often enough (in some cases it was found necessary to repeat the treatment as many as five times).
3. Patients almost always improve immediately after the worms have been expelled though a great many seem to be unable to recover fully from the effects of the disease.

RELATIVE INFECTION OF MALES AND FEMALES

In Table 1 the percentage infection of males and females is given, from which it appears that the two sexes are about equally subject to hookworm infection.

RELATION OF GROUND-ITCH TO THE DISEASE

This relation is brought out in Table 4, in which is given the calculation of those who have, and also of those who have not had ground-itch, but who were found infected with hookworm.

TABLE 4.—GROUND-ITCH AND HOOKWORM INFECTION

| Ground-itch. | Per Cent. Hookworm Infection. |
|---|---|
| Not since 1902 | 11 |
| Between 1904 and 1906 | 62 |
| Since 1906 | 82 |
| Not at all | 8 |

In this table three things are indicated: (1) that the uncinaria can live longer than eight years, the longest period found being twelve years; (2) that Nature may eliminate the worms from the intestines in less than eight years, the shortest time found being a little more than two years; (3) that ground-itch, though the chief, is not the only mode of infection. In all three of these deductions it is assumed, of course, that the cases reported were true cases of ground-itch and represent hookworm infections, which may or may not be true, for there are certain cases of ground-itch, so-called, caused otherwise than by larvæ of hookworms. In the words of Dr. Stiles, "probably the term 'ground-itch' covers a multitude of sins."

It may be mentioned also that eggs of *Tænia nana* were found in 3 per cent. of all specimens examined.

SUMMARY

1. Uncinariasis is confined mainly to persons between 5 and 27 years of age.

2. The greatest infection occurs between the age of 6 and 16 inclusive.

3. Symptomatic diagnosis is unsatisfactory; thymol is an effective vermifuge in the treatment of hookworm; in some cases full recovery from the effects of the disease seems to be unattainable.

4. Males and females are infected approximately to the same extent.

5. Exclusive of the large towns, about 24 per cent. of the total white population in Georgia have uncinariasis.

6. Ground-itch is the chief but not the only mode of infection.

7. The uncinaria may live in the intestines from two to twelve years.

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# RECURRENT FURUNCULOSIS IN AN INFANT SHOWING AN UNUSUAL BLOOD PICTURE

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Having failed to find any similar case reported in the literature, I believe that the following will probably be of interest.

The case occurred in my private practice and the child first came under my care in September, 1908, and at that time the following history was obtained.

*Mother's History.*—The family history was excellent, there being no discoverable hereditary taint. The mother, an unusually robust woman in her thirties, with that nervous energy which so often accompanies an active mentality, toward the end of the eighth month of this her second pregnancy, suddenly developed eclampsia, having, according to her accoucheur, previously presented no untoward urinary findings. The labor was hastened by an instrumental delivery, and the mother was delivered of a well-developed though premature boy baby, weighing about six pounds.

*Baby's History.*—As the mother could not nurse the infant owing to deficient milk supply, the accoucheur secured a wet-nurse. As the nurse's milk did not agree with the child, after trying fresh milk formulas he was placed on a condensed milk modification. On this, I am told, he improved somewhat, but the food did not prove altogether satisfactory and the infant was placed on the first formula of the "Materna,"[1] which constituted his food until I saw him for the first time at three and a half months of age. At this time his weight was eight pounds. The following information was also elicited. When about eight weeks old, the baby had an attack of suppression of urine which was relieved by hot packs over the kidneys, and on Sept. 7, 1908, one month later, I am told, passed no urine for a period of thirty-six hours. The first few drops of urine passed after this contained blood. One week later, the infant had a similar attack. I could not secure any further accurate information in regard to the urinary findings.

*Examination.*—I saw the baby for the first time Sept. 20, 1908, when he was three and a half months old, and for the previous twenty-four hours had been fretful and restless with a temperature of 102 F. He had had a number of greenish lumpy and watery stools. I made the following physical examination: A poorly developed baby, weighing eight pounds, slightly marasmatic look, poor color, bony and other tissues soft. He does not notice even loud noises. The pupils react to light rather slowly. The baby does not follow even a strong light with his eyes. His sense of taste is normal. There is a slight tendency to snuffles. There is no skin eruption, and no glandular enlargement. The lungs are normal. The heart presents a roughening of the first sound over the pulmonary interspace, but there is no weakening of the second pulmonary sound. There is no dilatation of the right ventricle, and no evidences of cyanosis or of venous stasis. Abdomen is slightly distended, but there is no rigidity. The liver and spleen are impalpable. The superficial and other reflexes are rather sluggish.

*Treatment.*—The infant, after recovering from this enteric attack, was placed on gradually increasing and appropriate milk dilutions, so that two weeks later he had gained one and a quarter pounds, and showed corresponding improvement in his general condition. One week later, Oct. 19, 1908, a few pustules appeared on the neck and the chin, which were carefully expressed and dressed. The milk formula was gradually increased to fat 2.23 per cent., proteid 1.12 per cent., sugar 6 per cent. He was getting 7 feedings in 24 hours with 4½ ounces at each feeding. The amount at each feeding, the strength of the food, and the number of feedings were changed from time to time to meet the needs of the child, and on Dec. 14, 1908, his weight was 11 pounds 3½ ounces, a net gain in 2½ months of 3 pounds 3½ ounces.

*Course of Disease.*—On December 19 of the same year, the baby had another attack of furunculosis and on December 21, thinking that he might do better with a wet-nurse, I secured one who had been carefully watched in one of the maternity hospitals of this city, and after a careful personal examination of herself and her six weeks old baby, put him to the breast, with remarkably satisfactory results. With the exception of one or two slight colds in the head, barring the periods of fever and furunculosis, the baby did splendidly, so that between Dec. 22, 1908, and Feb. 22, 1909, he had gained 5 pounds 11 ounces (weight 16 pounds 7 ounces). On June 15, 1909, his first birthday, the baby's weight was 20 pounds 7 ounces, his height 28¾ inches, circumference of head 18⅜ inches, chest 18½ inches. He had 8 teeth, and his bony and other tissues were normal. His vision and hearing were normal.

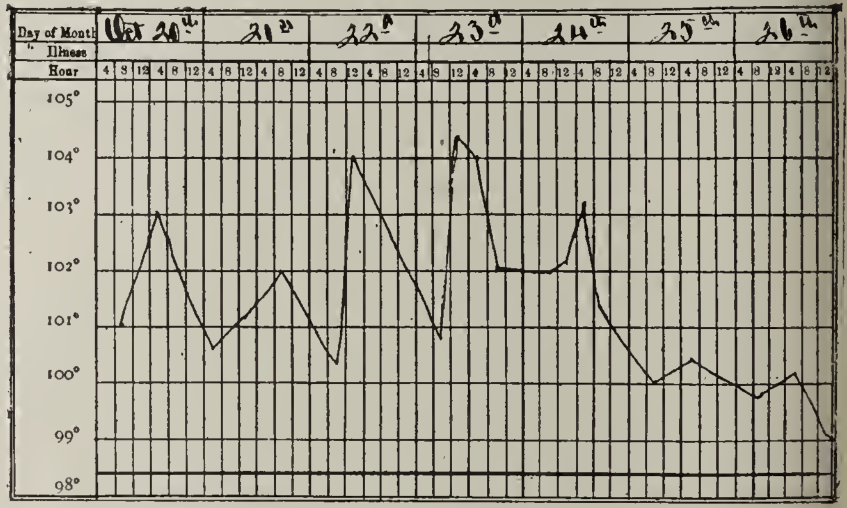

Chart 1.—Temperature curve during October, 1909, attack.

*Description of Furunculosis Attacks.*—During the period from the onset of the attacks of furunculosis, in October, 1908, the baby had persistent recurring attacks of furuncles accompanied with a rise of temperature, reaching from 102 to 104.6 F. This fever was usually of the irregularly remittent type, and lasted from 3 to 10 days; at one time the fever persisted for over three weeks (Charts 1 and 2). The fever reached its fastigium usually just prior to the ripening of the furuncles, which varied from 2 to 5 in number, and which were accompanied with considerable inflammatory infiltration of the surrounding tissues. Occasionally also an aphthous patch developed on the buccal mucous membrane, and this resulted in considerable necrosis. There was no tenderness of the legs, no abnormal changes at the epiphyses or of the periosteum. There was no sponginess of the gums, in fact, nothing to indicate scorbutus. Instructions were given to start the administration of orange juice after taking the child from the wet nurse, and this and the addition of barley and other cereal gruels to the fresh cow's milk were faithfully carried out. On only two or three occasions was there any marked gastrointestinal disturbance, and at no time was there any evidence of an ulcerative colitis. There was never any vomiting and rarely a diarrhea, the food in reduced quantity as a rule being well digested. During several of the attacks the baby suffered from marked prostration, presumably from sepsis, and the most careful stimulation was required.

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[1] The Materna is a glass graduate used in the home modification of milk for determining approximate percentages.

*Blood Examination.*—Repeated examinations of the blood failed to show the plasmodium of malaria, and the condition seemed to be uninfluenced by the administration of quinin bisulphate given in solution. There was at no time a marked anemia, the hemoglobin never being below 55 per cent., and the red blood corpuscles were always up to the minimum normal for that age. There was at no time a distinct leucocytosis, in fact the opposite condition, a leucopenia, was the rule. The unusual feature of the blood picture is the relative leucocyte count which on several examinations over a variable period of time remained very constant, showing an extreme relative lymphocytosis. The following relative leucocyte counts will serve as examples:

Oct. 25, 1909. Differential Count: Small lymphocytes, 65.8 per cent.; large lymphocytes, 32.2 per cent.; polynuclear neutrophils, 1.0 per cent.; eosinophils, 0.8 per cent.; basophils, 0.2 per cent.

Dec. 6, 1909. Differential Count: Small lymphocytes, 61.8 per cent.; large lymphocytes, 34 per cent.; polynuclear neutrophils, 1.0 per cent.; eosinophils, 2.8 per cent.; basophils, 0.4 per cent.

Jan. 12, 1910, the complete blood examination was as follows: Number of red blood corpuscles in 1 cm., 4,800,000; number of leucocytes in 1 cm., 3,000. Differential count: Small lymphocytes, 69.2 per cent.; large lymphocytes, 25.2 per cent.; polymorphonuclear neutrophils, 1.0 per cent.; eosinophils, 3.8 per cent.; basophils, 0.8 per cent. The amount of hemoglobin was 70 per cent. Color index was 0.73. The plasmodium of malaria could not be found on careful search. The red corpuscles were uniform, but somewhat small in size.

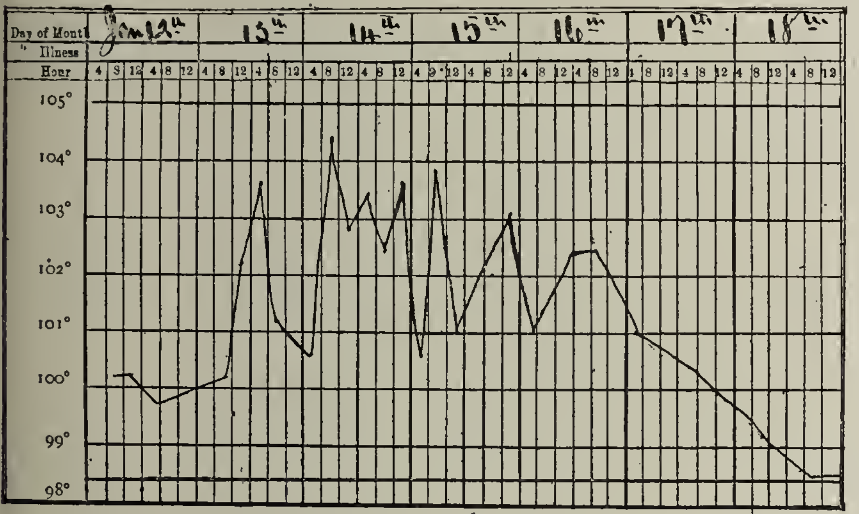

Chart 2.—Temperature curve during January, 1910, attack.

*Urine.*—The urinary findings on several occasions showed a heavy uric-acid deposit, and during the height of the fever on one or two occasions a faint trace of albumin was detected, but no other abnormal urinary conditions were found.

*Micro-organisms.*—Cultures from the pustules showed pure *Staphylococcus pyogenes aureus.*

*Present Condition.*—On Jan. 27, 1910, when the baby was 19½ months old, the following physical examination was made: A well-nourished, active though slightly pale-looking child, very responsive and easily interested, though somewhat nervous. He walks unaided, standing and sitting erect. His head measures 19 inches, chest 18⅞ inches, abdomen 18⅛ inches, and length 30 inches. His weight is 22 pounds, 7 ounces. His legs are straight. The anterior fontanelle is closed. The condition of all the bones is normal. He has 15 teeth, perfectly formed. His back is straight, and muscles are firm. The heart, lungs and abdomen are normal. There is no enlargement of the spleen or of the lymphatic glands, and no evidence of enlargement of thymus. Sensation, throat, eyes and ears normal.

Here, then, is the case of a baby who was born prematurely, who suffered from a marasmatic condition during the first few months of his existence, but who at one year of age and thereafter showed but slight if any departure from the normal in physical and mental development, but who was subject to repeated attacks of furunculosis, with accompanying fever and prostration all out of proportion to the clinical findings, and who also presented the unusual blood picture of an extreme lymphocytosis without other marked blood changes.

It is extremely difficult to account for this great proportion of lymphocytes. Lymphatic leukemia would be thought of, but the absence of a leukocytosis, and the absence of enlargement of the lymphatic glands and of the spleen, with the other clinical findings, would exclude this diagnosis. The periodicity of the fever coming on every few weeks would naturally suggest malaria, but repeated and most painstaking examinations of the blood by myself and several well-known clinical pathologists failed to find the plasmodia, and as has been stated there was no splenic enlargement.

The infant was never markedly anemic; there were no evidences of the "constitutio lymphatica"; at no time were there any symptoms of rachitis or scorbutus; and from the nature of its recurrency the infectious diseases may be excluded. There was nothing either in the history or the clinical findings to suggest specific disease. An enlarged thymus could not be detected.

In all probability, the fever is to be accounted for by the toxemia generated by the *Staphylococcus pyogenes aureus* during the attacks of furunculosis, but this does not satisfactorily account for the peculiar blood findings.

As every attention had been given to the feeding, the general hygiene of the infant, and the local treatment of the suppurative areas, without giving permanent relief from the recurrency of the attacks, an autogenous vaccine is being prepared at the bacteriologic laboratories of the College of Physicians and Surgeons, and careful injections of the vaccine will be made at intervals with the hope of establishing a partial or complete immunity to the staphylococci.

Since submitting this article for publication, during a period of two months, the little patient has had no return of the attacks, and his general health is excellent. The immunizing process was kept up over a period of six weeks, an injection of the vaccine being given at intervals of from five to ten days, in gradually ascending dosage. During this time he has shown no disagreeable symptoms, the vicious cycle of the attacks has been broken, and an immunity has been established. How long this immunity will last time alone will prove.

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**Therapeutic Disregard of the Laws of Gravity.**—R. Blondel in an article recently reviewed in the *Gazette Médicale Belge,* March 17, mentions among other ways in which the attraction of gravitation is disregarded in medical measures, that patients generally put on an elastic stocking like an ordinary stocking, after they have left the bed and the blood has had a chance to settle in the limb. How few physicians, he remarks, think of advising the patient to put on the stocking before arising, and not until after the limb has been held vertically for a time to allow the blood to leave it, the expulsion of the blood being promoted by gentle kneading downward and the stocking being drawn on by another's hands if possible. Abdominal bands should also, he says, be applied while the patient reclines, the individual merely lifting the pelvis from the plane of the bed to permit the band to be passed beneath the body. If corsets were put on also in this way, much would be gained. He also warns that after operations the pelvis should not be lowered too abruptly from the Trendelenburg position.

# ANIMAL EXPERIMENTATION IN RELATION TO PRACTICAL MEDICAL KNOWLEDGE OF THE CIRCULATION*

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## III. CIRCULATORY SYMPTOM-COMPLEXES AND THEIR TREATMENT

*(Concluded from page 1774)*

An attempt was made in Part II to make it clear that, whereas the attention of the ancients was attracted to certain symptoms, such as palpitation and syncope, owing to their lack of knowledge of the structure and functions of the heart and blood-vessels, such symptoms were not associated with specific diseases of the circulatory system.

### CLINICAL CONCEPTS AND ANIMAL EXPERIMENTATION

It has been shown, furthermore, how, in the seventeenth and eighteenth centuries, when post-mortem observations made possible the building of a firm foundation for anatomy and after Harvey's demonstration of the circulation of the blood, the clinical concepts as we now know them began to appear. This fact in itself sufficed to indicate in a general way the dependence of our modern conceptions on the results of experiment. It might, however, be well to call attention to this dependence in somewhat greater detail.

Why valvular defects, both organic and relative, should alter the action of the circulation, and how, becomes perfectly evident when they are viewed in the light of facts demonstrated by experiment. If the lesion causes a stenosis or insufficiency of any valvular orifice, the knowledge of this fact suffices to account for practically all of the signs and symptoms of the disturbed function. Given, for example, narrowing of the mitral orifice, with a knowledge of the physiology of the circulation, the clinical picture is almost completely understood. The relation of the adventitious to the normal heart-sounds, the enlargement of the left auricle, the engorgement of the pulmonary circulation and its consequences, the hypertrophy of the right auricle and ventricle, the pulsation of the liver and of the veins of the neck, as well as other signs and symptoms, become perfectly clear and are seen to be part and parcel of one and the same thing.

The conception of relative or muscular insufficiency of the valvular orifices rests almost entirely on inferences from results of animal experiments. As long as the Hippocratic idea of the parenchymatous nature of the walls of the heart held sway, the possibility of a variability of the diameters of the cardiac orifices was entirely precluded. When, however, Harvey, Borelli and others[1] recognized that the movements of the heart resembled those of muscles, and after the property of tone in heart muscle had been discovered by Gaskell[2] the way was opened for the clinical conception of valvular insufficiency due to muscular weakness.

The hypertrophied heart, the *cor bovinum*, as a purely anatomic conception, was one of the earliest cardiac lesions to be described. Suggestions as to its causation were not, however, made until it was recognized that the heart, not the blood, did mechanical work and that the amount of work performed by the heart was subject to variation. Practically the only cause of hypertrophy of voluntary muscle is increased work; then why not of heart muscle, too? When, therefore, a hypertrophied heart is met, the physician, in order to discover the cause, looks for the factor that has increased the work of the heart. Physics teaches that work is proportional to the product of the pressure and the surface. "It is, therefore, not a matter of chance that the first to measure the blood-pressure in animals (Hales) was also the first to attempt the estimation of the work of the heart."[3] Since the surface area of the heart and the pressure against which it contracts both are subject to variation, it is to these factors that the clinician looks in order to account for hypertrophies of the heart. In this way many of the etiologic factors of cardiac hypertrophy have been brought to light. It has served to explain the hypertrophies associated with valvular lesions. It has likewise served to explain the cardiac hypertrophy of pulmonary emphysema, of arteriosclerosis, of chronic asphyxia (Hensen[4]), in which condition the blood-pressure is elevated, of many cases of nephritis in all of which the arterial blood-pressure is high, of plethora (which probably increases the work of the heart, not by increasing the blood-pressure, but rather by increasing the amount of blood in, and consequently the area of, the heart (Tigerstedt[5]), and of adhesive pericarditis.

The fact that the dilated heart has great difficulty in maintaining the circulation is likewise seen clearly when viewed from the standpoint of mechanical work.

The concept of the weak heart rests on the fact that the heart acts as a force-pump. The signs of failure of the pump, the fall of arterial pressure, engorgement of the veins, etc., are explained by the discovery of Harvey and its elaborations.

Paroxysmal tachycardia is probably merely a symptom of a number of affections of the heart. Through modern clinical methods, which are largely the outcome of work on animals, the behavior of the heart during the paroxysms has been discerned and at least one cause of the symptoms has been determined, namely, pressure on the vagi (see below.)[6]

The investigation of bradycardia has met with better success. There can be recognized by the application to the human being of methods employed in the laboratory: (1) complete bradycardia, that is, slowing of the whole heart and (2) partial bradycardia, by which is understood the slowing of certain parts of the heart below the mouths of the great veins. Clinical experience, in the light of facts accumulated in the laboratory, has led to the recognition of at least two causes of complete bradycardia, namely (a) direct or reflex stimulation of the cardio-inhibitory mechanisms by asphyxia, by arterial hypertension as in acute nephritis,[7] by increased intracranial tension,[8] by irritation of the gastro-intestinal canal and peritoneum;[9] and (b) slowing of the rate of discharge of the mechanism that sets the pace of the heart (Stannius, Gaskell)[10] through the depressing action of poisons or arteriosclerosis. Clinically these two types may be distinguished in man (Dehio) by means of a laboratory test which depends on the fact that atropin paralyzes the vagus terminals in the heart.

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* This paper is one of the series prepared for and reprinted by the Council on Defense of Medical Research of the American Medical Association for circulation among the public. Fourteen of these pamphlets are now ready, taking up the relations of animal experimentation to ethics, diagnosis, cancer, vaccination, the live stock industry, tuberculosis, typhoid, dysentery, plague, rabies, surgery, internal secretions, the circulation of the blood, protozoan tropical diseases, etc.

[1] See Part II of this article.

[2] Gaskell: Jour. Physiol., 1880-82, iii, 53

[3] Nagel: Handbuch der Physiologie, i, 866.

[4] Quoted by Krehl, Pathologische Physiologie, 1907, p. 32.

[5] Tigerstedt: Skand. Arch. f. Physiol., iv, 41.

[6] Hoover: In Osler's Modern Medicine.

[7] Based on Marey's law, which in turn is based on animal experiments. See La circulation du sang, Paris, 1881, p. 321.

[8] Cushing: Am. Jour. Med. Sc., 1903, 1017.

[9] Based on experiments by Goltz: Virchows Arch. f. path. Anat., 1863, xxvi, 10.

[10] Gaskell: Experiments described in Phil. Tr., London, 1882, p 993.

Animal experiments (Stannius, Gaskell,[11] and others) have brought to light, and have determined the causes of, the type of bradycardia termed incomplete; and the applicability of this work to the condition (Stokes-Adams disease, etc.) as seen in man has been demonstrate by animal experimenters (Chauveau, His, Erlanger,[12] etc.) employing in the clinic the methods of the laboratory. These, by showing that the most common form of incomplete bradycardia is atrioventricular heart-block, have very recently served to elucidate a clinical picture that has puzzled the medical world ever since it was first described some seventy years ago.

It is almost too early to predict the outcome of the efforts now being made toward a better understanding of the cardiac arrhythmias. That they have opened a new era in the detection and analysis of cardiac disease is perhaps all that can now be affirmed. However that may be, the result up to date has been that through the clinical application by Wenckebach,[13] MacKenzie,[14] Hering and others, of facts revealed in the laboratory by Marey, Gaskell, Engelmann, Hering and others, heart irregularities such as extrasystoles, allorrhythmia, the absolutely irregular pulse, etc., which heretofore have had no significance whatever, now stand for specific disturbances of the cardiac motor mechanism.

Reference has already been made to the part animal experimentation and experimenters have played in calling the attention of clinicians to the mechanism that comes into play when, as in arteriosclerosis, the arteries become inelastic.[15]

Arterial aneurism was recognized in man by the animal experimenter, Galen, and attempts at treatment were made by him. Just what part animal experimentation played in the development of this phase of the subject cannot be determined. However that may be, many signs and symptoms of great significance in the diagnosis of aneurism have since come to the clinician through, or have been rendered clear by, experiments on animals or animal experimenters. Harvey, for example, first called attention to the changes of the pulse. Pressure changes in the arteries have also been detected and for their recognition Williamson finds that "the sphygmomanometer is much more sensitive than the finger."[16] The pupillary effects of aortic aneurism are explained by experiments on the cervical sympathetic, some of which were performed as early as 1727,[17] and by local changes in blood-pressure.[18]

The localization of arterial and of most venous emboli from dislodged thrombi is explained perfectly by the circulation. And experimentation has served to throw light on many of the problems connected with the subject of thrombosis. These experiments have demonstrated that slowing of the blood-system *per se* does not cause clotting, although it has been shown by deduction from experiments on animals when the necessary factors are present, decreased velocity plays an important part in thrombosis.[19]

### ANIMAL EXPERIMENTATION AND THE TREATMENT OF CARDIOVASCULAR DISEASE

To animal experimentation must also be attributed many of the most valuable suggestions as to the treatment of cardiovascular disease. It will, however, be possible to call attention to only a few instances of this most practical phase of the subject.

It is self-evident that with the discovery of the circulation, and only after the elucidation of the part played by the several mechanisms concerned in its maintenance, the rational treatment of the diseases of the circulation by mechanical means became possible.

Then it became possible to appreciate why patients suffering from "delinquium animi or swooning" should be placed in the recumbent position rather than "in an easy erect posture" as suggested by Paul of Ægina and why other practices, some of which are mentioned in Part II, were to be eliminated as irrational.

Bleeding, than which no form of treatment has passed through as many vicissitudes, illustrates how fruitless may be the results of uncontrolled speculation in medicine, the vacillation "in the practice of this therapeutic measure depending intimately on the prevailing views on blood and juices, on fever and inflammation, finally on life itself."[20] To-day venesection in diseases of the circulation seems to be indicated in but a single condition which may, however, appear in almost any of the symptom-complexes: "At any stage in a valvular lesion or in hypertrophy and dilatation of the heart . . . acute cardiac insufficiency may arise . . It is the one condition in which a venesection is advantageous."[21] Bleeding, then, is indicated only when it is necessary temporarily to relieve the weakened or dilated heart of the strain under which it is working. The mechanical indication and the mechanical action of bleeding both have been made clear through the discovery of the circulation and the part the heart plays in its maintenance. We no longer hear of bleeding practiced for its "derivatory" and "revulsive" actions.

More is heard to-day of a treatment which is just the converse of venesection, although it is practiced in many conditions to accomplish the very objects that were sought in blood-letting. The use of transfusion as a therapeutic measure was suggested in mythical times as a means of restoring youth. "An experiment which had hitherto only been made in animals,[22] transfusion was first put into practice by Cardanus in the fifteenth century. The attempt did not succeed, however, because, when artery was united to artery, the direction of flow was beyond the control of the surgeon. With the discovery of the circulation, the mechanical requirements of transfusion became clear.[23] Within less than forty years Lower succeeded in transfusing animals by passing the blood from an artery into a vein. And one year later Denis and King, working independently, successfully transfused blood from a lamb into man. The time was not, however, ripe for the practice of transfusion as a therapeutic measure. Unforeseen difficulties arose such as intravascular clotting, clotting at the point of union, and hemolysis. One by one, however, and almost exclusively through animal experimentation, these difficulties were cleared up and then eliminated. The successful efforts to remove what now appears to be the last great difficulty, namely, clotting at the point of union, are fresh in the minds of all. Through the use of a method brought to light by animal experiments (Queirolo, Crile),[22] of uniting blood-vessels with a tube in such a way that the blood does not come into contact with any foreign surface, or through the use of vessel suture as developed by the experiments of Carrel,[22] clotting is no longer to be feared.

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[11] Gaskell: Jour. Physiol., 1883, iv, 61.

[12] For the literature see Jour. Exper. Med., 1906, viii, 8.

[13] Wenckebach: Die Arrhythmia als Ausdruck bestimmter Functions-Störungen des Herzens, Leipsic, 1903.

[14] MacKenzie: Brit. Med. Jour., March and April, 1905.

[15] See Part II of this article.

[16] Quoted by Osler: Modern Medicine.

[17] Petit (1727) and Biffi (1846): Quoted by Schäfer, Text-Book of Physiology, ii, 618.

[18] Experiments of Wall and Walker; Quoted by Osler: Modern Medicine.

[19] Baumgarten and Rizor, and von Recklinghausen; Quoted by Blumer: Osler's Modern Medicine, p. 505.

[20] Bauer: Geschichte der Aderlässe, München., 1870.

[21] Osler and Gibson: Osler's Modern Medicine, p. 261.

[22] Crile: Hemorrhage and Transfusion, 1909.

[23] I here follow the account given in Neuburger and Pagel: Handbuch der Geschichte der Medizin, iii, 87.

Transfusion of blood is used at the present time, however, only as a means of last resort. In most cases the infusion of a salt-solution into the blood vessels accomplishes the same end. The use of this therapeutic measure was suggested by Goltz when he called attention to the fact that the danger of sudden large hemorrhages depends on the emptiness of the heart, which, in that state, cannot do its work efficiently.[24] Then, after experiments on animals by Cohnheim (1869) and by Kronecker and Lauder (1879) had demonstrated that the injection of an aqueous solution of sodium chlorid may save the life of an animal which has certainly sustained an otherwise fatal hemorrhage, the measure was tried in surgical and obstetrical practice with the life-saving results that are familiar to all.[25]

Attention should here be called to the fact that transfusion and infusion experiments represent the first attempts at intravascular medication, a measure that was thereafter extensively employed in the laboratory but which has only recently come into vogue in the practice of medicine.[26]

Under the caption of mechanical methods of treating cardiovascular disease may also be included resuscitation by means of massage of the heart of subjects in whom the heart has stopped. In the ultimate analysis this method of treatment rests on the fact that the heart acts as a force-pump and that the pumping action of the heart muscle can be replaced for a time by that of the hand of the operator. More specifically, however, direct massage of the heart was first practiced by Schiff, who by this method succeeded in reviving dogs that had been killed with chloroform (1874). The measure was tried in the clinic six years later.[27]

The drug treatment of diseases of the circulation has been incalculably furthered by means of experiments on animals, while many of our most useful drugs have been discovered in experiments which were based on a knowledge of the physiology of the circulation.

The medicinal properties of digitalis, the most valuable of heart remedies, were known to the laity and the drug was used by the medical profession long before it was investigated in the laboratory. "The celebrated work of Withering on digitalis, published in 1785, shows," however, "that many deaths were undoubtedly due to the use of digitalis. Indeed, at that time and for half a century thereafter the action of digitalis on the heart and blood vessels was very imperfectly understood."[28] Traube's experiments and clinical observations on the action of digitalis did much to increase its use in disease.[29] Without going into this subject in any greater detail, the dependence of the physician on practical facts brought to light by means of animal experimentation may be shown merely by giving, in the words of one of the greatest of living clinicians, the main contraindications to the use of digitalis: "It may be said broadly to be contraindicated in all forms of heart disease without symptoms of muscle weakness" and "in states of high arterial tension . . . . . . ."[30] The physiologic basis of these physiologic contraindications is so clear as to require no comment whatever.

In the choice of a heart remedy the physician has likewise to be guided by animal experiments. Both digitalis and strophanthin, for example, "act on the heart and on the blood-vessels, but in different degrees, and these differences alone determine whether one or the other shall be used in a given condition. Such differences cannot be determined except by means of animal experiments.[28]

The use of atropin in cases of overaction of the vagus mechanism is likewise based entirely on experiments on animals.

All of the drugs used as vasodilators, such as nitroglycerin and amyl nitrite, have been discovered by animal experiments and the indications for their use in cardiovascular disease would be meaningless in the absence of facts brought to light through animal experimentation.[28] Thus, the nitrites were introduced into therapeutics by the animal experimenter, Brunton, "who advised their use in angina pectoris to relieve spasm of the arteries." "Besides, in angina pectoris the nitrites may be used in any condition in which it is supposed the arterial tension may be lowered with benefit to the economy," as in certain cases of hypertension, or in combination with digitalis when, in cases of failing heart, the vasoconstrictor action of the latter might embarrass the already overtaxed heart.[31]

The vasoconstrictor adrenalin, one of the most valuable of recently discovered drugs, was brought to light through animal experimentation.[32] Indeed this statement is true of other drugs, too numerous to be mentioned here.

Animal experimentation on the circulation has also proved of value in the standardization of cardiovascular remedies. It is by that method alone that the physiologic activity of digitalis and strophanthus preparations, for example, can be determined, it is by that method alone that the physician can be supplied with digitalis and strophanthus preparations which will be of uniform strength and on which he can positively rely.[33]

The treatment of surgical diseases of the heart has been incalculably furthered—indeed this phase of medicine practically has been opened—by the experimental development of methods of opening the thorax under a negative[34] or a positive[35] pressure. Nor should we lose sight of the fact that both of these methods have as their foundation the animal experiments of Lower and of Haller, which were the means of laying down the first principles of the mechanics of respiration.[36]

### THE WIDE INFLUENCE OF THE DISCOVERY OF THE CIRCULATION

Physicians should be reminded of the fact that the discovery of the circulation has benefited not only the specialist in diseases of the circulation; it has made itself felt in practically every branch of physiology and through these branches in practically every branch of medicine. To give but a single case in point: The knowledge of the circulation as acquired through animal experimentation led physiologists to study function in isolated organs kept alive by means of an artificial circulation. Using this method von Schröder, for example, determined the role of the kidneys in the process of urea formation and elimination.[37] These experiments, by placing the treatment of diseases of the kidney on a rational basis, have been of incalculable value to the clinician.

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[24] Quoted by Neuburger and Pagel: Handbuch der Geschichte der Medizin, iii, 92.

[25] Von Ott: Virchows Arch. f. path. Anat., p. 114.

[26] Liebreich: Therap. Monatsh., 1901, xv, 551.

[27] Metcalf: Boston Med. and Surg. Jour., 1909, clxi, 9.

[28] Hatcher: Pub. Med. Soc. State of New York, 1909.

[29] Ziemssen: Handbuch der speciellen Pathologie, etc., 1879, vi.

[30] Osler and Gibson: Modern Medicine, p. 261.

[31] Cushny: Text-Book of Pharmacology and Therapeutics, 1906.

[32] Oliver and Schaefer: Jour. Physiol., 1895, xviii, 230.

[33] Edmunds, Charles Wallis: The Standardization of Cardiac Remedies, THE JOURNAL A. M. A., May 25, 1907, xlviii, 1744.

[34] München. med. Wchnschr., 1906, liii, 1.

[35] Deutsch. med. Wchnschr., 1906, p. 534.

[36] Neuburger and Pagel: Handbuch der Geschichte der Medizin, ii, 341 and 351.

### THE LYMPHATIC SYSTEM

The lymphatic system, as tributary to the circulatory system, should perhaps receive a word of notice here. Briefly, then, it may be said that in this connection the physician owes everything to animal experimentation, since the lymphatics were discovered by Aselli (1622) in an experiment on a living animal.[38]

And, it may furthermore be added, one of the chief practical uses to which the lymphatics are put by the physician, namely, the hypodermic administration of drugs, suggested itself to Wood in 1855 through contemplation of an animal experiment performed by Müller.[39]

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## AN STAMMERING BE TREATED SUCCESSFULLY THROUGH THE AGENCY OF THE PUBLIC SCHOOL?

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The official recognition by a department of a large merican municipality of stammering as a public prob- em. is fraught with too great possibilities to go un- eeded. Constituting as it does an initiatory effort in he United States, it is more than likely, if correctly aken and successful in its results, to awaken a country- ide movement of untold advantage to an unfortunate lass of sufferers. The schools very naturally have been rst to realize this problem, as they have before een the first to realize other problems concerning abormalities in children. The educator not only comes ito contact with the stammering child, but his pro- essional attitude demands recognition of his disorder; r hindrances to developmental progress of whatsoever haracter are, from his point of view, to be removed, nd the child graduated into the mature world unbur- ened with recoverable abnormalities. But since stam- ering children have always been in the schools, it is the great credit of the Chicago educators that they ave sought to give concrete, remediable form to this nportant situation.

### A COMMUNITY PROBLEM

And yet the problem should, I think, be considered a mmunity rather than a school problem. The de- ands for the treatment of stammering are peculiar in emselves, and do not readily fit into the ordinary hool régime. The problem should be considered a hool problem only in so far as the schools can be own to be best adapted for its handling. In other ords, the responsibilty of the public must not be con- dered to end with the capability or incapability of the hools in the matter, but calls for the creation of what- er machinery may be necessary for the treatment of the disorder. Since, however, the machinery of the schools is everywhere in operation, and since the stammering children should in the natural course of their lives be in the schools, it is desirable to utilize them, if possible, for this additional service.

The successful treatment of stammering is a specific problem involving certain requirements regardless of where or under what circumstances the stammerer is treated. He is not a normal individual, and his abnormality partakes of a multitude of variations. The instrument which is to remold the delicate mental and physical activities of a stammering child, suffering from a disorder often so intrinsically a part of the child's mental life, and one so elusive and fitful as is stammering, must be carefully considered and delicately adjusted. And this is all the more important because of the danger, not merely of doing no good, but actually, by ill-considered methods, of doing positive harm. The problem is, therefore, to be taken seriously.

The disorder is one of child development. The still young and growing boy or girl, usually between four and eight years of age, already having acquired the beginnings of speech in a normal manner, starts mysteriously a slight occasional hesitation in his utterance, and then step by step the disorder becomes fully developed. The links which connect the heretofore normally speaking child with these first significant hesitations in speech constitute the key to the understanding of the disorder. Any community effort at treating stammering which does not lay stress on this beginning period would fail in its greatest opportunity. This aspect of the problem will be spoken of again.

Each case requires study to determine whether physical abnormalities capable of interfering with successful training exist. Here enter questions of general health and of abnormalities of the peripheral speech mechanism, whether in nose, throat or chest. Each case demands also consideration of the nervous and mental mechanisms, as well as of environmental conditions, for they also may have a most important bearing on recovery. These are all medical, psychologic and sociologic problems, necessarily to be handled by the physician and psychologist.

### CLASSES OF STAMMERERS

Before discussing the requirements for success in the actual work of training stammerers let us realize that varying grades of severity of the disorder, varying degrees of firmness of its fixation in the mental life of the individual and varying degrees of susceptibility to training, exist. A certain minority are destined without skilled aid to acquire relatively smooth speech while still in childhood or in early youth; another proportion are capable of self-recovery early in adult life. Having eliminated these cases one is confronted with the great majority of stammerers, those who are destined, if untreated, to undergo a nearly or quite complete life-struggle with the disorder. For certain reasons the children who are capable in the long run of self-recovery should themselves be carefully treated, first, because training alone can select with certainty those that are really more easily recoverable; and, second, because the baneful hindrance to normal child development produced by stammering demands to be removed at the earliest possible moment. The permanent eradication of stammering even in the easier cases is hard enough. And any system of treatment of the whole number of stammerers should be based on the needs of the great majority of more severe cases, for the lighter ones will fall readily into such a system; whereas if plans are formed from the standpoint of the lighter cases even these may not be adequately reached, while the great mass of the stammerers will not merely be not benefited, but more probably will actually be harmed.

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[37] Von Schröder: Arch. f. exper. Path. u. Pharmakol., 1882, , 364; and 1885, xix, 373.

[38] Neuburger and Pagel: Handbuch der Geschichte der Medizin, 336.

[39] Wood: A New Method of Introducing Medicines into the stem, Month. Jour. Med., 1855, xx. 183.

### QUALIFICATIONS OF TEACHERS

As to the demands of training itself, the direct work of guiding the stammerer out of his spasm-wracked utterance into a smooth speech—so far from being easy, is in the majority of cases extremely difficult. Consequently the teacher for this duty must be more carefully selected than for the ordinary work of teaching. She must be thoroughly capable, must be carefully trained, unusually enthusiastic, and possess unlimited patience. And the oversight of her work by those capable of understanding all its difficulties must be more frequent and painstaking than that for ordinary teaching. Few teachers would for long keep up their enthusiasm in work which makes such exactions, or be able to meet the inevitable difficulties, unless steadied, encouraged and assisted by one having a broader knowledge and deeper insight than most of them can hope to attain in this work. And the need of care in the selection of teachers is doubly emphasized when one approaches the practical and varied psychologic insight involved in the inculcation of self-confidence, of courage, of persistence, and the firmness in self-control on which success very largely depends.

### MANAGEMENT

But all of these necessities having to do with the training of the stammerer are attainable in the public schools. There still remains a difficulty, however, not so easy to satisfy. Educated self-control, persistent, firm, habit-creating, is the key-note to success in the treatment of stammering. Bearing in mind that but one-fourth, or, at most, one-third of the child's waking hours are spent in the school room, and bearing in mind that self-control in a child under, let us say, thirteen years, especially if it be difficult self-control, is proportioned to the direct watchfulness exercised over him, one cannot but realize the great difficulty of uprooting this deeply seated disorder in the schools. Think of the difficulty under similar circumstances of causing a right-handed child to become by training left-handed, and you have a conception of the difficulties involved. The uncontrolled periods would be apt to serve to offset effectually the gains of the controlled periods. It is indeed a most serious question whether under conditions in which almost continuous discipline seems to be of vital importance, discipline during one-third of the time can be made to suffice. In the lightest cases the pupils would be benefited and eventually would recover; some of the moderate ones would probably succeed; but hope for success with the great mass of stammerers would, I think, hardly be warranted.

To overcome this serious drawback three possible things may be done.

1. Treatment may be extended over an unusually long period.
2. Parents may be systematically educated to enforce control intelligently at home.
3. A residence where the severely affected pupils might be housed day and night and kept continuously under observation could be created.

Indeed, it seems desirable that all of these expedients should play a part in the system. The relative ease with which long continued training could be secured is one of the great advantages of treatment in the schools. And while the cooperation of parents of a sufficiently intelligent character would be lacking in a large percentage of cases, yet this possibility in the system is deserving of the utmost emphasis. A systematic plan for the education of parents in the handling of their stammering children at home should be one of the prominent features of the method. Incidentally such cooperation is capable of saving a large sum annually to the community which attempts the public treatment of stammering.

### SEGREGATION

Equally important is a home for the continuous residence of selected pupils. Carry out a plan of purely school treatment as rigidly as you may, yet many stammerers (I fear a large percentage) will prove to be incurable by it. Long lapses in self-control—from Fridays until Mondays, for example—will prevent success in many; weakness of will, extreme sensitiveness, unusual excitability, other abnormal nervous states, severity of manifestation in individuals, deficiencies of home environment, and especially the youthful age of the stammerer, will all play a part in producing failures. Such pupils demand the continuous molding influence of leaders capable of inspiring attention and compliance, and of skilled trainers capable of meeting every individual difficulty. There is no way, so far as I am able to forsee, to fully meet the demand of the problem without this continuous residence adjunct. The child would pass back and forth between the residence to the classroom and *vice versa,* instead of between the school and his home. Let it be realized that in case the problem of treating stammering were to be approached by any community without considering the public schools as a means for that purpose, the first necessity would be such a residential institution as I have mentioned. Thus, through the utilization of the schools, and the employment of such a residential adjunct, the whole expense of treating the disorder would be placed at the lowest possible point. From the point of view of government bookkeeping it seems hardly proper to charge up the expense of this especial institution to the school fund, but more properly it might be charged to an especial fund created for the purpose.

Successful handling of the problem of the stammerer in the public schools, then, seems feasible and desirable. Success will depend on the full grasp of the difficult nature of the problem. It will involve not only adequate instruction and training by selected teachers, but also full cooperation and direction by skilled physicians and psychologists, adequate supervision, and the institution of certain adjuncts to the regular school machinery, particularly the education of parents and a continuous residental home for selected cases.

### UTILIZATION BY THE SCHOOLS

The utilization of the schools moreover, possesses certain inherent advantages. The first and most important of these is the possible reception of stammerers almost at the very beginning of the disorder. The stammering child under such a system needs not to await the attainment of usual school age before presentation at school, but with the enlightenment of parents may be presented whenever hesitation in speech becomes apparent. After the first few years every stammerer would be seen when he first entered school, and, as the years went on, a larger and larger proportion would be seen at a very early period after the inception of the disorder. The possibility and practical advantage at getting at the inciting causes would be unusual. And it is fair to presume that in the majority of cases incipient stammering could actually be arrested before the habit had become firmly fixed in the mental life of the child. Consider the saving in money, in effort, in character, in individual education, in mental suffering, and in successful lives, and such a possibility becomes of extreme importance.

Another advantage in the utilization of the schools for the public treatment of stammering would lie in the enevitable reception of nearly all stammerers, for nearly all children go to the public schools. And, also, it would lie in the permanence of the hold the system would have in each case. Only those who know the dogged tenacity of this disorder can realize the importance of such long-continued watchfulness and control.

The following suggestions are offered rather to open up the question of certain detailed methods which might be employed than as settled opinions, and they have reference in part to beginning efforts, when, as is the case in the Chicago schools, funds are apt to be inadequate.

### A TENTATIVE PLAN

Scattered through the grades there would naturally be found a considerable number of fully developed stammerers offering more or less serious individual diffiulties. In the practical attempt at the start to get at o extensive a problem these older cases might be passed ver and the facilities available concentrated on the few owest grades from kindergarten up. Having approached the problem through the incipient cases the ull development of a system for all the stammerers ould be made to accord with the success or failure in rresting the disorder in those already treated. The oung stammerers who failed to respond to the more eneral measures first adopted would be taken one by ne and together made the occasion of further steps n the development of the system. I am strongly disosed to emphasize treatment of the very beginners, to tand or fall, as it were, on the ability of a proper system to head off and to arrest a still incipient disorder. o this end the stammerers, as has been said, could e brought into the classes, so far as possible, before the egular school age. Especial attention could then be ven to the study of exciting causes, and the treatment arried out, as far as possible, from that point of view.

In so far as practicable it would seem best to bring hese beginning stammerers together from a number of hools into classes composed wholly of stammerers. hus the most favorable conditions could be secured, nd economy of time and expense encouraged. How the roblem could be worked out with a few beginning tammerers in each school, in case it were impracticable unite the cases from several schools, is hard to say.

If the grade teachers were capable of instituting eneral vocal training, including instruction in breathg, in chest control and in clearness of enunciation, peraps with musical adjuncts, their cooperation with the special stammering teachers could be utilized to advantage, for they, under those circumstances, could keep ntelligent watch over the stammerers during the enire school period. But the plan of segregation, with the ontinuous care of a small class by especially trained ammering teachers seems much more likely to suceed.

The following suggestion is mentioned as a possible means of overcoming a practical difficulty connected ith segregation. Let the plan of treating the stammerers by the schools be put forward at first, not as a universal proposal, but as an especial opportunity to be taken advantage of or not as the parents elect. Then let centralized schools be chosen for carrying on the work in the best and most economical manner possible. In this way there would be provided the needed opportunity to work out and prove a successful plan. Ultimately, as the public became convinced and funds became available, new centers could be created and finally all children provided for.

### CONCLUSION

A practical degree of success in the treatment of stammering in the public schools seems possible, and yet one approaches the problem with profound respect. To a certain extent the road to success must be created through experience. With the determination to meet, as far as possible, the conditions of success, however exacting, the outcome must at any rate be as successful as the intrinsic conditions permit, and that degree of success would, I believe, be gratifying.

It means very much in possibility that this proposed plan for the public treatment of stammering should be studied and tried out. It means so much that failure would be a serious calamity. The wisest plan, from every point of view, as it seems to me, would be to concentrate the beginning efforts on a relatively small number of cases, to work out plans with great care, and to advance the system only in the light of painstaking trial and observation. The whole country would be the gainer from such an effort, and Chicago might well be proud to have made it. It could not but result in added knowledge which would aid greatly in the final solution of this difficult community problem.

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## PAROXYSMAL TACHYCARDIA*

### HERBERT M. RICH, M.D.

DETROIT

Variations of the rhythm of the heart-beat occur in many pathologic conditions and are frequently seen in medical practice. In recent years a great impulse has been given to the study of these phenomena. Certain clinical types have been differentiated. Among these is a condition now generally known as paroxysmal tachycardia. At first quite widely and loosely applied to periodic attacks of rapid and irregular rhythm, it has more lately been confined to those cases of periodic tachycardia in which the heart attains a rate of 200 or more within a short time following the beginning of the attack. The clinical picture is one simply of tachycardia, it being very unusual for any irregularity of rhythm to occur. An attack of this kind is, of course, always alarming, and it is extremely important that its nature be recognized in order that suitable treatment may be instituted.

The unsatisfactory accounts of this disease in most text-books and the importance of its recognition are my reasons for considering the subject. For example, it can easily be imagined with what solicitude I watched the patient in the following case through the first attack which I saw.

*History.*—M. C., aged 29, a nurse-maid, was first seen in December, 1907, complaining of headache, dyspnea and dysmenorrhea. Patient had had typhoid fever at 14; several attacks of tonsillitis and several attacks of acute arthritis. In 1904 she first noticed dyspnea. I found a mitral stenosis, early stage, when she first came to me. The murmur has at times assumed a musical character. In 1902 the patient was operated on, having a resection of an ovary. Later an abscess opened, and still later a ventral hernia closed up. In April, 1909, she had a complete hysterectomy. During the time I have had the patient under observation she has had numerous attacks of incompensation of her valvular lesion. These have all ended favorably with rest and strophanthus.

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* Read before the Wayne County Medical Society at Detroit, Mich., February, 1910.

*Examination.*—On Oct. 9, 1908, she came to my office. When I attempted to count her pulse at the wrist, I was quite unable to do so. Hastily putting the patient on a couch, I counted the apex-beats with a stethoscope, and found the rate to be 220, and perfectly regular. Patient said that just as she entered my waiting-room door, her heart gave a sudden "flop" and she had been conscious ever since that it had been beating very rapidly. She was pale and somewhat short of breath, but walked out to my automobile, was driven home a mile and a half, walked up to the second floor, undressed alone and went to bed.

*Course of Disease.*—The attack lasted seven hours, ceasing as abruptly as it began. When it stopped the patient was very dyspneic and faint and thought that she was going to die. This passed off in a few minutes and except for exhaustion the patient felt perfectly well. The next morning she was able to go about her work as usual. There was absolutely no assignable reason for either the onset or cessation of this particular attack. She has had ten or twelve attacks in three years, each lasting from thirty minutes to nine hours. I have seen her in only two of these attacks, although I have seen her many times for other complaints. She had one while in Harper Hospital, convalescent from an operation. She had one at Port Huron and was seen, I believe, by Dr. Stockwell. The mitral murmur and thrill, which are ordinarily distinct, in her case could not be detected during the tachycardia. During the second attack in which I saw her, I made sphygmographic tracings from the radial artery, but unfortunately lost them. The record was "saw-tooth," perfectly regular, very similar to one published by Mackenzie.[1]

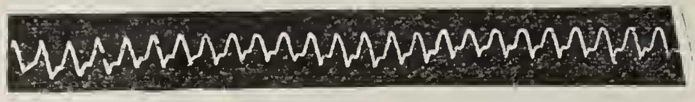

Fig. 1.—Sphygmographic tracing of radial pulse taken during an attack of paroxysmal tachycardia. Pulse 220.

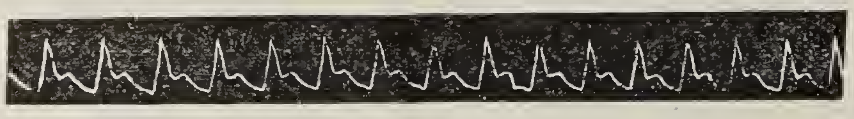

Fig. 2.—Sphygmogram of same patient taken between attacks. Case of mitral stenosis. Rate of pulse, 90.

SYMPTOMS

In general the attacks come on suddenly, usually without warning of any kind, and almost invariably without relation to any recognizable premonitory signs. The first intimation of the attack is usually described as a "flop" of the heart, and the tremendously increased rate is started almost instantly. The onset has been observed in a few cases and three or four extrasystoles have been observed before the greatly increased rhythm began. This, however, is not constant. There follows a sense of pressure over the precordial area, and almost invariably an inclination of the patient to sit down. Marked anxiety is shown, which usually passes off as the patients become accustomed to the attack and find that they have no pain and are not going to die immediately. The patient prefers a horizontal pose. The face is usually pale. Profuse sweating has sometimes occurred, but is unusual. Duration of attacks varies from a few hours to six or eight weeks. Usually there are no murmurs, the sounds of the heart corresponding to the fetal type. There may be greater or less depression, depending on the strength of the heart muscle. Patients show always a strong inclination to avoid exertion, although they apparently do not increase their discomfort by moving about, except a certain shortness of breath. Thus, my patient rode in from Pontiac on the trolley-car during an attack and then took the street-car three miles out to her residence, and apparently suffered no ill effects from it, although she was badly frightened.

The end of the attack is usually as abrupt as its onset. There is another "flop" and a feeling of goneness and suffocation with a subjective impression of impending death. This passes off in a few minutes, however, and except for exhaustion, the patient feels as well as before. In cases long continued, and especially those in which the heart was weak in the beginning, signs of stasis may occur; dyspnea, cyanosis, edema, cold extremities. Even in cases in which death was apparently imminent, sudden cessation of the attack has occurred, with prompt relief of all the extreme symptoms.

ETIOLOGY AND PATHOLOGY

It has not as yet been possible to produce paroxysmal tachycardia by any experimental procedure on the nerve-supply of the heart. Mackenzie, who has studied this condition and had autopsies performed on a number of these patients, designates this action of the heart as "nodal rhythm." An explanation of this term requires the consideration of the recently changing theories concerning the origin of the heart-beat.

For many years what is known as the "neurogenic" theory held complete sway among physiologists. This theory went on the assumption that the heart-beats originated in ganglion cells of the nervous system and were carried through nerve tissue to the muscular tissue of the heart, and that the function of the heart-muscle itself was simply that of contraction. Modifications in this theory were made to correspond to increasing knowledge, anatomic and physiologic. Latterly it was taught that the heart rhythm originated in the ganglion cells present in the heart and was distributed by nerve fibers to the heart muscle. The inhibitory influence of the vagus and the opposite action of the accelerator nerves were discovered and fitted in perfectly with this theory. Two objections, however, were brought forward. In the first place, some parts of the heart, like the apex and the aortic bulb, contain no ganglion cells. They can be made to beat rhythmically, however, under proper conditions after having been separated from the rest of the heart. The second objection was that in some animals pulsations of the heart appear in the embryo long before there are any ganglia in the tissues of the heart. For example in the chick the pulsations of the heart are noticeable in thirty-six hours, but the heart contains no ganglia until the sixth day.

Finally Gaskell, in experimenting on the heart of a tortoise, found that he could cut all the nerves without interrupting the rhythm of the heart so long as the muscular connections between the sinus and the ventricle were undisturbed. After cutting the muscular connections the ventricles stopped and then started again, beating with a rhythm different from that of the auricle.

In 1893 a very important contribution to our knowledge of these facts was made by the discovery of the bundle of His. This consisted of muscle fibers passing from the right auricle into the auriculoventricular septum, and sending branches out into both ventricles. The muscle cells in this bundle differ in structure from the other muscle fibers of the heart, being embryonic in character; that is to say, they are apparently the remains of the primitive cardiac tissue. The location of this bundle I have sketched in the drawing (Fig. 3).

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[1] On March 4, 1910, the patient was seen in a typical attack of paroxysmal tachycardia, and the accompanying tracing was taken at the time. The pulse was 220, the patient anxious, short of breath, slight sweating, more comfortable sitting than reclining. Apex two fingers outside nipple line. No first sound; usual thrill and murmur absent. Attack lasted seven hours. When rhythm returned to normal, patient was unconscious for several minutes, but next morning was able to do her work as usual.

Later, Tawara, a Japanese investigator, separated a complicated net-like nodule from the rest of the fibers of the bundle of His, and this is now known as Tawara's node, or the atrioventricular node. Later Keith described a second node similar to Tawara's situated at the juncture of the superior vena cava and of the auricle. Tawara's node is in the auricular part of the bundle of His. These nodes receive special arteries, and are now looked on as the seat of the impulses of the heart-rhythm.

The modern or myogenic theory of the heart-rhythm is that the impulses arise in and are transmitted by this primitive cardiac tissue known as the bundle of His, which is composed of muscle cells embryonic in character. In particular it is believed that normally the impulses arise in the node of Keith. The experiments previously referred to, however, in which the ventricles started up with an independent rhythm after both nerve and muscle connections were cut, are taken to prove that Tawara's node alone also may originate impulses capable of producing ventricular impulses. All these, of course, are subject to inhibition and acceleration by the well known nerve channels.

The nodal rhythm of Mackenzie rests on the assumption that for some reason the impulse begins in the node of Tawara instead of Keith, thus reversing the normal sequence of contraction, or even in some cases, he believes, there seems to be no auricular contraction whatever. The nodal rhythm is found not only in paroxysmal tachycardia, but also in various arrhythmias. The change in the origin of the impulse might occur through one of two means, either the impulse from the auricle is interrupted in its transmission to Tawara's node, and the latter being independent takes the lead, or through disease Tawara's node becomes more sensitive and originates impulses at a rate which interferes and possibly overcomes the auricular impulse.

In two cases of paroxysmal tachycardia which had been observed for several years by Mackenzie, Keith found areas of fibrosis of the myocardium with distinct evidences of cellular changes in the bundle of His. In one case he found total obliteration of the lumen of the artery supplying the bundle and probable degeneration of the cells of the bundle. The pathology known then is a fibrosis and degeneration of cellular elements in the heart extending to the bundle of His in such a way as to produce the nodal rhythm. Hoover says clinical evidence tends to show that paroxysmal tachycardia may result from disease of the medulla or reflexly through the medulla, from affections of the vagi, and from myocardial disease. Pal believes that it may be due to vasomotor relaxation in the splanchnic vessels.

The inability of investigators to produce the condition experimentally is interesting, and many observers have declared the condition a pure neurosis. This conclusion, however, seems hardly justified by our present knowledge. Apparently inhibition is suspended and instead of receiving successively phases of contraction, relaxation and rest, we have a condition approaching embryocardia.

The influence of position in these cases is marked and interesting. Some subjects can stop attacks by standing head down and feet up in a corner. One patient could stop it by leaning forward with the arms hanging down. In the case reported to-night two attacks came on while the patient was leaning over with the arms extended making a bed, and one while putting on a night-dress with the hands high above the head. Hoover relates the following interesting experience:

> A woman aged 35 years had had many attacks of tachycardia during the past ten years, averaging about three or four a year. There has been a very constant relation between nervous or emotional excitement and the attacks. The common sequence of events has been, constipation followed by accumulation of gas in the stomach and bowel, several sleepless nights, and then the attack of tachycardia which sometimes began with the "heart-flop" and at other times the tachycardia was in full force before any warning of any kind was perceptible. She had learned to bear these attacks with equanimity and no longer permitted them to interfere with attendance on her household duties, as she experienced no severe discomfort. Never before had a paroxysm of tachycardia lasted more than eight hours, but in this instance it persisted twenty-eight hours. The patient had been operated on two weeks before for suppurative salpingitis, and both tubes and ovaries were removed. A daily rise of temperature as high as 101 persisted after the operation. The pulse-rate remained between 100 and 120. The preceding day tachycardia commenced without the slightest warning or any unusual experience. The pulse-rate was 240 per minute, and so small at the wrist that no tracing could be obtained. The heart dulness was increased one and one-half inches to the right of the sternum and one inch external to the nipple line. There was a large centrifugal pulse visible in the external and internal jugular veins which had the same rate as the carotid pulse. It was impossible to determine by inspection the time relation between the jugular and the carotid pulse, but the two tracings taken with the Jacquet polysphygmograph show very clearly that the jugular pulse alternated with the heart and with the carotid pulsations. There were no signs of stasis in the liver or extremities. There was no cyanosis or dyspnea. Embryocardia was well pronounced. The tracings show the correlation between auricular and ventricular contractions as undisturbed. Pressure on the vagi, compression of the abdomen, and holding the glottis closed after deep inspirations had no effect. The patient was then taken out of bed and held with heels up and head down for a minute without result. She was then instructed to take a deep inspiration and "bear down" while in the inverted position. In a few seconds the heart-rate suddenly changed from

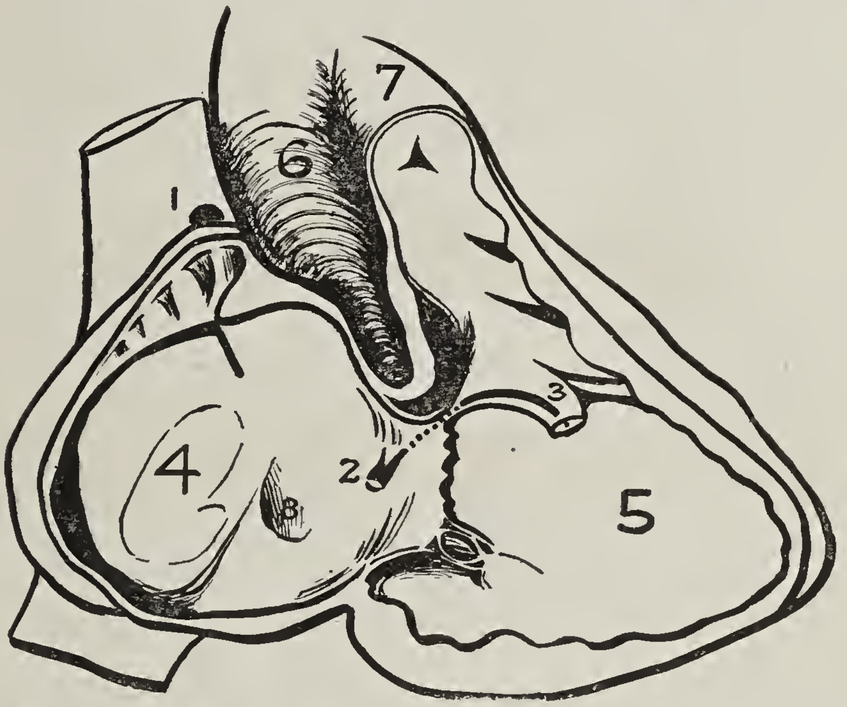

Fig. 3.—Diagram showing position of a portion of the remains of the primitive cardiac tissue, including the nodes of Tawara and Keith. 1. Superior vena cava and node of Keith. 2. Auriculoventricular node of Tawara, from which the auriculoventricular bundle arises. 3. Right division of the auriculoventricular bundle. 4. Right auricle. 5. Right ventricle. 6. Aorta. 7. Pulmonary artery (after Keith).

240 to 120, the rate which was in force at the onset of the tachycardia. The tracings and the exact halving of the heart-rate at the end of the attack show it to have been caused by the liberation of a series of extrasystoles from the auricle, all of which were transmitted to the ventricle. Vasomotor dilatation in the splanchnic area was probably not the cause of this attack. Had that been the case, inversion alone would have sufficed to arrest the tachycardia. The additional factor (viz., forced expiratory effort with closed glottis after a deep inspiration) was required to stimulate the bulbar inhibitory center sufficiently to arrest the series of extrasystoles. The heart-volume returned to the normal boundaries immediately after the tachycardia ceased.

### DIAGNOSIS

The diagnosis of paroxysmal tachycardia is usually not difficult. The rate is much higher than in other tachycardias, such as accompany fevers and thyroid diseases. While cardiac dilatation occurs in many cases of this disease, it is accompanied by no arrhythmia unless in the very latest stages. There may be difficulties in the diagnosis of periodic arrhythmia from myocardial disease. In general, however, a pulse-rate over 200, regular, and apparently not the termination of a long period of incompensation, may be pretty certainly set down as paroxysmal tachycardia. Mackenzie states that it occurs as a rare complication of mitral stenosis and aortic insufficiency.

### TREATMENT

What has been said concerning the influence of position in these attacks is undoubtedly the most important element of treatment. I have never succeeded in influencing an attack in this way, but apparently it has been done and will often succeed. The simplest device is to put the head down and the feet up, which can usually be done easily on an operating-table or a hospital litter. If there is no dyspnea or cyanosis, the abdomen may be tightly bandaged. Compression of the vagus in the neck has been successful, and the electric current over the vagus may be tried. Ice over the heart or at the nape of the neck should be useful at times.

Drugs seem to be of little value. Mackenzie states that after many year's experience he has decided that his drug treatment has no effect on the attacks themselves. Proper treatment between attacks is, of course, very important. Abstinence from stimulants is important and gastro-intestinal insults should be avoided. In cases in which the blood-pressure is high, persistent measures should be taken to reduce it.

### CONCLUSIONS

1. Paroxysmal tachycardia is a term applied to cases in which the nodal rhythm is transient and recurrent.
2. It may occur as a complication in mitral stenosis and aortic insufficiency.
3. While its onset is alarming, the individual attacks usually terminate in recovery very promptly, and this fact necessitates great caution in the prognosis of the disease.
4. Treatment of the individual attacks consists almost entirely in physical therapy by position and external applications. Proper general treatment between attacks is indicated.

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**Congenital Edema of the Leg.**—At the time of the birth of a female child there was noticed a well-marked edematous swelling of the sole and dorsum of the right foot and a swelling of the leg on its front and outer aspects which had continued. The right leg was one-half inch longer than the left, measured from knee to heel. It was believed that a deep angiomatous condition could be excluded.—Maynard Smith, in *Proc. Roy. Soc. Med.*, March, 1910.

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# A MODIFIED SIMPSON'S TAMPON TO PREVENT NASAL HEMORRHAGE *

MARK D. STEVENSON, M.D.
AKRON, O.

It sometimes becomes necessary to use mechanical means to stop nasal hemorrhage, spontaneous, following operations, or due to any of its many causes. After most nasal operations the patient should be kept in bed in a hospital for a time, but if this ideal condition cannot be fulfilled and the patient has to go home or some distance from the operating room, away from skilled attendance, it is safer to tampon the nares. I will describe a very easy and efficient method of tamponing the nose, which requires but a moment for its performance and is less distressing than packing by gauze or other material. The ordinary treatment of epistaxis by cauterization, etc., will not be considered in this paper.

Rest in bed, the quiet assurance of the nurse or physician that the bleeding will cease, which it practically always does when the blood pressure is sufficiently lowered, ice to the face or neck, hot water bottles to the lower extremities, and, if necessary, to the lower parts of the body, nearly always succeed in stopping the bleeding. The patient should be turned on the side from which the nose is bleeding, so that the blood may drip directly into a pus basin or towel and not compel him to clear the throat of blood or otherwise in any way disturb the clot. The clot is Nature's effort to prevent the hemorrhage and should be conserved.

I think the application of drugs usually accomplishes little more than to disturb the clot. Peroxid of hydrogen, solutions of cocain, and especially adrenalin, help to prevent or to stop immediate hemorrhage, but I think there is greater likelihood of after hemorrhage than if they had not been used. I do not put as much confidence as some do in the use of the calcium salts before an operation.

After a nasal operation, if the patient cannot be kept in a hospital, it is often advisable to tampon the nasal cavity. I use a tampon composed of compressed cotton, a modification of Simpson's tampon. I found the Simpson tampon too small, so I had larger ones made. They are three inches long and one-half inch wide by one-sixteenth or one thirty-second inch thick; when moistened they swell until very much thicker. The cotton tampon must be kept dry before introducing. It should be wrapped in thin gutta percha of equal length, the gutta percha being wrapped around the tampon two or three times, much like wrapping a cigarette, and the free edge, except at the ends, gummed down by some sterile ointment, e. g., zinc oxid or 2 per cent. calomel ointment. The gutta percha tissue is easily kept clean by keeping it, cut into proper sized pieces, three inches long by two and one-half inches wide, in a 1 to 2000 solution of formalin. The thin gutta percha which deteriorates in the air keeps well in this solution and should be thoroughly dried between layers of gauze before applying to the tampon.

If it is desired to plug the naris without knowing where the hemorrhage is coming from, or following removal of the inferior turbinate or a large ridge or spur low down on the septum, the long tampon is introduced into the naris and pushed horizontally backward along the floor of the cavity until entirely within the nose. The posterior end will then lie in the posterior choana. Sterile water, normal saline, compound tincture of benzoin, or some mildly antiseptic solution should then be dropped on the open end of the tampon, which will cause it to swell. Moisture may also be admitted through a few small perforations in the gutta percha. The tampon will then press evenly against the external wall of the nose and septum and occlude the posterior choana and anterior naris. The septum ordinarily is fairly elastic and gives a little so that too much pressure is rarely, if ever, felt. In a wide fossa two are required side by side. They are best introduced at the same time, although they should be wrapped separately in gutta percha, as they are then more easily removed. Occasionally one should be split and one and a half introduced or even two and a half. Experience soon teaches how many to use. In some very narrow anterior nares the full size may be too wide to introduce, or it might seem that when swollen it would be too large to remove easily. The tampons can be readily narrowed to any desired width by a strong pair of scissors. They rarely require to be shortened.

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* Read before the Ophthalmological and Otolaryngological Section of the Cleveland Academy of Medicine, Feb. 25, 1910.

I have never had any special difficulty produced in the nasopharynx, tube or ear, after using the tampons, although in twenty-four or forty-eight hours they should be removed, as they are no longer needed. After removal of the middle turbinate or a spur high up on the septum they can be cut much shorter and introduced high up into the nasal fossa where, after moistening, they remain. Simpson's tampons which can be used in the upper portion of the nasal fossa are much too short to use in the lower part of the nose, and if two are used, one in front of the other, some difficulty may be experienced in removing the posterior one. Good, who was the first man I saw use Simpson's tampon, has also devised a much larger one, but it is so wide that, in my opinion, it could be introduced and removed through only a few of the largest nares.

These smooth surfaced tampons are easily and usually painlessly (in contrast to gauze or cotton packing) removed, preferably by an alligator forceps. Hemorrhage usually follows removal for a few moments, but if the clot is not disturbed by blowing the nose there is little bleeding. Usually the clots should not be washed out for another twenty-four hours, and only very gently at first, depending on the case. If the end of the tampon in the anterior naris is covered by swelling of the mucous membrane, after the mucus is wiped or sprayed away, a 10 per cent. cocain in adrenalin (1 to 1000) solution can be applied on pledgets of cotton, quickly shrinking the swollen tissues and exposing the often flesh-colored end of the tampon. If the septum is too freely movable it may be supported in the opposite nasal fossa by another tampon, or, if it be thought necessary to breathe through that side of the nose, by some of the pervious nasal splints or by a proper sized piece of rubber tubing. There is no distress in introducing tampons following an operation, and very little in any case. If an anesthetic has not been previously used for an operation the nares should sometimes first be sprayed with a weak solution of cocain or other local anesthetic, and adrenalin.

**Congenital Absence of Left Femur.**—P. Lockhart Mummery (*Proc. Roy. Soc. Med.*, March, 1910) reported the case of a male child, aged 2, in which there was an absence of the left femur. The knee-joint appeared to be normal but was close up to the left hip; below the knee, the leg was normal but rotated outward. The *x*-ray shows the diaphysis of the left femur missing, the lower epiphysis being present, with a small island of cartilage above this. The child showed no other congenital defect and is healthy.

## RESPIRATORY JOINT CREPITATIONS

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For many years I have occasionally heard confusing adventitious sounds over the scapular areas during auscultation of the organs of respiration. They may be of a creaking, crunching or bubbling character, and may occur during either or both phases of respiration. They are somewhat superficial and are confined to the scapular areas, or, if they extend outside, lose considerably in intensity at the bone margin. Displacement of the scapulæ forward causes them to disappear, and clear respiratory sounds are now audible when the stethoscope is placed over the same pulmonary area.

I have been able to demonstrate these sounds to students in the clinic and have hitherto listed them under the term "the scapula rub." Three well-marked cases of late have enabled me, however, to trace their origin. In all three cases they were produced in the apparently healthy shoulder-joint during its respiratory movement. From this position of maximum intensity they were propagated by the scapula to the suprascapular and infrascapular regions and by the humerus along the arm, over which they were heard with peculiar distinctness. In one instance they were propagated along the clavicle, but did not reach the sternum. In two of the three cases they had led the examiner to entertain a suspicion that the patient had tuberculosis.

I have deemed their occurrence of sufficient importance to draw attention to for the following reasons:

1. No mention is made of them in the student's text-books.
2. They sometimes lead to an erroneous diagnosis of tuberculosis of the lung area over which they are heard.
3. Physicians who devote most of their time to the treatment of tuberculosis tell me that though they have long heard similar sounds they have never been satisfied as to their origin.

It seems not improbable that similar confusing sounds may be produced in the sternoclavicular and acromioclavicular joints.

## TRAUMATIC RUPTURE OF THE MESENTERY*

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LITTLE ROCK, ARK.

Most American and English authors either disregard this condition or treat it only as a complication of rupture of the intestine. In the latter form it is frequent, but rupture of the mesentery alone without other lesions in the intestine is comparatively rare. A few cases have been reported by German and French authors.

Neumann[1] reports one case in a boy run over by a wagon, the blood-vessels were ligatured and the mesentery sutured. Complete recovery followed. Neumann also collected nine cases (reported 1845-1896) in which autopsies had revealed rupture of the mesentery; the injury being due in most cases to being run over by wagons, or to falls or jumps from heights; in one case, to a kick by a horse and in one, that of a car conductor to being jammed between his car and a wagon.

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* Read before the Pulaski County (Ark.) Medical Society, March 21, 1910.

[1] Neumann, R.: Beitr. z. klin. Chir., 1904, lxiii, 676.

Kudlik[2] reports two cases, one of a child run over by a wagon, one of a man injured in a factory; both showed rupture of the mesentery without injury to the intestine, with hemorrhage. The child recovered from the operation; the man died from peritonitis.

Autenrilth[3] reports one case, that of a child of 4½ years, also run over; the mesentery was ruptured, tearing many of the branches of the arteria mesenterica, with serious hemorrhage. The child recovered.

Laubie[4] describes an autopsy on a man who fell from a height of 15 meters and died a few hours later. The mesentery was ruptured with hemorrhage of the mesenteric artery; no other lesion of the intestines. Death was probably due to hemorrhage.

Erdmann[5] reports three cases; in two of which the mesentery was torn from the intestine; and one in which there were as many as twenty lacerations of the mesentery causing hemorrhage. Recovery ensued in all cases.

Hume[6] reports a case of torn mesentery followed by resection of a portion of the intestine and recovery.

The following is a case which came under my observation, post mortem:

*History.*—On July 31, 1909, about 9 p. m., the patient, P. J. I., a white man, aged 40, engaged in a fight on the street, in the course of which he either fell or was knocked down and some witnesses stated that he was kicked in the abdomen. Apparently not much injured, with the exception of a few bruises about the face, he was arrested and taken to the police station. About 10 p. m. he complained of pain in the abdomen and a physician was called. A few bruises on the face and a rapid pulse (which was attributed to his drinking) were the only objective symptoms found. The next morning (Sunday) at 7 a. m., he was removed to a hospital, still complaining of abdominal pain. His temperature was 97 F. and his pulse 70 and very weak. During the day, however, he was able to walk about the ward. At 6 p. m. his temperature was 97 F. and his pulse was 80. Sunday night he vomited several times and had to be catheterized. On Monday, August 1, at 6 a. m., his temperature was 100 F. and his pulse could not be counted. From then on his condition became progressively worse until he died at 3 p. m.

*Autopsy.*—All organs were practically normal. No bruises or marks on abdominal wall. The abdomen was filled with fluid blood which came from an irregular tear entirely through the mesentery. The tear was 3 cm. long, just opposite the fourth lumbar vertebra and 2 cm. from the posterior attachment of the mesentery.

I am indebted to Dr. O. K. Judd for the clinical history of this case.

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# A REMARKABLE CASE OF METHYL-ALCOHOL POISONING

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NEW YORK

*History.*—Mrs. M. D., a Russian Jewess, was brought to the office blind on March 8, 1910, giving a history of failing vision beginning eleven days before. After an examination which led to the probable diagnosis of toxic amblyopia, the following history was elicited. Fifteen days before she had been present at a dinner, on which occasion she partook of a small quantity of whisky, about one tablespoonful. Her habits had been temperate, that is, she was accustomed to take 1 to 2 teaspoons of brandy once a day with her mid-day meal. Two days after the dinner she began to have pain over the eyeballs, more marked on moving the eyes, also headaches and some blurring of vision. The diminution of vision continued until the vision of the right eye was absolutely abolished, that of the left considerably reduced. This was three days before she was brought to me.

*Examination.*—With neither eye could the patient count fingers at any distance. The fields taken roughly with a visiting-card brought out the fact that there was an absolute central scotoma in the right, with some indefinite peripheric vision present, except below. The field of the left eye was similar, but with no central scotoma. There was absolute color-blindness. The ophthalmoscopic picture was that of marked papillitis in both eyes (amounting to 5 diopters in the left and 3.5 diopters in the right eye), with enormously widened and somewhat tortuous veins. Even the finer veins leading from the macula were greatly injected. The arteries were only slightly narrowed. The retina itself seemed in no way involved. The pupils were quite wide, but not fixed, reacting weakly and widening again. The general history and physical examination disclosed that the patient had been suffering from cholelithiasis for some time past. Considering the rapidly failing bilateral loss of vision, the diagnosis of toxic amblyopia suggested itself in spite of the marked papillitis and the headaches, which latter a rapidly growing intracerebral neoplasm might have explained. The brandy habitually consumed by the patient was examined by Dr. Arthur Bookman of the Mount Sinai Pathological and Chemical Laboratory and found to contain 6 per cent. of methyl alcohol. The dinner whisky could not be obtained.

*Course of Disease.*—In the further course of the case, during the next week, there was at first an increase in the swelling of the nerve-head with a few small hemorrhages, very narrow arteries, and still greater contraction of the field until only the upper outer quadrant in either eye remained. After another week the functional examination showed improvement in vision to the extent of counting fingers at 1 foot with either eye, and considerable enlargement of the fields, bearing out, for the first time, the report of subjectively improving vision. Objectively, the swelling of the discs had diminished, the outline being fairly well defined in the right eye and shining through the still edematous fibers in the left. After ten days more, both discs looked fairly normal and not even especially pale; except that the larger arteries were still considerably narrowed. The fields for white were roughly of apparently normal size, though no further improvement in central vision, beyond the counting of fingers at 1 foot could be noted. At the present writing, about seven weeks after the onset of the trouble, the patient's vision in each eye has improved to 20/50. The field is normal for white and for colors. The pupils react well. Ophthalmoscopically the nerves are slightly pale and the arteries less filled than normal.

The remarkable features of this case are that it occurred in a temperate woman in whom wood-alcohol poisoning would not easily suggest itself; that it was probably a case of chronic poisoning in which the addition of a somewhat larger dose brought on the acute symptoms; that only a very small quantity of the poison (about 7 to 8 grains) was ingested daily; and that the papillitis present was intense.

It is well known that methyl alcohol taken in small quantites is innocuous to many persons, whereas, on the other hand, there are many people for whom even half a teaspoonful would constitute a poisonous dose. This difference in susceptibility to the poison is probably due to the difference in secondary chemical compounds formed in the alimentary canal and the blood. At one time formaldehyde, one of these, was suspected, but this is probably not correct, nor can any admixed impurities, such as acetone, which was also accused, be made answerable.

In my patient the symptoms of cholelithiasis showed a disturbance in the function of the liver and consequent interference with digestion. It is probable that her intolerance to the small doses of methyl alcohol was due to this condition.

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[2] Kudlik: Deutsch. Ztschr. f. Chir., 1908, xciv, 327.

[3] Autenrilth: München. med. Wchnschr., 1908, lv, 513.

[4] Laubie, A.: Gaz. hebd. d. sc. méd. de Bordeaux, 1907, xxviii, 29.

[5] Erdmann, J. F.: Am. Jour. Med. Sc., 1905, New Series, cxxix, 980.

[6] Hume, G. F.: Univ. of Durham, Coll. Med. Gaz., 1906, vi, 122.

The ophthalmoscopic picture of methyl-alcohol poisoning appears under three varieties or degrees: first, entirely negative; second, with a well-defined pale disc and contracted arteries from the beginning, and third, as a neuroretinitis of moderate degree.

Pathologically, two structures are affected in methyl-alcohol poisoning, the ganglion cells and the blood-vessels, and probably the ophthalmoscopic picture varies according to the kind of structures involved and the degree of involvement. In the first variety, with the negative opthalmoscopic picture, the ganglion cells are primarily injured and the injury leads subsequently to the ascending atrophy of the nerve fibres.

The second picture, pale nerve with narrow arteries must be due to the effect of the poison or the respective derivatives of the poison on the blood-vessels, and is comparable to the effect of poisoning with quinin and the salicylates.

The third picture, neuroretinitis with swelling of the nerve-head and engorged veins, is either due to a real neuritis or dependent on altered circulation and pressure conditions within the cranial cavity.

In both these latter forms, there is of course the ganglion cell degeneration added to the circulatory disturbance. As a final result we find ophthalmoscopically a simple atrophy, corresponding to the first class, and a neuritic atrophy, corresponding to the second and third pictures.

681 Madison Avenue.

## POISONING BY MERCURIC CHLORID THROUGH VAGINAL DOUCHES

ARTHUR J. PATEK, M.D.
MILWAUKEE, WIS.

In discussing the various ways in which mercury, therapeutically administered, may be absorbed with toxic consequences, little emphasis has been laid on the danger attending its use in vaginal douches. The drug is surely freely used in this manner, and doubtless many individuals show a dangerous susceptibility to its irritating effect.

A recent experience with a fatal case of mercury poisoning through vaginal douches, is worth recording, so that it may constitute a warning to others. Inasmuch as several similar cases have recently been reported[1] in The Journal, the chronicling of another, even though it be a rare experience, must be considered an urgent duty.

The patient, Miss K., aged 35, first consulted me on the morning of Jan. 23, 1910. She gave a history of persistent vomiting and purging of four days' duration. Careful questioning elicited no satisfactory information, and her symptoms were without known cause. The taking of medicine in any form was denied. An epidemic of intestinal grippe was raging at the time and her condition was ascribed to this. She complained of no pain whatever, nor did physical examination elicit anything further. Powders of bismuth and morphin were given.

She was again seen January 25. Purging had ceased entirely, but vomiting followed everything taken by mouth. No pain was complained of, and the abdomen was not sensitive to touch. There was neither headache nor dizziness; vision was good. Since Jan. 23, anuria had existed. Again detailed questioning elicited absolutely no information of value, and the patient again denied having taken medicine or of even having used drugs or medicine in any form whatever. Efforts to stimulate the flow of urine were made. During the following night a small quantity was voided (after 72 hours' anuria) which, inasmuch as menstrual flow had begun, the attendant failed to save, as had been directed. On the previous day epistaxis was noted, continuing 36 hours. While during the first few days the mental condition was apparently normal, the patient occasionally lapsed into a dazed state when she remained unnoticed. Epistaxis recurred on Friday the 28th, and with the vomitus much of the swallowed blood was regurgitated. On the evening of this day four ounces of bloody urine were withdrawn by catheterization. It contained an abundance of albumin, epithelial cells, hyaline casts, blood and pus. Every effort was made to restore the action of the kidneys, but, save a slight response as indicated by a small quantity of bloody secretion, no further result was attained. The patient was in a stuporous condition during the night of Friday the 28th and the following day.

Although suspecting that the patient had taken mercury in some form, either with suicidal intent or by accident, this was strenuously denied, and no explanation for the rather characteristic symptoms of corrosive sublimate poisoning was suggested. However, on Saturday, the 29th, the day before her death, corroborative information of the suspected cause was obtained. I was reliably informed that on the day she was first taken ill, January 19, four days prior to my first visit, she had consulted another physician, complaining of severe irritation and burning of the labia. This physician was told that she had been using douches prepared by dissolving tablets in water, and the tablets were recognized by him as being mercury bichlorid. On examination he found a most intense inflammation and edema of the labia and vaginal tract, so much so that instrumental examination was impossible; and he noted the patient's excruciating suffering from the local condition.

Lacking evidence that the patient had taken mercury in any form by mouth, it is evident that the absorption of the poison in toxic quantities must have taken place through the vagina. The strength of the solution used is not known. In any event, this case, and others recently noted in The Journal[1], ought to constitute a warning to physicians that mercury can hardly be employed with safety in this manner.

141 Wisconsin Street.

## BRONCHIAL VINCENT'S ANGINA

J. H. ROTHWELL, M.D.
LIBERTY, MO.

Vincent's angina is a disease that usually attacks the throat, especially the tonsils. The following cases, I think, will show that, like diphtheria, Vincent's angina sometimes attacks the tracheal and bronchial mucous membranes.

Case 1.—Miss A., went to Kansas City, Dec. 7, 1909, to visit a brother, not feeling well when she left home. At 10 a. m., December 10, while down town shopping she was taken with a chill. She was taken to her brother's home and a physician called, who pronounced it a severe case of pneumonia and advised that the patient be brought to her home here.

I saw her about 7:30 p. m. Her temperature was 104 F. There was intense pain in the left side below the nipple, constant coughing, with profuse, bloody fluid sputum, and a sensation of great oppression over the upper part of the chest and a sensation of smothering. The breathing and cough resembled those of both asthma and croup. The tongue was clean and the throat not involved, no membrane or ulceration of any kind being present. I could make out no consolidation of the lung and the case did not impress me as being pneumonia. I procured some of the sputum and a smear showed it to be full of Vincent's spirilli and fusiform bacilli. This was evidently a case of bronchial infection, just as we sometimes have laryngeal and bronchial diphtheria. The next morning the temperature was normal and from that time for ten days or two weeks it varied from normal to 102 F. The characteristic breathing, cough and sputum continued, though gradually abating. The patient was able to be up in about three weeks. Six weeks later, on any exertion, such as sweeping, she would expectorate the same fluid, bloody sputum full of Vincent's spirilli, and it was two or three months before she was entirely free from them.

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[1] The Journal A. M. A., April 9, 1910, p. 1203 and April 30, 1910, p. 1458.

Case 2.—Another case was that of a woman who came to visit her sister to recuperate from an attack of grippe. After a few days I was called to see her. She was suffering with pneumonia; the infective agents at this time being the *Pneumococcus* and *Diplococcus catarrhalis*. She was a very delicate epileptic, with a very bad heart lesion, but she recovered in the usual time and went to her home. In a few days she was brought back again with a relapse, the infective organisms this time being those of influenza and *Diplococcus catarrhalis*. Every day or two during this attack she would have a seizure of severe, asthmatic coughing, with a sense of great oppression in the chest and a smothering sensation, accompanied by the expectoration of a fluid, bloody sputum full of Vincent's spirilli and fusiform bacilli. At other times the sputum did not contain many spirilli and often none. But when these attacks did come on the cough, breathing and sputum were characteristic of the former case.

These two cases were very interesting to me and similar cases have never been reported so far as I know. Altogether I have had three cases complicated with bronchial, Vincent's angina. I reported these cases to Dr. Frank J. Hall, a pathologist, of Kansas City, Mo., and he said that he had never seen any cases like them, nor had he seen any reported. Several months later, while I was visiting his laboratory, he told me that he had, a few days before, been called, with another physician, to see a patient whose case was a puzzling one, the patient having been under treatment then for six weeks, and he had found the same characteristic symptoms, viz.: the oppression of the chest and smothering sensation, and the breathing and cough resembling those of asthma and croup and the fluid bloody sputum which I had described to him as occurring in my cases. On microscopic examination, the sputum was found to contain great numbers of Vincent's spirilli and fusiform bacilli. On the strength of the diagnosis, iodids were administered and iodin in a nebulized form used. In two or three days the patient was greatly relieved. He reported that Dr. Hall said that no sign of the disease was apparent in the throat. So I am convinced that Vincent's angina sometimes attacks the tracheal and bronchial mucous membranes.

# THE DIFFERENTIATION BETWEEN DEMENTIA PRÆCOX AND DEPRESSIVE STATES BY SO-CALLED BIOLOGIC BLOOD-TESTS*

ELLEN CORSON WHITE, M.D.
AND
S. D. W. LUDLUM, M.D.
PHILADELPHIA

While the Wassermann reaction is of greatest value in differentiating between syphilis and non-syphilitic diseases of the nervous system, it does not permit of further differentiation between so-called functional nervous diseases.

Recently Much published a description of a method by which, he believed, he could differentiate dementia præcox and manic-depressive disease from other diseases. The method is based on the inhibiting action of blood-serum in cobra hemolysis. His results have not been confirmed by others.

In the following we wish briefly to state that we seem to have been able to differentiate by relatively simple methods between dementia præcox on the one hand and melancholia on the other.

Our method is based on the determination of the fixation of complement of guinea-pig serum by the serum of the patient. We found that in melancholia the amount of complement absorbed is very much larger than in all other diseases that we have encountered, and also much larger than in dementia præcox, in which disease it is approximately normal.

We have tested 67 cases of various mental diseases, 37 cases of melancholia half of which were of the manic-depressive type, and the others involutional. So far our test has been decisive and characteristic in all cases examined. We shall continue the examination for possible exceptions.

We also wish to state that it is possible to differentiate more clearly between mental diseases by using very carefully standardized factors in Much's method. In our cases this reaction always occurred in dementia præcox and almost never in melancholia, when all the factors were standardized.

In conclusion we wish to say that our results distinctly indicate that in so-called functional mental diseases, chemical changes in the blood take place, and can be discovered by so-called biologic methods.

216 South Fifteenth Street.

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* Preliminary Report from the Laboratory of Neuropathology in the University of Pennsylvania.

# ILEUS, DUE TO MECKEL'S DIVERTICULUM

## ATTACHMENT OF TERMINAL LIGAMENT TO MESENTERY MAKING RING, THROUGH WHICH ILEUM FORMED A HERNIA WITH STRANGULATION

C. E. HARRIS, M.D.
BLOOMINGTON, IND.

*History.*—W. F. N., male child, aged 2, up to Dec. 23, 1909, had had no serious illness. About 3 a. m., December 23, the child awoke and seemed to be in great pain. Half an ounce of castor-oil was given by the parents. About 5 a. m. the child began vomiting. Pain and vomiting continuing, a physician was called about noon. He prescribed calomel and more castor-oil, but everything given by mouth was rejected. On the second day several enemas were given, and, excepting a very small stool following the first enema, neither feces nor flatus passed. There had been no mucus nor blood passed per rectum. Pain, vomiting and absolute constipation had been continuous from the beginning of the illness. I was called on the evening of the fourth day and found that the child had died a few minutes before my arrival. I asked for an autopsy and the privilege was granted.

*Autopsy.*—Hippocratic facies marked; abdomen greatly distended. On opening the abdomen several greatly distended coils of small intestine presented. The intestine had lost its luster and was very dark in color; the mesenteric vessels were engorged. Folowing the small intestine downward, I found several collapsed coils massed in the ileocecal region. Here I found a band surrounding the intestine, above which the bowel was greatly distended, and below, it was collapsed. The appendix was in a normal condition. I tied off the cecum a short distance above the ileocecal junction and the ileum just above the constriction, removing the specimen. On examination it proved to be a Meckel's diverticulum, 2 inches in length, 3/4 inch in breadth, arising 14 inches from the ileocecal valve, with a terminal ligament attached to the mesentery directly opposite its base, forming a ring through which the ileum had become herniated.

## *New and Nonofficial Remedies*

Since the publication of the book "New and Nonofficial emedies, 1910," the following articles have been acepted by the Council on Pharmacy and Chemistry of the merican Medical Association. Their acceptance has een based largely on evidence supplied by the manufacurer or his agent and in part on investigation made y or under the direction of the Council. Criticisms and orrections to aid in the revision of the matter before ublication in the book are asked for.

The Council desires physicians to understand that the cceptance of an article does not necessarily mean a ecommendation, but that so far as known it complies ith the rules adopted by the Council.

W. A. PUCKNER, Secretary.

*(Continued from page 1789)*

**MAMMARY SUBSTANCE—Armour.**—Mammary Substance -Armour, consists of the mammary gland of the sheep freed rom fat, cleaned, dried and powdered, without the addition f preservative or diluent.

A yellowish to orange colored powder, having a slight peculiar odor. Only partially soluble in water.

One part represents approximately 4½ parts of the fresh mammary gland of the sheep. It contains nucleoproteid which, when treated with dilute sulphuric acid, yields guanin. (S. Fränkel, Descriptive Biochemie, p. 386). Upon incineration, it should not yield more than 9 per cent. ash.

*Actions and Uses.*—See Mammary Gland (N. N. R., 1910, p. 41).

*Dosage.*—0.13 to 0.3 Gm. (2 to 5 grains) three times daily.

Manufactured by Armour & Co., Chicago. Not patented or trade-arked.

*Mammary Substance Tablets-Armour.*—Each tablet contains desiccated mammary substance 0.13 Gm. (2 grains).

Dose.—1 to 3 tablets three times a day.

**DESICCATED SPLEEN—Armour.** — Desiccated Spleen—rmour, consists of the spleen of the calf, freed from fat, leaned, dried and powdered, without the addition of preservaive or diluent.

A dark yellowish colored powder, having a peculiar odor. Partially soluble in water.

One part represents approximately 4¾ parts of the fresh spleen substance. It contains nuclein and iron. Upon incineration, it should yield not more than 7 per cent. ash.

*Actions and Uses.*—See Spleen (N. N. R., 1910, p. 144).

*Dosage.*—0.13 to 0.25 Gm. (2 to 4 grains) every three or our hours.

Manufactured by Armour & Co., Chicago. Not patented or trade-arked.

*Spleen Tablets-Armour.*—Each tablet contains desiccated spleen .065 Gm. (1 grain).

Dose.—1 to 3 tablets three times a day.

**DESICCATED PAROTID GLAND—Armour.** — Desiccated arotid Gland—Armour, consists of the fresh parotid gland f the ox. freed from fat, cleaned, dried and powdered, withut the addition of either preservative or diluent.

A yellowish colored powder, having a slight peculiar odor. Partially soluble in water.

One part represents approximately 5 parts of the fresh parotid gland of the ox. Upon incineration, it should yield not more than 7 per cent. ash.

*Actions and Uses.*—See Parotid Gland. (N. N. R., 1910, p. 142).

*Dosage.*—0.2 to 0.3 Gm. (3 to 5 grains) three times daily.

Manufactured by Armour & Co., Chicago. Not patented or trade-arked.

*Parotid Tablets-Armour.*—Each tablet contains desiccated parotid gland 0.13 Gm. (2 grains).

Dose.—1 to 2 tablets three times a day.

**OVARIAN SUBSTANCE—Armour.** — Ovarian Substance—Armour, consists of the entire fresh ovaries (including the corpora lutea) of the hog, cleaned, dried and powdered, without the addition of either preservative or diluent.

A yellowish colored powder having a peculiar odor. Partially soluble in water

One part represents approximately 6¾ parts of the fresh ovary of the hog. It contains gelatin, mucin, nuclein and the active constituent of the corpus luteum. Upon incineration, it should not yield more than 7 per cent. ash.

*Actions and Uses.*—See Ovary (N. N. R., 1910, p. 141).

*Dosage.*—0.06 to 0.2 Gm. (1 to 3 grains) three times daily.

Manufactured by Armour & Co., Chicago. Not patented or copyrighted.

*Ovarian Substance Tablets-Armour.*—Each tablet contains ovarian substance 0.13 Gm. (2 grains).

Dose.—1 to 2 tablets three times a day.

**ORCHIC SUBSTANCE—Armour.** — Orchic Substance—Armour, consists of the pulp from fresh ram testicles removed, dried and powdered, without the addition of preservative or diluent.

A light yellow powder, having a peculiar odor. Partly soluble in water.

One part represents approximately 7 parts of the fresh pulp from the ram testicle. Upon incineration, it should yield not more than 10 per cent. ash.

*Actions and Uses.*—See Testicle (N. N. R., 1910, p. 144).

*Dosage.*—0.13 to 0.3 Gm. (2 to 5 grains) three times a day.

Manufactured by Armour & Co., Chicago. Not patented or copyrighted.

*Orchic Substance Tablets-Armour.*—Each tablet contains orchic substance 0.13 Gm. (2 grains).

Dose.—1 to 3 tablets three times a day.

*(To be continued)*

## *Therapeutics*

### RHEUMATIC FEVER

This acute disease, that is in all probability an acute infection, is so serious for the future of the individual who is unfortunate enough to have an attack, that the repeated discussion of its treatment is always in order. In spite of a pretty good understanding of its management and of the frequency of its complications, its successful treatment as to shortening the duration and preventing cardiac complications has hardly advanced at all in many years. An article by Dr. Frank S. Meara, in the *American Journal of the Medical Sciences,* March, 1910, presents modern ideas of the best management of acute inflammatory rheumatism.

Meara recalls to our minds that about one-half of all cases of rheumatism occur between the ages of 15 and 25 and about one-quarter between 25 and 35. He is right in believing that there are many undiagnosed attacks of rheumatism in young children, as many times a child may have rheumatic fever without swelling, heat, or redness in the joints. It is possible that many unexplained valvular lesions of the heart, discovered in later years and attributed to various other infections such as scarlet fever or diphtheria, may really date from an undiagnosed rheumatism. On the other hand, infants who are generally babies who are fed on other food than mothers' milk, are many times believed to have rheumatism. (On the other hand, infants, who are generally babies who are fed on other food than mothers' milk, are many times believed to have rheumatism) when scurvy is the trouble.' Children from 3 years upward should be carefully examined for slight fever, for some joint localization, and for cardiac disturbances if they have been or are subject to what has long been termed "growing pains." It should be remembered that a so-called subacute arthritis can allow or cause endocarditis with subsequent valvular lesions. Hence anyone with an arthritis, with much fever or with little, should be placed at rest, unless the joint inflammation is considered a surgical process and the joint is surgically immobilized.

A patient with acute rheumatism should have as much fresh, pure air in his bedroom as is now believed necessary in all the acute infections. Dampness and stagnant air are especially prone to perpetuate the disease while sunlight is a distinct aid in shortening the duration of the attack of rheumatic fever.

Meara believes that many acutely ill patients, and perhaps especially rheumatic patients, are under-fed, and he presents strong arguments for the administration of more food. A patient with fever certainly uses more calories of food than a patient without fever under the same conditions of rest, and it should be carefully decided how much and what kind of food he needs to obtain these necessary calories. He estimates that a man weighing about 150 pounds gives off at rest 2,300 calories, while the same patient with fever, such as rheumatic fever, will give off perhaps, 2,900 calories. A patient who is put on a rigid milk diet of about two quarts a day would take in not far from 1,200 calories, or not nearly what he is giving off. Consequently, he must burn his own fat and later his other tissues, this to his immediate direct disadvantage, and later perhaps, to his positive injury. It is theoretically absurd and clinically wrong to expect or cause a patient to drink enough milk to satisfy the need for calories or heat units (a calorie is considered to represent the heat that is required to raise one kilogram of water from 0 to 1° C.); it is therefore advisable that to the amount of milk, whether a quart, three pints, or two quarts, that is deemed suitable for the individual patient, should be added either cream, or starch, or sugar to furnish more calories for the needs of the body. Meara suggests adding considerable milk sugar to the milk, as furnishing many calories and not rendering it as sweet as cane sugar. Cereal gruels, as well represented by thoroughly cooked oatmeal gruel, will furnish a large number of calories, and makes a pleasant and nutritious food. Meara estimates that each of the following furnish 100 calories, viz.: "An ordinary thick slice of white bread (1⅓ ounces); an average ball of butter (about ½ an ounce); an ordinary helping of boiled rice (4 ounces); a large serving of oatmeal or hominy; 1½ ounces of cream; and 3 teaspoonfuls of granulated sugar."

As the wave of under-feeding has gone all over the country with such intensity that most patients who are seriously ill are under-fed, it is with pleasure that we present these suggestions for a better feeding of the rheumatic patient. Although we do not understand the part that extra acidity may or may not play in rheumatism, it certainly seems unwise to give such patients meat or meat protein foods, but the above diet as suggested is certainly a wise one. If there is much indigestion from the extra amount of fats and starches present, and as it is known that two elements are at work to reduce the normal gastric acidity, *viz.*, the extra amount of fat and milk and the fever, it can do no harm to administer, after the milk foods, a few drops of dilute hydrochloric acid 3 or 4 times in 24 hours. Whether the infection generally enters the system through the tonsils or more frequently through the intestinal tract, has not been determined, but certain it is that the less indigestion the less irritants are absorbed into the blood, the less the temperature, the less headache, restlessness, sleeplessness, and kidney irritation. There is nothing in rheumatic fever that should prevent the patient from having toasted bread, with butter, if desired, more or less frequently, portions of oranges, lemonade, and some salt with his milk or cereals. I should also be remembered that a patient who is on a diet that contains no iron should certainly receive a daily small dose of it, as represented by one or two drops of the official tincture of iron, or by 0.10 to 0.20 gram (1½ to 3 grains) of reduced iron, sugar of iron, or carbonate of iron.

Especially important in many diseases, but we believe paramount in rheumatic fever, the bowels should be kept in perfect active condition. When the patient is first seen, he should be thoroughly purged with some cathartic; whether salts, calomel, or castor oil should be determined by the individual choice of the physician and the age of the patient. Even if the patient is eating but little food, there is, as Meara emphasizes, a normal excretion from the bowels. The lower intestine should certainly be considered as an excretory organ, and even the washing out of mucous secretion and watery and toxic exudates must benefit any patient. The laxative which shall be used after the first purging must be determined by individualizing; possibly many times an enema will be sufficient, but certainly thorough evacuation of the bowels always reduces the temperature and relieves the patient of secondary toxemia. However, as Meara well cautions, frequent catharsis with salines or other active drugs is inadvisable. Laxatives, such as typically represented by cascara or by aloin in some good combination, and enemas are better than frequent saline purging.

The specific treatment of this disease seems to be clinically proved to be salicylic acid in some form, and Meara believes that too little is often administered, and he consequently gives to an "adult of average weight 20 grains, in one or other form, every 2 hours for the first 24 hours during the waking period, or even 48 hours. In severe cases even 30 grains may be given for the first 2 or 3 doses. When the pain subsides, the dose may be cut down gradually to 15, to 10, or to 5 grains at a dose, how much and how rapidly depending on the progress of events or the signs of accumulation. The dose should be well-maintained at amounts of 10 grains every 2 hours until the active phases, as evidenced by fever, pain, and joint swelling, have passed." He then gives his patients from "5 to 10 grains, every 2 or 3 hours for a week or 10 days after the subsidence of acute symptoms, and from 4 to 6 weeks a lesser dose of 5 grains 3 or 4 times a day." Salicylism, *viz.*, roaring or singing in the ears even to deafness, full-headedness, dizziness, gastric disturbances, and perhaps skin eruptions, urticarial or erythematous in type, he does not consider of enough importance, ordinarily, to stop the use of the drug. Albuminuria and hematuria he thinks can be caused by the disease as well as possibly by the salicylates.

These doses seem large, and theoretically it would seem that if a patient were saturated with the drug enough for the above symptoms, that the amount given might be reduced to just enough not to cause these symptoms. If, as he suggests, salicylic acid combats the germ of rheumatic fever as quinin does the germ of malaria, it might be best to give the salicylate in a large overwhelming dose once, perhaps, every 24 hours, preventing the head disturbance with bromids, in the same manner as quinin is best administered in malarial fever. It should be emphasized that when large doses of salicylic acid or sodium salicylate are administered, synthetic preparations should not be used. Salol, phenyl salicylate, should never be pushed in any such method as suggested, as it carries with it a phenol element that is toxic.

Meara does not state, but it is quite possible that part of the great good accomplished by salicylates is due to the fact that they cause a great amount of perspiration and therefore a large elimination by the skin of possibly the products of the disease. This can sometimes be accomplished perfectly by other methods. The writer of this editorial has frequently seen acute rheumatism almost aborted and certainly shortened by a general "body-bake," the hot-air treatment. Certainly, whenever it is possible, the body bake presents a most satisfactory treatment of rheumatism. Whatever the treatment, the frequent sponging of the body with hot water to remove the profuse, sour perspiration and the salts and toxins excreted by the skin, is physiologic as well as esthetic. Such sponging should be done at least twice a day.

Whatever the treatment, a patient who is in pain from rheumatism has a right to have it stopped, and a small amount of morphin is better than a large amount of a coal-tar product. This is always true when pain is constantly recurrent. The repeated administration of any coal-tar preparation is inadvisable in acute conditions. It is often not necessary to give large doses of morphin, and as Meara suggests, ⅛ or even 1/16 gr., hypodermatically, conjointly with the administration of salicylic acid will often give relief. This should be repeated, when the pain is severe, as often as it is needed. As Meara says, the value of potassium iodid and colchicum in acute rheumatism is probably mythical.

Whether alkalies are of much value or not is still undecided. Such treatment has its believers and disbelievers. A little extra alkali administered at such times (especially if antacid) as not to interfere with digestion can do no harm and may do considerable good. Meara suggests bicarbonate of sodium in amount sufficient to cause the urine to become alkaline. Potassium citrate would seem to be the better drug, as rendering the urine more quickly alkaline and causing less disturbance of the stomach and digestion.

The care of the individual joints which are inflamed cannot be dogmatically dictated. The joint and limb should be placed in the position that gives the patient the most comfort. If several joints of a limb are involved, and especially if there tends to be more or less troublesome muscle contractions, or an inadvertent movement causes excruciating pain, a splint may be devised to keep the limb at rest. Whether cold applications or warm applications are the best for other joints, depends on the feelings of the patient. Too continuous cold is perhaps best not applied, as tending so to deteriorate the circulation of the part as possibly to do harm. Generally, warm, moist applications, and perhaps nothing better than alcohol fomentations (one part of alcohol to 3 or 4 parts of warm water; a towel or napkin soaked in this and then wrung out just sufficiently not to drip, and this wound around the joint and then covered with oil silk) will probably give as much comfort as any application. These should be changed as frequently as they are cold. Sometimes dry cotton around the joint causes as much comfort as any application. The official methyl salicylate may be applied, or oil of wintergreen, but probably neither is more valuable than the above alcohol dressing.

Later when the acute inflammation in the joint has subsided, but the inflammation tends to persist in certain joints, ichthyol applications are much used and seem at times to be efficient in hastening the absorption of exudates. Ichthyol may be used in from 10 to 25 per cent. mixture with glycerin, or with olive or other bland oil. When there is acute rheumatic inflammation in the joint, counterirritation is contraindicated, but when a subacute inflammation persists, either fly blisters or the actual cautery are certainly advisable, and as Meara says, the cautery is generally the best treatment and is best applied in striæ around and over the joint, not cauterizing deeply enough to blister, and repeated once in 3 or 4 days. To prevent ankylosis or stiffening of joints that have been immobilized once every 5 days, they should be removed from the splints and slight motion made, when such motion is not severely painful.

If cardiac inflammation occurs and if the heart's action is impaired as shown by irregularity or increased rapidity of the heart beat, Meara believes, as is the consensus of opinion, that salicylates should be stopped. If there is no disturbance of the heart beat Meara does not believe that inflammation of it, though positively evident from auscultation, necessarily contraindicates the use of salicylates.

Anemia which so often follows rheumatism is perhaps frequently due to abstinence from meat and the prolonged administration of salicylates and alkalies. The constant administration of iron throughout the disease and a not too long use of salicylates and alkalies will generally prevent this condition.

The convalescence following rheumatism should be prolonged until the patient is thoroughly able to attend to his work. If there is a cardiac complication, such a recommendation is positively necessary. It can never be determined how much endocardial inflammation was present, how much valvular inflammation and thickening will be permanent, or how perfect the repair of the heart may be. Also, even when auscultatory evidence of cardiac complication has not been discovered, there may have been some inflammation which should call for prolonged rest. The administration of small doses of an iodid, best sodium iodid, from 0.10 to 0.20 gram (from 1½ to 3 grains) three times a day, is often advisable. Such treatment has frequently seemed to hasten or aid in the complete recovery of endocarditis. Not every endocarditis from rheumatism leaves valvular lesions.

Meat does not cause rheumatism, and prolonged abstinence from meat is generally inadvisable, still but a small amount of purin foods should be taken for some time. Eggs, green vegetables, and cereals should constitute the main food; later, fish or meat once a day may be allowed.

It has been urged, to prevent recurrences of rheumatism in those who have had it, that a week of salicylic acid treatment should be given once a month for a few months and then once in six months for several times. General prophylaxis is accomplished by the same old story now so constantly preached, and referred to by Meara. There should be plenty of warm water bathing; people should not sleep in ill-ventilated, damp, musty rooms; the bed clothing should be daily aired. Such clothing should be worn as is suitable for the climate, season of the year, environment and occupation. Overweighting of the body with unnecessary clothing, causing profuse, sticky perspiration that remains as a wet poultice over the body, will not only not prevent rheumatism, but may even be a promoting cause of it, and as Meara states, "sore throats, stiff necks, and 'growing pains' in children" should not be neglected.

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[*For other information see second page following reading matter*]

SATURDAY, JUNE 4, 1910

## ROBERT KOCH AND HIS ACHIEVEMENTS

Robert Koch, once a country doctor, the discoverer of the bacillus of tuberculosis, and with the immortal Pasteur, the founder of bacteriology, and of the germ theory of infectious diseases, died May 27, 1910. In what better way can we honor the memory of this preeminent man and benefactor of the human race, at this time and in this place, than by recalling, even if only in an incomplete and fragmentary fashion, some of the principal results of his life and work so that we may realize more fully than perhaps is the case in general what the world owes to him!

Koch was born Dec. 11, 1843, in Klausthal, Prussia. In 1862, having finished the gymnasium, he began the study of medicine in the University of Göttingen. On the faculty at that time were Friedrich Woehler, who first produced uric acid synthetically; the physiologist, Wagner, who discovered the germinal area in the ovum; and Jacob Henle, the great anatomist, who strove to unify anatomy, pathology and physiology, and who made important discoveries in microscopic anatomy. It has been suggested that probably Henle especially influenced Koch, because he was one of the first who advanced the idea that "contagium" is endowed with individual life and reproduces itself, growing by assimilation of organic material as it lives parasitically in the diseased body; he held that the as yet unseen parasites would be found to be vegetable in their nature.

While still a student Koch published the results of two investigations, one concerning the presence of ganglion cells in the nerves of the uterus, and another dealing with the question of the development of succinic acid in the animal body. In 1866 he received the degree of Doctor of Medicine, passed the state examination, and was now for a short time assistant physician in the general hospital at Hamburg; then he entered general practice in Langenhagen in Hanover. At this time he seriously considered the question of coming to this country, where two of his brothers had already established themselves, and of taking up the practice of medicine in St. Louis. He soon moved to a small place, Rackwitz, in Posen, and in 1872 he became *Kreisphysikus* or district physician in Wollstein, where he remained until he was called to the Imperial Board of Health in Berlin, in 1880. During this time he was a busy country doctor, and yet he, the unknown man, was now carrying on investigations on anthrax and on traumatic infective diseases the results of which at once placed him in the front rank of investigators and made him a leader in the new science of bacteriology.

### BACTERIOLOGY BEFORE KOCH AND THE EFFECT OF HIS FIRST EXPERIMENTS

In order to understand clearly Koch's rôle in the development of bacteriology, it is necessary to cast a glance at the state of the knowledge of the relation of microbes to disease as it was in the early seventies. It is true that Pasteur had shown that spontaneous generation was a chimera and had published epochal researches which, through Lister, gave us the life-saving boon of antiseptic treatment of wounds; and yet the road had not been wholly opened which bacteriologic investigation was to take in the near future, the road which has led to the modern discoveries in the causation of infectious diseases, their treatment and prevention. In this then virgin field Koch did pioneer service and cultivated it fruitfully to the end. At the time in question the connection between bacteria and infectious diseases seemed on the whole obscure and uncertain. There was no lack of advocates of the germ theory of infection; the great Billroth was trying ably to establish his *Coccobacteria septica* as the cause of wound infections; and Klebs had described his *Microsporon septicum* in purulent septic wounds, and introduced his fractional method of cultivation, but the actual cause of any of these conditions had not been established in a wholly satisfactory manner. The question whether the bacteria found in certain diseases were the cause of the disease or merely a consequence had not been settled. Many apparently contradictory results were being recorded and it is no wonder that doubt would arise in the minds of many as to the value of the germ theory of disease, when we consider that the results of some investigators indicated that the same disease might be caused by different bacteria and that the same bacteria might cause different diseases. Nägeli taught that the same bacterium was capable of existing in numerous forms with different functional powers, and as late as 1877 he wrote: "I have for ten years examined thousands of different forms of bacteria, and I have not yet seen any absolute necessity for dividing them even into two distinct species." No final solution of the difficulties in the way of further progress was offered until Koch appeared and supplied the methods and indicated the experiments that were necessary to furnish a thoroughly satisfactory proof of the parasitic nature of an infectious disease.

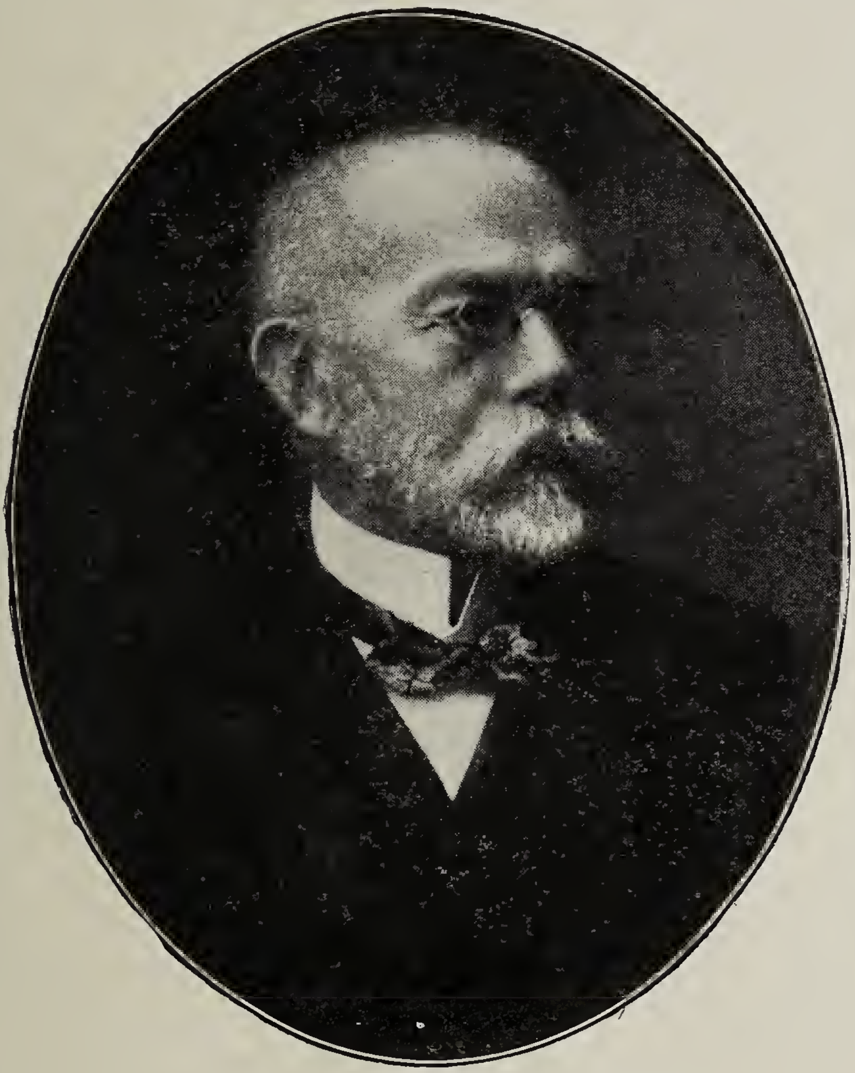
In 1876 he published his work on anthrax. Pollender and others had found rods in the blood of animals with anthrax, and the disease had been produced experimentally by inoculation with blood containing such rods; but it was still, at least in some places, a disputed question whether the rods were living things or not and whether they were the cause of the disease. Koch settled the first question by observing directly under the microscope in a hollow ground slide that if a trace of infected blood was mixed with broth, the rods in it would develop into long threads which under certain conditions would break up into minute glistening round bodies that in turn would give rise to rods like those originally found in the blood. By actual experiment, he showed conclusively that the rods as well as the rounded bodies, both of which he interpreted to be stages in the development of a single micro-organism, could cause anthrax. It is narrated that at this point Koch went to Breslau, bringing with him his microscope and white mice, for the purpose of repeating the experiments in the presence of Ferdinand Cohn, the botanist, Cohnheim, Weigert and others. The demonstration made a profound impression. Cohnheim is said to have told the workers in his laboratory:

"Let everything stand as it is and go over to Koch; this man has made a great discovery which in its simplicity and exactness of method deserves only the more admiration because he is cut off from all scientific connections and has himself worked out everything to absolute completion. There is nothing at all more to do. I regard this as a great discovery in the field of micro-organisms and I believe that Koch will surprise and outdistance us all again with further discoveries."

Two years later appeared the classical investigations on traumatic infective diseases, in which Koch showed conclusively by cultivation in the body of animals that there are specific, pathogenic bacteria which cause sharply defined transferable diseases; that pathogenic power is not a general or common characteristic of bacteria, of which there are many kinds, which have distinctive peculiarities; that bacteria of even similar form may differ widely in biologic properties. The appearance of this work marks the definite beginning of the era of exact bacteriologic-etiologic investigation.

Having solved the general question whether bacteria produce disease, Koch now made special preparations for the search for the special bacteria of individual diseases. He unremittingly attempted to improve the means "for the discovery of pathogenic bacteria in animal tissues, because he could not get rid of the idea that the doubtful results of investigations with regard to the parasites of infectious diseases might have their foundation in the incompleteness of the methods used." He greatly advanced the technic, especially by the introduction of Abbé's condenser, by the use of the homogeneous oil immersion lens and of the recently introduced anilin dyes for staining.

In 1879 Koch was called to Breslau as *Gerichtsarzt*, but evidently this work did not suit him, as he soon returned to Wollstein, remaining here only a few months, however, before he was called to the Imperial Board of Health in Berlin in 1880. Loeffler, who was Koch's first assistant in Berlin, gives the credit of having fully recognized Koch's genius and of giving it opportunity for full development to Struck, the first director of the board of health. Koch, with Loeffler and Gaffky as assistants, began his work in Berlin, in a small room with one window, but before long they moved into a larger room with three windows. The investigations on anthrax were continued; photomicrography and new cultural methods were developed; the current teachings in regard to disinfection were completely overturned, and new and improved methods for testing disinfectants were devised; corrosive sublimate and live steam as disinfectants were introduced. Now he also worked out the so-called plate method for obtaining pure cultures of bacteria from single organisms; by this simple method, which is one of the corner-stones of practical bacteriology, a ready and invaluable means was furnished for the isolation of a single bacterial species or strain from a mixture of many. When Koch demonstrated his transparent solid media and plate method at the Congress of Hygiene in London, in 1881, Pasteur exclaimed: "C'est un grand progrès"!


ROBERT KOCH, 1843—1910

### KOCH'S WORK ON TUBERCULOSIS

In the meantime Koch had begun his work on tuberculosis.

It may be noted that tuberculosis had long been regarded as an infectious disease; that Klencke in 1843 produced tuberculosis in rabbits by the injection of human tuberculous material into the veins; that Villemin a little later, by numerous systematic experiments, became the founder of the study of experimental tuberculosis; that Cohnheim and Salomonsen more recently, by inoculation of rabbits, in the anterior chamber of the eye, where they could follow the development of the tubercles step by step, had shown that various tuberculous substances contain the same infective material. Because of these results and because of his observations on anthrax and on wound infections, Koch had reached the firm conviction that tuberculosis also is a parasitic disease, and so he now proceeded with untiring patience and skill to search for the parasite. It soon became clear that the agent of tuberculosis differed from other bacteria and that different staining methods would be necessary to reveal its presence. Koch's own words give the best idea of the progress of the work:

> I commenced my investigations with materials in which the infectious agent surely would be present, as for instance, freshly developed gray tubercles in the lungs of animals which were killed three to four weeks after inoculation. Sections were made from lungs hardened in alcohol and examined with the best methods for the demonstration of bacteria. Gray tubercles were also crushed, spread out on cover-glasses, dried, and then examined for the presence of micro-organisms. All efforts to find bacteria or other micro-organisms in these preparations were without result. As it had been found in some of the earlier experiments that the addition of alkalies to the staining solutions in certain cases proved of special advantage in staining the bacteria deeply and differently from the surrounding tissue, this method was next used. Of the anilin dyes methylene blue permits the addition of the largest amount of alkali, and hence so much potassium hydrate was added to the watery solution of this dye as could be done without producing a precipitate. One cubic centimeter of a concentrated alcoholic methylene blue solution was mixed with 200 c.c. of distilled water and after repeated shaking 0.2 c.c. of potassium hydrate was added. When cover-glass preparations were treated for twenty-four hours with this staining solution, very fine rod-shaped forms were seen in the tuberculous material, which, as shown by further investigation, may multiply and form spores, and consequently belong to the same group of organisms as the anthrax bacillus. In sections it proved much more difficult to recognize these bacilli between the densely crowded nuclei and masses of detritus; consequently it was tried by the method of Weigert, who succeeded in staining anthrax bacilli in a different color from the surrounding tissue elements, to make the tubercle bacilli more distinctly visible by differential staining. This purpose was achieved by the use of a watery solution of vesuvin with which the blue stain cover-glass preparations and sections were treated until they appeared in a pure brown color to the naked eye. Microscopic examination now showed that only the previously blue-stained cell nuclei and their disintegration products had taken on the brown color, but that the tubercle bacilli retained a beautiful blue color, in consequence of which they were clearly differentiated from their surroundings, so that even in the densely crowded nuclear masses they were easily recognized. . . .
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> The bacteria have a rod shape and consequently belong to the group of bacilli. They are very thin and from ¼ to ½ as long as the diameter of a red blood corpuscle, occasionally reaching a greater length up to the diameter of a corpuscle. They show in form and size striking similarity with the lepra bacilli. However, they differ from the latter in that they are a little more slender and appear pointed at the ends. And the lepra bacilli take the stain with Weigert's nuclear staining method, which the tubercle bacilli absolutely do not.

The next problem, to obtain the bacilli in pure culture, free from all the constituents of the diseased body, was brilliantly solved by the use of blood serum solidified at 65 to 70 C., on which the bacilli grew freely, and by the inoculations of animals to determine whether the pure cultures actually consisted of the tuberculosis parasite; he secured positive results in every instance.

The first announcement of this wonderful and epochal discovery was made March 24, 1882, in the Berlin Physiologic Society. The communication bore the title "On Tuberculosis." As Koch quietly, soberly and without apparent emotion presented the details of his discovery, everyone in the large audience felt the tremendous importance of the occasion; when he finished no one spoke and the session closed without discussion. In print this classical communication, which is one of the most important in the literature of medicine, occupies about two pages like these. The work they record will always excite special admiration because of the completeness of the proof that tuberculosis is caused by the bacillus which Koch found. Not a stone is missing in the great structure.

### THE DISCOVERY OF THE COMMA BACILLUS

Continuation of work on tuberculosis was soon prevented because in 1883 Koch was sent to Egypt to study cholera, which threatened to invade Europe. As the Egyptian epidemic soon subsided, it became necessary to proceed to India, where he finally completed his discovery, in the characteristic choleraic intestinal contents, of the comma bacillus, which he brought home with him in pure culture. In the course of his studies of cholera he reached a clear notion of the mode of dissemination of this disease, which proved to be of the utmost importance in the development of practical preventive measures; he recognized that the patient is the principal source and carrier of the germs and that the secret of prevention of epidemics lies in prompt recognition of the first cases.

While in Egypt he made important observations on Egyptian conjunctivitis (Koch-Weeks bacillus) and on amebic dysentery. On his return in 1884, he received 100,000 marks from the German government. In 1885 he was appointed professor in the University of Berlin, and director of the newly established Hygienic Institute. Long before this time his laboratory was thronged with physicians from many countries, who wished to learn bacteriologic methods. The number of students now increased greatly and Koch's methods were carried to all parts of the world.

Of the work of the many assistants and pupils who have reached eminence and made great discoveries no mention even by name can be made at this time.

### THE DISCOVERY OF TUBERCULIN

In the first communication on tuberculosis Koch pointed out that the multiplication of the bacillus is limited to the living body and that the spread of the disease is due to discharges from tuberculous persons and animals, especially cattle. Koch devoted years to the search for substances which would destroy the bacilli in the infected body, but in vain. He then sought to cure tuberculosis by means of substances derived from cultures of tubercle bacilli in glycerin broth, and in 1890, at the Tenth International Medical Congress in Berlin, he presented a communication concerning tuberculin ("old tuberculin"), which created the greatest excitement. Koch claimed for this substance that it was an excellent means of diagnosis of tuberculosis in animals as well as human beings, and that it also would prove to be, so he hoped, a means of cure in the early stages of tuberculosis. The expectations in regard to the curative power of tuberculin were carried beyond reason, not only by physicians, but by the general public, and when it was found that these expectations were not realized, there followed unjust condemnation not only of the remedy but of the discoverer himself. In 1896 Koch brought forward his "new tuberculin." Experience has now shown that Koch was right in his claim that tuberculin is a reliable diagnostic means and, according to the opinions of numerous conservative physicians, it also possesses, when properly administered, a definite healing power in certain forms of tuberculosis. In connection with the experiments on the immunizing action of tuberculin investigations were carried on in his institute on immunization with other substances, which eventually led to the marvelous discovery by Behring of diphtheria antitoxin and to the helpful work of Ehrlich on the principles of immunity.

### INVESTIGATIONS ON RINDERPEST, SURRA, BUBONIC PLAGUE, ETC.

In 1891 Koch was appointed director of the newly founded Institute for Infectious Diseases in Berlin.

In 1896, he was asked to go to Africa to study rinderpest and, while he did not discover the cause of this disease, he did find a method by which the animals might be immunized, namely, by the injection of the bile of animals that have died from the disease. Now followed investigations by Koch and his assistants of bubonic plague in India, as well as in Africa; of surra, a tropical disease of cattle and horses caused by a trypanosome, which is transmitted by the much-feared tsetse fly; and of Texas fever, in which case he confirmed the discovery of Theobald Smith that the causative agent *(Piroplasma bovis)* is carried by a tick. Koch's sojourn in Africa led to highly important studies of malaria. The discovery that the malarial parasites develop in mosquitoes and are inoculated into human beings by their bite was made first by Ronald Ross; the independent investigations of Koch led to exactly the same results and filled certain gaps in the researches of Ross. Koch's discovery of the frequency of malarial infection in native children is most important, because of the light thus thrown on the source of tropical malarial diseases and on immunity in malaria. Koch also introduced a new idea of prevention of malaria in the tropics, namely, by the preventive administration of quinin to the people in malarial districts.

### DISCOVERY OF THE LACK OF IDENTITY OF HUMAN AND BOVINE TUBERCULOSIS

During these years Koch continued, so far as possible, the work on tuberculosis, and in 1901 he announced that he had reached the conclusion that human and bovine tuberculosis were not identical. He had found that human tuberculosis, as a rule, could not be transmitted to cattle, which are highly susceptible to bovine tuberculosis, and that there existed noteworthy distinctions between the bacilli of the two forms of tuberculosis. He consequently urged the view that bovine tuberculosis plays a minor rôle in the development of tuberculosis in man and emphasized again, and strongly, that the chief danger to man is the human disease. This pronouncement roused a storm of opposition and led to extensive investigations. At present it seems as if his claim that the bacilli of human tuberculosis have but little infective power for cattle may be regarded as established; it also appears to be agreed that certain definite differences exist between the bacilli of bovine and human tuberculosis; but the difficult and much-discussed question in regard to the frequency of transmission of bovine tuberculosis to human beings still awaits a final answer. As the matter now stands it seems that tubercle bacilli of the bovine type may be found in human beings and probably oftener than Koch believed in 1901 to be the case; the comparatively small number of cases, however, in which such bacilli have been found, as well as the frequency of human tuberculosis in regions where bovine tuberculosis is absent, or where the infection of human beings from this source may be excluded, nevertheless appear to support Koch's conception of the dominating importance of infection from person to person in the spread of human tuberculosis.

### PREVENTION OF TYPHOID FEVER AND OTHER DISEASES

Koch's studies on typhoid fever have led to a change in the conception of the mode of transmission and to new methods for its suppression. The key to this method is exact and early diagnosis in every case. Every person who shelters the bacillus is a source of danger to healthy persons in his environment and consequently he must be placed under conditions that obviate this danger. This is the same principle which Koch applied with such success to the prevention of cholera in Germany, which he recommended for the suppression of malaria and sleeping-sickness, and which he believed eventually would be applied to tuberculosis, syphilis and other infectious diseases.

In 1904 Koch studied various protozoan diseases in German East Africa, and in 1906 he visited the interior of Africa, for the purpose of studying sleeping-sickness and the prevention of its ravages. In 1905 he received the Nobel prize in medicine.

He was active almost to the end. In 1908 he visited the United States and took an active and effective part in the International Congress on Tuberculosis at Washington, especially in discussions and conferences concerning the relation of human and bovine tuberculosis, a problem on which he proposed to work on his return to Berlin.

### THE WORLD'S DEBT TO KOCH

But death has claimed the master and the world has lost its leader in the struggle against infection. Endowed with a mind of the first order, and animated, beneath a quiet, impassive and meditative exterior, by a spirit of unceasing but wonderfully well-regulated activity, which drove him on as by an internal fire from achievement to achievement, he made his own age preeminent over all the ages that have gone before for advances in the exact knowledge of the causation and prevention of infectious diseases. Rarely, if ever, have so many discoveries of such decisive importance to mankind emanated from the activities of one person; yet he served with all humility of mind. He simply tried to do his duty, being, as he said, fortunate to find sometimes the gold among the gravel of the road which is open to everyone. When we consider the advancement medicine owes to Robert Koch and the endless and inestimable blessing which has come to mankind through his work and life, there comes an overpowering sense of admiration, reverence and gratitude.

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## THE AMERICAN MEDICAL ASSOCIATION CALLED A TRUST

"Trust" is a good word to juggle with nowadays, for to most people it conjures up visions of extortion, robbery and general oppression. When, therefore, any organization is to be attacked and there are no tangible charges to be preferred against it, it is dubbed a "trust" and by that very token is damned in the premises. In this manner the American Medical Association becomes the "doctors' trust" according to the "National League for Medical Freedom"—and other organizations with equally high-sounding and misleading names, fathered by the "patent medicine" interests. Not that the term originated with this widely advertised "league," although some fifteen or sixteen years ago the president of this "league" attacked the medical profession in a magazine article on "Medical Monopoly." The representatives and mouthpieces of the proprietary interests have long employed it; notably Strong through his two journals, the *National Druggist* and the *Medical Brief*, and Engelhard through his journals, the *Western Druggist* and the *Medical Standard*. As the proprietors of these publications are found among the *personnel* of the "league" it is natural that this latest "patent medicine" organization should have appropriated a figure of speech possessing such magnificent potentialities.

To the proprietary men the American Medical Association is a trust because, they allege, it has attempted to dictate to physicians what medicinal preparations they shall and shall not use; or to put it more baldly, because the fraudulency and worthlessness of various proprietary products have been made clear in THE JOURNAL. Others have accused the Association of being a trust because it has attempted to raise the standard of medical education and thereby to "control the output of medical students." But the reason advanced by the "league" is a brand-new one, invented, no doubt, in the hope that it will reach the public's heart through its most direct route—the purse. The American Medical Association is a trust, we are told, because it has established a schedule of prices by which all its members are bound. The president of the "league" is reported as saying:

> "The [American Medical] Association now fixes the prices charged by physicians in America."

More specifically the "league's" vice-president puts it:

> "The American Medical Association has secured the adoption of its scale of prices throughout the country. . . ."

To such a charge there is but one answer and that an all-sufficient one, *viz.*, that it is a falsehood and a stupid one at that. Every physician, and every layman who has ever investigated the matter, knows that as a matter of fact the American Medical Association has never even suggested that the "price" of medical service be "fixed," but on the contrary, has positively discouraged such a proposition. The recommendation in the Principles of Medical Ethics that individual physicians in any locality should adopt some general rules "relative to the minimum pecuniary acknowledgement from their patients," has been taken and an attempt made to read into it a meaning never intended and certainly never accepted. What the attitude of the Association is on this point is well set forth in the standard "Constitution and By-Laws for County Societies" prepared by a committee of the American Medical Association and recommended and very generally adopted by various county societies:

> "Sec. 3.—Agreements and schedules of fees shall not be made by this society. . . ."

And yet the falsehood is blazoned forth, with a prodigal disregard for the expense entailed, by means of display advertisements and "interviews," that the American Medical Association "fixes the price" of medical service. Of course, the "league" had to have some shibboleth and the accusation that the American Medical Association is a "trust" is an untruth that may be counted on to arouse the interest of the unthinking and to give a more or less plausible excuse for the "league's" existence. How absurdly mendacious the accusation is the medical profession already knows and the public will not be long in learning.

Again we say: The publicity which the "patent medicine" interests are giving to the American Medical Association through this "league" is welcomed. The more the people know about the Association and the work it is doing, the keener the investigation made of its iethods and aims, the better it will be not only for the merican Medical Association and the medical profesion of the country, but also, more important than all, or the public itself.

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## POISONING BY SUBLIMATE TABLETS

The recent publication[1] in THE JOURNAL of reports f several instances of fatal poisoning from the introuction of bichlorid of mercury tablets into the vagina as aroused some discussion of the growing danger from he promiscuous sale and increasing use of these conenient antiseptic preparations. In this connection he recent review of the cases of sublimate poisoning hich have occurred in the German Empire during the ears 1897 to 1905,[2] will undoubtedly have much inerest.

By official action all cases of poisoning with bichlorid f mercury since 1897 have been reported to the govrnmental health office, and from the reports submitted he above-mentioned review has been compiled. It will ndoubtedly cause some surprise that in the entire Gerian Empire there occurred during nine years but one undred and one cases of poisoning with bichlorid of iercury dispensed in tablet form, and twenty-three rom sublimate sold as the powder or crystals, and this, n spite of the known prevalence of suicide in that ountry. Of the one hundred and one instances of oisoning with bichlorid tablets, no less than ninetywo were attempts at suicide, the other nine being acidental poisonings; there was no instance of the use of iercury for the purpose of murder, nor is there any ecord of poisoning from the introduction of tablets ito the vagina as has been mentioned above. The morality was not so high as might have been anticipated, fty-eight persons dying while forty-three recovered, n spite of the fact that most of these were cases of uicide, in which therapeutic intervention is not usully so prompt as in accidental poisoning. The greater iclination of women to commit suicide by poison rather han by more violent means is brought out by these ables, for in thirty-four cases in which the sex is reorded twenty-five women and but nine men used ichlorid of mercury with suicidal intent.

Compared with the tablets, bichlorid of mercury in he unmodified form is a rare source of serious poisonig, however often it may lead to slight local or contitutional symptoms in persons using it frequently. 'here were but twenty-three cases of poisoning by this orm of mercury during the same nine years. Of these, ixteen were suicidal and six accidental, including under the latter two cases in which fatal poisoning followed injections of sublimate solution for the purpose of producing abortion. In any case it is evident that bichlorid of mercury as compared with compound solution of cresol, phenol, and even phosphorus, is not a popular poison for suicidal purposes in Germany. During the nine years under consideration there were reported in Prussia alone 2,895 suicides by poison, of which but thirty-six or 1.2 per cent. were from antiseptic tablets containing sublimate.

We have a distinct impression that poisoning by this agent, especially accidental poisoning, is much more frequent in this country than these figures show it to be in Germany; unfortunately there is no way of learning the exact conditions in America because of our laxity in the matter of vital statistics. There is every reason why we should have more poisonings by bichlorid tablets than the Germans have, for here almost anyone can secure a bottle of them at any time, and almost every household has a partly used bottle in some cupboard inviting mistaken administration by self-drugging adults, or accidental assimilation by inquisitive children. In Germany, however, it is not so easy to buy or unintentionally to poison oneself with bichlorid tablets, because of the enforcement of rigid laws regulating their sale. Among the legal provisions are the following: For medical purposes sublimate tablets can be sold only by apothecaries, and only on the presentation of a dated and signed order from a regular physician; each tablet must contain a soluble red anilin dye, and it must be enclosed separately in a black paper on which is printed the word "poison" in white letters, in addition to the usual regulations concerning the marking of the containers.

With such regulations in force it is easily understood why only one accidental poisoning occurs annually in Germany from this source, and that a suicidally inclined person will have some trouble in securing this particular means of escape from life's cares. As a matter of fact, a remarkably large proportion of those who did take bichlorid with suicidal intent were nurses, midwives, servants of doctors, and others who could procure the antiseptic tablets readily—a fact which shows how efficient the German laws are in keeping this particular poison from being improperly used by the general public. The conclusion reached by the official who investigated these statistics for the governmental health officers is that the existing regulations have proved themselves so efficient that there is no need for any further restriction being placed on the use and sale of bichlorid of mercury tablets, in view of their well-established usefulness. It is a pity that we have no available statistics in this country for a similar study; it is reasonably certain that the inevitable conclusion would be that in this country there is urgent need for the adoption and enforcement of regulations similar to those which have so effectively protected the German public.

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[1] Lankford, Burnley: A Peculiar Case of Mercurial Poisoning, HE JOURNAL A. M. A., April 9, 1910, p. 1203; Sharp, W. H.: The areless and Criminal Use of the Mercuric Chlorid Tablet, THE OURNAL A. M. A., April 30, 1910, p. 1458; Patek, A. J.: Poisonig by Mercuric Chlorid Through Vaginal Douches, THE JOURNAL . M. A., June 4, 1910 (this issue), p. 1867.

[2] Franz, F.: Die im Deutschen Reiche während der Jahre, 1897-905, amtlich gemeldeten Vergiftungen mit Sublimat, insbesondere it Sublimatpastillen, Arb. a. d. k. Gsndhsamte, 1910, xxxiv, 1.

### CANDOR FROM AN ANTIVIVISECTIONIST—AN APPRECIATION

Within the past few months the *Ladies' Home Journal* has been publishing papers giving both sides of public questions. These articles have been written in each case by men who were competent to discuss from their respective standpoints the subjects dealt with. A few months ago an article appeared, written by the president of the American Antivivisection Society, the Rev. Floyd Tompkins, giving the antivivisectionists' views on animal experimentation. In the next issue of the *Ladies' Home Journal* the other side of the question was admirably presented by Dr. W. W. Keen. It now appears that Dr. Keen's article has impressed even the antivivisectionists with the weakness of their own arguments as presented by their president. At least, that is the impression obtained by reading the letters sent by Mrs. Caroline Earle White, editor of the official organ of the "antis," the *Journal of Zoöphily,* to the editor of the *Ladies' Home Journal* and reproduced in the former publication. Mrs. White did not like the Rev. Dr. Tompkins' presentation of her side of the subject and opines that "we might have arranged something better for our cause."! She therefore wrote three letters to the *Ladies' Home Journal* asking that more space be allowed to "refute" the arguments of Dr. Keen. She also apparently intimated that Dr. Keen had an advantage over the Rev. Dr. Tompkins, inasmuch as the latter's article appeared first and he, therefore, "could not possibly reply to" Dr. Keen's arguments. After being told that neither article could be an "answer" to the other as neither writer had any knowledge of what the other would say, and furthermore, that two articles on any one subject were all that the editor of the *Ladies' Home Journal* intended publishing, Mrs. White then charged the *Ladies' Home Journal* with unfairness in its choice of a writer. Mrs. White asserts that the Rev. Dr. Tompkins, the president of the Antivivisection Society, "though an excellent man, is very slightly acquainted with the subject" and "he makes no claims to having studied thoroughly the question of vivisection."! While, from a study of antivivisection literature, we have always believed, and occasionally stated, that the members of the organization to which Mrs. White and the Rev. Dr. Tompkins belong know little or nothing about the subject of animal experimentation, we had hardly expected to have the editor of the antivivisectionists' official organ frankly admit the impeachment, especially as directed against the president of that organization. Such an exhibition of candor coming from the representative of a class that has distinguished itself in the past by the circulation of the most virulent form of fiction—not to use a "shorter and uglier" term—is as refreshing as it is rare. As to the pique displayed by the editor of the *Journal of Zoöphily,* we may be excused for suggesting that an unfair fighter is never a "good loser."

### THE ST. LOUIS SESSION

Arrangements have been completed for the annual session in St. Louis June 7 to 10, and the indications are that it will be one of the most successful meetings yet held. Interest grows yearly in the work of the Association and on account of the interesting program arranged, the central location, the abundant railroad facilities, the experience of St. Louis in handling conventions, the interest and energy of the Committee on Arrangements, and the well-known hospitality of the profession and the people of that city, an attendance equaling the high-water mark of the Chicago meeting of 1908 may be expected.

Attention is again called to The Journal of May 7, the St. Louis Number, which contains full information about railroads, hotels, meeting-places, clinics, hospitals, points of interest about the city, entertainments, the scientific and commercial exhibits, information bureaus, etc. The special information bureau to be established by the Committee on Arrangements at the Union Station will be ready to guide incoming visitors; and the official program, guide-books and printed information about entertainments, etc., will be given at the general registration bureau in the Coliseum to members when they register.

### THE PRESIDENT AND THE SECTION OFFICERS

In this issue are pictures of the President-Elect of the American Medical Association and also of those of the section officers whose pictures have not already appeared in The Journal. They are not only a good-looking body of men, but they are thoroughly representative of the highest type of physicians and scientists in their respective special fields. In honoring them by selecting them from so great a body of splendid men to preside over the sections, the American Medical Association is also honoring itself and will be indebted to them and to the rest of the section officers for the credit they will reflect on it by their efforts in making the Sixty-First Annual Session a scientific success. Honors have come to all of them before, either in the way of office in the scientific organizations with which they are connected, or in the way of recognition of advanced and original scientific or administrative work in their special fields. But the present positions to which they have been called must be to them gratifying evidence of appreciation and as placing the seal of approval on their efforts as physicians and scientists by the great representative national body of physicians. The President-Elect, Dr. Welch, recently received a more intimate and personal tribute in the splendid testimonial dinner tendered him by his friends and pupils in Baltimore, but to be made the head of the American Medical Association was a fitting climax to his great and honored career as a man, a physician and a scientist.

## *Medical News*

### ILLINOIS

**Directors Reduced.**—At a meeting of the executive committee of the Chicago-Winfield Tuberculosis Sanatorium, May 21, it was decided to reduce the directorate from thirty-nine to seventeen members.

**Recommends Revocation of License.**—The grand jury in a partial report, submitted May 11, is said to have recommended that the license of Dr. Cora Emery Reed, practicing physician be revoked on account of the unfit moral and physical conditions found to exist in the Rock Island Maternity Home.

## INDIANA

**Personal.**—Dr. C. P. Hutchins has been appointed director of physical training at the University of Indiana, Bloomington.——Dr. Harry H. Long, La Porte, sustained minor injuries by the overturning of his automobile, April 29.——Dr. William W. Blair, Princeton, entertained the members of the Gibson County Medical Society at his home, May 13, in celebration of the sixtieth anniversary of his entrance into the practice of medicine.——The office of Dr. L. B. W. Johnson, Ireland, was destroyed by fire May 11.——Dr. Benjamin F. Kuhn, Elkhart, was seriously injured in a collision between his automobile and a street car May 8.——Dr. Simon J. Young, Valparaiso, has started for Europe.

## IOWA

**Course in Bacteriology.**—A course in bacteriology, consisting of lectures, recitations and laboratory work, will be given under the Department of Pathology and Bacteriology of the State University, Iowa City, June 16, lasting four or five weeks. This course will be especially adapted to the needs of physicians and health officers.

**Iowa Medical Women Meet.**—At the annual meeting of the Iowa State Society of Medical Women, held during the meeting of the state medical society in Des Moines, the following officers were elected: President, Dr. Sophie Hinzie Scott, Des Moines; vice-presidents, Drs. Lily Kinnier, Dubuque, and Florence B. Sherbon, Colfax; secretary, Dr. Lena A. Beach, Cherokee, and treasurer, Dr. Clara B. Whitmore, Cedar Rapids.

**State Society Election.**—At the annual meeting of the Iowa State Medical Society, held at Des Moines, May 20 to 22, the following officers were elected: President, Dr. Mathew N. Voldeng, Cherokee; vice-presidents, Dr. William J. Egloff, Mason City, and Harootune A. Minassian, Des Moines; councilors, Dr. Clyde A. Boice, Washington; George E. Crawford, Cedar Rapids, and Giles C. Moorefield, Ida Grove; trustee, Dr. Gilbert G. Cottam, Rock Rapids, and delegates to the American Medical Association, Dr. David S. Fairchild, Clinton, and Dr. David C. Brockman, Ottumwa. The next meeting of the Association will be held in Des Moines.

**Personal.**—Dr. Thomas C. Brady, Marshalltown, is reported to be ill with septicemia.——Dr. Harley Saylor has succeeded Dr. Clifford W. Losh as city physician of Des Moines.——Dr. Frank M. Tombaugh, in charge of the medical relief department of the Burlington system at Burlington, has resigned and will engage in private practice.——Dr. and Mrs. Elbridge M. Breniman, Ackley, have started for Europe.——Dr. Isaac L. Potter, Ackley, was operated on for the removal of gall-stones, at Rochester, Minn., May 2, and is reported to be doing well.——Dr. Frank E. Boyd, Colfax, has been appointed surgeon for Spring City Railway, Colfax Northern Railway and Rock Island System.——Dr. William A. Stoecks has been appointed city physician of Davenport.——Dr. Frank S. Smith, Nevada, who was seriously injured in an automobile accident a few weeks ago and had a complication of pneumonia and pleurisy is reported to be improving.

## LOUISIANA

**The Sickles' Legacy Fund.**—The mayor of New Orleans has written the city attorney asking what course to pursue to make use of the S. B. Sickles' Legacy Fund, which was left to the city forty years or more ago to provide medicine for poor people. The fund now amounts to $106,779, and has not been disturbed in about twenty years.

**Charity Hospital Alumni Meet.**—At the annual meeting of the Charity Hospital of Louisiana Alumni Association, held in New Orleans, May 2, the following officers were elected: President, Dr. William H. Seemann; vice-presidents, Drs. Albert J. Mayer and Alfred C. King; secretary, Dr. Lucien H. Landry (reelected); treasurer, Dr. Philip W. Bohne (reelected), and executive committee, Drs. Charles N. Chavigny, James B. Guthrie and Isaac I. Lemann, all of New Orleans.

## MARYLAND

**County Society Meeting.**—At the annual meeting of the Baltimore County Medical Association, held in Towson, May 19, the following officers were elected: President, Dr. Edward N. Brush, Towson; vice-president, Dr. Harry S. Jarrett, Towson; recording secretary, Dr. Josiah S. Bowen, Mount Washington; corresponding secretary, Dr. Richard C. Massenburg, Towson; treasurer, Dr. William L. Smith, Rider; delegate to the Medical and Chirurgical Faculty of Maryland, Dr. H. Louis P. Naylor, Pikeville, and alternate, Dr. D. L. Gibbons Smart, Lutherville.

**Personal.**—Dr. V. Milton Reichard, Fairplay, is seriously ill with pleurisy.——Dr. H. Burton Stevenson, Sherwood, was shot and seriously wounded by his brother, May 16, and was taken to University Hospital, Baltimore.——Dr. H. Arthur Mitchell has been elected president and Dr. William D. Cawley member of the common council of Elkton.——Dr. Frederick N. Nichols, Denton, has been appointed health officer of Caroline County and Dr. John E. Legge of Garrett County.——Dr. Jephtha E. Pitsnogle, health officer of Washington County, recently appointed, has declined to act as health officer of Hagerstown.

### Baltimore

**Baltimore College Commencement.**—Baltimore Medical College held its annual commencement exercises May 26 and graduated a class of fifty-four. Dr. Lee E. Bransford of Tennessee received the college medal and the degree of Doctor of Medicine *magna cum laude.*

**Personal.**—Dr. Richard P. Bell will move to Atlanta, Ga.——Dr. Lewis M. Allen has moved to Mount Clinton, Va., where he will take up the practice of the late Dr. Samuel T. Latané.——Dr. Gustav A. Thiede has been elected state physician of the order of Eagles.

## MASSACHUSETTS

**Society Meetings.**—The annual meeting of the Suffolk District Medical Society was held in Boston April 30. Dr. George H. Monks was reelected president; Dr. Francis B. Harrington, vice-president; Dr. David D. Scannell, secretary; Dr. Arthur K. Stone, treasurer; Dr. B. Jay Jeffries, librarian; and Dr. Fred T. Murphy, commissioner of trials, all of Boston.——Worcester North District Medical Society held its annual meeting in Fitchburg, April 26, and elected the following officers: President, Dr. William N. Cowles, Ayer; vice-president, Dr. Charles J. Pierce, Shirley; secretary, Dr. Walter F. Sawyer, Fitchburg; treasurer, Dr. Frederick H. Thompson, Fitchburg; councilors, Drs. Charles E. Bigelow, Leominster, and Ernest P. Miller, Fitchburg; nominating councilor, Dr. Charles E. Bigelow, Leominster; committee on trials, Dr. Luther G. Candler, Townsend; censors, Drs. Ernest P. Miller, Fitchburg; Appleton H. Pierce, Leominster; John B. Donnelly, Gardner; Hartstein W. Page, Baldwinsville; Edward J. Tully, Fitchburg, and librarian, Dr. Atherton P. Mason, Fitchburg.

## MICHIGAN

**Donates Hospital.**—Edward W. Sparrow, Lansing, has presented to the city a site valued at $12,000 and $88,000 in cash for the erection of a new hospital.

**Cocain Seller Fined.**—Ray Stout, Detroit, convicted of selling cocain, is said to have been sentenced, on May 8, to pay a fine of $225, and be confined in the Detroit House of Correction for sixty days.

**Society Meets.**—St. Joseph County Medical Society held its annual meeting in White Pigeon April 20, and elected Dr. John R. Williams, White Pigeon, president; Dr. Frank A. Pratt, Centerville, vice-president, and Dr. Samuel R. Robinson, Sturgis, secretary-treasurer.

## MINNESOTA

**State Sanatorium in Danger.**—The state tuberculosis sanatorium, Walker, was saved from destruction during the recent forest fires only by the strenuous efforts of the patients and attendants, with assistance of the citizens.

**Society Meeting.**—At the annual meeting of Stearns-Benton County Medical Society, held in St. Cloud, April 21, Dr. John C. Boehm, St. Cloud, was elected president; Dr. William Friesleben, Sauk Rapids, vice-president; and Dr. Claude B. Lewis, St. Cloud, secretary-treasurer.

**Personal.**—Drs. Ivor S. Brenson and Palmer E. Brandon have opened a hospital in Jackson.——Dr. Harry A. Tomlinson, for twenty years superintendent of the St. Peter State Hospital for the Insane, has been appointed superintendent of the State Farm for Inebriates, near Wilmar.

## MISSOURI

**Personal.**—Dr. Benjamin Belove, Kansas City, has returned from Europe.——Dr. Charles M. Johnson, St. Charles, is reported to be seriously ill.

**Alumni Meet.**—The class of 1900 of the University Medical College, Kansas City, held its tenth annual reunion in Kansas City, May 11. Dr. William G. Rowe, Blue Springs, was elected president.

**Hyde Found Guilty.**—The jury in the Hyde-Swope case is said to have found Dr. B. Clark Hyde guilty of murder, May 16, and he was sentenced to imprisonment for life in the state penitentiary.

**Tefft Memorial Services.**—Memorial services in honor of the late Dr. Jonathan E. Tefft were held by the Greene County Medical Society, at Springfield, May 13. A number of addresses were made and the medical library of Dr. Tefft was presented to the society by his widow.

**Graduating Exercises.**—At the graduating exercises of the University Medical College, Kansas City, held May 13, a class of forty-seven received diplomas. Rev. Cyrus Townsend Brady delivered the doctorate address and Dr. Jabez N. Jackson presented the diplomas and awarded the prizes.

**Medical Secretaries Meet.**—At the second annual meeting of the Missouri Society of Medical Secretaries, held in Hannibal, May 3, the following officers were elected: President, Dr. George W. Goins, Breckenridge; vice-presidents, Drs. Bert B. Parrish, Kirksville; Vincent O. Williams, Nevada, and secretary-treasurer, Dr. Charles Wood Fassett, St. Joseph. The next meeting of the society will be held in Jefferson City on May 11. Dr. Frederick R. Green, assistant secretary of the American Medical Association, was a guest of the society and delivered an address on "Medical Reorganization—Past and Present."

### St. Louis

**Personal.**—Dr. John C. Morfit has been appointed first hospital commissioner under the new hospital commission.——Drs. Major G. Seelig, Willis B. Young and Harvey G. Mudd have been appointed members of the surgical visiting staff of the new St. Louis City Hospital, and Drs. George C. Crandall, Carl J. Luytics and Elsworth Smith, Jr., members of the visiting medical staff.

**Commencement Exercises.**—The commencement exercises of Barnes University Medical Department were held in St. Louis May 16. A class of fifty-one received diplomas from Dr. Alonzo R. Kieffer, dean of the faculty. The doctorate address was made by the Rev. W. M. Wilkinson and the honorary degree of Doctor of Medicine was conferred on David C. Morrow, secretary of the dental department.

**Fraternity to Meet.**—The second international meeting and dinner of the Alpha Omega Medical Scholarship Society will be held under the auspices of the Washington University Chapter at the St. Louis Club, 3663 Lindell Avenue, at 6:30 Tuesday evening, June 7. The tickets are $2 and members may bring friends. Announcement will be made at this meeting of the time and place of a special meeting of delegates to be held later.

## MONTANA

**Hospital Opened.**—The Geiger Building, Libby, has been fitted up by Drs. E. F. Coyningham and Robert Auld. It will be known as the Libby General Hospital.

**Personal.**—Dr. Willard A. Long, Lewistown, with his wife and daughter, sails for Europe June 11. Dr. John T. Foley will act as health officer during the absence of Dr. Long.

**State Board of Health Meeting.**—At the annual meeting of the State Board of Health, held at Hunters Hot Springs, May 10, the following officers were elected: Dr. Samuel E. Leard, Livingston, president, and Dr. Thomas D. Tuttle, Helena, secretary.

## NEBRASKA

**Tuberculosis Camp Project Abandoned.**—The opposition of property owners has resulted in the abandonment of the project to establish a tuberculosis hospital at Pries Lake, north of Florence.

**County Medical Society Meeting.**—Cuming County Medical Association at its annual meeting held in West Point, elected Dr. Harry W. Francis, Bancroft, president, and Dr. Harry L. Wells, West Point, secretary.

## NEW YORK

**Charities Aid Report.**—The thirty-seventh annual report of the Charities Aid Association has just appeared. Legislation creating the Board of Ambulance Service for Greater New York was one of the reforms obtained by the association. The society also aided in the effort to obtain ambulance relief stations in three different sections of Greater New York. Two bills have become laws, one authorizing the establishment of county hospitals for tuberculosis, and the other providing for the ambulance service of New York City. They also drafted a bill providing for the more adequate treatment of intoxication and inebriety in this city, but the bill failed of passage. Owing to the increase of the association's work for children there was a deficit of $2,500 in the general fund.

**Heavy Cost of the Insane.**—According to the statement issued by the state controller recently, the largest item of expenditure during the past ten years has been for the support of state hospitals for the insane. During the last decade this expenditure amounted to $54,018,361. The state lunacy commission reports that during the last year 6,474 patients were received into the state hospitals and 23 per cent. as many were discharged, recovered. The total number now under treatment is 31,000. Dr. Albert Warren Ferris, New York City, president of the state lunacy commission, read a paper at the annual meeting of the American Medico-Psychological Association urging certain preventive measures to be inaugurated immediately, as they would result in great saving to the state.

### Buffalo

**Section Officers Elected.**—The section of medicine of the Buffalo Academy of Medicine has elected Dr. Lesser Kauffman, chairman, and Dr. Carl S. Tompkins, secretary.

**Law Against Spiritualists and Clairvoyants.**—As the result of the acquittal of Mrs. Lane, a spiritualist or clairvoyant, Erie County Medical Society has had drawn a bill for the purpose not only of stopping the practice of spiritualists and clairvoyants, but with the intent to put a stop to all mental healers who practice for money consideration. The bill provides that every person practicing the healing art must have a diploma. The bill has been passed by the general assembly.

**Care of Insane Before Commitment.**—The report of the committee appointed by the Buffalo Academy of Medicine on the care of the insane prior to commitment shows the need of improvement in the methods in vogue in the state. Although the best care should be taken of the insane, the fact still remains that more than 37 per cent. of the men and more than 10 per cent. of the women committed to the Buffalo State Hospital have been sent from jails and police stations. The committee found many instances of long delays and lack of considerate care, neglect and improper provision.

## OHIO

**Governor Refuses Optometrists.**—In spite of the efforts of a committee of the Ohio Optical Association, headed by the vice-president, Governor Harmon has refused to reconsider his veto of the Dean Optometry Bill.

**Personal.**—Dr. Francis P. Corrigan, Cleveland, has returned from Europe.——Dr. Asa C. Messenger has been appointed health officer of Xenia.——Dr. Louis F. Bucher has been appointed medical inspector of the Board of Education of Dayton, and Dr. John W. McKenny has been appointed a member of the board.

**College Commencement.**—The third annual commencement exercises of Starling-Ohio Medical College, Columbus, were held May 18, when a class of 39 was graduated. President W. C. Thompson of the Ohio State University delivered an address and conferred the degrees and Oscar T. Corson, formerly State School Commissioner, delivered the commencement address.

**Damages Against Physician.**—In the case of Mrs. Sarah V. Palmer against Dr. William H. Humiston, Cleveland, in which it was alleged that, after a surgical operation, the defendant had allowed a gauze sponge to remain in the wound, which was removed six months later by another operation, a verdict of $5,000 damages is said to have been awarded the plaintiff, April 30.

**School for National Guard Medical Officers.**—A school for medical officers of the Ohio National Guard will be held in Columbus, June 8 and 9. The instructors, who are all of the Medical Corps of the Army, are Major Edward L. Munson, Fort Leavenworth; Major Charles R. Reynolds, Fortress Monroe; Major Henry C. Fisher, Columbus Barracks, and Capt. W. Henry Pipes, Washington, D. C.

**Societies Meet.**—The physicians of Salem met April 25 and organized the Salem Physicians' Club, with Dr. Andrew W. Schiller, president, and Dr. Paul E. Barckhoff, secretary.——At the meeting of the Ohio Alumni of Jefferson Medical College, held in Toledo, May 12, Dr. Albert W. Fisher, Toledo, was elected honorary president; Dr. Richard S. Gaugler, Dayton, president; Dr. Silas W. Fowler, Delaware, vice-president, and Dr. Fred Fletcher, Columbus, secretary and treasurer.

**In the Hands of the Law.**—Dr. John C. Snyder, Bowling Green, is said to have been convicted in the probate court of the illegal prescription of liquor to a detective named Collier, and to have been fined $250 and costs. However, $200 of the fine was suspended until further order of the court.——Dr. Jacob F. Wallom, Jerry City, charged on several counts of elling liquor in violation of the law, was discharged April 29.——James M. Luburg, Miamisburg, whose certificate is said ecently to have been revoked by the state medical board on he charge of unprofessional conduct has been granted a new rial by the governor and attorney-general sitting as a court f appeal.

### Cincinnati

**Personal.**—Dr. Robert D. Mussey, receiving physician of he City Hospital, has resigned to accept a position in Roches-er, Minn., and has been succeeded by Dr. Charles Howard.——Dr. J. C. Cadwallader, for fifteen years health officer of Norwood, has resigned and has been appointed chairman of the board of health; Dr. Frank Perry has been appointed health fficer and Dr. Louis Sauer district physician.——Dr. Simon P. Kramer has sailed for Europe.——Drs. William E. Lewis, professor of anatomy, Charles L. Metz and Moses Salzer, emonstrators of anatomy, Grear Hill Baker, demonstrator of biology, Walter R. Griess, lecturer on applied anatomy, and Henry L. Woodward, demonstrator of embryology, have left he faculty of the Ohio-Miami Medical College. It is reported hat a new head of the department from an eastern college is o be appointed who is expected to select his own staff.

## OKLAHOMA

**Protective Association Organized.**—The Tilman County Phy-icians' Protective Association was organized at Frederick ecently and the following officers were elected: Dr. Fred G. Priestly, president, and Dr. Adam B. Fair, secretary, both of Frederick.

## OREGON

**Commencement.**—The Medical Department of the University f Oregon, at its annual commencement exercises, May 2, raduated a class of fifteen. Hon. Abbott Low Mills delivered he annual address, President P. L. Campbell conferred the egrees and presented the Saylor and anatomy medals, and Dr. Edmund J. Labbe delivered the charge to the graduating lass.

**New Hospitals.**—Granite City Hospital, with a capacity of 0 patients, a new hospital of solid concrete construction, and which has cost about $40,000, was formally opened in Ash-and, April 30.——Mrs. Millie Trumbell, Portland, is agitating ctively the matter of an emergency hospital for Portland, to e located in the new Multnomah County Courthouse. She is lso advocating the instruction of the police in first-aid to the njured.——Ground is reported to have been secured for the rection of a hospital for Chinese in Portland and $40,000 has een subscribed for the institution.

## PENNSYLVANIA

**Personal.**—Dr. J. Budd Rees has resigned as resident physi-an at Pottstown Hospital.——Dr. Edward R. Myers has been ected president of the board of health of Pittston, and Dr. dward F. McGinty a member of the board.

**State to Care for Tubercular Children.**—Announcement was ade by Dr. Samuel G. Dixon, State Commissioner of Health, ay 24, that a special department for tubercular children is eing established at Mount Alto and that separate children's inics will be held at the dispensary every Saturday from 1 4 p. m. Dr. Charles Weber, an expert on diseases of children, has been appointed to examine and look after these atients. Cases among children will be reported by the public hool authorities, and the new children's building at Mount lto will be utilized to take care of the more advanced cases.

**Tuberculosis Notes.**—Berks County Tuberculosis Sanatorium n Neversink Mountain, opened for the season, May 12, with ccommodations for fifteen patients.——At a meeting held in rie, May 13, a local branch of the state society for the prevention of tuberculosis was organized. Drs. John W. Wright, dward Cranch and George B. Kalb were elected vice-presidents.——A contract has been awarded by the State Department of Health for the erection of a group of buildings consting of a dining hall, infirmary, nurse's home, physician's ouse and ward building, at the State Sanatorium, Mount lto, the cost of the buildings to be $106,000.——A contract as been awarded for the building of an addition to the Home-ead Hospital, to be three stories in height, of brick, and to st about $10,000.

### Philadelphia

**Gone to Europe.**—The following physicians have sailed for urope: Drs. J. Nicholas Mitchell, Alfred Bernstein, and oward T. Karsner.

**Bequests.**—The will of the late John H. Converse bequeathes 5,000 to the Presbyterian Hospital.——By the will of the late Samuel E. Shoyer, the Jewish Hospital receives a bequest of $5,000 for the establishment of a free bed in memory of Gabriel and Louisa Shoyer.——The will of the late Lucinda Dodson devises $8,000 in trust for the benefit of Albert B. Dodson and at his death $5,000 is to be given to the Methodist Episcopal Hospital to endow one or more free beds.

**Hospital Staff Appointed.**—Dr. Joseph S. Neff, director of Health and Charities, appointed the following staff of visiting physicians at the Tuberculosis Hospital, Byberry: Drs. Ward Brinton, Samuel Rhoads, Arthur C. Morgan, Daniel M. Hoyt, Edward J. G. Beardsley, Joseph V. C. Roberts, J. Clinton Foltz, and J. Willoughby Irwin. The plan of the department is to receive from the various hospitals of the city, all those cases of consumption, among the deserving poor, that are moderately advanced—that is, those for whom there is the slightest hope of recovery—and there keep them under the direct care of visiting physicians. Dr. Henry Sykes, chief resident physician, has sent examining blanks to all the city hospitals and on May 27, 40 patients were sent from the Philadelphia General Hospital and 6 from Jefferson Medical College Hospital.

**Furthering the Baby-Saving Campaign.**—To further the plans of last week for the baby-saving campaign this summer, another meeting was held at Dr. Neff's office at City Hall on May 20 and the following committee was appointed: Dr. Jesse D. Burks, director, Bureau of Municipal Research; Miss Lucy Davis, secretary, Visiting Nurse Society; Dr. Samuel McC. Hamill, Pediatric Society; Miss Anna Jeffries, superintendent, St. Christopher's Hospital for Children; J. Percy Keating, vice president, Society for Prevention of Cruelty to Children; Miss Mary V. Kemp, Church House Settlement; Porter R. Lee, general secretary, Society for Organizing Charity; the Rev. H. Cresson McHenry, assistant superintendent, Protestant Episcopal City Mission; J. Prentice Murphy, superintendent, Children's Bureau; Mrs Solomon Selig, Juvenile Aid Committee; Dr. Louis Starr, Mrs. E. Boyd Weitzel, president, Country Week Association. Mayor Reyburn forwarded a message to Councils asking that $5,400 be appropriated immediately toward the establishment of a Division of Child Hygiene, under the Department of Health and Charities. All through the 18 schools of the second, third, fourth, fifth, sixth and seventh wards, lectures under the joint supervision of the Bureau of Health, the Visiting Nurses and the Bureau of Municipal Research, were given by Dr. Neff's medical inspectors, assisted by the school nurses, May 26. These were simple practical talks to the little girls, on the care of babies, the proper way to dress them and most important of all—the care of their milk and bottles. It is hoped that these "little mothers," who practically have full charge of the babies of their families will carry out these precepts. The work which will center in the two downtown wards where the death rate among babies is highest, will begin June 1. Every house where a birth is reported or where a baby is known to live, will be visited and advice and instruction will be given to the mother. In order to facilitate prompt notification of births, Dr. Neff has planned to have reports of births sent informally by postcard or telephone within 24 hours to the Central Registration Bureau, instead of waiting for the allowed 10 days. In a house where there is no regular attending physician, the nurse will leave an addressed postal card, which can be used to notify the Health Department in case of the baby's illness. Upon receipt of such notification, the department will investigate through one of its physicians and the physician and nurse will render assistance as long as may be necessary.

## VERMONT

**Personal.**—Dr. Everal C. Haviland, first assistant physician of Brattleboro Retreat, has resigned.——Dr. James D. Tanner, Burlington, sailed for Europe, April 23.——Dr. Clarence F. Ball has been reappointed health officer of Rutland.

**State Board Meeting.**—The State Board of Health in Rutland, May 12, decided to hold the summer school for health officers in Montpelier during the first week in August, and to discontinue, for the season, the tour of the tuberculosis exhibit.

## VIRGINIA

**Buildings for Epileptic Colony.**—The board of trustees of the state epileptic colony of Amherst County near Lynchburg, expects to have its work well under way by September 1. The present three buildings on the farm will be utilized, one as a cottage for inmates, one as an administration building and a third for farm employees. Plans for a new building have been accepted and the building will be ready for occupancy by the end of the year.

## GENERAL NEWS AND COMMENT

**Medical Librarians' Meeting.**—The Medical Library Association will hold its thirteenth annual meeting in the Southern Hotel, St. Louis, June 6 and 7, under the presidency of Dr. John H. Musser, Philadelphia. The association will discuss matters relative to libraries and library movements.

**Gastroenterologists to Meet.**—The thirteenth annual meeting of the American Gastroenterological Association will be held in St. Louis, June 6 and 7, at the Planter's Hotel, under the presidency of Dr. Julius Friedenwald, Baltimore, the subject of whose address will be "Recent Events in the Development of Gastroenterology."

**Harvard Alumni to Meet at St. Louis.**—Harvard alumni attending the American Medical Association meeting at St. Louis will meet at the University Club for dinner, at 6:30 p. m., June 7. Dr. John Green will act as toastmaster. There will be a desk for registration at the general headquarters in the Southern Hotel, where the Alumni are urged to register. Dr. Nathaniel Allison, 609 Metropolitan Building, is in charge of the arrangements.

**Meeting of State Medical Examining Boards.**—The twentieth annual convention of the National Confederation of State Medical Examining and Licensing Boards will be held in the Southern Hotel, St. Louis, June 6, under the presidency of Dr. Augustus Ravogli, Cincinnati, the subject of whose address is "A Plea for More Practical and Extended Clinical Instructions for Medical Students." The matter of combining the American and National confederations will come up for action before this meeting.

**Frisco Surgeons Meet.**—The ninth annual convention of the Frisco System Medical Association was held in Springfield, Mo., May 16 and 17. St. Louis was selected as the place of meeting for 1911 and the following officers were elected: President, Dr. Elijah J. Neathery, Sherman, Texas; vice-presidents, Drs. William S. McDonald, Fort Scott, Kan., and James R. Dawson, Birmingham, Ala.; secretary, Dr. Stanton K. Crawford, St. Louis (reelected); treasurer, Walter A. Camp, Springfield, Mo. (reelected), and Dr. William Britt Burns, Memphis, Tenn., member of the executive committee.

**Conference Regarding Feeble-Minded.**—The thirty-fourth annual conference of the American Association for the Study of the Feeble-Minded was held at the Lincoln (Ill.) State School and Colony, May 16 to 18. The following officers were elected: President, Dr. Arthur R. T. Wylie, Faribault, Minn., vice-president, Dr. Harry G. Hardt, Lincoln; secretary and treasurer and editor-in-chief of the *Journal of Psycho-Asthenics*, Dr. A. C. Rogers, Faribault, Minn., and associate editors, Drs. Walter E. Fernald, Waverly, Mass.; Martin W. Barr, Elwyn, Pa.; George Mogridge, Glenwood, Iowa; Arthur R. T. Wylie, Faribault, Minn.; H. H. Goddard, Vineland, N. J.; Harry G. Hardt, Lincoln, Ill., and Charles S. Little, Laconia, N. H.

**Prevention of Infant Mortality.**—At the annual meeting of the American Association for the Study and Prevention of Infant Mortality, to be held in Baltimore November 10 and 11, the session on Municipal, State and Federal Prevention will be in charge of Dr. Wm. H. Welch, Baltimore, chairman, and Dr. John S. Fulton, Washington, D. C., secretary; the session on Medical Prevention will be presided over by Dr. L. Emmett Holt, New York City, with Dr. Philip Van Ingen, New York City, as secretary; Dr. Helen C. Putnam, Providence, R. I., will preside over the session on Educational Prevention and Prof. Abby Marlattt of the University of Wisconsin will be secretary, and Hastings H. Hart, New York City, will be in charge of the session on Philanthropic Prevention.

## LONDON LETTER

*(From Our Regular Correspondent)*

London, May 14, 1910.

### The Death of King Edward

The death of the King, after a brief illness, on May 6, in his sixty-ninth year, has fallen as a heavy blow on all his subjects throughout his vast empire. We realize that we have lost a ruler of exceptional merits whose one idea was the service of his people by the promotion of peace among nations. With what skill he worked for this ideal and attained a title which has never been borne before, "the world's peacemaker," is well-known. His success depended not on intellectual greatness but on a personality of singular charm. He has been well described as "The kindest man who ever wore a crown." He always took a great interest in the profession of medicine and he was a staunch friend of it. In collecting funds for the hospitals he was foremost. He founded the "King Edward's Hospital Fund" from which large grants are made every year to all the London hospitals. In the scientific aspects of medicine he was also deeply interested. As Prince of Wales he presided at the last International Medical Congress held in London and his interest in the problems of tuberculosis and cancer are well-known. In the anti-tuberculosis campaign he made the epigrammatic remark which has often been quoted: "If preventable why not prevented." Speaking of cancer investigation he said that the man who discovered a cure for that dire disease deserved to have a statue erected to his memory in all the capitals of the world.

### The Treatment of Cancer

The practice of the Cancer Hospital, London, is of interest as showing the results of the latest methods of treating cancer. The electrical department is well-equipped with apparatus for the *x*-rays, ionic medication, high-frequency currents and radium therapy. Last year nearly 2,000 treatments were administered. As before, the *x*-rays have been found to alleviate a considerable number of cases but no cures can be claimed. The use of the high-frequency currents is limited to the relief of pain. Ionic medication has given good results in some cases but it has failed in extensive, inoperable and internal cancer. At a cost of $1,000 20 milligrammes of radium have been obtained. In superficial cancer radium has given good results and certain cases can be claimed as cured. But in the deep-seated cases of advanced growth all that has been obtained is temporary checking of the disease and relief of pain. The trypsin treatment for which so much was claimed has proved a complete failure. The same is true for the serum of Doyen of Paris. In spite of these results, however, the fact that in rare cases (estimated to be somewhat less than 1 in 1,000) cancer undergoes spontaneous cure, that in others the natural resistance of the body to the growth of cancer is great, and that Nature by means of fibrosis and sloughing attempts to get rid of the disease seem to give hope of the discovery of a cure, and point to a serum treatment. At present another serum treatment is being tried.

### Disappearance of Yellow Fever from the West Indies

Prof. Rupert Boyce, who has just returned from Jamaica reports that the old-time scourge of the West Indies has practically disappeared. About the year 1850 the introduction of water-pipes in nearly all the principal towns did away with the necessity for wells, vats and barrels, the breeding-places of the stegomyia, greatly reducing its numbers and the number of cases of yellow fever. Professor Boyce states that whenever an appreciable, though not necessarily a complete reduction in the number of stegomyia, is brought about in a district, from that time yellow fever ceases to be endemic. In short, a certain excess of this mosquito appears necessary to maintain continuous infection or endemicity; short of that number endemicity disappears. But if by chance a case of yellow fever should be imported from some distant center in Central America, where the disease is still endemic, then a smaller or larger outbreak will occur, limited in extent by the number of stegomyia existing in the particular district. These outbreaks, despite increasing commercial relations, are every year becoming less frequent and smaller.

## PARIS LETTER

*(From Our Regular Correspondent)*

Paris, May 13, 1910.

### Physicians in the Chamber of Deputies

The new Chamber of Deputies, elected on April 24 and May 8, comprises 597 deputies, among whom are 49 physicians. In the former chamber there were only 591 deputies, of whom 54 were physicians. This proportion appears larger, because the other professions, except those of law and journalism, are represented by much smaller numbers. Among the new deputies there are only 13 pharmacists. There are, however, about 120 lawyers. A well-known publicist, M. Henry Maret, who never fails to disparage physicians a little, asks why there are so many lawyers and physicians, and goes on to say that it is easy to understand why there are so many lawyers; it is their business to understand the law and it is natural for them to be called on to make laws; but, he asks, what relation has the medical profession with the conduct of the governmental affairs? Literature, it has been wittily said, leads to everything, provided one forsakes it. "Just as good writers keep out of politics," M. Maret remarks, "the best physicians are not those who become legislators."

There may be some truth in this observation; but medicine and social hygiene are called on to play an important rôle in modern legislation. The medical profession, moreover, ha furnished some eminent men to politics. Two former premiers, who played a considerable rôle in recent years, M. Combes and M. Clemenceau, were medical men. One of the most prominent members of the last legislature, M. Fernand Dubief, former vice-president of the Chamber of Deputies, who has twice been a minister, is likewise a physician, and consequently took an active part in legislation requiring special knowledge along this line, such as the laws on industrial accidents and reform of legislation in regard to the insane, etc.

### The Jubilee of Dr. Gellé Père

In one of my previous letters (The Journal, March 26, 1910, liv, 1069) I mentioned the formation of a committee to take charge of the celebration of the jubilee of Dr. M. E. Gellé. This ceremony took place, under the presidency of Dr. F. Raymond, professor at the Paris college of medicine, and many otologists were present, colleagues, pupils and friends of Dr. Gellé. Letters of congratulation were read from Austrian, Belgian, Spanish, Italian, Dutch and Roumanian otologic societies. At the close of the ceremony, Dr. Gellé was presented with an artistic medal, bearing his own portrait, the work of A. Boucher.

### A Victim of Medical Duty

M. Neyrand, intern under Dr. Donnet, professor of clinical obstetrics in the Limoges medical school, has just died of septicemia, due to a scratch infected by the pus from a salpingitis on which an operation had been done. The administration of the Limoges hospital has undertaken to defray the expense of Neyraud's funeral and to pay suitable honors to his remains. The minister of public instruction has ordered academic palms to be placed on the coffin of the young victim of professional duty.

### Death of Professor Trolard

The death is reported of Dr. Paulin Trolard, professor of anatomy in the Algiers college of medicine. Dr. Trolard had been since 1906 a national correspondent of the Académie de Médecine.

### Treatment of Wounds of the Hands with Tincture of Iodin

During the session, May 3, of the Académie de Médecine, Dr. Paul Reclus, professor of clinical surgery at the Paris college of medicine, made a report on the treatment of wounds of the hands by painting with tincture of iodin. The treatment of such wounds has taken on much importance since the passage of the law on industrial accidents. It is well known how wide-spread is the practice of washing the hands of wounded workmen with benzin, gasoline or ether before treating them. This practice ordinarily results in the infection of the wound by the diffusion and dissemination of the microbes, which multiply in the dust deposited in the folds and wrinkles of the skin of the fingers. Dr. Paul Reclus believes that no preliminary disinfection should be done and that immediately after the accident the wounded region should be painted with tincture of iodin, a layer of which should be deposited all around and over the wound itself. When the tincture of iodin has once evaporated the region should be covered by an aseptic compress and a pad of absorbent wadding held in place by a bandage. This painting, which should be renewed every day, insures perfect asepsis of the wound, reduces inflammation to the minimum and leads to rapid cure. In order to avoid blistering, only a freshly prepared tincture of iodin should be used. On account of its extreme simplicity, dressing with tincture of iodin is capable of rendering great service in all urgent cases and especially in times of war.

## BERLIN LETTER

*(From Our Regular Correspondent)*

Berlin, May 13, 1910.

### Personals

Professor Curschmann of Leipsic, director of the medical clinic at that place, died May 6 at the age of 63. His death was unexpected, especially by those who, like myself, had the opportunity to see him at the meeting of the association for internal medicine in full bodily and mental vigor. Influenza of a few days' standing attacked his heart and suddenly terminated his life. In Curschmann there has departed from us a great investigator, teacher and physician. He entered on his teaching career in 1875 at the university of Berlin and in the same year was appointed at the age of 29 as chief physician at the Moabit hospital. As a result of the success which he achieved in this position he was called in 1879 to Hamburg as the director of the state hospital. Here he directed the building of the new general hospital at Eppendorff and showed a remarkable knowledge of hospital building and hospital management, so that the hospital under his direction was for a long time recognized as the model hospital of Germany. In 1888 he was called to Leipsic as the successor of the renowned clinician Wagner and in this position, in spite of numerous invitations from other universities, he remained until his death. Curschmann produced a long series of scientific articles and works. Of his monographs, his article on typhoid fever in Nothnagel's treatise is especially notable. All his articles bear the stamp of wide experience and thorough criticism; they are clearly written and therefore highly esteemed by practicing physicians. Curschmann had a vigorous personality and knew how to exert his full authority in every position. In addition he was a very politic man. He had formed the greatest school of all living German clinicians and thanks to his influence and the worth of his pupils, most teaching positions in internal medicine were occupied by his pupils, as for instance, Krehl in Heidelberg, Romberg in Tübingen, His in Berlin, Hirsch in Göttingen. Presumably he will be succeeded by one of his pupils.

Professor Edlefsen of Hamburg, died a few days before Curschmann, at the age of 68. He was for a long time professor extraordinary of medicine at Kiel and had charge of the medical policlinic at that place. He was the author of a Text-Book of Diagnosis of Internal Diseases (Lehrbuch der Diagnostik der Inneren Krankheiten). His chief work lay in the field of pulmonary diseases. Some years ago he resigned his position at Kiel and took up his residence at Hamburg.

At the end of the summer semester Professor Leber, director of the university eye clinic at Heidelberg, will retire from his professorship.

Professor Verworn of Göttingen has received a call to Bonn as successor of Pflüger. Professor Heller, director of the pathologic institute of Kiel, celebrated his seventieth birthday, May 1.

### International Exposition of Hygiene at Dresden

A short time ago it was determined to establish a special department in the exposition which should point out to the public the dangers which threaten it on account of quackery. The collection of the German society for the suppression of quackery is to serve as a nucleus for this part of the exposition; a call will be issued for other material.

### Berlin University Centennial

The city government has appropriated $48,000 (200,000 marks) for the celebration of the jubilee of the university in October. Out of this sum such attendants of the university are to be taken care of as have shown themselves capable, have completed their academic education and can show that their further education will be improved by travel for study.

### Tuberculosis Meetings

This week, as is the annual custom, various meetings for the campaign against tuberculosis have occurred, especially a general session of the German central committee for the campaign against tuberculosis, a session of the executive section of the central committee and a session of the commission appointed by the central committee for the campaign against lupus. For lack of space I will postpone the report of these very interesting meetings until my next letter.

## VIENNA LETTER

*(From Our Regular Correspondent)*

Vienna, May 10, 1910.

### A Tariff of Medical Fees

The fight which the medical profession is prepared to carry on against the ruinous legislation called "social reform" requires organization and money. As about 90 per cent. of all practitioners belong already to the organization, the strike, if declared, will be rigidly adhered to and no club work will be done by doctors. In order to enable the doctors to deal with the population fairly, in case of club strike, the following tariff has been worked out for the country districts, with the strict understanding that no practitioner will be allowed to charge less:

The population will be regarded from the standpoint of income. Persons or families with less than $250 (1,200 crowns) a year income, will be charged 20 cents (1 krone) per visit at the surgery; 50 per cent. more for a visit in the house of the patient, a moderate charge of 40 cents extra being added for each half hour's ride or drive. If the income be between $250 and $500 (teachers, clerks, better class of laborers) the tariff is 30 cents and 40 cents respectively for a visit, and 60 cents per half-hour drive. Persons with an income of more than $500 (2,400 crowns) or from another doctor's district will be charged 40 cents for consultation at the surgery, 50 per cent. more for a visit at the patient's lodging, and 80 cents per half-hour drive. Carriage charges are always to be paid by patient; night calls always 100 per cent. more; special hours, immediate calls 50 per cent. above ordinary fee. Consultations with the house physician are to be charged for respectively at $1.10, $1.60 and $2, and at least $2 for the consultant. The tariff will come in force on the day that the practitioners refuse all Krankenkasse or club practice; it is a litle higher than the usual fees charged in our country, in the upper limit at least, but it is very moderate in the lower limit, so as to give the poorer classes still the opportunity of obtaining medical help without the clubs. The population are informed already that this attitude of the profession has been caused by the threatening law, which will make private practice among the lower middle classes practically impossible.

### The New Infants' Home in Vienna

In this country the government has taken over the charge of all orphans and foundlings and altogether over 17,000 children up to 14 years of age are at present under control in Lower Austria alone. For the purpose of dealing with foundlings in Vienna, a large up-to-date institution, the "Central Kinder-Heim" (Central Children's Home), has been erected and was recently opened by the emperor. It consists of a large building, capable of accommodating 410 children, besides 280 wet-nurses and mothers, and 54 nurses. The institution contains also a pavilion for diseased children, an isolation ward, and a reception ward for foundlings, where they are prepared, washed and brought into a condition of fitness for the home. Special care has been taken to ensure a sufficient supply of light and air to all rooms, and the chimney has been fitted with a smoke-destroying apparatus—the first instance of a large institution being provided with such an appliance in this city. The laundry handles 3,500 pounds of linen daily, and the kitchen prepares food for 600 persons. The elaborate plans, together with the grounds and building, were selected by a commission in which medical men had a deciding vote, and all children who are born in the clinics may have the first opportunity to be received there. Besides the institution negotiates positions for wet nurses, contains an information-bureau for mothers (hitherto a private affair of small associations), and all children controlled by the institute are cared for until they find employment or up to the age of 18.

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# Pharmacology

## BROMIN-IODIN COMPOUND

### The Life-History of a Nostrum

A correspondent writes for information concerning a remedy known as Bromin-Iodin Comp., which he says is manufactured by the Bromin-Iodin Chemical Company, formerly of Binghamton, N. Y., but now located in San Diego, California. In The Journal for Feb. 5, 1898, appeared an article by Dr. C. W. Ingraham, Binghamton, N. Y., entitled "Five Years' Successful Experience with a Special Mode of Treating Pulmonary Tuberculosis." This "special mode" of treatment consisted in using what Dr. Ingraham called "bromin-iodin compound," which he said had the following formula:

| | |
|---|---|
| Iodin | gr. 1/2 |
| Bromin | gr. 1/14 |
| Phosphorus | gr. 1/100 |
| Thymol | gr. 2/3 |
| Menthol | gr. 2/3 |
| Sterilized oil | fl. dr. 1 |

This "hypodermic treatment of phthisis" was widely advertised in the late nineties by the Bromin-Iodin Chemical Co., Binghamton, N. Y., and was but one of the innumerable "treatments" for pulmonary tuberculosis that have risen, had their day and, more or less gracefully, retired. It was first sold "to physicians only" for hypodermic administration. In 1906, however, physicians were told by the company that "if we find it impossible to secure your cooperation . . . we will be compelled to do business with the druggists in your locality. . . ." Apparently they found such cooperation impossible, because a leaflet was issued to the laity and the statement was made that they intended to advertise "all over North America in publications of national and international circulation, as well as in local newspapers. . . ." Naturally the laity couldn't be expected to administer this treatment by the hypodermic method and it is not surprising to read that "experiment has proved that the same solution can be taken internally." In addition to the advertising leaflet, the public also was provided with a "pocket calendar good for 200 years" which contained numerous testimonials from physicians laudatory of the "bromin-iodin" treatment. The layman who received one of the leaflets was told that if he was suffering from "asthma, bronchitis, colds, consumption, coughs, eczema, goiter, hay fever, neuralgia, rheumatism . . . also constipation and kidney troubles," and his recovery was "not as rapid as it should be," should, moreover, his physician refuse to use the bromin-iodin compound "it might not be a bad idea to discharge him" and get a physician who would!

At the time this "treatment" was first tried by its "inventor," the results given in fifty cases were: First stage, 90 per cent. cures; second stage, 50 per cent. cures; third stage, no cures, but improvement in several cases; this was in 1895. It now appears that this "treatment" has after a period of "patent medicine" exploitation come back into the "ethical proprietary" field. Presumably a mixture such as that represented by the "formula" did not lend itself to administration by mouth; there was nothing to do, therefore, but enlist the aid of "easy" physicians in furthering its sale.

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## THE PHARMACOPEIAL CONVENTION OF 1910

No one can predict the ultimate results of the action of the convention which has now passed into history; but for the benefit of those who did not attend the deliberations it may not be amiss to analyze those immediate results which affect the medical profession.

1. *The Election of Officers and the General Revision Committee:* This reflects fairly the composition of the convention, and this was overwhelmingly pharmaceutical. On the general revision committee of 50, there are only about 3 practitioners, and about 6 pharmacologists. The other 41 members are pharmacists or chemists. Professor Remington, the chairman of the last revision committee, was reelected to the same position, and there is every reason to believe that he will endeavor to carry out the intentions of the convention fairly and efficiently.

2. *Delegates:* Delegates of certain government services and other organizations recommended by the trustees were admitted. An attempt to grant recognition to the National Association of Retail Druggists was defeated. The last action may be interpreted largely as a rebuke to the "patent-medicine" activities of the "American Druggists Syndicate."

3. *Number of Delegates from Institutions:* The recommendation of the trustees to restrict each institution to one delegate was defeated. This matter has two sides: The admission of three delegates means that the convention is representative of the individual delegates rather than of the institutions from which they are accredited; it places the medical institutions at a disadvantage; and it gives a very great advantage to the eastern institutions over those which are situated at a greater distance from Washington. On the other hand, it was argued that the eastern pharmaceutical men actually perform the greatest part of the work of revision; and that the three-delegate plan assured a larger convention. On the whole, it appears that the retention of three delegates is to be regretted.

4. *The Re-Formation of the Revision Committee:* The proposition of the trustees was carried to enlarge the general revision committee from 25 to 50; this committee to select from their own number an executive committee of fifteen. The latter are to have the charge and responsibility of the actual work of revision, while the other members will serve in an auxiliary, advisory, and supervisory capacity. It remains to be seen how this new plan will work in practice. If

it is carried out in the spirit in which it was intended—and there is every indication that this will be done—it gives promise of great usefulness. As has often been said, the old number of 25 members was too small to be representative, and too large for effective team work. The new plan secures both objects: The "General Revision Committee" is sufficiently large to really represent the convention—in fact, it makes the convention a permanent body. It can inquire into technical matters; it can advise and supervise; it can discuss questions of policy as they arise; it can help to secure publicity for such discussions; and it can aid in many other ways, and thus carry on the functions which would devolve on the convention if it were in permanent session. The convention has wisely given a very wide latitude to this general revision committee. On the other hand, the "Executive Revision Committee" can now be elected at leisure, each man for his especial fitness for his especial task. Having thus the full responsibility, as well as the full credit, for his part of the work, he will have every incentive to put forth his best individual efforts.

5. *Supplements:* The decennial revision has been justly criticised as too infrequent, at least too inelastic, for these days of rapid progress. This has been remedied by granting authority to the committee "to prepare a supplement to the Pharmacopeia at any time they may deem such action desirable."

6. *Publicity:* The universal demand for adequate publicity of the progress of revision has been met by the necessary instructions to the committee.

7. *Therapeutically Suggestive Titles, and Compound Preparations:* The Committee was instructed to eliminate these as far as possible. This is certainly a step in the right direction.

8. *Biologic Products and Biologic Assays:* The Committee was given authority to admit sera and other biologic products, as also *biologic assays of drugs*. The presence on the revision committee of an eminent serum expert, and of several pharmacologists who have had a large experience in pharmacological assaying, gives assurance that this work will be done scientifically. It was also decided to include in the Pharmacopeia *reagents which are important for clinical diagnosis.*

9. *Other Instructions in the Interest of Physicians:*

(a) Official Abbreviations: These are to be appended to all articles which are used in prescriptions. Their adoption by physicians will be optional, of course, but it will tend to prevent mistakes.

(b) A list of official preparations, in which each article is used, is to be appended.

(c) Doses: The experiment of stating the "average dose," which was made in the last revision, has been found acceptable; but the medical delegates were as a unit against the recognition of official "maximum doses," and a motion to introduce these was lost after a thorough discussion.

The "plan for revising the next Pharmacopeia," submitted by the retiring revision committee, in which the above recommendations were presented, also contained a considerable number of other valuable features of more strictly pharmaceutical interest, all tending to the improvement of the following revision, and all of which were adopted. Indeed, every item of this model report should have been adopted—but it was not to be. One clause only, and that in many ways the most significant, was voted down; namely, that relating to the

10. *Scope of the Pharmacopeia:* It was recommended that "there should not be included rarely used substances or *those whose value and use has not been established.*" Had this recommendation been adopted, and conscientiously carried out, the next Pharmacopeia would have been scientific in its contents as well as in its descriptions. It would have become a useful book medically as well as pharmaceutically. It would have become a guide to scientific prescribing. The reports of the various sections of the American Medical Association, and the replies to the circular sent out by its Committee on the Pharmacopeia, leave no doubt that this restriction was the desire of the medical profession. Teachers of therapeutics and of pharmacology foresaw that a restricted pharmacopeia would encourage a more careful study and a more extended use of the efficient and standard remedies.

The pharmaceutical profession, on the other hand, believed that its interests would be better served if admissions to the Pharmacopeia were governed by commercial expediency rather than by scientific merit. This policy is doubtless short-sighted, for the restriction of our overburdened materia medica is quite as much to the interest of the pharmacist, as of the physician and the public. However, the majority of the pharmaceutical delegates did not see it in this light. Had there been an adequate representation of physicians in the convention, they could doubtless have carried the point. In fact, the arguments for a therapeutically scientific pharmacopeia were so strong that a motion was defeated to substitute the words "value *or* use" as defining the scope. The convention did not care to go on record as discouraging scientific standards of admission! However, the majority were only too glad to avail themselves of the subterfuge of silence, by striking out the entire clause and thus leaving the determination of the scope to the general committee on revision.

This appears to leave the question open, but the committee doubtless understands what it is expected to do in the matter.

If the admissions to the future Pharmacopeia are not to be based on scientific standards; if the wishes of the profession are not to be recognized in its revision, then the book will not be regarded by intelligent physicians as a safe guide to scientific prescribing. The Pharmacopeia will always be important for enforcing standards of purity for drugs, but this practically will be the extent of its usefulness to the medical profession. The much greater field which we hope for it will have to be abandoned should this interpretation of the scope of the Pharmacopeia be accepted by the revision committee, which we trust will not be the case.

## Correspondence

### A Rapid Stain for Frozen Sections

*To the Editor:*—I was interested to note in THE JOURNAL (May 14, 1910, p. 1614) the rediscovery of an old method for staining frozen sections with thionin which I published in the *Proceedings of the New York Pathological Society* of 1901 (New series, i, 110). I can add that in an experience of ten years with this and other stains I have seen no reason to change the method as published, and can agree with Dr. Strouse as to its general applicability.

It is also interesting to record that surgeons are beginning to feel that they cannot always make a diagnosis of the exact nature of a tumor during operation, and are calling more and more on the microscopic expert to furnish accurate information. Suitable frozen sections are, in the vast majority of cases, as satisfactory for diagnostic purposes as those made after embedding and sectioning in the usual fashion; but it should be clearly understood that a man must have considerable training in this line of work before his diagnoses become reliable. Experience with thin sections stained with eosin-hematoxylin does not necessarily fit one for a diagnosis on thicker fresh sections.

I cannot, therefore, agree with Coplin, who says in Keen's "Surgery" (v, 1208), that "for diagnostic purposes the freezing method cannot be considered satisfactory," but hold with Wilson of Rochester, Minn., that the procedure is most useful and that errors do not occur if reasonable care is taken.

FRANCIS C. WOOD, New York.

*To the Editor:*—My attention has been called to Dr. F. C. Wood's report in the *Proceedings of the New York Pathological Society*, 1901, new series, vol. i, on the use of thionin as a stain for frozen sections. As I did not refer to this paper in my article on the same subject in THE JOURNAL (May 14, 1910, p. 1614), will you kindly allow me space to express regrets at my inability to find Dr. Wood's report before mine was published, and to state that while my work was independent, all credit for the use of the stain should belong to Dr. Wood?

S. STROUSE, Chicago.

### Resolutions Not Adopted

*To the Editor:*—I notice in the *New York Medical Record* of May 28 an item stating that certain resolutions presented by Dr. G. Frank Lydston to the House of Delegates of the Illinois State Medical Society at its last annual meeting were adopted.

I desire to call attention to the fact that this statement is not true. The facts are these: Dr. Lydston presented the resolutions to the House and moved their adoption. While this motion was pending a motion was made and carried to adjourn. The presiding officer declared the motion carried and adjourned the House. After the adjournment, and after most of the delegates had left the hall, a small number, 18 to be precise (20 being a quorum), most of whom I believe were from Chicago, held a meeting and called the second vice-president to the chair. He put the motion on the adoption of the resolutions presented by Dr. Lydston and declared them adopted. This meeting of 18 delegates out of 102 delegates present before adjournment cannot be considered a legal session of the House of Delegates of the Illinois State Medical Society.

E. W. Weis, Secretary Illinois State Medical Society.

## Book Notices

Surgical Diagnosis. By Alexander Bryan Johnson, Ph.B., M.D., Professor of Clinical Surgery in the Columbia University Medical College. Vol. III. Cloth. Pp. 708, with 275 illustrations. Price, $6.00. New York: D. Appleton & Co., 1909.

Of the numerous conditions dealt with in the third and final volume of this work, particular mention may be made of the chapters on "Injuries and Diseases of the Spine and Spinal Cord" and on "Traumatic Neuroses" in which these rather obscure conditions to most general practitioners are very clearly described. The tuberculin tests for tuberculosis are considered here, having been purposely omitted from the other volumes in order that the last word might be given concerning their method of application and their value as a diagnostic measure. The dangers attending the conjunctival method are clearly set forth.

In an appendix is found some of the latest information concerning the parathyroid glands, exophthalmic goiter and hyperthyroidism, the status lymphaticus, the serum diagnosis of syphilis, recent improvements in *x*-ray apparatus and *x*-ray technic, and some additional data in regard to the diagnosis of organic lesions of the brain, thus bringing the subjects right up to the time of going to press. There is an index of authors and a very elaborate index of subjects occupying 90 pages. This is one of the best works on general surgical diagnosis that has appeared up to date.

Atlas zur Mikroskopischen Diagnostik der Gynäkologie. Nebst einer Anleitung und erlauterndem Text. Von Priv.-Doz. Dr. Rudolph Jolly, Oberarzt der königl. Universitäts-Frauenklinik zu Berlin. Paper. Price, 17.50 marks. Pp. 83, with 54 illustrations. Berlin: Urban & Schwarzenberg, 1910.

This atlas of the microscopic diagnosis of gynecology by Rudolf Jolly, includes an introduction, the application and technic of the microscopic examinations of specimens, and an explanatory text. The contents have been so systematized and simplified, and generously illustrated with pathologic sections with both high and lower power reproductions, that they are quite as invaluable to the general practitioner as to the gynecologist. The entire field of gynecologic pathology is covered, including plates of chorionic villi and decidual cells, mucous membrane and epithelium of the normal uterus, and the various stages of normal menstruation. It is illustrated with 52 exceptionally good colored plates. The explanatory notes are concise, and their meaning is clear. The author begins with the physiologic conditions, gradually develops into the simple, then the more complicated pathology, and finally brings out the differentiations. Each illustration, however, is complete in itself. The clearly defined lines drawn between the early malignant and benign growths is sufficient to make a valuable place for the work in the doctor's library.

The book is well worth possessing, even by those who do not read German, for the illustrations alone. Those who read German with difficulty will find that the book is written in a simple, easily comprehended style.

# The Public Service

### Medical Department, U. S. Army

Changes for the week ended May 28, 1910:

Pierson, Robert H., capt., left Vancouver Barracks, Wash., for duty at target range near Proebstel, Wash.

Oliver, Robert T., E. S. D. S., left Fort Hamilton, N. Y., en route to Fort Totten, for temporary duty; arrived at Fort Totten same date.

Walkup, Joseph O., 1st lieut., M. R. C., left Fort Snelling, Minn., with Battery D, 5th Field Artillery, en route to maneuver tract, Sparta, Wis.

Keefer, Frank R., lieut. col., relieved from duty at Fort Wadsworth, N. Y., and ordered to West Point, N. Y., for duty as surgeon and professor of Military Hygiene, relieving Lieutenant Colonel Charles M. Gandy, Medical Corps.

Hill, Eben C., lieut., sick leave extended 1 month.

Hess, Louis T., major, relieved from duty at Fort Leavenworth, Kan., and ordered to Fort Hamilton, N. Y., for duty.

Fuller, Leigh A., major, relieved from duty at Fort Hamilton, N. Y., and ordered to Fort Leavenworth, Kan., for duty.

Lambie, John S., Jr., lieut., relieved from further duty in the Philippines Division and assigned to duty as surgeon of the U. S. A. T. *Sherman*, with station at San Francisco.

Whitney, Walter, 1st lieut., M. R. C., left Fort McPherson, Ga., en route to U. S. Rifle Range, Waco, Ga., for duty with 3rd Battery, 17th Infantry.

Woodall, William P., capt., is assigned to the command of the one-half of Co. A, Hospital Corps, which is to participate in the camps of instructions at Fort D. A. Russell Target and Maneuver Reservation, Wyo., and Fort Riley, Kan., July 18 to Sept. 15, 1910.

Gray, William W., col., on arrival at San Francisco, will proceed to St. Paul, Minn., and report in person to the commanding general, Department of Dakota, for duty as chief surgeon of that department.

Connor, Clarence H., capt., after arrival at San Francisco, and on expiration of leave of absence will proceed to Fort Brady, Mich., for duty at that post.

Van Kirk, Harry H., 1st lieut., M. R. C., relieved from duty at Fort Levett, Me., and directed to proceed to Manila, P. I., for duty on transport sailing from San Francisco about Aug. 5, 1910.

Wall, Francis M., 1st lieut., M. R. C., relieved from duty at Fort Michie, N. Y., and directed to proceed to Manila, P. I., for duty on transport sailing from San Francisco about Oct. 5, 1910.

Huff, John Van R., col., ordered to inspect hospital and medical departments at Forts H. G. Wright, Terry and Michie, N. Y.; Mansfield, R. I.; Trumbull, Conn.; Adams and Greble, R. I.; Rodman, Banks, Andrews, Strong, Warren and Rever, Mass.

Wallace George S., 1st lieut., M. R. C., detailed as instructor of infantry officers of the organized militia of the State of Texas, Camp Mabry, Austin, Tex., June 6 to 11, 1910.

Graham, George D., dental surgeon, returned to Fort Des Moines, Iowa, from leave of absence.

Macy, Frederick S., lieut., granted 14 days' leave of absence.

Bingham, E. G., capt., reports relief from duty as Attending Surgeon, Headquarters, Department of California, San Francisco.

Long, Charles J., dental Surgeon, reported for duty at Fort Adams, R. I.

Shugerman, Harry P., 1st lieut., M. R. C., is relieved from duty at the Army Medical School in this city; he will proceed to his home and on arrival report by telegraph to The Adjutant General of the Army for further orders.

### Medical Corps, U. S. Navy

Changes for the week ended May 28, 1910:

Pleadwell, F. L., surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the summer conference at the Naval War College, Newport, R. I.

Halton, E. P., acting asst-surgeon, ordered to duty at the Naval Hospital, Narragansett Bay, R. I.

### Public Health and Marine Hospital Service

Changes for the week ended May 25, 1910.

Pettus, W. J., asst.-surgeon general, granted 1 day's leave of absence, May 24, 1910.

Banks, C. E., surgeon, granted 1 day's leave of absence, May 24, 1910.

Young, G. B., surgeon, detailed to represent the Service at the sixty-first annual meeting of the American Medical Association, to be held in St. Louis, June 7-10, 1910.

Lavinder, C. H., P. A. surgeon, granted 3 days' leave en route in Europe, under Paragraph 189, Service Regulations.

Korn, W. A., P. A. surgeon, granted 14 days' leave of absence from June 21, 1910.

Long, J. D., P. A. surgeon, directed to proceed to Philadelphia, Pa., on special temporary duty.

Lloyd, B. J., P. A. surgeon, granted 1 month's leave of absence from May 20, 1910, on account of sickness.

Mullan, E. H., P. A. surgeon, relieved from duty at Montreal, Canada, and directed to proceed to Ellis Island, N. Y., and report to the chief medical officer for duty.

Marshall, E. R., asst.-surgeon, relieved from duty at Delaware Breakwater Quarantine Station and directed to proceed to Honolulu, Hawaii, and report to the chief quarantine officer for duty.

Diaz, Jose A., acting asst.-surgeon, granted 30 days' leave of absence, without pay, from May 15, 1910.

Duncan, Wm. A., acting asst.-surgeon, granted 30 days extension of leave from April 4, 1910, on account of sickness.

Dunn, James, acting asst.-surgeon, granted 12 days' leave of absence from June 1, 1910.

Slamberg, N. L. A. K., acting asst.-surgeon, granted 30 days' leave of absence from May 25, 1910.

Tarbell, B. C., acting asst.-surgeon, granted 1 day's leave of absence, June 19, 1910.

Thornton, M. J., acting asst.-surgeon, granted 1 day's extension of leave, May 8, 1910, on account of sickness.

Wakefield, H. C., acting asst.-surgeon, granted 13 days' leave of absence from June 13, 1910.

## Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

### WARMED ANESTHETIC VAPORS

*To the Editor:*—Please give authorities in regard to the use of warmed anesthetic vapors or gases. Anesthetist.

Answer.—

Haun: "Advantages of Warming Chloroform for Anesthesia," München. med. Wchnschr., Nov. 26, 1907, No. 48.

Gwathmey, J. T.: "Warm versus Cold Anesthetics," New York State Jour. Med., February, 1908; abstr. in The Journal, April 4, 1908, p. 1150.

Report of the Anesthetic Commission of the American Medical Association, The Journal, Nov. 7, 1908, p. 1572 et seq.

McRoberts, W. J.: "An Advance in Anesthetic Technic," Northwestern Lancet, Aug. 15, 1909; abstr. in The Journal, Sept. 18, 1909, p. 970. This paper describes the method and the apparatus used for administering the warmed anesthetic.

### DENTAL ANALGESIC

*To the Editor:*—As all country doctors have more or less extraction of teeth to do, it would be of interest to more than the writer if you would kindly publish formula for a safe and efficient analgesic. Please state amount to be injected. A. E. L.

Answer.—The following solution for injection for the production of local anesthesia is recommended by an authority on dental materia medica and therapeutics:

| ℞ | gm. or c.c. | | |
|---|---|---|---|
| Cocainæ hydrochloridi | \|3 | | gr.v |
| Sodii chloridi | \|25 | or | gr.iv |
| Aquæ destillatæ | 30\| | | fl℥ i |

M. Sig: Cocain injection for dental purposes; to each c.c. add 1 drop of epinephrin solution (1-1000) when used.

For pain after extraction, cotton saturated with chloroform or ether may be applied to the cavity.

## Marriages

Harvey Gordon McNeil, M.D., to Miss Mary Jenks, both of Los Angeles, May 12.

Thomas Henry Legg, M.D., to Miss Evelyn C. Repp, both of Union Bridge, Md., May 18.

Emile E. DeLanney, M.D., to Miss Margaret Mendenhall, both of South Omaha, May 14.

Arthur J. Booker, M.D., DesMoines, to Miss Daisy Deane Walker, of Indianapolis, May 12.

Charles Reuben McCreery, M.D., Tacoma, to Miss Bertha F. Harris, of Seattle, May 14.

Albert E. Bernstein, M.D., Detroit, to Miss Fannie Schomberger, of Traverse City, Mich., May 14.

Edgar S. Everhart, M.D., Crabtree, Pa., to Miss Madaline Lee Christian, of Richmond, Va., May 24.

Charles C. Headley, M.D., Holloway, Ohio, to Miss Margarbetta Clemens, of Moorefield, O., May 11.

Daniel John Keelan, M.D., Montgomery, Vt., to Miss Angeline Poronto, of Enosburg, Vt., May 10.

John Egerton Cannaday, M.D., Charleston, W. Va., to Miss Margaret Stuart Roller, of Harrisonburg, Va., May 11.

Ed Henry Spiegelburg, M.D. Hot Springs, S. D., to Miss Maud Lee Talbott, of Boise, Idaho, at Hot Springs, May 9.

## Deaths

**Henry Sayles Kilbourne, M.D.** University of Michigan, Ann Arbor, 1865; a member of the American Medical Association; who served as contract surgeon in the United States Army during the Civil War and at intervals thereafter until 1875, when he was appointed assistant surgeon in the regular establishment; was made captain in 1880; promoted to major in 1894; served during the Spanish-American War with troops at Tampa, Fla., and as chief surgeon of the Second Division, Fifth Army Corps in Cuba during the Spanish-American War; was promoted to Deputy Surgeon General with the rank of Lieutenant Colonel in 1903, and was retired from active service, Aug. 14, 1904; died at his home in Washington, D. C., May 16, aged 69.

**Daniel Mayer, M.D.** Eclectic Medical Institute, Cincinnati, 1869; of Charleston, W. Va.; a member of the American Medical Association, and formerly president of the West Virginia State Medical Association; a surgeon of volunteers during the Civil War, and at one time state commander of the G. A. R. of West Virginia; who was appointed by President McKinley consul-general to the Argentine Republic; died in the Jewish Hospital, Cincinnati, May 20, from nephritis, aged 73.

**Oliver Payson Rex, M.D.** Jefferson Medical College, 1867; hospital steward of the Thirty-third Illinois Volunteer Infantry; and later Major and Surgeon during the Civil War; for several years a lecturer on children's diseases in Jefferson Medical College; a resident of Abington, Pa., and medical director for several years of the Penn Mutual Life Insurance Co.; died May 16, on a steamer in which he was returning home from the Mediterranean, from pneumonia complicating typhoid fever, aged 63.

**F. Gurney Stubbs, M.D.** Northwestern University Medical School, 1893; a member of the American Medical Association, Chicago Laryngological and Rhinological Society, and Physicians' Club of Chicago; assistant professor of laryngology and otology in Rush Medical College; professor of laryngology, rhinology and otology in the Chicago Eye, Ear, Nose and Throat College; died in St. Luke's Hospital, May 26, from pneumonia, aged 41.

**Frank Monroe Tiffany, M.D.** University of Pennsylvania, Philadelphia, 1896; a member of the American Medical Association and a fellow of the American Academy of Medicine; a member of the staff of the Stamford (Conn.) Hospital and Children's Home; consulting physician to the Stamford Day Nursery, and physician in charge of St. John's Church and Home; died at his home in Stamford, May 18, from cancer, aged 41.

**Clarence Samuel Bartlett, M.D.** Dartmouth Medical School, Hanover, N. H., 1902; a member of the American Medical Association and New Hampshire and Massachusetts medical societies; from 1894 to 1906 a member of the staff of the New Hampshire State Hospital, Concord; a member of the Medical staff of the Henry Haywood Memorial Hospital, Gardner, Mass.; died recently at his home in that city, aged 41.

**William R. Howard, M.D.** College of Physicians and Surgeons, Baltimore, 1879; a member of the Medical Society of the State of New York, and one of the charter members of the Rochester Pathological Society; a member of the staff of St. Mary's Hospital and surgeon to the Buffalo, Rochester and Pittsburg Railway; died at his home in Rochester, May 22, aged 54.

**Monroe Griffith Reynolds, M.D.** Rush Medical College, 1880; of Aledo, Ill.; a member of the Illinois State Medical Society; and formerly president of the Mercer County Medical Association; representative in the Illinois General Assembly in 1904-1906, and Mayor of Aledo from 1899-1901; died suddenly on his farm near Redwood Falls, Minn., May 13, aged 64.

**Rob Roy Kennedy,** University of Nebraska, Omaha, 1902; formerly registrar of the State Board of Health, District 41, Nebraska; city physician of Murray, Utah; died in St. Mark's Hospital, Salt Lake City, March 28, from cerebral embolism after an operation for nephrectomy and appendicectomy, aged 35.

**Thomas H. Daugherty, M.D.** Cincinnati College of Medicine and Surgery, 1866; a member of the Kentucky State Medical Association; for many years a practitioner of Sadieville, Ky., and president of the Sadieville Deposit Bank; died at his home in Georgetown, May 19, from heart disease, aged 63.

**Edward R. Perkins, M.D.** Hahnemann Medical College, Philadelphia, 1878; a veteran of the Civil War and for more than 30 years a practitioner of Excelsior, Minn.; died suddenly May 21, on a Lake Minnetonka car, while making a professional call, from cerebral hemorrhage, aged 67.

**Michael Brinkmann, M.D.** University of Marburg, Germany, 1848; surgeon in the German Army in 1848 and 1849, and assistant court physician in 1850; said to have been the first to introduce hydrotherapy in the United States; died at his home in Philadelphia, May 19, aged 84.

**Wilton Winston Winget, M.D.** Miami Medical College, Cincinnati, 1893; a member of the Oklahoma State Medical Association; died at his home in Nowata, May 14, from the effects, it is said, of a hypodermic injection of medicine administered to cure the morphin habit, aged 41.

**Henry Proper Stillwell, M.D.** University of Buffalo, N. Y., 1879; a member of the Medical Society of the State of New

York, and vice-president of Schuyler County Medical Society; died at his home in Burdett, April 9, from cerebral hemorrhage, aged 64.

**Jacob S. Giltner, M.D.** Pennsylvania Medical College, Gettysburg, 1846; medical director of the Army of the Cumberland during the Civil War, and a practitioner of Portland, Ore., since 1866; died at his home, May 18, from cerebral hemorrhage, aged 85.

**James Bourne Ayer, M.D.** Harvard Medical School, 1873; a member of the American Medical Association; formerly an overseer of the poor at Boston and a member of the State Board of Insanity; died at his home in Boston, May 14, aged 60.

**William G. Gardiner, M.D.** Toledo, Ohio, Medical College, 1883; formerly demonstrator of physiology and anatomy in his alma mater; a member of the American Medical Association; died at his home in Toledo, May 18, from pneumonia, aged 69.

**Thomas Drury Edwards, M.D.** University of Tennessee, Nashville, 1884; a member of the American Medical Association, and a specialist in disease of the eye; died at his home in Union City, Tenn., May 16, aged 53.

**Martin A. McHenry, M.D.** Tulane University, New Orleans, 1882; a member of the Louisiana State Medical Society, and a wealthy and prominent practitioner of Monroe; died at his home in that city, May 15, aged 55.

**Edward C. Adams, M.D.** Northwestern Medical College, St. Joseph, Mo., 1886; a specialist on diseases of the eye and ear of St. Joseph, Mo.; died in a hospital in that city, May 14, from cerebral hemorrhage, aged 52.

**Sidney Bishop, M.D.** Bellevue Hospital Medical College, 1873; an honorary member of the Bridgeport (Conn.) Medical Association; died at his home, March 24, in that city, from valvular heart disease, aged 62.

**John W. Hebb, M.D.** University of Maryland, Baltimore, 1860; a member of the Medical and Chirurgical Faculty of Maryland; died at his home in West Friendship, May 18, from senile debility, aged 71.

**Joseph Solomon Morton, M.D.** Rush Medical College, Chicago, 1887; a member of the American Medical Association; died while fishing near his home in Vernon, Ill., May 18, from angina pectoris, aged 46.

**Francis X. Weil, M.D.** University of Pennsylvania, 1869; a member of the Medical Society of the State of Pennsylvania; treasurer of York County Medical Society; died at his home in York, May 20, aged 69.

**Joseph C. Kimsey** (license, years of practice, Ind.); a practitioner of Steuben County for 54 years; a veteran of the Civil War; died at the home of his daughter in Angola, May 16, aged 90.

**John G. Stricklett** (license, years of practice, Ill., 1880); a practitioner for 52 years, and a veteran of the Civil War; died at his home in Springfield, May 8, from senile debility, aged 83.

**William Dunstone** (license, Mich., years of practice, 1900); for 44 years a practitioner of the Copper Country; died at his home in Dollar Bay, Mich., May 18, from senile debility, aged 79.

**Newell Allen Dryer, M.D.** University of Buffalo, N. Y., 1864; for 40 years a practitioner of Bath, Mich.; died suddenly in Perkins, Okla., April 23, from cerebral hemorrhage, aged 71.

**Allen V. Sheridan, M.D.** Kansas City, Mo., Medical College, 1899; of Broken Bow, Neb.; formerly of Paola, Kans.; died suddenly in that city, May 16, from heart disease, aged 41.

**Frederick S. Gray, M.D.** University of Vermont, Burlington, 1882; a member of the American Medical Association; died at his home in Troy, Vt., March 1, from diabetes, aged 53.

**Simeon Joseph Gérouard, M.D.** Laval University, Montreal, 1890; of Worcester, Mass., died in the Worcester City Hospital, April 3, from lobar pneumonia, aged 40.

**Ezra L. Broughton** (years of practice, Mich., 1900); of Lansing; died in the Michigan Asylum for the Insane, Kalamazoo, May 5, from arteriosclerosis, aged 74.

**A. W. Manchester** (license, Iowa, years of practice, 1886); for 35 years a practitioner of Walker; died at his home, May 14, from heart disease, aged 62.

**Jacob P. McIntosh, M.D.** Eclectic Medical Institute, Cincinnati, 1869; died at his home in Worthington, Ind., April 30, from senile debility, aged 74.

**Arthur Wadsworth, M.D.** Kentucky School of Medicine, Louisville, 1893; died at his home in Castleton, Ind., May 14, from heart disease, aged 52.

# Society Proceedings

## COMING MEETINGS

American Medical Association, St. Louis, June 7-10.

American Academy of Medicine, St. Louis, June 4-6.
American Assn. of Medical Milk Commissions, St. Louis, June 6.
American Association of Medical Examiners, St. Louis, June 5-6.
American Gastro-Enterological Association, St. Louis, June 6-7.
American Proctologic Society, St. Louis, June 6.
American Society of Tropical Medicine, St. Louis, June 11.
American Urological Society, St. Louis, June 6-7.
Assn. of Amer. Teachers of Diseases of Children, St. Louis, June 6.
Maine Medical Association, Bar Harbor, June 29-30.
Massachusetts Medical Society, Boston, June 7-8.
Nat. Con. State Med. Exam. and Licensing Bds., St. Louis, June 6.
New Jersey Medical Society, Atlantic City, June 28-30.
North Carolina, Med. Soc. of State of, Wrightsville Beach, June 21.
Wisconsin, State Medical Soc. of, Milwaukee, June 22-24.

## AMERICAN PEDIATRIC SOCIETY

*Annual Meeting, held in Washington, D. C., May 3-5, 1910*

(*Continued from page 1712*)

The President, Dr. D. L. Edsall, in the Chair

### SYMPOSIUM ON POLIOMYELITIS

### Infantile Poliomyelitis; Its Relation to the Community in Reference to Etiology and Prevention

Dr. R. W. Lovett, Boston: The medical profession of to-day is confronted with the task of making a new literature on the subject of infantile poliomyelitis, and of dealing with the various aspects of the disease as it affects the community. Orthopedic men who have to repair the damage done will be anxious to join hands with the pediatrists in fighting this malady. It is one of the most infectious diseases and is unquestionably on the increase. It is serious enough to warrant greater attempts on the part of health authorities to investigate the conditions under which it occurs. Information obtained in Massachusetts in the past year shows that the death rate is generally from 5 to 15 per cent. Of the patients who survive over four-fifths are permanently paralyzed and many crippled for life. The recognition of outbreaks of infantile poliomyelitis is of recent date. From the time of the report of the first outbreak until 1909 is only thirty years. Sixty-nine outbreaks have been reported all together. The outbreaks of the past five years show that it is not a local condition. The United States shows over one-half of the reported cases. There has been an increase in outbreaks in the last five years in a way not to be explained by increased interest in the disease. There are more in cold than in warm countries. More cases are reported in the United States than in other parts of the world.

It is evident that house-to-house investigations of all outbreaks should be made by competent men. The infectious nature of the disease has been demonstrated in the laboratory by Flexner and others, but I believe the work in the field to be of equal importance. Maps prepared by the State Board of Health of Massachusetts show the distribution of the disease there. One hundred and thirty-six cities and towns were listed according to the prevalence of the disease. Boston is shown by districts.

It is notable that density of population seems to have nothing to do with distribution. Most cases occur in old houses. Prevalence of the disease is shown not to be coincident with deficiency of rainfall. Out of 187 cases, 149 children were paralyzed. There were 48 abortive cases. More males than females were affected. Nearly one-half of the children had been wading or swimming in contaminated water before the onset of the disease. Only 7 per cent. occurred in first year of life, but 87 per cent. in the first ten years. Pain and tenderness occurred in a large percentage of cases. Duration of the paralysis was from three days to three months. No conclusions were drawn from the investigation, the report being entirely a preliminary one, but I think if the investigation of the disease by health authorities is to be continued it should be so indicated by the representatives of the societies present.

### The Clinical Aspects of Poliomyelitis; Types; Communicability; Mortality

Dr. L. Emmett Holt, New York: There seems to be an alarming increase of epidemics of this disease. The infection, starting in Europe, is spreading over this country and probably over the entire world. There is no essential difference between the two forms of the disease, except as to communicability. The analogy to cerebrospinal meningitis is striking. Virulence is greater when the disease is epidemic, but otherwise they seem identical. The disease varies in severity in different epidemics. The death rate in sporadic cases is much lower than in the epidemic cases. The proportion of abortive cases cannot be estimated at present, but it is probable that the number is quite large. Several cases of transmission by a third party have been noted. The disease is contagious, and under certain conditions highly so, demanding in epidemic forms a strict quarantine. Healthy persons may be carriers of the infection. Contact with persons suffering from the disease, or associated with it, is the medium of infection. The disease seems to vary as to its communicability at different times. I believe that a new name should be sought for the disease, as the term used is not exact, inasmuch as it is not limited to the anterior horns, nor indeed to the cord itself. I suggest the name, epidemic myeloencephalitis.

### Experimental Epidemic Poliomyelitis and Its Relation to Poliomyelitis in Human Beings

Dr. Simon Flexner, New York: In the last few months it has been demonstrated with certainty that a disease agreeing in clinical type and pathologic features with anterior poliomyelitis can be produced regularly in certain of the lower animals.

[The results of Dr. Flexner's experiments will be found in papers published in The Journal during 1909 and the present year.]

### Paralysis of the Neck and Diaphragm in Poliomyelitis

Dr. Irving M. Snow, Buffalo: I wish to report such a case terminating in complete recovery in a boy of 4 years. There was pain, tenderness and retention of urine. In a day or two flaccid palsy of the neck occurred. There was complete paralysis of the neck muscles so that patient had no control of the head whatever. Most of the distress, however, was from difficulty in breathing. For ten days he remained in a stationary condition. On the fourteenth day of illness the patient improved, but the neck muscles remained paralyzed. A jury mast had to be employed for some time. I believe that cervical poliomyelitis, affecting only the spinal accessory nerve, is rare, and although paralysis of diaphragm is rare and dangerous, recovery is possible.

### The Pathology of Poliomyelitis

Dr. Israel Strauss, New York, described in detail the lesions found in the disease, demonstrating them by means of many lantern-slides.

This is no longer a disease of doubtful origin, but is unquestionably due to infection. The virus reaches the meninges very early after infection. Infection may take place through the intestinal route. In regard to the experiments in which infection was produced by scarifying the nasal mucous membrane, that would seem to be really introducing the infection directly into the blood. I believe there is a strong resemblance between the virus and that of rabies. I wish to call attention to the interesting relations between the pathologic changes shown and the clinical picture of the disease. Many of the cells in the cord are not affected and can undergo rapid recovery. The extent of the paralysis gives no idea of the extent of the lesion, and I believe that in every case in which the cord is infected the bulb is also affected. The hope of the future is in finding a means for checking the disease before it has attacked the ganglion cells, and of finding the source of infection and preventing its spread.

### Treatment for the Amelioration of Permanent or Partial Paralysis by Silk Tendons and Silk Ligaments

Prof. D. Fritz Lange, Vienna: In the acute stage, fixation, either in an orthopedic bed or plaster-of-Paris bandages, is a measure to be recommended. After the subsidence of the acute stage a second task develops for the orthopedist—to prevent the occurrence of contractions and interference with the nutrition of the affected muscles. I would warn you especially against rough, hard massage. The muscles may be weakened and injured instead of strengthened in this way.

[His method of employing silk tendons and silk ligaments was demonstrated on a model. He uses a celluloid support to prevent sinking of the arch of the foot and during the night uses a steel support. Where the muscle is too short he lengthens it by means of silk sutures.]

### Discussion on Poliomyelitis

Dr. B. Sachs, New York: I rather think the name infantile spinal paralysis is the proper one clinically. Perhaps a more proper name from a pathologic standpoint would be polioencephalomyelitis. I consider that time given to massage and electricity in these cases is time wasted; I cannot see that such methods do any definite good, and a great deal more benefit would be attained by early institution of orthopedic measures. The atypical forms of the disease I believe are rare.

### A Comparison in Boys and Girls of Weight, Height, Epiphyseal Development

Dr. Thomas Morgan Rotch, Boston: The series of charts exhibited here demonstrate that at first boys are heavier and taller than girls, but the girls' weight line crosses the boys' at about 13; the boys' again crosses the girls' at about 17. The line for height shows about the same thing. Age does not readily determine weight and height. Girls are lighter and shorter than boys at birth, but before puberty the girls gain. The charts show the lack of relationship between epiphyseal development and general growth. In grading individuals the epiphyseal development should replace chronologic grading. The child's welfare depends on maintaining a proper equilibrium, and there should be a curriculum adopted to certain stages of epiphyseal development.

### The Cytodiagnosis of Tuberculous Meningitis and the Possibility of Recovery

Dr. Charles Hunter Dunn, Boston: The child whose illness forms the basis of my paper was a girl of 3 years of age. Father, mother and younger sister are well; brother died of tuberculosis of spine. There is nothing remarkable in previous history. December 5, two days before I saw her, she began to vomit; continued vomiting all day; at 5 p. m. vomiting ceased; next morning she was better and played a little; in afternoon vomited once. Temperature varied from 99 to 100. Increasing apathy was the most noticeable feature. She was a well-developed, well-nourished child, lying on her back, with eyes open, but took little interest in her surroundings; eyes fixed and staring; ptosis of left eyelid; no retraction of head; knee jerks somewhat more lively than normal; moderate Kernig. She was given castor oil and irrigation of colon until the following day. Then she began to cry out. There was marked rigidity of right arm and hand. She was seen again the following day; had had bad night; crying out and twitching of hands; temperature not above 100; apathy more marked; occasional slight internal strabismus; Babinski's sign present. Lumbar puncture; 10 c.c. cloudy fluid obtained; examination showed no fibrin formation; slide count showed 260 lymphocytes per cm., 2 per cent. polynuclears, 96 per cent. lymphocytes, 2 per cent. endothelial cells. With stain for tubercle bacilli several clumps of acid-fast bacilli were found which resembled tubercle bacilli. Positive diagnosis was made and unfavorable prognosis given. The condition cleared up and patient is now perfectly well. The evidence of the presence of the tubercle bacilli, with the other signs, is strong evidence of its being a case of tuberculous meningitis, and I believe we are justified in holding out some hope in these cases. If it were possible to demonstrate the bacilli in every case of lumbar puncture it would be of great value. The predominance of lymphocytes may be generally accepted as diagnostic. I have endeavored to establish a standard of the number of cells present in the fluid, and have found in sixty cases that the average is between 200 and 400 per cm. Should this be confirmed, it will give additional means of making positive the diagnosis of tubercular meningitis. It might lead to recognition of other cases of recovery in the future.

### DISCUSSION

**Dr. W. P. Northrup**, New York: I have had one of these "don't-know" cases myself, but do not think one is justified in feeling sure of this diagnostic method. In my case the patient had all the symptoms of tuberculous meningitis, with increased fluid and increased lymphocytes on lumbar puncture, but the patient suddenly began to get better. Why, I do not know, so I refer to them as "don't know" cases.

**Dr. F. S. Meara**, New York: I have lately correlated the cases of meningitis in Bellevue for the past three years, and of fifty in which lumbar puncture was done in forty the bacillus was recovered. My results correspond closely with those of Dr. Dunn. One child under 1 year, in whom the bacillus was found in the fluid, improved after some weeks, and it was thought to be a case of recovery, but the child suddenly became worse and died. There were a number of cases of so-called meningismus in which there was slight increase in the cells.

**Dr. S. M. Hamill**, Philadelphia: I have not formally reported, but in a discussion referred to a case of tuberculous meningitis which I had under my care a few years ago in which the bacilli were recovered in the fluid and in which recovery occurred. There was slight increase of leucocytes and the tubercle bacilli were found. I had not laid particular stress on the case because no animal injections were made and so the final link in the chain of evidence was lacking.

**Dr. J. P. Crozer Griffith**, Philadelphia: Frebinger has reported finding the bacillis in a case in which the patient recovered.

**Dr. F. S. Churchill**, Chicago: The presence of lymphocytes is not sufficient; only the presence of the bacillus is positive proof.

**Dr. Isaac A. Abt**, Chicago: I believe that patients sometimes recover from tuberculous meningitis. In a case seen in Vienna the diagnosis was made and later, the child having died of another disease, the scars at the base of the brain were shown at autopsy, confirming the clinical diagnosis.

### The General Considerations Regarding the Effects of Vaccines

**Dr. S. M. Hamill**, Philadelphia: Vaccine treatment differs in no way in children from that in adults, except in the matter of dosage. Relatively small minimum doses are generally advocated, but there is considerable difference of opinion as to maximum doses. The impressions one gathers are that it has been demonstrated that localized infections with staphylococcus pyogenes aureus are quickly cured; that generalized infections are favorably influenced; that gonococcal infections are favorably influenced; that in other diseases there is not enough data yet to warrant any striking conclusions.

*(To be continued)*

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## ASSOCIATION OF AMERICAN PHYSICIANS

*Twenty-fifth Annual Meeting, held at Washington, D. C., May 3-5, 1910*

*(Continued from page 1807)*

### Clinical Significance of Transitory Delirium Cordis

**Dr. George Henry Fox**: By transitory delirium cordis is meant a transitory but extreme irregularity of the heart, during which the auricular waves disappear from the venous tracings. The paroxysms may be excited by exhaustion, vomiting, exertion or excitement, or they may come on with no apparent cause. In two patients, over 40, the first paroxysms occurred after operations. The heart may be absolutely negative on physical examination between attacks and the diagnosis of a nervous condition made. However, as five of the six patients ultimately developed the permanent form of irregularity with cardiac insufficiency the prognosis should be guarded.

### DISCUSSION

**Dr. Joseph H. Pratt**, Boston: I have under observation now a case of the type described. The patient is 60; has never had any shortness of breath; he is well between attacks, except that he is nervous; no shortness of breath on exercise. A month or two ago I attended him in one of his attacks. His pulse was very irregular, and varied from 120 to 140 beats per minute. The attack lasted twelve hours. The tracings showed the heart sounds apparently duplicated. This condition might readily be mistaken for a cardiac neurosis.

**Dr. Walter B. James**, New York: From a study of 150 cases and cardiograms I am convinced that arrhythmia forms an important group of cases which has not been subdivided satisfactorily. There is no question whatever that a great number of these cases depend on auricular fibrillation. I believe that the use of the electrocardiogram is the only means of determining whether this is the case or not.

### Relation of Combined Intoxication and Bacterial Infection to Necrosis of the Liver, Acute Yellow Atrophy and Cirrhosis

**Dr. Eugene L. Opie**, New York: By the administration of poisons which attack the liver, namely, chloroform or phosphorus, in combination with bacterial infection, it is possible to reproduce the peculiar midzonal necrosis which in man occurs in association with bacterial infection, under conditions which are not fully understood. The same combination of poison and bacteria, apparently acting with maximum intensity, reproduces a lesion resembling acute yellow atrophy in man; necrosis and hemorrhage are followed by regenerative changes. When the poison in association with bacterial infection repeatedly produces relatively slight changes, cirrhosis of the liver occurs and advances much more rapidly than that produced by the poison alone.

### DISCUSSION

**Dr. S. J. Meltzer**, New York: The results obtained by Dr. Opie are very practical and important, but I should like to offer a suggestion. His results were obtained by using chemicals on the one side and bacteria on the other. Some years ago I presented a paper before this association in which I pointed out certain facts now generally recognized, namely, that bacteria like the typhoid bacillus or streptococci when introduced into the circulation disappear in a very short time. But if there is a small injury inflicted, then these bacteria will start to develop. In Dr. Opie's experiments it might be the chloroform or the phosphorus that caused this injury.

**Dr. William W. Welch**, Baltimore: Experimental work on cirrhosis of the liver has hitherto been very unsatisfactory, particularly with alcohol. I have never succeeded in producing cirrhosis of the liver experimentally with alcohol. The liver has an enormous regenerative power, and in order to produce cirrhosis we must inhibit this regenerative power. A combination of the action of toxins with something which prevents this regenerative power may give the real explanation of the cause of cirrhosis of the liver.

### Development of the Epiphyses of the Hand and Wrist

**Drs. T. M. Rotch and H. W. Smith**, Boston: During the past year work in this direction on boys and youths from 7 to 20 years of age has been carried on with the following results: It has been found that the development of the hand and wrist represents so well that of the other epiphyses of the skeleton that they furnish the best material for the study of epiphyseal development. It has been found that the epiphyses which appear first are the last to unite, so that the lower epiphysis of the radius has proved to be of especial value in this work since it appears so early and unites so late. It has been found that while the appearance of the carpal bones and epiphyses furnish us with an index for the first half of epiphyseal development, the uniting of the epiphyses of the radius, ulna, metacarpal bones and phalanges provide us with a means of establishing an index for the second half of epiphyseal development.

## SYMPOSIUM ON INTRACELLULAR FERMENTS

### Interpretation of the Metabolic Defects in Diabetes Mellitus

Dr. A. E. Taylor, Berkeley, Cal.: There are four chief reactions of glucose in the animal body; the formation of glucose from levulose and galactose, and the formation of galactose from glucose; the formation of glycogen from glucose, and the reversed reaction; the formation of fat from glucose; and the combustion of glucose. All are reactions of fermentation. On the basis of the nature of the chemical reactions involved, all are presumably related to different enzymes. Retained fully in true diabetes is the reaction of intramolecular conversion, the formation of glucose from levulose and galactose. More or less completely lost are the power of forming glycogen from glucose, of forming fat from glucose, and of burning glucose, especially the last. In the reaction of formation of glycogen from glucose are two stages known: the stage of disaccharide and of polysaccharide; we do not know where in diabetes the difficulty lies. The loss of the power of forming fat from glucose cannot be studied until we know whether normally sugar is formed from fat in the body. In the case of the loss of the power of burning sugar, it is known that the difficulty lies in the very first stages of the reaction, before the stage of lactic acid. The loss of power of forming glycogen and fat from glucose cannot be dependent on the loss of the power of burning glucose.

The loss of power of burning glucose is physico-chemically to be interpreted as follows: Glucose in alkaline reaction is slowly burned; this is the auto-reaction. The muscles provide a zymase, which is of low activity only. The pancreas, presumably the islands of Langerhans, provide a zymo-excitor, whose action is to multiply greatly the acceleration accomplished by the muscular zymase. A direct analogy is to be found in alcoholic fermentation, where the zymase of the yeast is the enzyme and phosphoric acid the zymo-excitor. Loss of combustion of glucose could be caused by loss in the mass of the muscular enzyme, by loss in the mass of the pancreatic zymo-excitor, or by some disturbance in the reaction. The best investigations indicate that in diabetes of the classical type, the cause is to be found in the pancreas, leading to a more or less complete reduction in the mass of the zymo-excitor.

### The Internal Secretion of the Pancreas

Drs. J. H. Pratt and L. H. Spooner, Boston: Atrophy of the pancreas was produced by ligating the ducts in dogs and cats. Limit of assimilation of carbohydrates decreased 50 per cent. or more in two months after occluding the pancreatic ducts. In a dog kept under observation for one year, diabetes did not develop. There was no definite evidence of compensation on the part of other organs for diminished pancreatic function. Limit of assimilation for glucose was markedly increased by feeding fresh pancreases. In both dogs and cats there was complete disappearance of the islands of Langerhans in atrophied pancreases without the occurrence of diabetes.

### Clinical Experiences with the Cammidge Reaction

Drs. D. C. Balfour, J. T. Pilcher, B. C. Willis and B. F. McGrath, Rochester, Minn.: Of 62 patients at operation showing involvement of pancreas, 50 gave more or less "positive reactions. Of 50 cases showing at operation no pancreatic involvement, seven gave more or less "positive" reactions. Of 25 "well" individuals one gave a "positive" reaction. This work served to show the possibilities of error owing to the indefiniteness of what actually constituted a reaction due to great variation in color changes, amount of precipitate, type of crystals and relation of controls. Additional cases studied later were clinically of four classes: I. Cases shown at operation or autopsy to have involvement of pancreas. II. Cases (with abdominal or pelvic lesions) which at operation or autopsy were shown to have no involvement of the pancreas. III. Sick individuals in whom the pancreas were not examined. IV. Apparently well individuals.

Of Group I (pancreas involved), containing 21 cases, 14 were examined before operation. Of these, 6 gave positive reactions. Of the same 21 cases examined five days after the operation 6 were positive, 3 of these having been positive before operation, 1 negative and 2 not previously examined. Eighteen of these cases were examined about the ninth day after operation, and 3 gave positive reactions. These 3 had all been positive at the examination before operation. One had been positive on the second test, and the other two negative.

Of Group II (pancreas not involved), containing 60 cases, 21 were examined before operation. Of these, 14 were positive. Five days after operation all 60 were again examined and 15 were positive. Four of these had been positive before operation and the remaining 11 had not been previously examined. About nine days after operation 55 of these cases were again examined. Fourteen were positive. Of these, 5 had been positive before operation and the remaining 9 not examined before operation. Nine of the 14 cases had been positive five days after operation.

Of Group III (sick persons whose pancreases were not examined) 207 cases were examined. Seventy-three of these were positive. Of these 73 positives 15 were goiter cases (31 goiter cases in all examined), 8 were appendicitis cases, and the remainder were cases of salpingitis, uterine tumors, etc.

Of Group IV (apparently well persons) 17 cases were examined from one to five times each. Of these, 5 were positive.

From the foregoing it is apparent that even where the most elaborate care is exercised to follow the technic of Cammidge's "C" reaction, in the most uniform manner, if knowledge of the clinical histories and other factors of the personal equation be eliminated, the end results, judged by Cammidge's own criteria, must be considered, as a means of diagnosing disease of the pancreas, as both valueless and misleading. There is no apparent clinical relationship between disease of the pancreas and any of the various types of end reaction. It does not seem that the end reactions are artefacts but rather that they indicate actual metabolic variations. The relationship of these changes in metabolism to the welfare of the patient is not apparent.

### Discussion on Ferments

Dr. Francis P. Kinnicutt, New York: Our observations at the Presbyterian Hospital do not permit me to accept these conclusions. Our work is done most carefully, and the personal equation is eliminated. The examinations are made by one person who is an expert chemist in the laboratory and who has no knowledge of the cases. The specimens of urine are simply sent to him in the laboratory, and the improved Cammidge test is used in all cases. We have tried it very carefully in 127 cases. Among these there were positive reactions in 24, while in the remainder the reactions were negative.

Dr. L. A. Wilson: It seems to me that the results are far from proving that a positive test will demonstrate pancreatic lesions. Strange as it may seem, the test was positive in many healthy individuals. In patients with pancreatic lesions the reaction varied greatly. One day they would have a beautiful reaction; during the next twenty-four hours the specimen sent would show no reaction.

### Bacteriology of Acute Respiratory Infections

Dr. L. Emmett Holt, New York: Nearly 1,000 cultures have been made from children, mainly hospital patients, these chiefly from the bronchial secretion. Cultures for the sake of comparison have been made from the nose, nasopharynx and pharynx. The organisms studied have been the pneumococcus, influenza bacillus, streptococcus, staphylococcus, tubercle bacillus and diphtheria bacillus. The persons are classified as: (1) healthy hospital inmates; (2) those suffering from acute illness, non-respiratory; (3) those suffering from mild acute respiratory infections; (4) pneumonia. An attempt has been made to connect the clinical symptoms with the bacteriologic findings. In most cases mixed infections were present. In many the pneumococcus, influenza bacillus or staphylococcus predominated and gave a definite clinical picture, temperature curve, etc. Infection with the *Bacillus* *influenza* was usually of a mild type, but with fairly characteristic symptoms and temperature; staphylococcus infections were usually mild, sometimes persistent streptococcus infections are uncommon as a predominant type.

### A Clinical Method of Estimating the Coagulability of the Blood

Dr. R. D. Rudolf, Toronto: In this research the glass tubes introduced by Sabrazes and McGowan were used. These are tubes with a caliber of 1.5 mm. and a length of about 7 inches. They are partially filled with blood taken under certain precautions and after a few minutes are broken across at half inch intervals every half or quarter minute and the broken ends are slowly separated. When coagulation has occurred the blood column does not break with the glass as it does until then, but a thread of fibrin remains connecting the two parts of the broken tube.

About five hundred estimations have been made and the results are, under the same circumstances, very constant. No definite variations occur at different times of the day nor in relation to meals. The temperature at which the filled tubes are kept, however, makes a marked difference in the time of coagulation, this varying roughly about one minute for every degree Centigrade.

## SYMPOSIUM ON VACCINE THERAPY

### The Basic Principles of Vaccine Therapy

This paper by Dr. J. G. Adami, Montreal, will appear in full in The Journal.

### Vaccine Therapy in Typhoid

Dr. M. W. Richardson, Boston: Typhoid vaccines are of the greatest value in prophylaxis, and should be made use of by all who are likely to be exposed to the disease. Their use by the general public cannot be expected in the near future. For this result, time and education will be required. Typhoid vaccines properly used will, I feel sure, prevent a large proportion of relapses. The success of vaccines in the treatment of the original disease will depend on the character of the case. Conservatively used they will do no harm and they may be of much assistance. Early diagnosis and early treatment will be, undoubtedly, of great importance.

### Effects of Injections of Killed Streptococci in the Living Body

Dr. G. H. Weaver, Chicago: The galactose-killed germs are more active than heat-killed streptococci. In erysipelas they have no effect except in the subacute and chronic cases. In streptococcic complications of the eruptive diseases they have no effect in the acute stage, but in the subacute and chronic stages marked benefit is noted in some cases. The "septic" cases are often benefited. The difficulties in judging the results of injections are very great because of the natural course of the condition treated. Failure in favorable cases may depend on exhaustion of the reactive ability of the body cells, adaptation of bacteria, distortion of the interaction of bacteria and the serum and cells of the body.

### Discussion on Vaccine Therapy

Dr. Frank Billings, Chicago: We have used vaccination in various forms of infections at the Presbyterian Hospital in Chicago with satisfactory results in a certain class of cases and very unsatisfactory results in others. In acute infectious diseases with severe clinical course, as pneumonia, typhoid and especially in chronic infections endocarditis, vaccination certainly seems to do no good, but it does no harm. In genitourinary diseases, if there is a morbid condition of the kidney or ureter, or prostate, or if there is a pelvic condition in which there is a distortion of the bladder and poor drainage, one can continue vaccination forever and not drive the organisms out; but if the physical condition can be overcome, vaccination may cause the organisms to disappear. One may vaccinate forever and ever when there is a typhoid infection of the gall-bladder, without results. In infections of the antrum, unless it is properly drained, vaccination is of no value.

## ILLINOIS STATE MEDICAL SOCIETY

*Sixtieth Annual Meeting, held at Danville, May 17-19, 1910*

*(Concluded from page 1809)*

### Neurologic Conditions of Joint Diseases

Dr. Archibald Church, Chicago: The anatomic relations of joints and muscles which actuate the joints with the general mechanism of the nervous control give rise to certain functional points which are of importance in the consideration of joint disease. In other instances involvement of joints extends to nerve trunks in the vicinity, giving rise to symptoms of distal situation. These considerations are of particular importance in relation to neuritis secondary to joint involvement, this giving rise to neuritis due to the involvement of the filaments of the nerves within the joints and leading to secondary muscle wastings above the joints and secondly to the wasting below the joints when the nerves which pass the joints are implicated. Another group of joint disorders essentially hysterical in character, without any evidence of involvement of joint surface or joint mechanism, present features of distinctive significance. This condition may also be associated with actual joint lesions.

### Joint Diseases from the Orthopedic Standpoint

Dr. John Ridlon, Chicago: The mechanical treatment of joint diseases is mainly confined to the treatment of tuberculous joints and to the deformities resulting from joint tuberculosis and other infections. In the mechanical treatment of tuberculous joint diseases one must consider the general principles, together with the relative value of fixation, traction, protection during certain stages, and the stimulating value of the use of the joint during other stages of the case. In considering the mechanical corrections of deformed joints, those still diseased are separated from those no longer diseased; and of the latter class which may and which may not be safely corrected without cutting operations other than occasionally subcutaneous tenotomies and myotomies.

### Gall-Tract Infection

Dr. J. E. Coleman, Canton: The great number of unsuspected gall-stones found postmortem show that more care should be observed by the practitioner in the diagnosis of gall-tract infections, which always precede gall-stone and whose symptoms are always attributed to biliousness. Gall-tract infection is first a medical, then a surgical, then a medical disease, and should receive careful medical treatment before and after operation. The case should be referred to the surgeon for operation before adhesions and dangerous complications arise. This makes the operation a very safe one in competent hands. The diagnosis can be aided materially by close observation of the stools of the suspected patient and by watching for evidences of degenerative changes in the heart and blood vessels. The practitioner should see to it that the heart tone is fully restored after operation, and this usually requires months of treatment. The surgeon is often responsible for this not being done by his nihilistic attitude to medicine.

### Persistent Infections in Specific Urethritis in Relation to the Penile Urethra

Dr. B. C. Corbus, Chicago: Persistent infections due to congenital abnormalities are common pathologic conditions in genitourinary surgery. Specific urethritis secondary to congenital malformations and localized infections (paraurethral abscess) form some of the most stubborn and persistent types of infections. Careful examinations by means of the modern methods now at our disposal will often reveal their presence. Early treatment based on the pathology of the condition offers the best method of eradicating the infection.

#### DISCUSSION

Dr. L. B. Russell, Hoopeston: Every case of gonorrheal urethritis should be treated early if possible. When I insert the sound I leave it in for ten or fifteen minutes.

Dr. B. D. Baird, Galesburg: Gonorrhea, if neglected beyond a certain point, should almost be classified with the incurable diseases. The gonococcus was demonstrated in the urine in one of my cases seven years after the infection.

Dr. J. G. Fisher, Danville: I recall the case of a man who had had several attacks of specific urethritis. In July he had chills. I thought they were malarial and treated him for such, but quinin was of no value. By examining his urine I found a bacillus which resembled the colon bacillus. No culture tests were made, but according to the appearance and quantity, and its manner of conducting itself, it seemed to be an infection with the colon bacillus, and by putting him on urotropin the condition was somewhat cleared up. But I found this bacillus over quite a period of time following this, and finally his urethritis cleared up.

Dr. Corbus (closing): In regard to the value of antigonococcic serum and vaccine, the general consensus of opinion seems to be at the present time that they are valuable in systematic infection alone, not in local conditions.

### Sympathetic Ophthalmia

Dr. E. V. L. Brown, Chicago: A characteristic infiltration of the iris, ciliary body and chorioid has been found to be constantly present in the first eye and consists of plasma cells. Transfer to the second eye does not take place along the optic nerves or by ciliary nerve irritation, but through the general circulation. The specific microorganism is first present in the general circulation and only becomes localized in the eye after he iris, ciliary body or chorioidea have been damaged by a wound or inflammation. It then first develops sufficient virilty to attack the healthy chorioidea, etc., of the other eye. This endogenous theory is revolutionary in character, yet it better explains the peculiar localizations of the disease in the uvea and in certain parts of it than does the prevailing exogenous wound infection theory. The difficulties of diagnosis are great for general practitioners and for specialists alike. Syphilis and tuberculosis must be excluded. The prognosis is not invariably bad. Enucleation should help the second eye. Sodium salicylate in large doses, mercurial inunctions, etc., uiet the tissues, but no operations, no light and less atropin.

### The Rationale of Infections of the Nasal Accessory Sinuses

Dr. W. L. Ballenger, Chicago: The etiology of infection nd inflammation of the mucous membrane of the nasal accesory sinuses should be studied under two general headings—ctive causes and predisposing causes. The active cause is lmost always a pathogenic microorganism, though in excepional instances the condition may be due to traumatism, and xternal violence, caustics, hot irrigations, steam, irritating nhalations, etc. The predisposing causes are numerous, lthough an obstructed lesion of the nose, especially in chronic infection, is an almost constant factor. In primary acute inusitis obstructive lesions are not so constantly present.

### Early Efficient Surgical Treatment of Skull Fracture

Dr. F. C. Schurmeier, Elgin: Injuries of the head are ever too insignificant for a most careful and painstaking xamination. Where there is suspicion of intracranial trouble he patient should be kept under the eye of a competent bserver. When the diagnosis of intracranial pressure is made peration should begin at once, if the seat of trouble is surically accessible. It is never too late to operate, even though linically it seems useless, and we fail in the attempt to save fe. Operation should not stop short of efficiency when the atient's life threatens to cease.

### Symptoms and Treatment of Exophthalmic Goiter

Dr. Cassius C. Rogers, Chicago: Goiter, tremor, tachyardia are usually present, but one or more may be absent. ther symptoms are mental disturbances, gastrointestinal disurbances, paralysis, impairment of vision, cardiac hyperrophy, cough, nephritis, sweating, etc. Special attention hould be given to the female pelvic organs. I have not found n exception in exophthalmic goiter where the patient has not uffered with either amenorrhea, dysmenorrhea or menorrhagia. he ovaries are always large and tender. Not infrequently re these cases operated on and one or both ovaries removed. nvariably this is followed by a severe attack of acute exophthalmus. All acute cases should be considered as medical and never operated on until they have recovered, or until the disease has become chronic. Some cases apparently recover without treatment. There is no rule that can be followed in selecting the cases for operation. All acute cases and all cases with marked heart, liver and kidney changes are unfavorable for operation. The size of the goiter is not an index to the symptoms it may cause. Blood examination is of more value in acute than in chronic thyroidism.

### The Study of Mental Disorders

Dr. H. Douglas Singer, Kankakee: The study of psychiatry has been evolving proportionately with the conception of mind. Psychologic factors play a large part in the etiology of insanity. Psychiatry presents its most hopeful outlook as a branch of preventive medicine. The promotion of this work by the study of psychological types of personality requires the cooperation of the medical profession as a whole. There is need of more extensive teaching, and especially of facilities for clinical study in the medical colleges.

### Prevention and Treatment of Insanity

Dr. Eugene Cohn, Anna: There is urgent need of early treatment in all cases of insanity. It is best that the patient be at once placed in a proper institution. The general practitioner should be able to more readily detect insanity in its incipiency and should vigorously enforce the necessary measures for immediate treatment, for the sooner systematic treatment is begun the better are the chances for recovery. The existence of a sufficient number of psychopathic hospitals should be assured, where the sufferer may receive adequate treatment and observation prior to a formal commitment, by the court to a regular insane hospital or sanitarium. This final measure may not be necessary in many cases, and the patient is thus saved much possible embarrassment.

### The Relations and Clinical Significance of Urinary Acidity

Dr. Henry R. Harrower, Chicago: The study of the urinary acidity and its relations is worthy of much wider attention. Its clinical significance is of importance in all disease conditions, but more especially in the definite and obscure chronic diseases. The acid index is a factor of considerably more importance than has yet been supposed and has an intimate relation with the phenomena commonly found with intestinal putrefaction and autotoxemia. The urinary acidity is not only of importance in diagnosis, but also serves as a valuable guide during the period of treatment. The frequent finding of evidences of kidney irritation would lead us to believe that the conditions causing urinary hyperacidity are important predisposing factors in the causation of nephritis. The test for the degree of acidity is simplicity itself and can be easily accomplished either with a burette or an acidimeter. The clinical indications and therapeutic possibilities suggested by these findings will more than repay one for the slight trouble required in making the tests.

### A Practical Measure in the Prophylaxis of Postoperative Cystitis

Dr. E. C. Dudley, Chicago: During the past two or three years in all cases in which the catheter was used I have followed its use with the instillation of boric acid and argyrol solution. Whenever I have especially anticipated postoperative cystitis I have had the catheter passed at stated intervals and the boric acid and argyrol solutions used. This tentative catheterization may be quite essential since pelvic operations are apt to be followed by partial retention, and since partially retained urine is especially apt to give rise to cystitis. After perineorrhaphy, for example, the rule that the catheter should be avoided when the patient can relieve herself holds good only when natural urination is complete. Since I have applied the routine treatment of postoperative cystitis to the prophylaxis of cystitis, I have observed freedom from infection, and corresponding relief from a frequent distressing and humiliating sequel to pelvic surgery. The results are fully as satisfactory as are those following the application of a silver solution to the eyes of the new-born.

## AMERICAN NEUROLOGICAL ASSOCIATION

*Thirty-sixth Annual Meeting, held in Washington, D. C., May 2-4, 1910*

The President, Dr. Morton Prince, Boston, in the Chair

### Cerebral Localization from the Point of View of Function and Symptoms, with Special Reference to v. Monakow's Theory of Diaschisis

Dr. Morton Prince, Boston: The doctrine of cerebral localization resolves itself into the question whether the localization is of symptoms or of function or whether it is only an anatomic localization of fibers. It too often happens that the formulas of localization do not work in diagnosis. It not rarely happens that clinical and pathologic findings are contradictory. Thus, on the one hand, extensive lesions in one or other of the recognized cortical centers run their course without symptoms, and, on the other hand, focal symptoms, pointing to disease of these centers, develop in cases in which no anatomic alterations are found at autopsy. There is growing dissatisfaction with the currently accepted doctrine of cerebral localization; a feeling that it is in many respects inadequate. The first blow to the traditional localization of function in the cortex was received when Marie launched his attack on the doctrine of aphasia. Whatever the outcome of the reinvestigation of this question shall prove to be, it is evident that the beautifully diagrammatic conceps of the function of language and of aphasic disturbances of this function have been relegated to the scrap heap of the phantasies of science. The fact, I believe, will be found to be that whether the third left frontal convolution, the first and second left temporal convolution or other areas take part in the function of language or not, the function as a whole, as a psychical process, is a widely distributed one in which are engaged many dynamic processes and anatomic "centers," and a lesion of any one of several "centers" may give rise to all modes of aphasic disturbance. The contest has centered largely around the question whether a lesion of Broca's convolution gives rise to the motor type of aphasia and, therefore, whether in this convolution can be localized so much of the language as is lost in this type.

The clinicoanatomic data themselves are contradictory; as, for example: 1. Lesions of the third frontal convolution do give rise to a clinical aphasic syndrome of the so-called motor type. 2. Destruction of Broca's convolution may be accompanied by simple mutism—or pure motor aphasia of the so-called subcortical type. 3. It also appears to be true that in a considerable proportion of cases of aphasia, characterized by loss of the power of word formation and articulation, Broca's convolution has been found intact. In any theory of aphasia as a clinical syndrome, and in any theory of function these discrepancies must be reconciled. Von Monakow, whose clinical experience and pathologic training entitle his views to great weight, points out the inadequacy of the generally accepted doctrine of localization to account for these contradictory phenomena. He believes that there lies some error in the form in which localization is conceived by most clinicians. To-day, as formerly, two sets of experiences stand opposed to one another—the negative and the positive—and invite anew discussion of the doctrine of localization, which has been declared closed by many writers. How can these contradictions be explained? To answer this von Monakow proposes a theory, which is of the greatest interest and challenges examination, known as diaschisis, and which has for its basis the results of experimental investigations. After removal of focal areas in the cortex, certain symptoms are temporary, while others, which are purely local, are permanent. These latter, or residual, symptoms alone represent the function or part of function that is localizable in a given center. So-called focal symptoms are in large part a complicated reaction of unimpaired areas of the central nervous system to the local cortical lesions. By diaschisis is meant a functional, shock-like inhibition of previously uninjured distant areas produced by the dynamic influences of a lesion anatomically connected with such areas. Through the break in the continuity of the conducting associative paths the eccentrically lying brain foci are robbed of their natural sources of stimulation and in part isolated. Only the directly injured elements give rise to the permanent symptoms and secondary degenerations. So far as the theory definitely distinguishes between the localization of symptoms and the localization of function, I think it may be safely insisted on as the only interpretation that can reconcile the facts of clinical and pathologic observation. The diaschisis theory is fruitful in other fields than that of cerebral localization. For example, its possible applications in the explanation of focal symptoms without focal lesions will occur to everyone.

### A Report of Three Prefrontal Tumors

Dr. F. X. Dercum, Philadelphia: In the first and second cases, the tumors were inoperable; the third tumor was removed, but was of enormous size, weighing 7¾ ounces. Death occurred 14 days after operation. The symptoms present in the reported cases are of unusual interest. Vague mental symptoms were present in all. Case 1 suggested symptoms not unlike those of profound cerebral exhaustion of a beginning paresis. Headache had never been a marked feature and was elicited only by questioning. It existed only for a short time previous to death; vomiting occurred but once, and that only toward the very close of the illness. There was absence of optic neuritis and any involvement of the visual fields. The only symptom which was at all suggestive was one attack of slight twitching of the left leg and possibly twitching of the left arm which occurred a few days before the patient came under observation; the attack was very brief in duration and was not attended by loss of consciousness. Occasionally psychic vesical incontinence was present. In the second case there was early headache, optic neuritis and vomiting, all the symptoms being typical and marked. The feature of special interest was the slight flattening of the lower half of the right side of the face and the equally slight involvement of the left leg and arm. These symptoms were in all probability due in part at least to indirect pressure. The subjective sensory disturbances, namely pain and the hypesthesia of the left arm and both legs, are somewhat difficult to explain. The occurrence of typical areas of hysterical painful hyperesthesia under both breasts and over both groins must be borne in mind in considering the other sensory symptoms present. The area of hyperesthesia on the left parietal region was also small and resembled in other respects an area of hysterical hyperesthesia, though it was present on the same side as the tumor. The question arises: Was the left hemiparesis, present for a time only, also hysterical in origin?

In Case 3 optic neuritis was pronounced. Headache was scarcely, if at all, present. Vomiting was absent. This case is remarkable for the size of the growth which had probably existed for a long time previous to the seizure which occurred in the summer of 1908. That so large a growth could have been present and the patient still have been able even in a degree to attend to business and ordinary affairs is very remarkable. Finally, the resemblance of the mental symptoms in Cases 1 and 3 to those of paresis is worthy of comment. In Case 1 the patient was placid, indifferent, and did not manifest the least anxiety as to his condition. In Case 3 the patient was at times distinctly expansive, good-humored and not infrequently laughed and joked. In Case 2 the patient, though quiet, complained greatly at times of suffering; at no time was she jocose nor was there any tendency to laughter or hilarity. Indifference to the sphincters was not observed and there were no epileptiform seizures. The eye muscle symptoms made their appearance late and are probably to be referred directly to the frontal lobe lesion; in part they may have been due to the blindness and the absence of fixation. In many respects these cases conformed to the ordinary observations made in prefrontal tumors. This was particularly the case as regards the mental symptoms which were most marked in Case 3, less marked in Case 1 and least in Case 2. Psychic incontinence was pronounced in Cases 1 and 3. Epileptiform seizures were present but once in Cases 1 and 3 and absent altogether in Case 2. Optic neuritis was present in Cases 2 and 3 and absent in Case 1; the swelling was more marked on the side of the tumor in Case 2 and slightly greater on the side opposite the tumor in Case 3. Local tenderness of the skull was present only in Case 2; was on the same side as the tumor but was parietal and not frontal. Finally, it is interesting to note that in none of the cases was there any ataxia.

It should be added that no $x$-ray examination was made in Case 1. In Case 2 an $x$-ray examination was negative. In Case 3 an $x$-ray examination was also negative, save that it revealed some irregularity of the inner surface of the frontal bone on the right side, and also some apparent thinning of the bone. The possible etiologic value of trauma is well illustrated in Case 1.

### DISCUSSION

Dr. E. W. Taylor, Boston: The two main points brought out are interesting. In the first place the mental condition; in the second place the epileptiform seizure. I presume it is generaly accepted that there is no definite type of mental disease to reveal frontal lobe lesion. I recall distinctly a patient in whom the mental symptoms, instead of being apathetic, were precisely the opposite. The man was a young army officer, previously healthy. He was extraordinarily apprehensive; he developed all sorts of phobias, was unable to go into crowded places, buildings and so on, and presented all the appearances of a mental state. He had slight epileptiform convulsions, which I misinterpreted as hysteroid convulsions. He disappeared from view, and if I had not heard his subsequent history I would have regarded him as a psychasthenic patient. He later came under treatment and died. Autopsy revealed an extensive prefrontal tumor, gliomatous in type, very difficult to distinguish from the brain itself. The points of importance are incidence of slight seizure, epileptiform in character, and, secondly, and still more confusing, are the phenomena one so often sees in the neuroses of psychasthenic character.

Dr. Edward B. Angell, Rochester, N. Y.: I have been impressed with the lack of symptomatology of prefrontal tumors. Many of these patients are without headache, nausea, vomiting or any of the motor symptoms, and without any of the hemiplegias or disturbances of one side of the body. The case of a very successful and intelligent business man came under my observation a year ago. He suddenly became apathetic; his family first noticed this because he received news of a disaster with unconcern. Aside from that condition he had no symptoms whatever. He had an attack of influenza and had quite a nasal discharge and an increase in the white blood cells. Here was a case where there was reason for suspecting acute trouble by extension from the nasal chambers. The mental symptoms were not such as to indicate much pressure. When the man died, and it was shortly, it was found that he had a tumor as large as that of Dr. Dercum's patient in the left prefrontal lobe.

Dr. Hugh T. Patrick, Chicago: What was the state of the sense of smell in these cases?

Dr. Herman H. Hoppe, Cincinnati: I wish to refer to a symptom-complex which obscured the diagnosis in a case in which there were absolutely no general symptoms of brain tumor. The tumor grew from the sella turcica and involved both portions of the frontal lobes. The earliest manifestations were in reference to the optic thalamus. This man went on with business after developing atrophy of the optic nerve; then he began to develop sluggishness of the pupils. In the subsequent history there was a pure simple dementia, so much so that the diagnosis of dementia paralytica was made. The man died in the insane hospital and autopsy revealed the tumor.

Dr. George Jacoby, New York City: I saw the patient in the case reported by Dr. Dercum and, after seeing and comparing it with two others I had previously seen, it seems to me that we can be very positive that there is no pathognomonic series of symptoms of prefrontal tumors. One way in which diagnosis can be made is by sequence of symptoms or symptoms dependent on pressure. The occurrence of aphasia and involvement of the motor tract and the significance of reflexes are also helpful and indicative of the associated pressure.

Dr. E. E. Southard, Boston: I have found that in some cases it is profitable to examine histologically other parts of the brain than those directly involved in the tumor. I recall a case of tumor of the prefrontal lobe in which epilepsy did not exist but in which there was a unilateral paralysis on the same side as the tumor, and histological study of the precentral gyri showed that for some reason on the opposite side there was absence of cells.

Dr. B. Sachs, New York City: I do not know why these tumors are spoken of as prefrontal tumors. There are two points of vital importance in regard to the question of operability. The focal signs in many instances give no idea of the actual size of the tumor and the probable result of an operation. So much depends on shock, which seems to be in direct proportion to the size of the tumor, that one of the most essential points for determining the operability of a tumor is to try to decide whether the tumor is of large size or not and whether the symptoms give one any idea of the size of the tumor. The other points belong to all tumors. A great deal depends on the character of the tumor, particularly in the development of symptoms. There is a great difference in conditions when the brain substance is being invaded by tubercle or sarcoma or when it is being gradually invaded by a glioma; and some of the peculiarities in regard to tumor of the frontal lobe may be explained by the fact that many of these tumors have been slowly invading gliomata, whereas the cases in which the tumor has been much more destructive the symptoms are more marked. The destructiveness of the tumor is in direct relation to the distinctness of the symptoms. I observed a case which had presented during life absolutely nothing else but epileptiform seizures, in which the patient suddenly died from hemorrhage from a tumor which on postmortem examination proved to be a huge glioma involving the entire one hemisphere of the brain. A point we often lose sight of is the different character of the symptoms in relation to different structure of the tumor. Glioma seems to cause fewer symptoms than any other tumor because the brain tissue accommodates itself much more readily to the slow invasion of the glioma.

Dr. D. D. Wolfstein, Cincinnati: I wish to refer to a case in which I made the diagnosis of tumor of the frontal lobe. It was in the left frontal lobe and of very large size, but there was absolutely no mental disturbance. The only symptoms were progressive optic atrophy with complete loss of vision. There was a suspicion of epileptiform seizure. Very often these tumors pass far back and tangential fibers which pass through the capsule are involved. Those cases which simulate epileptiform seizures might in this way be explained.

Dr. F. X. Dercum, Philadelphia: In these cases the sense of smell was preserved. In a case which I reported to this association some years ago the sense of smell was destroyed. I think Dr. Southard's position well taken. It seems to me that the epileptiform attacks in these cases were perhaps due to pressure about the base. I am in entire accord with Dr. Sachs' statement in reference to the size of the tumor. The first two cases were round-celled sarcomata; the third was endotheliomata and sprang from the dura of the base. I feel that the term "prefrontal" is justifiable, provided we mean that the tumor has advanced up in front of the motor tract itself.

(*To be continued*)

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## OHIO STATE MEDICAL ASSOCIATION

*Sixty-fifth Annual Meeting, held at Toledo, May 11-13, 1910*

(*Continued from page 1809*)

### Femoral Hernia

Dr. George F. Goodhue, Dayton: Congenital femoral hernia is unknown. Before the age of 20 it is exceptional, and in children it is a rarity. A consideration of the anatomic conditions involved in this hernia would lead us to infer that its production must be caused by prolonged strain or violent exertion far beyond the ordinary. The connective tissue sheath enveloping the vessels is strong and unyielding in the young and healthy, which explains its greater prevalence in the weak and aged or those exposed to unusual strain in their daily avocations. The greater size of the canal in women, and the firmer character of the inguinal ring in that sex renders this variety of hernia more common in the female. My method of operating for the relief of this condition, which I believe the safer for the average surgeon, closely conforms to that of Bassini, which consists in fastening Poupart's ligament to the pectineal fascia and muscle and sometimes the falsiform ligament to the same structure by catgut sutures. I wish to emphasize the statement made by Ferguson, that in every case of femoral hernia except in extreme old age or infirmity the patient should be subjected to operation for radical cure. This advice is based on the extreme danger of strangulation in this variety of hernia which much sooner become gangrenous owing to the tense, firm sharp border of the ring. This risk to life must never be under-estimated. Trusses—barbarous in every variety—are rarely efficient in this form of hernia. The operation is fraught with little danger and in the hands of experienced surgeons under proper conditions success is assured.

### DISCUSSION

Dr. F. F. Lawrence, Columbus: When strangulation occurs it would be well to consider the possibility of the bladder being engaged in the hernia mass, and to recognize what the hernia contains would be important. It has been my practice to expose the sac, tie it off and drop it, and then try to approximate Poupart's ligament either to the pectineal muscle or fascia, thereby making the space on the side of the femoral vein much smaller.

Dr. R. B. Hall, Cincinnati: Of all varieties of hernia the physician is called on to treat the femoral hernia requires most prompt action, for with strangulation the tissues in the sac may become gangrenous in six hours. In one case the vermiform appendix was found in the sac on operation. Recurrence of the hernia would be rare if the technic advocated by Dr. Goodhue were followed out.

Dr. G. F. Goodhue: It is necessary to note the natural course of a descending femoral hernia in order to succeed in reducing the hernia by taxis. I do not think taxis is the proper measure to resort to, except as a temporary expedient, as when the case is seen in emergency or before transporting the patient to a hospital. Another point I wish to emphasize is the desirability of introducing the stitches through the pectineal muscle and fascia well down on the pubic bone, so that the ligament is brought well down over the surface of the muscle and fascia instead of just having the edges approximated.

### Instruments Used and Points of Technic of the Major Smith Cataract Operation

Dr. D. T. Vail, Cincinnati, gave a detailed description of each instrument Smith uses in his operation, and related the arguments he presents to prove the advantages of each of these instruments over any other pattern in common use. He also exhibited a complete set of instruments, original and not original, which Smith uses in doing the operation, and gave arguments to prove that these simple instruments meet all the demands which arise in every operation for cataract, whether in or out of the capsule. He mentioned the dangers that an operator invites who attempts to extract cataracts in their capsules by the employment of the ordinary set of instruments, and sounded a note of warning to those who would exercise the courage to undertake the Smith operation, so-called, as a routine practice without thorough knowledge and appreciation of the principles which underlie successful extraction in the capsule.

### Prognosis in the Traumatic Neuroses

Dr. Louis Miller, Toledo: There are few diseases which have received more attention concerning their prognosis than the wide group of diseases known as the traumatic neuroses; although specialists have been more or less at variance in their opinions on the subject, yet not so much so as general practitioners and often other members of the profession. This is especially true of those cases which are the subjects of litigation. While much of the disagreement may be placed to the blame of the prejudice attending taking sides with the parties in cases, which are the subjects of litigation, all cannot be thus explained. The difficulty lies partly in the inherent complexities of the conditions with which they have to deal, such as exact diagnosis; partly to the confusions of nomenclature. In recent years authors are coming closer together in their views of prognosis, but one still reads opinions which give impressions considerably at variance. In the term traumatic neuroses I include only functional disorders resulting from violence, *i. e.*, hysteria and neurasthenia and states which cannot be separated clinically from them. The disorder has been designated as accident aboulia, traumatic hysteria, traumatic neurasthenia, and other terms, but traumatic neurosis is comprehensive and will probably lead to less confusion if adhered to universally. Admitting then that these neuroses do not constitute a distinct disease entity, but are either neurasthenia or hysteria, or a combination of them, we can say in general that the prognosis is that of those two affections.

### Malingering and Its Detection

Dr. E. E. Gaver, Columbus: It is in the field of psychiatry or neurology that we encounter the majority of cases of malingering. Malingering is divided into three varieties—exaggeration, substitution and entire simulation. Exaggeration of disease is the most common endeavor, and is usually found in the functional diseases, such as hysteria and neurasthenia. In the organic diseases there is sufficient pain without additions or exaggeration. The substitution of origin of a disease is difficult to detect in a well-trained criminal. Physical defects form a prominent basis for fraudulent substitution of origin. A defective eye, a scar on the head or neck, or defective hearing commonly form the basis for claims. Entire simulation is the real true form of malingering and is the comparatively rare form. Very few attempts to defraud by such means are now successful. Physicians are most concerned in the detection of malingering. The symptoms in nervous diseases most commonly feigned are disturbances of vision and hearing, anesthesia, convulsions, contractions, paralysis, tremors, disturbances of gait, pain and hyperesthesia. The visual malingerer is usually turned over to the ophthalmologist for detection. An ordinary stethoscope is a useful adjunct in detecting any fraud in the claim of deafness. By connecting the stethoscope, either branch of which can be separated at the will of the examiner, in the ears of the patient and operating from behind it is usually a simple matter to conduct sound to either ear singly or simultaneously and with ordinary cleverness in manipulation the operator will reveal hearing in both ears if it really exists. In testing for feigned loss of sensation we must bear in mind the fact that most individuals can nerve themselves to the point of withstanding extreme pain. Defeat, however, is almost certain to follow the unexpected application of painful stimuli, such as the faradic current or some sharp instrument.

It is usually in an effort to play the part of an epileptic that convulsions are feigned. An examination of the subject, if he is a malingerer, will not reveal the scarred tongue and head the result of injury, the pupils will continue to react, and the reflexes are not lost. Paralysis is one of the most common symptoms simulated. Paralysis is usually accompanied by atrophy, changes in the reflexes, electrical reaction of degeneration, vasomotor disturbances. The simulation of tremor is difficult and should be fairly easily detected. A useful test is to place the subject on the belly, and if he can press his toes on the bedding the tremor can be maintained, but should the legs be flexed at the knees the tremor ceases. The more irregular a tremor the less possibility of its being real. There is no known means of determining whether a pain is real or fraudulent. Judgment must be passed on weight of evidence afforded by accompanying symptoms or signs. Continued severe pain soon impairs nutrition and sleep. According to some authorities, pressure over a tender area will increase the pulse rate often as much as 20 beats a minute and in some instances it produces sweating. Disturbances of gait usually carry with them other signs impossible to simulate.

### "Pole Ligation" for Exophthalmic Goiter

Dr. J. H. Jacobson, Toledo: In a preliminary report on this method made in October, 1909, I formulated the following conclusions:

> 1. Ligation of both poles of the thyroid acts first by diminishing the blood supply to the gland, and thus diminishing immediately its activity; secondly, by directly diminishing and preventing the gland secretion from entering the general circulation by way of

he main lymphatic channels and veins which leave the thyroid body t its upper poles; and thirdly, by causing a subsequent atrophy of he gland itself.

2. The pole ligation is much easier to perform than ligation of he thyroid vessels, and may be as effective as a partial thyroid- ctomy.

3. It does not disturb the blood supply of the parathyroid glands, or endanger the recurrent laryngeal nerves.

4. Theoretically, at least, and from the simplicity of its perform- nce, it would seem that pole ligation should entirely supplant he operation of simple ligation of the thyroid vessels in Basedow's lisease, and in many cases the necessity of partial thyroidectomy.

5. As a preliminary operation to partial thyroidectomy for asedow's disease it will be found of great value.

6. At present, we are warranted in saying that pole ligation ffers the prospect of cure in many cases, and of lasting improve- nent in others.

7. The operation of pole ligation is a safe one, and in skilled ands should have no mortality.

Subsequent experience with this operation has shown these onclusions to be correct. Theoretically at least it seems that he ligatures should be placed extracapsular, for the reason hat the lymphatic vessels of the gland parenchyma empty nto those contained within the capsule and that the extra- apsular ligature will more effectually stop the gland excretion. Ve are confronted by many difficulties in estimating the effect r value of any operation for the relief of this disease, par- icularly as to what constitutes a cure in these cases. All hese patients are improved by the operations of partial hyroidectomy, ligation of arteries, or pole ligation. In only very small number do all the symptoms entirely disappear. t is obvious that the same conditions confront us in estimat- ng the end-results of partial thyroidectomy.

### DISCUSSION

**Dr. James Donnelly**, Toledo: In making the double ligature ne can notice, when tying it, that there is immediately a lanching of the gland, showing that there has been consid- rable decrease in the quantity of blood sent to it. Dr. George V. Crile has shown that the nerve connection has been an lement in the successful treatment of the condition.

**Dr. S. J. Foster**: While ligation of the artery is theoret- ally easy, yet at times it has been found very difficult, and he operation now advocated of extracapsular ligation is a istinct advance, because of its ease of execution. Besides, here is practically no mortality and the end-results of the peration promise a great deal.

**Dr. J. H. Jacobson**: The exact distribution of nerves to the hyroid gland is not known, but reasoning by analogy is the ame as in other portions of the body, so that in putting a gature around the pole, we get the arteries, veins, nerves and mphatics. I think the lymphatics are the most important. t has been shown that the thyroid secretion gets into the cir- ulation through the lymphatic glands. In many of these cases he lymphatics are found to be enlarged at operation. Cross- ection of the glands shows a deposit in them of colloid aterial.

### neumonia with Severe Abdominal Symptoms Simulating Acute Disease of the Region

**Dr. H. J. Whitacre**, Cincinnati: A review of the literature n this subject shows that the condition is by no means infre- uent. Surgeons of wide experience and unquestioned ability ave committed the error of operating on the abdomen, and the rror is at times unavoidable. An incomplete history and phy- ical examination as a rule will be the direct explanation of ost errors. These cases usually arise as grave emergencies. he surgeon is called for an acute appendicitis—he finds a his- ry of sudden onset with severe pain and vomiting, an eleva- ion of pulse and temperature, the right rectus rigid, and he eglects all further examination of the patient. There are rtain points which will be of value in the diagnosis: (1) The untenance of the patient will not be peritonitic, and there apt to be some grade of cyanosis; (2) the tongue is moist nd not coated; (3) respiration is frequent, out of all propor- ion to the pulse rate, and costal in type—there is often a efinite catch at the end of inspiration; (4) abdominal rigidity less circumscribed than in appendicitis and is very great— he abdominal wall relaxes for a moment with each inspiration; (5) abdominal sensitiveness may be local, unilateral or general, but is always superficial, deep pressure is not painful; (6) a sudden high temperature (continuous) has been observed very frequently, which is not true in appendicitis; (7) a careful objective examination of all organs is most necessary. The explanation of the abdominal symptoms is not clear. In many cases it seems most probable that the pain, sensitiveness and rigidity are to be explained by an irritation in continuity of the lower six dorsal nerves. Irritation of the seventh, eighth and ninth nerves will cause pain in the epigastrium, and will simulate gall-bladder disease or ulcer of the stomach, while irritation of the tenth and eleventh nerves will cause signs in the appendix region. In other cases, the sensations are purely reflex and result from irritation originating in the lung, which are transmitted either through the costal group or through the vagus to produce visceral pains. The intestinal paralysis which has been prominent in many cases has been explained by some as the result of toxemia; by others, as a reflex disturbance of the splanchnic system.

### Prostatectomy

**Dr. W. D. Hamilton**, Columbus: Experience gives us great confidence in the perineal operation, while for some cases in which the gland has developed considerably at the expense of the intravesical space, so that it may be more accessible from above, the high operation is occasionally of great service. The low operation is anatomically more difficult in the average case, and may be followed by several conditions which may be regarded as unfortunate results: (1) incontinence of urine; (2) stricture of the urethra; (3) urethrorectal fistula; (4) damage to the sexual function; (5) fistula. My first report contained a tabulated list of seventeen patients on whom prostatectomy had been done with 4 deaths. Since the publication of that paper, the operation has been done 43 times in the practice of Dr. Charles S. Hamilton and myself. Of the 43 cases, 9 were for malignant disease, and 34 for benign lesions. Of the malignant cases 8 were adenocarcinoma, and 1 of round-cell sarcoma; of the 9 patients, 3 died, and 6 recovered. Of the 34 benign cases, 4 patients now in the hospital are at various stages in their apparent convalescence. Of the 30 operated on for benign lesions, 3 have died and 27 recovered. This would make a mortality in this latter series, and covering the benign cases only, of 10 per cent. Of the 34 cases it may be of interest to observe that 26 of them were adenofibromata.

*(To be continued)*

## Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

### EMPLOYERS' LIABILITY AND WORKMEN'S COMPENSATION LAWS IN THE UNITED STATES

By Chauncey Rea Burr, M.D.
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Under the title of "The Federal Compensation Act of 1909," a measure is before Congress which, if passed, will go far to remove our reproach among nations for the indifference with which hitherto we have treated our injured workmen.

It is remarkable that up to the present time no demand loud enough to be heeded has come from the workingman to indemnify his dependents in case of his own death from accident occurring in the line of his employment, or to pension him for permanent disability.

The empire builder, Prince Bismarck, appreciated the worth of the human machine and provided statutory enactment to pay for it when damaged or destroyed. Incidentally he dealt the socialist cause in Germany the hardest blow it has ever had. In the earlier part of the Nineteenth Century the right of the workmen to redress from accident was that of anyone else, viz.: in order to recover damages, he must prove default on the part of the person who injured him. To prove default on the part of the employer or his agents was often a difficult if not impossible matter even when this was known to exist. The explosion of a steam boiler might not only kill all the witnesses to the accident, but might so alter the surrounding as to render it impossible to secure evidence as to the cause. The industrial expansion of the Nineteenth Century, with a corresponding increase of industrial accidents, and an increase of killed and maimed workmen, swelled the ranks of the destitute and added to the misery and discontent of the submerged classes. Hence it became a matter for the government to investigate. Between the years 1883 and 1900 a series of laws was passed in Germany providing for indemnity against disease, accident or death among workmen; such indemnity to be paid by an assurance society whose solvency was secured by legislation. In 1883 a law for compulsory insurance against loss of wages from sickness was passed, one-third of the cost to be borne by the employers and two-thirds by the workmen. In 1884 a similar law against loss of wages from accident was passed. Five supplementary laws followed and in 1900 all were grouped under one law, which placed the whole burden of compensation for accident on the employer.

In 1889 a law was passed providing for pensions for old age and invalidism, the cost of which was divided between the state, the employer and the employee. The classes who benefit by this insurance are limited to those employed in mines, salt works, quarries, smelters, factories, railways, steamboats, agricultural operations, lumbering and forestry, building trades, breweries, warehouses, butchering, well digging, domestic service, and also seamen, longshoremen, blacksmith, locksmiths, chimney-sweeps and window cleaners. Such persons injured during their work are entitled to free medical treatment, medicine, sick-pay (i. e., two-thirds of the daily wages) and hospital care, if necessary, for a period of thirteen weeks. With the beginning of the fourteenth week the case comes under the care of the "Trade Association," composed of employers and employees engaged in the same industry, which fixes the amount of the indemnity. This varies with the disability. If total, the full amount of the yearly wage is paid as a pension in monthly instalments; if partial, a proportionate amount only is paid, as high, it may be, as two-thirds. Fraud is guarded against by compelling each pensioner to be examined by the trade association physician every six months. Thus pensions may be increased or diminished or stopped altogether, as the condition of the recipient warrants. Should the workman be killed as the result of the accident, the widow, if there is one, is entitled to burial expenses, and twenty per cent. of her late husband's yearly wage during her widowhood. If she remarries she receives a lump sum of sixty per cent. of the yearly wage in full discharge. Each minor child of the deceased is entitled to twenty per cent. of his father's yearly wage till the age of fifteen years; and dependent parents or grandparents are entitled to the same twenty per cent. pension *per capita*.

These laws have proved to be the prototype of most of the European legislation on employers' liability and workmen's compensation, which has been enacted in recent years. Thus Austria legislated on the subject in 1887 and 1888; Norway in 1894, 1897 and 1899; Finland in 1895; Great Britain in 1897 and 1908; Denmark in 1897; Italy in 1898 and 1903; France in 1898 and 1902; Spain in 1900; Greece in 1901; Sweden in 1901; Russia in 1904; Belgium in 1903. One or the other of two principles runs through this legislation. The first may be defined as the principle of the personal liability of the employer to his workman; the second, as the principle of compulsory insurance. Sometimes an attempt is made to combine the two.

In 1908 the United States made her first essay into the field of workmen's compensation for accident. May 30, 1908, an act was passed "granting to certain employees of the United States the right to receive from it compensation for injuries sustained in the course of their employment." The persons eligible under this act are such as are "employed by the United States as artisans or laborers in any of its manufacturing establishments, arsenals or navy yards, or in the construction of river and harbor or fortification work, or in hazardous employment or construction work in the reclamation of arid lands or the management and control of the same, or in hazardous employment under the Isthmian Canal Commission." If such persons die as the result of an accident received in the course of their employment, their dependents shall be entitled to receive for the remainder of the year the same amount that the deceased would have received as wages for the same period.

If the employee shall be "injured in the course of such employment," he shall be entitled to receive for one year thereafter, unless in the opinion of the Secretary of Commerce and Labor he be able to resume work sooner, the same pay as if he had continued to be employed. No payment to be made, if the injury is due to the negligence or misconduct of the employee, nor unless the disability continues for more than fifteen days. Provision is also made for a medical examination of the injured employee at least once in six months, by order of the Secretary of Commerce and Labor.

In this act no distinction is made between partial and total disability. Defective as this law is, it was apparently the opening wedge for more comprehensive legislation. Feb. 10, 1908, a bill "to provide compensation for injuries to employees solely engaged in interstate and foreign commerce, to which the regulative power of Congress extends" was introduced in the House of Representatives by Hon. Adolph J. Sabbath of Illinois. In introducing his bill Mr. Sabbath said: "In the course of an experience of over twelve years on the bench in Chicago, one of the greatest cities in the world, every kind and class of cases were brought before me. My duty not only consisted in enforcing the laws, but in attempting to alleviate the misery and the damages caused by our modern economic system. This last function was impressed on me by the horrible cases of breaking up of families, degradation of the widows and ruin of the daughters, caused by the loss of the father's or brother's earning power. Years and years of litigation, appeals, new trials and all the necessary steps of our modern procedure brought it about that the results of the litigation were wasted; and social degradation of the family, without any fault of their own, ensued. . . . The object of my compensation bill, as of all compensation acts, is to correct what heretofore has amounted to a denial of justice." This bill failed of passage, and on March 15, 1909, Mr. Sabbath introduced a somewhat different measure, entitled, "A bill to require persons carrying on occupations and trades subject to the regulative power of Congress to pay compensation to employees injured, and to change the general law for injuries received on mail routes." This bill, the federal compensation act of 1909, which it is the object of this paper to describe, applies only to the employees of common carriers engaged in interstate and foreign commerce or in transporting the mails, which are subject to the regulative power of Congress. Such common carriers include steam railroads, electric roads, and vessels which convey the mails, express companies and sleeping-car companies operated on a mail route. Whenever the employee of such a common carrier is injured, the latter shall pay the former compensation without requiring an action at law to be brought. The amount of compensation is governed by a schedule annexed to and made a part of the act.

For the purpose of carrying into effect the provisions of the act a commission to consist of three members is established, to be known as the "Federal Commission of Injury Awards." The principal office is to be at Washington, although "whenever the convenience of the parties may be promoted or delay or expense prevented thereby, the commission may hold its sessions in any part of the United States." When an employee is injured or killed, the common carrier must notify the commission, and this in turn notifies the employee or his widow or next of kin of their right to compensation. It then remains for the employee, his widow or next of kin to decide whether they will accept compensation under this act or bring suit for personal damages. It is further provided that in any future contracts with common carriers for forwarding the mails, the Postmaster General is forbidden to sign such till the common carriers agree to the indemnity stipulations.

The schedule of injury awards is as follows: For death due to injury in the course of his employment the employee's widow or dependent next of kin is entitled to an annual pension of seventy per cent. of the deceased's monthly wages, during their life or while they are entitled thereto; i. e., a widow forfeits her pension by remarriage, or a minor child on reaching a working age. If there is no widow or dependent next of kin, then only the medical, surgical and burial expenses shall be paid. No disability shall be paid for which does not exceed two weeks. For total disability not exceeding six months there shall be paid one-half of the monthly wages for that period, as well as hospital, surgical and medical attendance. For total disability continuing after six months, there shall be paid two-thirds of the weekly wage during the period of said impairment. When the earning capacity is materially impaired through partial disability, one-half of the weekly wage is to be paid. When the earning capacity is slightly impaired, through partial disability, one-fourth of the weekly wage is to be paid; provided that such disability is not covered in the following scale of percentage awards.

The scale referred to deals with the loss or total impairment of certain parts of the body and follows very closely the order given in "Instructions to Examining Surgeons" issued by the Bureau of Pensions, Washington, D. C. The awards, however, are not the same, although in many cases approximate. On the whole they are larger. The scale is too long to give in full, but enough follows to give an idea of its scope. The figures show the percentage of the earnings which will be paid as an annual pension for the stated disability.

### SCHEDULE OF AWARDS

Loss of one eye, 40 per cent.; loss of hand, 40; loss of foot, 40 to 50; loss of an arm at or above the elbow or a leg at or above the knee, 45 to 60; loss of either a leg at the hip-joint or of an arm at the shoulder-joint, or so near as to prevent the use of an artificial limb, 40 to 60; loss of thumb, 20; loss of index finger, 06; loss of great toe, 08; ankylosis of shoulder, 30; ankylosis of elbow or knee, 25; ankylosis of ankle or wrist, 20; total deafness of one ear, 25; hernia, 20 to 50.

A distinction is made between the right hand and the left as to their respective values. Thus, "loss of thumb, index, middle and ring fingers" is rated at 25 per cent.; while "loss of thumb, index, middle and ring fingers of right hand" is rated at 40. The difference in value between a right and left hand can only be in a difference of skill between the two, for very few persons are ambidextrous. If therefore a skilled workman who is right-handed, loses his right hand, he loses something more than the hand. He loses skill, the ability to compete with his fellows, the power of earning the same pay. There is in short a loss of competing power as well as a loss of physical power. Everybody recognizes this where the hands are concerned, but it is not so easy to realize when the injury is internal and out of sight. In a given case these separate elements of damage ought to be considered and rated separately before a just estimate of the total damage to the earning power can be arrived at. The bill, however, while not entering in detail on this more extended field, very cleverly covers it by providing one rate when the earning capacity is "materially impaired" and another when it is but "slightly impaired." These are vague terms, but the award is not. On the whole the bill leaves but little to be desired, and Mr. Sabbath is to be congratulated on the masterly way in which he has grappled with the problem, and it is to be hoped that Congress will think likewise and enact the bill into law.

In the last analysis the public will pay the cost of these pensions in increased freight charges or mileage, but it is worth it. As the government pays pensions to its soldiers and sailors and certain of its civil employees, and by this bill, if passed, the railroads to their employees, it is unfair that workmen in general should not under like circumstances have pensions paid them. Perhaps in time this will come here as it has in Germany through the medium of "trade associations." For the purpose of comparison, the following table is appended, which shows what the various nations have done in the way of pensioning their disabled workmen.

### TABLE SHOWING THE ACTION OF VARIOUS NATIONS IN THE WAY OF PENSIONING DISABLED WORKMEN

| Country. | Total and permanent disability. | Partial and permanent disability. |
|---|---|---|
| Germany | An annual pension equal to the full amount of the yearly wage. | Proportionate pension up to two-thirds of yearly wage. |
| Austria | An annual pension of 0.60 of yearly wage. | A pension of not more than 0.50 of yearly wage. |
| Norway | An annual pension of about $41.50. | Proportionate pension, but none unless earning power is diminished at least 0.05. |
| Great Britian | An annual pension of 0.50 of yearly wage. | Proportionate pension. |
| Denmark | A lump sum equal to six times the annual wage, but not less than $500 nor more than $1,335. | A lump sum computed on basis of earning power lost. |
| Italy | A lump sum equal to six times the annual wage, the minimum being $600. | A lump sum equal to six times the amount by which the annual wage has been reduced, the minimum being $100. |
| France | An annual pension of 0.67 of yearly wage. | An annual pension equal to 0.50 of earning power lost. |
| Spain | A lump sum equal to two years' wages. | A lump sum equal to one year's wage or work at the same pay as before the accident. |
| Holland | An annual pension of 0.70 of yearly wage. | Proportionate pension. |
| Sweden | An annual pension of $83.33. | Proportionate pension, but none unless earning power is diminished at least 0.10. |
| Russia | An annual pension of 0.67 yearly wage, with permission to commute this for a lump sum equal to ten times the yearly wage in full discharge. | Proportionate pension. |
| United States | A lump sum equal to one year's pay (Act of 1908). An annual pension of 0.67 of yearly wage (proposed Act of 1909). | A lump sum equal to one year's pay (Act of 1908). Proportionate pension (proposed Act of 1909). |

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## POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

### Tenth Month—Fourth Weekly Meeting

### MIGRAINE

ETIOLOGY: Heredity, age, sex, gout and rheumatism, eye-strain, gastrointestinal disorders, etc.

SYMPTOMS: Premonitory. Sensory symptoms, visual disturbances, photophobia, tingling, numbness of extremities, motor symptoms, paresis, aphasia, "ophthalmoplegic migraine." Headache, location, duration, degree. Nausea and vomiting. Vasomotor symptoms. Course of disease and prognosis.

TREATMENT.

### TICS

DEFINITION: Etiology: Age, heredity, associated neurotic taint, emotions, local irritation.

VARIETIES: Facial tic, blepharospasm, mental torticollis, coprolalia. Frequency, character, location and extension of spasms.

### Monthly Meeting

Psychotherapy in the Treatment of the Psychoneuroses.
The Diagnosis and Differentiation of Hysteria.
The Diagnosis and Treatment of Epilepsy.

# Medicolegal

### Illegal Practice of Medicine by "Masseur Doctor"—Texas Law Explained

The Court of Criminal Appeals of Texas says, in Newman vs. State (124 S. W. R. 956), that the evidence showed that said Newman inserted in a local paper an advertisement which read: "Prof. J. M. Newman, the Masseur Doctor, has located," etc. "He is the doctor that cures consumption, appendicitis, as well as all other diseases. Now is your time to be healed. Come and see him while he is here." Soon thereafter he undertook to treat a number of persons for sundry ailments, including warts, fever, kidney diseases, and stammering. Testifying in his own behalf, he stated that he was a doctor and a great one; that he could cure the diseases that the M.D.'s could cure, and the diseases that they could not cure; that he had treated various patients of various ailments, and received pay for his services in so doing; that he never used or prescribed medicine in treating his patients; that he used only the massage treatment; that he only rubbed patients for their ailments, and at no time pretended to be a physician or surgeon; that he did not practice medicine, but was opposed to the use of any medicine to effect cures. It was shown by the clerk that he had filed no license or authority to practice medicine.

Section 10 of the Texas medical practice act of 1907 provides that the act shall not apply, among others, to masseurs, in their particular sphere of labor, who publicly represent themselves as such. A fair analysis of section 13 classifies the practitioners who shall be subject and amenable to the law. First, it includes any one who shall publicly profess to be a physician, and claim to effect cures by any system or method; and, second, those who shall treat or offer to treat any disease by any system or method, or to effect cures thereof, and charge therefor. Evidently the words "system or method" were intended to be wide enough in their scope to reach any and every school of medicine, whether based on the administration of pills, potions, or pellets, or the modern—as many persons believe, excellent—system of osteopathy or massage. The history of legislation on this subject in Texas shows that heretofore the Legislature, in dealing with the practice of medicine, had attempted to classify the different branches, and provide for boards for the different schools. Evidently the ineffectiveness of these laws was brought to public attention, because it is certain that the Thirtieth (1907) Legislature, with a view of closing every avenue of escape on technical grounds, and for the protection of the public health, as well as individual citizens, against the quack faker and charlatan, undertook to provide that any person shall be regarded as a practitioner of medicine who professes for pay to cure any kind of disorder or injury by any system or by any method.

The first statement in the advertisement put out by the accused characterized him as a masseur doctor. He advertised himself to be the doctor, and to cure consumption, appendicitis, as well as all other diseases, and warned the public, "now is your time to be healed." Pursuant to his invitation, many people did call to see him, to be healed of their troubles. Can it be said that this man was not holding himself out as a physician, as one who treated and cured diseases? Can it be said that he did not, in the sense that the Legislature understood this term and method or system of treatment, know he was not exempt on the mere ground that he did not use drugs and medicines or surgical instruments?

He was charged with unlawfully engaging in the practice of medicine without having first registered and filed for record the certificate required by law. He was undoubtedly guilty under all the proof, and a judgment of conviction is affirmed.

### Admissibility in Evidence of Testimony as to Statements by Patients

The Springfield, Mo., Court of Appeals says, in the personal injury case of Brady vs. Springfield Traction Co. (124 S. W. R. 1070), that a physician who was called to visit the plaintiff after her injury, in testifying as to the condition in which he found her, was permitted to repeat some statements made by her to him in response to questions asked her by him during the examination. It was claimed that this was hearsay and self-serving, and should have been excluded. It was held in Missouri in the case of Gartside vs. Insurance Co., 76 Mo. 446, that such statements could not be admitted in evidence, but that case was overruled by the case of Groll vs. Tower, 88 Mo. 249, the latter case was followed in the case of Squires vs. City of Chillicothe, 89 Mo. 226, and it has since that time been the settled law of the state that such testimony is admissible. The rule is that a physician in describing the result of an examination of a patient may give statements of the patient made to him in the course of the examination which relate to the condition of the patient at the time and which give the physician information proper for him to have in determining the condition of the patient, but statements made by the patient which relate to her past condition or to the circumstances surrounding the injury or the manner in which she received it are not admissible.

### "Insanity" Arising During Progress of Difficulty No Defense

The Supreme Court of South Carolina says, in the assault case of State vs. Coyle (67 S. E. R. 24), that "insanity" arising during the progress of a difficulty, voluntarily brought on by the defendant and as the result of a blow rightfully inflicted by his adversary, should not constitute excuse for his after conduct in such difficulty. The reason which sustains the settled law in South Carolina—that voluntary intoxication is no excuse for crime—applies with great force in a case of this kind. Furthermore, the court considers that the barbarity of the defendant's conduct, in beating and cutting the other party a number of times with a knife, afforded no evidence of irresponsible insanity.

# Current Medical Literature

## AMERICAN

Titles marked with an asterisk (*) are abstracted below.

### Boston Medical and Surgical Journal

*May 19*

1 *The Frequency and Dangers of Fibroids of the Uterus. E. B. Young and J. T. Williams, Boston.
2 Tuberculosis of the Elbow. J. W. Sever, Boston.
3 Rupture of the Uterus in Labor at Term. C. M. Green, Boston.
4 The Treatment of Constipation. M. V. Tyrode, Boston.
5 *Cancer in Massachusetts in 1905. W. F. Whitney, Boston.

1. **Fibroids of Uterus.**—The following conclusions are drawn by Young and Williams from the study of 971 autopsy records obtained from the Boston City Hospital:

1. Fibroids of the uterus occur in from 7 per cent. to16 per cent. of all adult females, and in from 7 per cent. to 22 per cent. of all over thirty-five years of age.

2. The age at which fibroids giving rise to symptoms which demand their removal are most commonly encountered is shown by American statistics to lie between thirty-five and forty-five, and by German figures between forty and fifty.

3. Fibroids may, in the main, be divided into three groups: (*a*) Fibroids of considerable size, nearly all of which produce symptoms. (*b*) Fibroid polyps, and submucous fibroids which project markedly into the uterine cavity. (*c*) Small and symptomless fibroids.

4. In fibroids of considerable or large size complications and degenerations dangerous to life occur in at least 10.5 per cent. and for this reason alone the routine removal of all such tumors is indicated.

5. In submucous tumors and fibroid polyps necrosis occurs in over 43 per cent. and the excision of all such growths is, therefore, indicated.

6. Small and symptomless fibroids are absolutely innocuous and of such frequent occurrence that they may safely be let alone. Such tumors, however, when met with in the course of operations for other conditions, should be removed when feasible, because there is always the possibility that they may increase in size.

5. **Cancer in Massachusetts.**—From the statistics quoted by Whitney it would appear that cancer has really increased in Massachusetts. The rate has rather more than doubled from 1850 to 1875, and almost doubled again from 1875 to 1900. This is true whether the rate for persons at all ages, or persons over thirty years of age, are considered. If the separate sexes and the different decennia of life are compared there is rather more irregularity, but in the main these also give the same result. If the same rate of increase should continue in the future, it is easy to calculate that in 1950 there

would be 6,000 deaths to every million persons living over thirty years of age, against the 1,600 deaths in 1900. For 1850 the cancer death-rate for all persons over thirty years of age is 375 for each million living, while for the year 1900 it is 1,578, a difference between them of about 1,200. This would give an average rate of increase for each five years of 120.

### Medical Record, New York

*May 21*

6 *The Scaphoid Scapula. W. W. Graves, St. Louis.
7 Hygienic Principles of Ventilation. W. A. Evans, Chicago.
8 The Local Hospital Sanitarium as One of the Most Important Phases in the Antituberculosis Crusade. S. A. Knopf, New York.
9 The Recognition of Dementia Præcox. S. P. Goodhart, New York.
10 *Tabes and Muscular Atrophy. E. L. Hunt, New York.
11 Case of Alkaptonuria. C. Mitchell, Chicago.
12 Examination of Duodenal Juice Obtained by the Gróss Duodenal Tube. F. v. Oefele, New York.
13 Abrams' Method in the Treatment of Aneurism of the Thoracic Aorta. L. St. J. Hely, Madera, Cal.

**6. Scaphoid Scapula.**—An article on this subject by the same author will appear shortly in The Journal.

**10. Case of Tabes and Muscular Atrophy.**—The patient whose history is given here by Hunt showed Argyll-Robertson pupils, loss of knee-jerks, presence of the Romberg sign, and great ataxia in all the extremities. At the same time, he showed a progressive muscular atrophy beginning in the hands and extending to the neck and scapular muscles—an atrophy which evinces fibrillary twitchings and a diminished electrical response. It is an atrophy which has advanced with considerable rapidity. Another feature of the atrophy is that it involved not the legs, but the arms, and that it has steadily progressed from the interossei of the hands to the scapular muscles and the face.

### New York Medical Journal

*May 21*

14 Psychotherapy. J. J. MacPhee, New York.
15 Sterility in the Female. C. G. Child, Jr., New York.
16 *Should the Operation for Ruptured Tubal Gestation be Immediate or Deferred? J. E. Summers, Omaha, Neb.
17 Three Years' Experience in General Practice with Bacterial Vaccines. G. H. Sherman, Detroit.
18 Bacterial Treatment of Malignant Disease. H. A. Duncan, Philadelphia.
19 Sensitization of Cancer. J. W. Vaughan, Detroit.
20 Uremia with Terminal Cerebral Hemorrhage. E. P. Magruder, Washington, D. C.
21 *Possibly a Way for Cure of Seminal Vesicle Infection. C. E. Barnett, Fort Wayne, Ind.
22 Serodiagnosis of Syphilis (continued). V. C. Pedersen, New York.

16. Abstracted in The Journal, April 2, 1910, p. 1158.

21. Abstracted in The Journal, April 23, 1910, p. 1400.

### Kentucky Medical Journal, Bowling Green

*May 1*

23 Our Duty to Ourselves, Our Patients and Our Fellow Practitioners. J. E. Wells, Cynthiana.
24 The Toxemias of Pregnancy. E. L. Godby, Campbellsville.
25 Early Diagnosis of Tuberculosis. J. H. Chrisman, Owenton.
26 Operative Interference in Acute and Chronic Emergency. H. Grant, Louisville.
27 Diagnosis of Gall-Stone Disease. J. L. Ransohoff, Cincinnati.
28 Four Cases of Appendicitis. J. T. Dunn, Louisville.
29 What is the Doctor Doing? A. W. Cain, Somerset.
30 Idem. J. W. F. Parker, Somerset.
31 When Should a Surgeon be Consulted in Appendicitis? J. T. Dunn, Louisville.
32 Hydatidiform Mole with Remarks. C. C. Garr, Lexington.
33 Pancreatic Diseases. V. Blythe, Paducah.
34 Dividing Professional Fees. M. D. Mann, Buffalo.
35 Indications for Operative Interference in Acute and Chronic Emergency Conditions. H. H. Grant, Louisville.
36 Malarial Fever. C. W. Rogers, Rineyville.

### Journal Experimental Medicine, Lancaster, Pa.

*May*

37 Studies on the Venous Pulse. J. A. E. Eyster, University, Va.
38 *Survival of Engrafted Tissue. C. C. Guthrie, Pittsburg, Pa.
39 *The Changes in the Venous Bloodflow on Administration of Amyl Nitrite. R. Burton-Opitz and H. F. Wolf, New York.
40 Changes Induced in the Blood of Rabbits by Living in an Atmosphere of Water Gas. G. G. Nasmuth and F. C. Harrison, Toronto.
41 *Studies in Edema: Influence of Adrenalin on Absorption from the Peritoneal Cavity. M. S. Fleisher and L. Loeb, Philadelphia.
42 *Carcinoma of Brook Trout (Salvelinus Fontinalis); Its Relation to Ordinary Goiter. D. Marine and C. H. Lenhart, Cleveland, Ohio.
43 The Complement Binding Test in Rabies. J. L. Berry and A. Mann, New York.
44 *Experimental Comparison of Transplanted Tumor and a Transplanted Normal Tissue Capable of Growth. P. Rous, New York
45 The Relation of Combined Intoxication and Bacterial Infection to Necrosis of the Liver, Acute Yellow Atrophy and Cirrhosis. E. L. Opie, New York.
46 *Studies in Water Drinking. C. C. Fowler and P. B. Hawk, Champaign, Ill.
47 The Quantitative Changes in the Proteins in the Blood Plasma of Horses in the Course of Immunization. R. B. Gibson and E. J. Banzhaf, New York.

**38. Survival of Engrafted Tissues.**—The most complete results have been obtained by Guthrie with ovaries in fowls. In auto-intra-abdominal as well as in subcutaneous transplantations, excellent morphologic results have been obtained. In iso-intra-abdominal ovarian grafts between fowls and between guinea-pigs, functional activity, in addition to anatomic structure, has been completely preserved. Evidence of the complete functioning of such transplanted ovaries is afforded by the altered characters in the offspring.

The ovary of a pure bred white hen was removed and in its place an ovary from a pure black hen was engrafted. Subsequently the white hen laid eggs, and on being mated to a pure white cock, such eggs were incubated and from them were hatched white and black chicks. As yet there is no evidence that simple mutilation of the ovary is a factor in these results. In the single case in which degeneration of an ovary engrafted into a fowl has been observed no eggs were laid. Furthermore, all control hens have produced eggs. On the whole, Guthrie says, we may be reasonably certain that ovarian tissue engrafted into fowls, as in these experiments, may develop and preserve its functional powers to a high degree.

Results with testicles are less complete, no offspring having as yet been produced from engrafted testicles. However, morphologically, the results seem as perfect as with the ovaries, engrafted testicular tissue showing a marked growth and normal structure almost four months after the operation. Transplantation of ovaries and testicles with anastomosis of the nutrient blood vessels have not been practiced sufficiently to permit of comparisons or conclusions. Guthrie says that since results are readily obtained in certain animals hitherto employed by the simple method of transplanting there has been no need for the more complicated operation. But there are good reasons for believing that in larger and older animals, as well as under less favorable conditions, successful results will, perhaps, be more certain after transplantation with anastomosis of the blood vessels than after the simpler operation.

**39. Changes in the Venous Blood Flow.**—While the amyl nitrite invariably produced a marked lessening of the arterial blood pressure, the venous pressure retained its normal value in all cases in which the drug was permitted to exert a general effect of ordinary magnitude. When an artificial circulation through the normal leg was established and inhalations of amyl nitrite were given, no changes in the flow of the perfusion fluid could be detected. It appears, therefore, that the vasodilatory effects of this drug are not incited with the help of central nervous structures.

**41. Studies in Edema.**—Fleisher and Loeb found that adrenalin injected intraperitoneally increases the rapidity of absorption of fluid from the peritoneal cavity, independently of whether the solution to be absorbed is hypotonic or hypertonic or is approximately isotonic with the blood serum. The intravenous injection of adrenalin also increases the absorption of fluid, but not so markedly as does the intraperitoneal injection. Adrenalin injected either intraperitoneally or intravenously increases the quantity of sodium chlorid absorbed. The relative absorption of sodium chlorid—the movement from the peritoneal cavity of sodium chlorid, as compared with the movement of water—is slightly increased when 0.85 per cent. of sodium chlorid solution and adrenalin are injected intraperitoneally; but it is diminished when adrenalin is injected intravenously, or when 1.5 per cent. sodium chlorid solution and adrenalin are injected. When distilled water has been injected intraperitoneally, adrenalin decreases the relative amount of sodium chlorid through the kidneys under the influence of adrenalin.

When 0.85 per cent. sodium chlorid solution is injected into the peritoneal cavity, the blood becomes diluted after two hours and a half. When adrenalin is also injected, the dilution of the blood is less marked, in spite of the increased absorption under the influence of adrenalin. When distilled water is injected into the peritoneal cavity, the blood is diluted equally in control and adrenalin experiments. When 1.5 per cent. sodium chlorid solution is injected, the dilution of the blood is very slight, and in adrenalin experiments it is the same as in control experiments or very slightly greater than in control experiments. The injection of adrenalin causes a temporary increase in the osmotic pressure of the blood, which gradually returns to normal.

In experiments in which 0.85 per cent. sodium chlorid solution was injected intraperitoneally, either with or without adrenalin, there existed a tendency of the peritoneal fluid to attain a greater osmotic pressure than the blood serum. The authors noted a similar condition in cases of general edema in man, in which the osmotic pressure of the ascitic fluid is greater than that of the other edematous fluids or even than that of the blood serum. There exists, therefore, a mechanism that causes the passage of osmotically active substances from the blood or from the tissues into the peritoneal cavity, and that causes the osmotic pressure of the peritoneal fluid to become higher than that of the blood.

The addition of 1.22 per cent. calcium chlorid solution to 0.85 per cent. sodium chlorid solution, increased directly the transudation into the peritoneal cavity merely by inhibiting the absorption.

It follows that adrenalin does not increase the amount of peritoneal transudate found after the intravenous infusion of large quantities of sodium chlorid solution, to which adrenalin has been added, by delaying the absorption from the peritoneal cavity. The increased amounts of peritoneal fluid must be due to increased transudation into the peritoneal cavity; and the adrenalin, in view of its marked effect on absorption from the peritoneal cavity, must increase the movement of fluid into the peritoneal cavity much more strongly than could be assumed from the figures obtained in the infusion experiments.

42. **Thyroid Carcinoma of Brook Trout.**—Marine and Lenhart conclude that the so-called carcinoma of the thyroid of brook trout is, in its early stages at least, nothing more than severe endemic goiter. The possibility that this physiologic hyperplasia may, in some instances, go over into carcinoma is not denied and is in harmony with the more modern views of cancer development. Prevention and cure is favored by adjusting the amount of food and the number of fish to the water supply or by the addition of iodin-containing substances to the water passing through the ponds.

44. **Comparison of Transplanted Tumor and Normal Tissue.**—Rous' paper deals with a comparison of the conditions which determine the fate of transplanted tumor and of a transplanted normal tissue capable of growth. Mouse embryo and mouse-tumor were employed as material. It was shown that individuals differ as hosts for transplanted embryo, some being naturally resistant to its growth, and some favorable, just as is known to be the case where tumor is concerned. The fate of implanted tumor depends directly on whether it elicits from the host a vascularizing stroma. So, too, it is with implanted embryo. Furthermore, mouse embryo, like mouse-tumor, when introduced into rats calls forth a stroma and grows for a brief period.

In attempting to answer the question as to whether individuals favorable (or resistant) to implanted tumor are likewise favorable (or resistant) to implanted embryo, it was shown that the factors of age, nutritive condition, and race, which are potent in determining an animal's status as a tumor-host, act similarly in determining that for embryo. Using embryonic tissue and a method which has proven effective for the production of immunity to implanted tumor, an immunity to implanted embryo was brought about. This immunity manifests itself in the same way as that for the implanted tumor, namely by an absence of the stroma-reaction necessary to life of the engrafted tissue.

Rous believed that these results demonstrate how largely tumor obeys in its adaptation to a new host and growth therein, the general laws regulating a transplanted normal tissue. Besides the phenomena here dealt with, many others that have held the attention of workers with transplantable tumors are probably not peculiar to neoplasms. The present findings emphasize the importance of the tumor-problem as a tissue problem; and they further indicate how essential it is in cancer work to discriminate between characters unique with tumor and those which it possesses in common with normal tissue.

46. **Water Drinking.**—The daily drinking of three liters of water with meals, for a period of five days, by a man 22 years of age, who was in a condition of nitrogen equilibrium through the ingestion of a uniform diet, was productive of the following findings: 1. An increase in body weight, aggregating two pounds in 5 days. 2. An increased excretion of urinary nitrogen, the excess nitrogen being mainly in the form of urea, ammonia, and creatin. 3. A decreased excretion of creatinin and the coincident appearance of creatin in the urine. The decreased creatinin output is believed to indicate that the copious water drinking has stimulated protein catabolism. The appearance of creatin is considered evidence that the water has caused a partial muscular disintegration resulting in the release of creatin, but not profound enough to yield the total nitrogen content of the muscle. The output of creatin is, therefore, out of all proportion to the increase in the excretion of total nitrogen. 4. An increased output of ammonia which is interpreted as indicating an increased output of gastric juice. 5. A decreased excretion of feces and of fecal nitrogen, the decrease in the excretion of fecal nitrogen being of sufficient magnitude to secure a lowered excretion of both the bacterial and the non-bacterial nitrogen. 6. A decrease in the quantity of bacteria excreted daily. 7. An increase in the percentage of total nitrogen appearing as bacterial nitrogen. 8. A lower creatinin coefficient. 9. A more economic utilization of the protein constituents of the diet.

The general conclusion reached by Fowler and Hawk as the result of this experiment is to the effect that the drinking of a large amount of water with meals was attended by many desirable and by no undesirable features.

### Mississippi Medical Monthly, Vicksburg

*May*

48 The Indications and Contraindications for Curettage. G. S. Bryan, Amory.
49 Fibrinous Pneumonia in an Infant. B. S. Hood, Bond.
50 Diagnosis of Pelvic Inflammations. B. H. Durley, Aberdeen.

### Lancet-Clinic, Cincinnati

*May 7*

51 Modern Treatment of Tuberculous Joints. J. L. Porter, Chicago.
52 Sanitation of Barber Shops. G. A. Persson, Mt. Clemens, Mich.
53 Tuberculosis and its Prevalence in Cincinnati. B. F. Lyle, Cincinnati.
54 Section Teaching of Obstetrics. W. D. Inglis, Columbus, Ohio.

### Illinois Medical Journal, Springfield

*May*

55 *Prognosis of Angina Pectoris. F. Forchheimer, Cincinnati.
56 Chronic Colitis. G. D. Kahlo, French Lick, Ind.
57 Fibroma Uteri in the Non-pregnant and Pregnant. A. B. Keyes, Chicago.
58 Perineal Prostatectomy. A. H. Ferguson, Chicago.
59 The Tuberculosis Question in Relation to the Organs of Digestion. F. B. Turck, Chicago.
60 The Resection of Bony Deflections of the Nasal Septum. O. T. Freer, Chicago.
61 The Septal Spur and its Removal. F. G. Stubbs, Chicago.
62 Recent Use of Stovain in Chicago. H. F. Lewis, Chicago.
63 Advance in Therapeutics. C. M. Riley, Alton, Ill.
64 Eye Symptoms in Diabetes. H. Gradle, Chicago.
65 *Diagnosis and Treatment of Plumbism. B. Fantus, Chicago.
66 Neglected Sources of Infection. J. Casey, Chicago.

55. **Angina Pectoris.**—In common with all other observers, Forchheimer finds that angina pectoris is more common in the male than in the female, in the ratio of 63 to 48. The youngest patient in his series of cases was 29 years old, the oldest 76. The longest duration of the recurring syndrome was 17 years, the shortest was found in three who died in the first attack.

Consideration of the various forms of angina pectoris shows the following: In coronary sclerosis there were 56 cases in all; i. e., 29 cases without other appreciable changes in the heart and 27 with other changes. Evidences which Forchheimer considers as pointing to coronary sclerosis are the existence of angina pectoris and certain changes in the aorta or the aortic valves.

In the aorta we find as evidence of sclerosis, some dilatation. Most frequently a soft aortic systolic bruit is detected, which sets in a little after systole. most commonly combined with an accentuation of the second aortic sound, especially characteristic when the blood pressure is low. Over the aortic area are found systolic bruits, differing much in character, sometimes soft, sometimes harsh, but as a rule unlike those of aortic sclerosis due to other causes. Moreover, the second aortic sound is accentuated, which Forchheimer says is a fairly reliable differential sign between arteriosclerotic changes in the valve and in the ordinary form of aortic stenosis.

In one case of syphilitic endarteritis there existed angina pectoris of a very severe type, the physical evidence of a mitral lesion and of myocardiac insufficiency. In 27 cases which were developed on other diseases. the before-mentioned signs were present. The co-existing diseases were chronic myocarditis in 12, mitral lesion in 6, aortic lesions in 4, obesity of the heart in 4, alcohol, diabetes, chronic nephritis, of each, 2; syphilis and cirrhosis of the liver, 1. Nearly all of these had evidence of arteriosclerosis.

In the cases of angina in which coronary sclerosis alone existed we find three dead in the first attack and seven others dead. Of the latter two died of diabetic complications, one of complicating pneumonia in the status anginosus, death being due to acute cardiac dilatation, one of a cerebral and another of a gastric hemorrhage. So that, in all, in only 6 cases could death be attributed to the coronary sclerosis. The duration of the disease in these cases varied from 16 months to 17 years, and all were males. In the 29 cases of coronary sclerosis there is but one female.

When the obstruction is due to thrombosis or embolism, the attack is usually fatal, either immediately or later on, as the result of changes in the myocardium. The attack is always immediately fatal when one coronary artery is closed. As a rule, death occurs instantaneously where the descending or circumflex branches are completely closed, but occasionally the patient survives for a few days as is shown by myocardial infarcts found post-mortem. Forchheimer's experience leads him to believe that when both cardiac asthma and angina pectoris are present from the onset, the outlook for improvement is very small. But he does not agree with Neubürger who states that in coronary sclerosis there are three stages of myocardial changes, which develop and which are always fatal.

So far as the duration of the disease is concerned, aside from those who died in the first attack, in eight the disease lasted from 1 to 2 years; in four from 2 to 4 years, and in 1 for 17 years. Of those alive, four have had the disease from 8 to 10 years, the same number from 5 to 8 years, and 10 from 4 to 5 years.

65. **Plumbism.**—The three indications in the curative treatment of plumbism are, Fantus says, 1. to stop the introduction of the poison into the system; 2, to favor its elimination; and, 3, to antagonize the disturbances produced by it. To stop the introduction of the poison, usually means prompt change of work, not only temporarily, but permanently. An individual who has once suffered from lead poisoning is extremely susceptible to its recurrence, and recurrence in an aggravated form. In favoring the elimination of lead, our first care should be to obtain free evacuations of the bowels, two or three a day, which are sometimes difficult to obtain owing to the obstinate constipation present. It is a mistake, says Fantus, to use in this condition, purgatives that act largely on peristalsis. The salines, and among them most especially magnesium sulphate, should be used in large and frequent doses. The action of the purgative can best be reinforced by the administration of atropin which antagonizes the intestinal spasm, and the use of large oil enemas which are as useful here as they are in other forms of spastic constipation.

After the bowels have been freely opened, and not until then, potassium iodid should be given in doses of 5 grains (0.3 gm.) three times daily. Its exhibition should be accompanied by the free use of water. Anything that increases metabolic activity favors the elimination of the deposited lead. Sweat baths with or without the use of sulphids are useful. A sulphur bath may be obtained by dissolving six ounces of potassium sulphuret in half a tubful of water. But above all, does daily work in the sweat of the brow, preferably out of doors, answer the indication; and this is the kind of work physicians should advise their patients to take up at least for a while.

### Journal Medical Society of New Jersey, Orange

*May*

67 Dysmenorrhea: Its Significance and Treatment. P. B. Bland, Philadelphia.
68 The Treatment of Acute Inflammation of the Middle Ear and Mastoid Process. G. B. Wood, Philadelphia.
69 The Rational Treatment of So-called Inoperable Uterine Cancer. W. B. Chase, Brooklyn.
70 Autointoxication Resulting from Restricted Diet. W. W. Beveridge, Asbury Park.

### Texas State Journal of Medicine, Fort Worth

*May*

71 Tumors of the Testicle. J. B. Shelmire, Dallas.
72 Neuroretinitis Hemorrhagica. W. A. Rape, Victoria, Tex.
73 The Need for Education on the Question of Sex and Venereal Diseases and Problems Involved. M. M. Duggan, San Antonio.

### Surgery, Gynecology and Obstetrics, Chicago

*May*

74 Pathology and Clinical Significance of Gastric Ulcer. W. C. MacCarty, Rochester, Minn.
75 *Mixed Tumors of the Uterine Body. I. C. Herb, Chicago.
76 Nutritional Changes Occurring in Fibromyoma of Uterus Incident to Pregnancy and the Puerperium. H. D. Fry, Washington, D. C.
77 Relationship Between the Thyroid and Parathyroids. J. Halpenny, Winnipeg, Canada.
78 Forcible Dilatation of the Kidney Pelvis as a Means of Diagnosis. G. L. Hunner, Baltimore.
79 The Operative Treatment of Tumors of the Hypophysis. A. E. Halstead, Chicago.
80 *Necrosis of the Bladder with Exfoliation. R. F. O'Neil, Boston.
81 A Silk Thread as a Guide in Esophageal Technic. H. S. Plummer, Rochester, Minn.
82 Removal of Foreign Bodies from the Bronchi. F. Huber, New York City.
83 Pin Removed from Ascending Division of Left Bronchus with Aid of Fluoroscopic Screen. R. T. Norris, New York.
84 Surgical Knots. O. Borchgrevink, Christiania, Norway.
85 *Measuring the Capacity of the Renal Pelvis. H. W. Baker, Boston.

75. **Mixed Tumors of the Uterine Body.**—Mixed tumors of the uterine body, contrary to those of the cervix, are of infrequent occurrence. Herb found only 8 authentic reported cases, including the one mentioned by her. The youngest patient was 40 years of age. Menstruation had been irregular for 4 years. All the other women were past the menopause, their ages varying from 50 to 62 years. The clinical symptoms, without exception, were pelvic pain, accompanied by a watery or bloody vaginal discharge, which was fetid in some of the cases. The symptoms were of short duration, being from one to six months. A positive and correct diagnosis from curettage was not made. All the women had borne children. All the tumors sprang from the tubal region, except two, which developed in the posterior uterine wall.

They were all single tumors, except Hunziker's, in which there was a hazel-nut size subperitoneal growth which he considered a metastasis. In Penkert's case the tumor, which was 7.7 cm. long and 6.5 cm. wide, sprang from a pedicle scarcely 1 cm. in diameter. In Herb's case the tumor mass extended entirely through the uterine wall; however, it could readily be differentiated from the surrounding musculature. They usually fill the uterine cavity and present an irregular polypoid surface, with dark necrotic areas. They are of rather soft consistency and a grayish or yellowish white color.

Microscopically besides sarcomatous tissue and the different forms of connective tissue, smooth and striated muscle, small cysts, cartilage, and tissue resembling carcinoma may be present. Metastases to other organs or involvement of regional lymph glands were not observed. One patient died of exhaustion seven days after total extirpation. All of the remainder whose histories were followed after operation died from local recurrence within six months, except Lawen's patient, who lived one year.

80. **Necrosis of Bladder with Exfoliation.**—O'Neil claims that necrosis of the bladder occurs as a result, primarily, of interference with the circulation of the organ, aided by bacterial infection. The interference with circulation may be produced by mechanical pressure outside the bladder, or by bacterial inflammation within the bladder wall. The condition is more common in women than in men. The clinical symptoms are vague. Retention (when associated with cystitis) which cannot be relieved with catheter should excite

suspicion. There is a typical cystoscopic appearance by which the diagnosis can be made if the examination is made at a certain time. The prognosis as to life, on the whole, is good in women. In severe cases permanent injury to the urinary function will result. The prognosis in men is good if the membrane is removed. Operative treatment is always indicated in men, occasionally so in women.

85. **Measuring the Capacity of the Renal Pelvis.**—The apparatus devised by Baker consists of a glass burette graduated into c.c. and of 100 c.c. capacity. It is filled with sterile methylene blue solution. A rubber tube leads from the burette, which is fitted into the ureteral catheter by a glass connection. From the top of the burette a rubber tube leads to an air pressure gauge which is fitted with a cautery inflating bulb. With the ureteral catheter in the renal pelvis the bulb is inflated and the fluid is forced into the kidney pelvis under a uniform pressure. When the renal pain occurs, indicating that the kidney pelvis is distended, the reading of the pressure gauge is taken and the amount of fluid which has passed from the burette into the renal pelvis is seen at a glance.

### Journal Oklahoma State Medical Society, Muskogee

*May*

86 Comatose Pernicious Malaria. C. S. Neer, Vinita.
87 Mexico from a Doctor's Standpoint. A. K. West, Oklahoma City.
88 A Legal Decision of Interest to the Medical Profession. Justice Dunn, Supreme Court, Oklahoma.

### St. Louis Medical Review

*April*

89 Diphtheria from the Medical Standpoint. R. J. Bunch, St. Louis.
90 Diphtheria. W. D. Black, St. Louis.
91 The Surgical Treatment of Diphtheria. J. W. Shankland, St. Louis.
92 Diphtheria from the Neurologic Standpoint. H. Unterberg, St. Louis.

### Virginia Medical Semi-Monthly, Richmond

*May 13*

93 Diagnostic Significance of Dyspepsia. S. Lile, Lynchburg.
94 Formation and Duties of Local Boards of Health. H. B. Wood, Philadelphia.
95 *A New Operation for Prolapsus Uteri. C. S. Venable, San Antonio, Tex.
96 Symptoms of Puerperal Sepsis. R. M. Taliaferro, Lynchburg.
97 Inflammation of the Frontal Sinus. A. D. Wood, Bluefield, W. Va.
98 Uncinariasis: Observations on its Spread and Eradication. W. A. Brumfield, Brookneal.
99 Surgery of the Thorax and its Viscera. B. M. Ricketts, Cincinnati.

95. **New Operation for Prolapsus Uteri.**—In Venable's advocated procedure, the uterus is lifted to the lower angle of the abdominal wound, the fundus grasped with the tenaculum forceps and held. The thumb and forefinger of the operator are now passed in front of the broad ligaments on either side, respectively, and approximated behind the uterus. The points of the broad ligament easiest approximated are brought together, or if sufficient relaxation does not present for them to meet, a corresponding point on either side is brought to a point on the postero-lateral aspect of the body of the uterus, exerting sufficient tension to see that if so held the uterine position will be as desired and these are selected as the sites for the introduction of a suture. A half-curved, round needle with chromic gut is then passed from before back through the broad ligament just below the ovarian vessels and carried behind the uterus, entering the wall on the postero-lateral aspect as the fundus rounds off to the body and emerges at a similar point on the opposite side; the broad ligament of the left side is now grasped in the same manner, and the needle passed from behind forward below the ovarian vessels, through the left broad ligament. The operator, still holding the left broad ligament, now passes the needle from before backward through the lowest point that it has been ascertained will meet or correspond with a similar point on the opposite side. The needle is then entered into the lateral posterior aspect of the uterus on a line parallel with the suture line above, and emerged at a similar point of exit for the left broad ligament. The suture is then tightened, and if laid correctly the uterus will be swung forward; the tension on the round ligaments producing an anteversion —the sacro-uterine ligaments are made taut and the posterior fornix elevated. If this is the case the hold is relaxed and the posterior surface of the uterus between the points of exit and entrance of the ligature is denuded, as are the portions of broad ligaments that are to come in contact with these denuded surfaces. The suture is again tightened and tied as a mattress suture; the approximated edges of the broad ligament are sutured with continuous catgut in a French needle. The relaxation of the round ligaments may be so great that while this procedure supports the uterus, these are not sufficiently tightened by it, when it will be advisable to add Baldy's procedure or a modification thereof, by fastening the round ligaments behind the fundus with sufficient tension to maintain an antiversion as well as support.

### St. Paul Medical Journal

*May*

100 The Acute Stage of Infantile Paralysis. O. Medin, Stockholm, Sweden.
101 Early Diagnosis of Poliomyelitis. G. W. McIntyre, St. Peter, Minn.
102 The Hospital Laboratory; Special Reference to Diagnosis in Surgical Cases. L. B. Wilson, Rochester, Minn.

### Journal of Cutaneous Diseases, New York

*May*

103 The Elastic Tissue of the Skin. C. J. White, Boston.
104 Multiple Benign Cystic Epithelioma and Multiple Fibroma in the Same Patient. E. W. Ruggles, Rochester, N. Y.
105 Psoriasis with Unusual Symptoms and History. W. F. Breakey, Ann Arbor, Mich.

### New York State Journal of Medicine, New York

*May*

106 Vaccine Therapy in Colon Bacillus Infection of Urinary Tract. F. Billings, Chicago.
107 Vaccine Therapy in Surgical Tuberculosis. L. L. McArthur, Chicago.
108 Treatment of Surgical Tuberculosis by Vaccines. J. MacLeod and N. K. MacLeod, Buffalo.
109 Chronic Glanders Treated by An Autogenous Vaccine. A. T. Bristow and B. White, Brooklyn.
110 Treatment of Pelvic Infections: Special Reference to Bacterial Vaccines. F. L. Oastler, New York.
111 Adequacy of the Present Day Treatment of Syphilis Tested by the Occurrence of Syphilitic Diseases of the Nervous System. J. Collins, New York.
112 The Wassermann and Noguchi Complement-Fixation Tests in Leprosy. H. Fox, New York City.
113 *Has Therapeutics Kept Pace with the Advance of Other Branches of Medical Science? C. W. Dennis, Goshen.
114 Anesthetics and Anesthesia. R. Cordner, Middletown.

113. **Therapeutics and Medical Science.**—The future hope of the therapeutic art as applying to drugs, Dennis believes lies along the following lines: Dropping out of the pharmacopeia hundreds of medicines which are of doubtful utility or which are with difficulty prepared with accuracy or which duplicate each other in their range of action. The state should provide a laboratory in which would be made examination and tests of medicines to determine their strength and purity, and a law should be made prescribing a fine and punishment for offering for sale medicinal substances varying materially from a standard as defined in the U. S. P. In addition, skilled men should be employed to determine physiologically, when possible, the positive effects of drugs most commonly used. More careful observation should be made and recorded by medical men of the effects of medicines clinically; single remedies should be used more frequently; the ready-made prescription should be largely, if not entirely, dispensed with, as it cultivates habits of carelessness and indolence.

### Louisville Monthly Journal Medicine and Surgery

*May*

115 Indications for Operative Interference in Acute and Chronic Conditions. H. H. Grant, Louisville.

### Philippine Journal of Science, Manila

*December, 1909*

116 *Specific Treatment of Carcinoma. A. F. Coca and P. K. Gilman, Manila.
117 *The Cutivation of the Leprosy Bacillus. M. T. Clegg, Manila.
118 Balantidium Coli Infection with Autopsy. F. B. Bowman, Manila.
119 The Difference in Susceptibility to Cattle Plague Encountered Among Cattle and Carabaos. E. H. Ruediger, Manila.
120 Tuberculosis in the Philippines. E. R. Whitmore, Manila.

116. **Specific Treatment of Carcinoma.**—The protoplasmic substances of malignant epithelial tumors in human beings can be injected subcutaneously in large quantities without injurious results. In three cases affected with carcinoma, such

injections given by Coca and Gilman have been followed by the softening and disappearance of tumor masses measuring in diameter from 2 to 4 centimeters. In a fourth case, a rapidly growing lump appeared near the site of the excised cancer two days after treatment. Several days later, when the lump had reached a diameter of 4 centimeters the growth ceased and subsequent microscopic examination showed it to be a firmly encapsulated mass of dying epithelial-like cells. Three other surgically absolutely inoperable cases, in two of which visible amounts of cancer tissue were left unexcised, have remained until now, i. e., for from five weeks to six months, free from recurrence of the disease.

Seven other cases have remained free from a return of the disease for from one to seven months. Two of these were designated as "curable by operation;" three were designated as "probably curable by operation;" and two were designated as "of doubtful curability by operation." In only one case has the disease returned after treatment. In this case the material used for vaccination was rendered inert by too vigorous disinfection. Hitherto no case of sarcoma has come to treatment; however, in view of the failure of the procedure to affect the course of Hodgkin's disease, the outlook for sarcoma is not promising. Tumor cachexia is not increased by the rapid absorption of large quantities of tumor tissue; on the contrary, large injections of tumor material seem to cause the disappearance of the cachexia.

Further experiments seemed to indicate: (1) that the efficacy of the treatment is indirectly proportional to the amount of malignant tissue left in the body, and, within certain limits, directly proportional to the amount of tumor-cell substances injected and to the number of such injections made; (2) that a carcinoma in one individual can be successfully treated with injections of material from a carcinoma of the same kind taken from another individual; (3) that one-half per cent. of carbolic acid does not destroy the "vaccine" within 36 hours if the latter is kept at a temperature of 7 C.

**117. Cultivation of Leprosy Bacillus.**—Attempts have been made by Clegg to cultivate the leprosy bacillus from the spleens of lepers and from cutaneous nodules in cases of leprosy in 10 instances. In 8 out of the 10 instances an acid-fast bacillus was observed to multiply in successive transplants of the cultures of amebas to which the leprosy material had been added. Control plates of the ameba culture without the addition of leprosy material showed no acid-fast organisms present. By heating such an ameba-cholera-leprosy culture a half hour at 60° C. and incubating, isolated colonies of the leprosy bacillus were obtained which grew readily in pure culture when transplanted to the ordinary laboratory media (nutrient agar, bouillon, coagulated egg medium, etc.).

Guinea-pigs inoculated subcutaneously with the pure culture developed in some instances lesions at the site of inoculation which bear a certain resemblance to the leprous lesions of man, both macroscopically and when sectioned and examined under the microscope. The acid-fast organisms were found at the site of inoculation and in some instances also in the spleen. In one instance the acid-fast organism was cultivated from a lesion in a guinea-pig. These guinea-pigs as well as others which received intraperitoneal injections, invariably died during the third or fourth week after inoculation. Inoculations into monkeys have yielded as yet only negative results. The majority of the lepers from whom the material for these cultures was obtained, had tuberculous lesions in their lungs, but the tissues used for the cultures showed no evidence of tuberculosis. The animal inoculations proved that the acid-fast organism cultivated was not the tubercle bacillus.

### Ophthalmology, Seattle, Wash.

*April*

121 Congenital Absence of the Choroid with Retinitis Pigmentosa. E. W. Alexander, San Francisco.
122 The Extraction of Cataract Within the Capsule. A. Elschnig, Prague, Austria-Hungary.
123 Removal of the Cataractous Lens within its Capsule. J. W. Wright, Columbus, Ohio.
124 Expression of Cataract in the Capsule. D. W. Greene, Dayton, Ohio.
125 Tuberculosis of, and About the Eyes. R. Kerry, Montreal.
126 The Present Status of Calmette's Conjunctival Reaction in the Diagnosis of Tuberculosis. F. P. Calhoun, Atlanta, Ga.
127 Does Optic Atrophy in Tabes Develop from a Disease of the Ganglion Cells or From the Nerve Fibers? H. Rönne, Copenhagen, Denmark.
128 So-called Doubling of the Puncta Lacrimalia. F. T. Tooke, Montreal.
129 Pneumocele of the Lacrimal Sac. R. H. Elliot, Madras, India.
130 Metastatic Panophthalmitis. C. M. Harris, Johnstown, Pa.
131 Phlegmonous Inflammation of the Lids. N. H. Goodenow, Seattle, and E. F. Chase, North Yakima, Wash.
132 Differential Diagnosis of Orbital Affections Occasioned by Sinusitis, Including Report of the Cavernous Sinus. W. Reber, Philadelphia.

### Bulletin Johns Hopkins Hospital, Baltimore

*May*

133 *Experimental Hypophysectomy. S. J. Crowe, H. Cushing and J. Homans, Baltimore.

**133. Experimental Hypophysectomy.**—The authors found in agreement with Paulesco, that a state of apituitarism due to the total removal of the hypophysis leads inevitably to the death of the animal, with a peculiar and characteristic train of symptoms (*cachexia hypophyseopriva*). That these symptoms are not due to surgical trauma or postoperative complications is evidenced by the facts (1) that the same operative manipulations leaving the hypophysis in place and omitting the single step of removal leads to no symptoms whatsoever, and (2) that incomplete removal produces no immediate disturbances. However, even in the case of adult animals death need not occur after a total removal as promptly as Paulesco claimed; puppies may remain in an apparently normal condition for at least three weeks before the terminal phenomena appear. These same symptoms after the same intervals of time, follow the removal of the entire *pars anterior* alone, even though the posterior lobe remains in place. On the other hand, removal of the posterior lobe (necessarily leaving a small amount of *pars intermedia*) not only leads to none of the manifestations of *cachexia hypophyseopriva,* but does not appear to affect the physiologic balance of the animal in any symptomatic way, unless the convulsions and excessive sexual activity which have been seen in a few cases can possibly be ascribed to its absence.

Separation of the hypophyseal stalk, owing to circulatory disturbances, is comparable either to a partial hypophysectomy or to a total removal with immediate reimplantation of the excised tissue elsewhere in the body. The gland becomes reattached and the pathways for posterior lobe secretion (supposed to traverse the *pars nervosa* on its way to the infundibular cavity) may become obstructed by the scar, leading to an accumulation of "hyalin" within the channels of the *pars nervosa.*

Definite constitutional disturbances which may be regarded as manifestations of hypopituitarism have been observed after partial (anterior lobe) removals in a number of animals kept under observation for long periods of time. The most striking feature is a state of adiposity accompanied by (or resultant to?) a secondary hypoplasia of the organs of generation in adults or by a persistence of sexual infantilism in case the primary hypophyseal deficiency antedates adolescence. Polyuria, glycosuria, alterations in the skin and its appendages (such as edemas and hypotrichosis), the tendency to a subnormal body temperature, and psychic disturbances are more or less frequent accompaniments—all of them symptoms which occasionallly occur with states of adiposity and of sexual infantilism in man, in company with certain pituitary body tumors—states, therefore, which presumably are due to hypophyseal (anterior lobe) deficiency.

Animals, in states of hypopituitarism, appear to have a lowered resistance to infection, exposure or disease, conditions which are apt to precipitate the onset of *cachexia hypophyseopriva.* It has been possible, by glandular transplantations, or by injections of anterior lobe emulsion, definitely to prolong the life of animals after total hypophysectomy, and likewise to tide over periods of threatened *cachexia hypophyseopriva* in animals retaining anterior lobe fragments which temporarily may be physiologically insufficient. Boiled anterior lobe emulsions appear to elicit a characteristic (anaphylactic?) febrile response when injected subcutaneously in states of experimental hypopituitarism.

### Buffalo Medical Journal

*May*

134 A Department of Public Health. R. L. Owen, Washington, D. C.
135 The Rational Treatment of So-called Inoperable Uterine Cancer. W. B. Chase, Brooklyn.

### Atlanta Journal-Record of Medicine

*April*

136 End Results of Non-removal of the Appendix in 23 Abscess Cases. R. M. Harbin, Rome, Ga.
137 Stimulation During Anesthesia. W. A. Selman, Atlanta, Ga.
138 Aneurism. H. Ainsworth, Thomasville, Ga.
139 Empyema. W. D. Gaines, Lafayette, Ala.
140 Pellagra. D. N. Sage, Atlanta, Ga.
141 Eclampsia. O. L. Stephenson, Roanoke, Ala.
142 La Grippe. E. P. Green, Hickory Flat, Ala.
143 Increasing Frequency of the Use of Narcotic Drugs by Members of the Medical Profession and the Probable Reasons for it. W. C. Ashworth, Greensboro, N. C.

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## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### Lancet, London

*May 7*

1 Embryologic Problems in Relation to Medicine. P. Thompson.
2 *Itching Diseases of the Skin and their Treatment. J. L. Bunch.
3 The Practice of Wassermann's Reaction from the Quantitative Standpoint. B. Klein.
4 *Comparative Value of the Various Methods of Antisyphilitic Treatment. C. Gibbs.
5 Progressive Destruction of Teeth Sockets: Chronic General Periodontitis. J. F. Colyer.
6 The Bacillus Influenza and Symbiosis. R. W. Allen.
7 Removal Through the Mouth of a Shawl Pin Impacted in a Secondary Bronchus. S. Thomson.
8 Cerebellar Abscess and Acute Suppurative Labyrinthitis. J. Harper.
9 The Use of Solid Carbon Dioxid. E. R. Morton.

2. **Treatment of Itching.**—According to Bunch, internal treatment should begin by giving preparations of salicylic acid, salol, sodium salicylate, carbolic acid in pill form, arsenic and atropin, or pilocarpin (10 to 20 drops of a 1 per cent. solution). Greater success is usually obtained with sedatives, especially bromid of sodium in combination with cannabis indica, or tincture of aconite with tincture of gelsemium. In more severe cases where insomnia is a marked symptom, hypnotics are necessary. External treatment must, however, always be employed in addition to internal remedies, and one of the simplest and most effective applications is an evaporating lotion. Equal quantities of eau de Cologne and water supplied on lint, or lavender water dabbed on every few minutes, often afford great relief, especially if preceded by hot applications. Sponging with hot water, as hot as can be borne, with or without the addition of bicarbonate of soda, or a hot bath, a vapor or Turkish bath, causes dilatation of the capillaries of the skin, and a subsequent constriction of these vessels induces a more lasting cessation of itching. The addition to a hot bath of oatmeal is usually beneficial. Of cooling lotions the simplest is one containing 2 drams of liquor plumbi subacetatis to 1 ounce of lavender water and 7 ounces of distilled water. One containing hydrocyanic acid, which is very successful, is the following:

| | gm. or c.c. | | | |
|---|---|---|---|---|
| Dilute hydrocyanic acid | 1 | 5 | | ʒss |
| Spirit of rosemary | 30 | | or | ℥i |
| Glycerin | 16 | | | ℥ss |
| Water to | 300 | | | ℥x |

Carbolic acid made up in a strength of ʒi to ℥x of water with the addition of ℥ss glycerin and ℥ss eau de Cologne gives a useful lotion, and, if necessary, to any of these lotions, ʒii of cocain may be added to give greater anti-pruritic effect. Alkaline lotions, consisting of either ʒii bicarbonate of soda, ʒii carbonate of potash, or ʒi borax to ℥viii water are all useful for cases where large areas of skin are involved. The addition of a little menthol will increase the effect. Ichthyol, ʒss, sodium bicarbonate ʒiss, spirit of lavender ℥ss, water to ℥viii, is a lotion which often gives relief and may be used for weeks without harmful effects.

In pruritus genitalium, and especially pruritus vulvæ, hygienic and dietetic rules must be adhered to. In more usual cases of pruritus vulvæ, where there is a uterine or vaginal discharge, strict cleanliness must be enjoined, with plentiful use of soap and water and douches of 1 in 5,000 potassium permanganate or 1 in 5,000 perchlorid of mercury, or 1 in 1,000 zinc sulphate. After this a vaginal tampon must be inserted and the external parts covered with Lassar's paste containing 1 per cent. silver nitrate. An ichthyol ointment or paste may be substituted or an ointment containing 30 minims of chloroform to 2 ounces of lard, or the ordinary aconitine ointment. An ointment which often gives good results is chloral hydrate, menthol and camphor āā gr. 45, lanolin and vaselin āā ℥ss.

The more inveterate cases respond well to applications of a Paquelin cautery, to excision of kraurotic skin areas, or to turning up a flap of skin all around the vulva, and division of the afferent nerve fibers. Pruritus of the anus is usually accompanied by some secondary eczema, with the formation of rhagades and thickening of the skin. Ointments are best used at night, bathed off in the morning with olive oil, and the following powder applied: chloral hydrate, camphor āā gr. 40, starch ℥i. A 20 per cent. solution of ichthyol painted on frequently gives relief. Equal quantities of lime-water and black-wash make an excellent application. In the most obstinate cases a rapid application of the actual cautery to the most irritating areas often causes great amelioration of the symptoms. Application of the high frequency current with a glass electrode is occasionally successful, and cases frequently react well to two or three ½ pastille doses of *x*-rays at intervals of a week. A more permanent cure, and one to be recommended in those intense cases when life has become a misery, is that of surgical operation.

4. **Effects of Antisyphilitic Treatment.**—Gibbs and Bayley endeavored to find out by means of the Wassermann reaction the comparative value of various antisyphilitic drugs and methods of administration in 231 cases. Of 138 cases treated with mercurial pills, 66 had received under six months' treatment, and of these 62 gave a positive reaction (94 per cent.). After this period, however, the effect of mercury is clearly shown. Of 33 cases that had received from six months to a year's treatment, 19 were positive (57 per cent.) and 14 negative. Of 25 cases that had received 18 months' treatment, 10 were positive (40 per cent.) and 15 negative. Of 16 cases of inunction treatment all were positive. Of 15 cases treated with mercurial suppositories all were positive. Of 32 cases that had received under six months' pill treatment, 30 were positive with both doses of complement (1/10 and 1/5) (94 per cent.) and 2 were positive with the smaller dose, but showed some hemolysis with the large dose (6 per cent.). Of 11 cases that had received treatment for from six months to one year, 3 were positive with both amounts of complement, 6 were positive with the smaller amount, 2 showed hemolysis with both amounts of complement—i. e., 70 per cent. showed the effect of mercurial treatment.

Of 7 cases that had received 18 months' treatment, 1 was positive with both amounts of complement, 4 were positive with the smaller, but showed some hemolysis with the larger amount, and two showed hemolysis with both amounts of complement—i. e., 86 per cent. showed the effect of treatment. In other words, of the 17 cases which had received over 6 months' treatment only 3 showed hemolysis with the smaller amount of complement, whereas 14 showed hemolysis with the larger amount of complement—i. e., 83 per cent. showed influence of treatment. All those showing a positive result with the smaller amount of complement are active syphilitics.

Of 11 cases of treatment by mercurial inunction, all under three months' treatment, 2 were positive with both amounts of complement, and 9 were positive with the smaller amount, but showed some hemolysis with the larger amount; i. e., 82 per cent. showed effect of treatment, therefore, and this after only three months. Of 17 cases that had received 12 injections of calomel 11 were positive with both amounts of complement, and 6 were positive with the smaller, but showed some hemolysis with the larger amount; 35 per cent. therefore showed effect of treatment. Of 14 cases treated with suppositories for under 6 months, only 3 (21 per cent.) showed any effect of treatment.

### British Medical Journal, London

*May 7*

10 Practical Points in the Treatment of Clinical History of Early Syphilis. W. Coates.
11 *Surgical Treatment of Gastroptosis. F. Eve.
12 Principles of Treatment in Gastroptosis. R. Hutchison.
13 Cerebrospinal Rhinorrhea with Double Optic Atrophy. N. H. Pike.
14 Diagnostic Value of the Leucocytosis Occurring in Whooping Cough. T. A. Ashby.

15 Cellulitis of the Arm, Complicated with Pneumonia, Treated by Vaccine. W. O. Evans.
16 Acute Abdominal Infection in a Typhoid Carrier. T. H. Gardner.
17 The Knife and its Point. A. Z. C. Cressy.

11. **Surgical Treatment of Gastroptosis.**—Of 11 cases of gastropexy recently operated on by Eve, 2 patients were relieved of their symptoms while in the hospital. One patient was quite well 12 months after the operation, but must be excluded because calculi were removed from the common bile duct at the same time that gastropexy was performed, and Eve believes that the symptoms were probably largely due to cholelithiasis. Another patient became melancholic shortly after the operation, was sent to an asylum, and has since been lost sight of. Of the remaining 7 cases, 6 were completely cured; 3 of them reported themselves between 1 and 4 years after operation, and 3 between 3 and 9 months after operation. The remaining patient, operated on 13 years ago, was a neurasthenic, 32 years of age. She was quite well for some time after the operation, but returned to the hospital at the end of a year owing to occasional vomiting and return of pain; but her symptoms entirely subsided while she was in the hospital, and she was able to take ordinary food. Before the operation, the iodopin reaction was obtained in three hours, and 12 months after the operation in one hour and a half, indicating that the motility of the stomach had improved.

Seven patients were treated by gastrojejunostomy. In 3 of them there was dilatation of the stomach in addition to gastroptosis, and 2 of these had also hematemesis. In three other cases hematemesis was a conspicuous symptom. Three of the patients were definitely neurasthenics, but gastrojejunostomy was performed, because in one case there was distinct dilatation and in the two other, incessant vomiting with hematemesis. Of the 7 patients 4 were cured; of these 2 reported themselves 20 months and 7 years, respectively, after the operation, and 2 patients, 8 and 3 months, respectively. The three remaining patients were slightly improved. None of the patients with hematemesis had any recurrence. In fact, Eve has not yet seen recurrence of hematemesis after gastrojejunostomy. The stoma of the gastrojejunostomy probably acts as a safety valve and prevents the distention of the stomach by flatulence, which is one of the chief causes of the hemorrhage.

The two patients treated by Duret's method were improved at first, but ultimately relapsed more or less completely. In one of them gastropexy was subsequently performed with excellent results. Eve concludes that an operation on Beyea's plan, slightly modified, is indicated in the majority of cases of gastropexy which are not amenable to medical treatment. Gastrojejunostomy should be avoided, but may be necessary in certain cases of gastroptosis with dilatation and atony, and when hematemesis is present.

### Medical Press and Circular, London

*April 20*

18 Some Painful Surgical Conditions of the Feet. J. J. Clarke.
19 Diagnosis of Duodenal Ulcer. G. Herschell.
20 Modern Methods of Infant Feeding. N. P. Marsh.
21 Allosan in the Treatment of Gonorrhea. D. N. Cooper.

*April 27*

22 Abscess in the Anal and Rectal Region. J. P. L. Mummery.
23 The Difference Between Real and Ineffectual Antiseptics. J. Lucas Championniere.
24 The Place of Cesarean Section in the Treatment of Placenta Prævia. H. Jellett.
25 Phlyctenular Affections of the Eye, with Particular Reference to Pathogeny. S. Stephenson.

### Clinical Journal, London

*April 13*

26 Fundamental Truths in Surgery. C. B. Lockwood.
27 Panhysterectomy for Carcinoma of the Body of the Uterus, in Which an Infiltrated Portion of the Bladder was Removed. A. H. N. Lewers.
28 Cancer and the Treatment of the Disease. F. M. Sanwith.

*April 20*

29 Endosteal Sarcoma of the Tibia. H. J. Waring.
30 *Abdominal Surgery, Including Some Rare Forms of Intestinal Obstruction. H. Curtis.
31 Some Affections of the Eye-Muscles. A. H. Thompson.

*April 27*

32 Treatment of Colitis. H. P. Hawkins.
33 *Abdominal Surgery, Including Rare Forms of Intestinal Obstruction (continued). H. Curtis.
34 Myomectomy During Pregnancy. F. E. Taylor.

30. **Abdominal Surgery.**—The cases reported by Curtis are the following: 1. Penetrating wound of a hernial protrusion (self-inflicted); intestine and mesenteric vessels transfixed; intestine and mesentery sutured; death from hemorrhage, external and internal, and shock. 2. A large umbilical protrusion simulating a reducible hernia, found to be a trabeculated sac only, containing free ascitic fluid (cirrhosis of the liver); radical cure; recovery. 3. Tubercle of the extraperitoneal tissue of the anterior abdominal wall, associated with pleurisy and adhesive peritonitis (polyorrhomenitis, or polyserositis). 4. Volvulus of the small intestine, secondary to a hernia into the duodenal-jejunal fossa; one week's intestinal obstruction; reduction; cardiac failure; death. 5. Volvulus of the cecum and strangulation of the descending colon by a traction diverticulum, secondary to chronic peritonitis, causing chronic intestinal obstruction.

### Practitioner, London

*April*

35 The Pupil Symptoms in Thoracic Aneurism. W. Osler.
36 Four Cases of Aneurism. R. B. Ness and M. J. Stewart.
37 *Acute Pyelonephritis Due to *Bacillus Coli.* H. D. Rolleston.
38 Gastric Ulcer versus Gastrostaxis. G. A. Sutherland.
39 Prophylaxis of Breast Cancer. W. S. Handley.
40 Treatment cf Aural Sepsis with Antiseptic Vapor. W. Stuart-Low.
41 Gonorrhea in the Female: Its Diagnosis and Treatment. B. Whitehouse.
42 Preparation for and After Treatment of Gynecologic Celiotomies. A. J. Wallace.
43 Fissure of the Anus. F. C. Pybus.
44 Is the Acne Bacillus the Cause of Seborrheic Conditions of the Scalp? A. D. S. Cooke and H. Dold.
45 *Persistent Chronic Bronchitis in Children. J. Allan.

37. **Acute Pyelonephritis Due to Bacillus Coli.**—It is important, says Rolleston, to be on the lookout for infection of the urinary tract with *Bacillus coli*, because it may give rise to grave constitutional symptoms without any prominent local manifestations; this is particularly so in children, but it may also occur in adults. The *Bacillus coli* may gain a footing in the urinary tract in three ways: 1. Ascending infection, or the upward extension of the micro-organism from the urethra to the bladder, ureters, and pelvis of the kidney. This method of infection occurs in females, especially in early life, and has been explained by the shortness of the female urethra, and by its liability to be infected from the adjacent anus by fecal discharges, and by thread worms. 2. Descending infection, or infection due to the excretion of organisms from the blood into the tubules of the kidney. 3. Transparietal infection, or the passage of micro-organisms from the colon to the kidney, probably by means of the lymphatics. Vaccines made from *Bacillus coli* isolated from the patient's urine have been largely given, but opinion is not unanimous in their favor. Surgical treatment Rolleston regards as unnecessary, except (1) in the most severe cases in which there is suppuration spreading into the kidney substance; (2) in chronic cases in which a pyonephrosis has developed; (3) in secondary cases in which there is a calculus in the kidney.

45. **Chronic Bronchitis in Children.**—In the treatment of persistent chronic bronchitis the first point is that the causative factor must be determined and if possible remedied. Remove enlarged tonsils and adenoids. Mouth breathing in any case is a direct menace to the child's health, and in the tuberculous will tend to aggravate the constitutional condition. Nasal obstruction from whatever cause should be at once treated. As soon as possible after the operation the child should begin to carry out respiratory exercises, to reestablish breathing through the nose. The child's dietetic régime should be carefully investigated, and in necessary cases a suitable dietary should be drawn up. The fault may lie in habitual overfeeding or in wrong feeding. All cases will be benefited by a modified diet, and in cases secondary to chronic indigestion it should be strictly enforced. In general terms the reduction of the carbohydrate intake and the interdiction of sweet things are the important factors in modifying the diet.

Allan prescribes a diet similar to that advised by Dr. Robert Hutchinson in chronic dyspepsia in children. The following should be avoided: Starchy puddings, such as rice, sago, tapioca, arrowroot, and cornflour sweets, sweet cakes, sweet fruits, jam, honey, marmalade, potatoes, turnips, carrots, etc.

The diet should consist chiefly of stale bread, dry toast with butter or drippings, eggs in any form, beef, mutton, fish, chicken, bacon, tongue, green vegetables in moderation, custard, plain puddings, stewed prunes, figs, etc. The child should be trained to eat only at meal times and should not be given anything between meals. Tea, coffee and stimulants should be prohibited. In the absence of definite gastric symptoms, Allan relaxes the restrictions somewhat, allowing more carbohydrate food, and a little weak tea, but forbidding sweet things as far as possible. General hygienic measures are of primary importance. These children should be in the open air as much as possible. The rooms which they inhabit should have good ventilation, and the window in the sleeping apartment should be kept open night and day. The clothing should be of such material as to afford sufficient warmth without being too heavy. Outdoor sports, in the absence of any cardiac disability, are to be recommended. Cold sponging is invaluable. A change of residence is often beneficial. With regard to medicinal treatment, general tonics should be prescribed. The cough under certain circumstances may call for treatment, but it is often found that under this general tonic treatment, improvement as regards this symptom takes place.

### Journal of Laryngology, Rhinology and Otology, London

*April*

46 Report (1908) of the Ear and Throat Department of the Eye, Ear and Throat Infirmary, Edinburgh. W. G. Porter and J. M. Darling.
47 Acquired Deaf-Mutism Due to Congenital Syphilis. M. Yearsley.

### Annales de Gynécologie et d'Obstétrique, Paris

*April, XXXVII, No. 4, pp. 193-256*

48 Operative Treatment of Postoperative Abdominal Hernia. (Nouveau procédé d'opération de la hernie abdominale postopératoire.) V. Pitha.
49 Supravaginal Hysterectomy near Term without Emptying the Uterus. A. Couvelaire.
50 Clinical Study of 183 Cases of Hemorrhage from Placenta Prævia. (Doit-on recourir à l'opération césarienne pour traiter les hemorragies dues à l'insertion vicieuse du placenta?) J. Mouchotte.

### Annales de l'Institut Pasteur, Paris

*March, XXIV, No. 3, pp. 161-240*

51 The Microbe of Peripneumonia of Cattle. (Morphologie du microbe de la péripneumonie des bovidés.) J. Bordet. (Microbe de la péripneumonie.) Borrel, D. Beaumetz, Jeantet and Jouan.
52 Diastase Splitting Cellulose. (Recherches sur la Cellase.) G. Bertrand and M. Holderer.
53 Action of Certain Microbes on Tuberculin. (Etude de la nature de la tuberculine). Vaudremer.
54 Analyzing Action by Certain Acids on Alcoholic Fermentation. M. Rosenblatt and M. Rozenband.
55 Presence of a Flagellated Leptomonas in the Juice of Three Species of Euphorbia (Milkweed): "Flagellosis" in Plants. A. Lafont.
56 Treatment of Trypanosomiasis in Horses. (Traitement des trypanosomiases chez les chevaux par l'orpiment seul ou associé à l'émétique de potasse.) A. Thiroux and L. Teppaz.
57 Treatment of Surra in Camels. (Traitement du surra chez les dromadaires par l'orpiment seul ou associé à l'émétique ou à l'atoxyl.) A. Thiroux and L. Teppaz.

### Archives des Maladies du Cœur, Etc., Paris

*April, III, No. 4, pp. 209-272*

58 Paroxysmal Adams-Stokes Syndrome with Sclerosis of Bundle of His. (Syndrome de Stokes-Adams à crises paroxystiques avec rythme bicouplé dans un cas de double lésion aortique compliquée de double lésion mitrale et de rétrécissement tricuspidien. Sclérose du faisceau de His.) E. Barié and M. Cléret.
59 Sclerosis and Atheroma of Pulmonary Artery: Mechanical Factors. Giroux.
60 Comparative Research on Hemolytic Jaundice in New-Born Infants and Induced Hemolysis. (Etude anatomo-pathologique comparée de l'ictère hémolytique du nouveau-né et de l'hémolyse provoquée. Nature hémolytique de l'ictère post-chloroformique.) E. Leuret.

### Bulletin de l'Académie de Médecine, Paris

*April 26, LXXIV, No. 16, 357-368*

61 *Compulsory Isolation in Leprosy, Smallpox, etc. (A propos d'un cas de lèpre contagieuse. Réflexions sur l'isolement obligatoire de certains malades infectieux.) J. Courmont, M. Lannois and Dufourt.

61. **Contagious Leprosy.**—Courmont has a patient with leprosy whose nasal secretions swarm with lepra bacilli. The man ascribes the infection to cleaning a building in Colombia, South America, which had been used at one time for lepers but was then empty. A few months later symptoms of leprosy developed. He has been serving as a porter during the last two years in France, and Courmont discusses the problem of social hygiene presented by such a case, as there is no legal means of preventing his spreading the infection broadcast. The nose was the principal seat of the ulcerations. The throat also was involved. As the man is only 39, lives a wandering life and emits every day several grams of secretions swarming with bacilli, and is liable to acute exacerbations at certain intervals, he is certainly a peril to the public. Courmont believes the passage of some wandering leper of this kind may have been the origin of certain foci of leprosy in France. He urges modification of the law to enforce compulsory isolation of contagious individuals until their bacteriologic recovery. In the Scandinavian countries, he says, both rich and poor seek the hospitals, and this is the true solution of the question. He states that it is, from the social point of view, more important to isolate the contagious than the insane. Prophylaxis of scarlet fever, diphtheria, leprosy and smallpox requires compulsory isolation from the beginning of the disease to the end of the contagious period.

### Obstétrique, Paris

*April, III, N. S., No. 4, pp. 289-384*

62 Unusually Large Fetuses. (Considérations sur les gros fœtus.) P. Delmas and J. Delmas.
63 Pubiotomy in Five Cases. (A propos de cinq cas d'hébotomie.) E. Holländer.
64 Muscle and Ligament Apparatus of the Cervix. L. Devraigne and P. Descomps. Commenced in No. 3.
65 The Need and Utilization of Energy in Infants. (Le besoin d'énergie chez l'enfant.) P. Lassablière.

### Presse Médicale, Paris

*April 27, XVIII, No. 34, pp. 313-320*

66 Amputations in Light of Modern Progress. (Les amputations.) H. Hartmann.

*April 30, No. 35, pp. 321-328*

67 Staphylococcus Infection of the Bladder Following Carbuncle on the Neck. (Infection vésicale staphylococcique par migration de dehors en dedans.) T. Tuffier and A. Mauté.
68 *Behavior of Leucocytes with Cancer Extract: Leucodiagnosis. (Nouveau procédé de diagnostic du cancer.) H. Bénard and C. Gagneux.
69 Epigastric Hernia. C. Dujarier and J. Berger.

*May 4, No. 36, pp. 329-336*

70 *Toxicity of Echinococcus Cysts. Direct Toxicity and Anaphylaxis. L. Boidin and G. Laroche.

68. **Leucodiagnosis of Cancer.**—Achard, Bénard and Gagneux have demonstrated that the presence of certain cellular elements in the organism confers on the leucocytes the faculty of reacting to the products of these cells. This reaction is influenced by the normal or pathologic modifications occurring in the functioning of these cells. Their tests *in vitro* seem to show that this leucocyte reaction is specific to the pathogenic or normal substance circulating in the organism, thus revealing the physiologic or pathologic state connected with the intoxication, infection or functional disturbances in the organ in question. They have applied this method to various infections and diseases and in this article report the findings in 49 cases of cancer, all positive, and in 24 non-malignant cases, in which the reaction was always negative. The test is made with extract of macerated cancer tissue. Mixed with this extract the leucocytes from healthy persons seem to lose their phagocytic property, while leucocytes from persons with cancer are not affected by the extract. The phagocytic properties are tested with one drop of a yeast emulsion in test tubes containing the extract and a drop of blood from the patient.

70. **Toxicity of Echinococcus Disease.**—Boidin and Laroche call attention to the fact that the fluid from an echinococcus cyst is scarcely at all toxic for animals, and yet the absorption of a few drops during a clinical operation is liable to cause sudden and severe symptoms indicating serious intoxication. Chauffard explains this as the result of anaphylaxis, and experimental research is here reported which justifies this view. There is evidently a slow, chronic, toxic action going on all the time, as is revealed by biologic tests, fixation of complement and eosinophilia. Under the influence of this chronic intoxication the patient becomes sensitized, as it were, and the introduction of a new dose of the toxin, even a small one, is liable to induce shock due to anaphylaxis.

### Revue de Gynécologie, Paris

*April, XIV, No. 4, pp. 305-416*

71 *Microcystic Ovary. (L'ovaire à petits cystes.) E. Forgue and G. Massabuau. Commenced in No. 2.
72 *Ileocecal and Appendicular Tuberculosis. P. Alglave. Commenced in No. 2.

71, 72. See abstracts 68 and 69, page 1484, April 30, 1910.

### Semaine Médicale, Paris

*May 4, XXX, No. 18, pp. 205-216*

73 Scleroderma with Simple Goiter. M. Klippel.

### Archiv für Gynækologie, Berlin

*XC, No. 3, pp. 441-648. Last Indexed April 23, p. 1414*

74 Fat Droplets in the Muscle Cells in Chronic Metritis. (Auftreten von Fetttröpfchen in den Muskelzellen des Myometriums bei der sogenannten Metritis chronica.) F. Unterberger.
75 Respiratory Metabolism and Respiration During Pregnancy. (Respiratorischer Stoffwechsel und Athmung während der Gravidität.) L. Zuntz.
76 Comparative Research on Intraperitoneal and Extraperitoneal Infection. M. Schwab.
77 Experiences with 530 Cases of Contracted Pelvis at Zurich Maternity. (Geburtsverlauf und Therapie beim engen Becken, 1891-1909.) O. Metzler.
78 Etiologic Importance of the Leucocytes for Pregnancy Kidney and Eclampsia. (Aetiologische Bedeutung der weissen Blutkörperchen für die Schwangerschaftsniere und die Eklampsie.) A. Dienst.
79 Thirty-four Cases of Eclampsia at Urban Maternity. W. Schneider.
80 Colporrhaphy by Doubling the Vaginal Wall. (Kolporrhaphie durch Scheidenwandverdoppelung.) A. Rieck.
81 Relations Between Ovary and Hypophysis Cerebri. (Beziehungen zwischen Keimdrüsen und Hypophysis.) E. Mayer.
82 *Operative Treatment of Placenta Prævia. M. Henkel.

82. **Operative Treatment of Placenta Prævia.**—Henkel compares the experiences at various clinics with different technics. His conclusion is to the effect that abdominal Cesarean section is indicated for placenta prævia centralis whether the fetus at term is living or not. Earlier in the pregnancy the vaginal route is preferable, clamping the uterine vessels on both sides. With placenta prævia lateralis or marginalis either the inflatable bag or version can be applied. In a recent series of 26 cases of placenta prævia in which treatment was applied on these principles, only 2 of the patients died, while 6 patients and half of the children died in a preceding series of 30 cases in which the metreurynter had been exclusively used.

### Beiträge zur Klinik der Tuberkulose, Würzburg

*XVI, No. 2, pp. 71-182. Last indexed May 14, p. 1656*

83 Tuberculin in Treatment of Tuberculosis. (Einige Bemerkungen über die specifische Therapie der Tuberkulose.) K. Dluski.
84 Béraneck's Tuberculin in Treatment of Tuberculosis. (Anwendung des Beraneckschen Tuberkulins TB in der Tuberkulose.) K. Dluski.
85 Study of Symmetrically Conducted Râles. (Zur Kenntnis der symmetrisch fortgeleiteten Rasselgeräusche.) L. v. Muralt.
86 Spengler's I. K. in Treatment of Tuberculosis. K. Weihrauch.
87 Carbol-Fuchsin Iodin Stain for Structure of True Acid-Fast Bacteria. (Neue einfache Strukturfärbung für die echten Säurefesten, speziell für die Tuberkuloseerreger.) H. Kronberger.
88 Pathologic Anatomy of Artificially Induced Pneumothorax, Warnecke.

### Beiträge zur klinischen Chirurgie, Tübingen

*April, LXVI, No. 3, pp. 463-801*

89 *Fatality Following Momburg's Belt Constriction. (Ein Todesfall im Anschluss an Momburg'sche Blutleere.) J. Amberger.
90 Cystic Tumors in Tendons. (Ueber Sehnenganglien.) W. Bergemann.
91 Traumatic Hernias. F. Schlender.
92 Hernia into the Lesser Sac of the Omentum. (Die Hernien der Bursa omentalis mit abnormen Eintrittspforten. Die Transhæsio intestini.) E. D. Schumacher.
93 *Injuries of the Semilunar Fibrocartilage of the Knee. (Verletzungen der Kniegelenkszwischenknorpel und ihrer Verbindungen.) F. Kroiss.

89. **Fatality After Momburg Belt Constriction.**—The patient in the case reported was an aged and infirm man who had been crushed between a wagon and a stone wall, the contusion being in the right inguinal region. Two hours after the accident signs of laceration of the femoral artery compelled operation and the rubber tubing was wound around the waist to prevent further hemorrhage, according to the Momburg technic. As the tubing was unwound afterward the patient collapsed. Autopsy disclosed stasis hemorrhages in the pleura and edema in the lungs and a little bloody fluid in the pericardium. These evidences of severe congestion in the upper part of the body Amberger ascribes to the action of the constricting tubing in this particularly decrepit patient.

93. **Injuries of the Meniscus and Their Treatment.**—Kroiss reports from the Innsbruck clinic in charge of Schloffer 32 cases of this kind and reviews 214 from the literature, giving a summary of each, with the special treatment and the ultimate outcome so far as known. Removal of the meniscus gave good results in 82 per cent. of the cases, while a perfect result was obtained in 92 per cent. of the cases in which the meniscus was merely sutured.

### Berliner klinische Wochenschrift

*April 18, XLVII, No. 16, pp. 709-756*

94 Prophylaxis and Treatment of Caisson-Disease. (Pressluftererkrankungen.) J. Plesch.
95 Radium Emanations and Gout. H. Bechhold and I. Ziegler.
96 Aortic Insufficiency and the Wassermann Reaction. R Krefting.
97 *Prelatent Stage of Pulmonary Tuberculosis: Tuberculosoid. (Ueber Lungentuberkulosoid.) E. Neisser and H. Bräuning.
98 *Loading Tests of the Stomach. (Belastungsproben des Magens.) W. Bloch.
99 Functions of the Hypophysis and Action of Experimental Injection of Its Extract. G. Franchini. Commenced in No. 15.
100 Relations Between Appendicitis and Pyelitis. E. Rosenkranz.
101 Suction Apparatus for Keeping Field of Operation Clear of Blood During Operations on the Skull. (Versuche über Blutstillung bei Gehirnoperationen.) E. Unger and M. Bettmann.
102 Advantages of Vein or Artery Wall for Plastic Operation on the Dura. (Duraplastik.) E. Unger and M. Bettmann.
103 Application of Electric Vibrations—Forest's Needle—for Operative Purposes. (Anwendung der ungedämpften elektrischen Schwingungen zu operativen Zwecken.) M. Cohn.
105 "Enlarged Suicide:" (Parent Killing Self and Children.) (Der Familienmord und die freie Willensbestimmung.) H. Marx.

97. **Pulmonary Tuberculosoid.**—Neisser and Bräuning have coined this term to express a common condition in which the patients present subjective signs of pulmonary tuberculosis and some susceptibility to tuberculin, unstable temperature but no fever, and tenderness in the region of the bronchial glands, but all these signs gradually subside and the patients remain constantly well. In the 1,900 persons who have passed through the tuberculosis observation station at Breslau in the last ten years, 300 presented this tuberculosoid condition, and examination from 4 to 10 years later has shown that the condition is the result of tuberculous infection in a person who is not predisposed to the disease and is thus able to resist general infection. The process remains small and circumscribed, and either heals or passes into a latent phase. If he dies from some intercurrent disease, the findings are those which Naegeli has described. This prelatent stage of pulmonary tuberculosis may itself become chronic, the patients being then classed as anemic or pseudoanemic by their ailing but never really sick state, but their susceptibility to tuberculin and the tenderness of the bronchial glands reveal that they are chronic tuberculosoids. The primary focus is not able to induce actual pulmonary tuberculosis but still keeps its foothold. The importance of this conception is that in these cases the patients did not take any treatment or merely a very insignificant one. If they had been given a course of treatment the recovery or passage into the latent phase would have been ascribed to the treatment. In the spontaneously recovering cases the observer might have been tempted to doubt his diagnosis of tuberculosis. Among 90 tuberculosoids reexamined after several years, 57 were cured or in a latent phase, and in 28 the condition had become chronic although better than at the first examination. Only 2 out of the total 300 tuberculosoids have died, and both succumbed to an intercurrent affection. In conclusion Neisser and Bräuning call attention to the peculiar liability of certain occupations to develop this tuberculosoid condition; it was encountered in 38 per cent. of 269 cabinet makers and locksmiths; in 32 per cent. of 68 painters and printers; in 70 per cent. of 47 girls employed in stores, but only in 3.7 per cent. of 325 housemaids and in 2 per cent. of 179 sailors, gardeners or roofers, or men otherwise employed out of doors.

98. **Loading Test of the Stomach.**—Bloch has the patient take a suspension of bismuth and he is then radiographed. He then eats an appetizing meal of beefsteak and potatoes, eating as much and as fast as he can, and is then radiographed anew at intervals. The normal stomach under these conditions

enlarges evenly, spreading wider, but the pathologic stomach is dragged down by the weight of the ingesta and the latter accumulate at the bottom, which is the only part that spreads out wide.

### Centralblatt für die Grenzgebiete der Med. und Chir., Jena

*April 4, XIII, No. 5, pp. 161-208*

106 *Leukemic and Pseudoleukemic Disease of the Upper Air Passages. (Die leukämische und pseudoleukämische Erkrankung der oberen Luftwege.) R. Imhofer. Commenced in No. 3.
107 *Traumatic Pneumonia. L. Müller. Commenced in No. 3.

106. **Disturbances in the Upper Air Passages with Leukemia and Pseudoleukemia.**—Imhofer discusses the manifestations in the throat and nose of a tendency to leukemia and pseudoleukemia. With leukemia the mouth and throat may present a diffuse catarrhal affection, or the lymphatic tissue, follicles and tonsils may alone be involved, or the lesions may be of an ulcerative or gangrenous nature. In differentiation great stress should be laid on a striking and rapidly increasing enlargement of the tonsils—they may become four or five times the normal size; small suggillations are also characteristic. When such are discovered the blood should always be examined under the microscope. Hanszel has reported a case of acute leukemia in which a deep ulcer developed in the tonsil, involving the uvula, and staphylococci were cultivated from the lesion. The connection with an angina is particularly evident in a case reported by Hanszel in which a young man had a severe sore throat. followed by fatigue and emaciation after a fall from a horse. Four weeks later the angina recurred with ulceration in the tonsil, enlargement of the glands throughout and death in four weeks from acute leukemia. Kubler found a yellowish deposit on gums and tonsils in a previously healthy soldier, and their leukemic nature is evident, as a tendency to hemorrhages at various points and multiple glandular tumors were also observed. In 4 cases on record operations for removal of adenoid vegetations or enlarged tonsils in leukemic children proved fatal. In one case the child died suddenly several hours after an extensive postoperative hemorrhage. In the other cases 2, 3 or 4 weeks elapsed after the operation before the child succumbed to increasing weakness and aggravation of the signs of leukemia, suggesting that the operation had transformed a chronic leukemic process into an acute form. The danger of hemorrhage is thus not the main peril in operations on the upper air passages in leukemia; the possibility of rousing a mild chronic process to severe acute manifestations must be considered. In one of the above cases this transformation did not occur until after a second operation for recurrence of the leukemic enlarged tonsils and adenoid growths. Consultation with the little patient's family physician is extremely important, if practicable, before attempting any operation on adenoids or enlarged tonsils. On the slightest suspicion of leukemia the most careful examination should be made, and only when leukemia can be certainly excluded should the operation be performed except for vital indications. Especially suspicious is the simultaneous enlargement of all the tonsils and of the regional glands. although such may be encountered with tuberculosis. Rapid recurrence after operation is also suspicious of leukemia; also when the swollen parts are redder than with tuberculous lesions and the tumor seems harder; edema is not observed as in tuberculous lesions in the throat. The blood findings are the main reliance for differentiation. Lymphosarcoma is distinguished by its progressive encroachments in the vicinity. Treatment of leukemic affections of the nose and throat can be only symptomatic and that for leukemia in general and this has little to show to its credit. Tracheotomy is indicated as a last resort but did not avert the fatality in the cases on record. In one there was necrosis of the fascia and fatal bronchopneumonia; pressure necrosis and gangrenous destruction are liable also after intubation. The same conclusions apply to pseudoleukemia and to lymphosarcoma except that the course of the latter is more prolonged as a rule. and patients with lymphosarcoma stand operations much better than those with leukemia or Hodgkin's disease. Beale, Storck and others have reported long survivals after removal of the lymphosarcoma and Abercrombie performed three operations for recurrence, the patient finally succumbing to a complicating erysipelas. Lymphoid and myeloid chloromas seem to stand midway between leukemia and lymphosarcoma, but they do not involve adjoining tissues and there is no enlargement of the spleen.

107. **Traumatic Pneumonia.**—Müller reviews 127 articles that have been published on the subject of pneumonia following external violence or inhalation of dust or gas or aspiration of a foreign body. He summarizes the various cases reported, emphasizing the special features of each. The list includes 21 articles published since 1900, among them J. J. King's article in THE JOURNAL, March 21, 1908, page 939. Litten reported 4.4 per cent. of traumatic cases in 320 cases of pneumonia in his experience during 6 years. The acute pneumonia may develop into a chronic phase, but Müller could find very few records of traumatic pneumonia commencing in an insidious chronic form. Hadlich's experimental research has shown that a chronic florid inflammatory process may persist in the lung unsuspected long after the healing of an experimental stab wound not far away. In the few clinical cases of chronic traumatic pneumonia on record a tuberculous element seems probable in some. Partsch states that the numerous small foci of extravasated blood from a contusion of the lung may induce a syndrome suggesting insidious phthisis but that complete recovery is the rule. Stern is convinced that chronic non-tuberculous inflammation of the lung occurs more frequently than is generally recognized. In a case in which pneumonia developed two days after a boy had been hit on the back by his teacher, the court refused to admit that the blows on the back, the head bent forward, could have been responsible for the rapid development of acute pneumonia. In Weigel's case, also, no forensic connection was admitted between a slight injury of the head in 1893 and a fatal pneumonia complicated with meningitis in 1906. In another forensic case a young man developed fatal pneumonia two days after a jar from another swimmer in a swimming tank. He became unconscious from the impact but was rescued in about four minutes. The verdict of traumatic pneumonia relieved the swimming-master of responsibility; the autopsy findings showed that no water had been aspirated.

### Correspondenz-Blatt für Schweizer Aerzte, Basel

*April 20, XL, No. 12, pp. 353-400*

108 *Treatment of Contracture in Hemophilics. (Zur Behandlung des kontrakten Blutergelenkes.) C. Hübscher.
109 *Traumatic Tabes. P. Ladame.
110 *Predisposition to Disease with Atmospheric and Similar Conditions. (Disposition und Gezeitenamplitude.) H. Brunner.

*May 1, No. 13, pp. 401-432*

111 Appendicitis and Gynecologic Disease. (Appendicitis und Frauenkrankheiten.) A. Widmer.
112 A Century of Vital Statistics in a Swiss Commune. (Hundert Jahre Geburts- und Totenstatistik der Kirchgemeinde Ermatingen.) O. Nægeli.

108. **Treatment of Contractures in Hemophilics.**—Hübscher describes the technic with which he was able to correct the contractures in the knees of a boy of 15, a typical bleeder, from a family of bleeders. The process in the knees was the typical hemophilic joint process, and there was a fistula in the arm from a hematoma in the biceps, which bled a little at times. Before attempting treatment, Hübscher injected 10 c.c. of normal horse serum into the region of the pectoralis, and within two days the fistula ceased to bleed. The contracture was corrected with a plaster cast from hip to toes, cut out at the knee, with elastic traction on the leg by means of rubber tubing fastened to a projecting iron frame. The device is illustrated. The boy was not kept in bed and by the end of the month he was able to use his legs. The last trace of contracture was then reduced under ether after another injection of horse serum; there was no bleeding at any time. The family physician was instructed to keep up the prophylactic injections of serum every six weeks or two months afterward for a time. The influence of the serum was striking in this case; under its protection measures were successfully undertaken even the attempt at which previously had brought on menacing hemorrhages. He used the serum less than two hours after it had been taken from the horse. By this means he believes that it will be possible to avoid fatalities such as those König has reported in which boys of 13 and 18 succumbed to hemorrhage after an operation on the knee for supposed tuberculosis. A cousin of Hübscher's patient met

with this same fate. Tilmann also lost a patient from this cause after an operation on a hemophilic joint which had been mistaken for a lipoma. Fröhlich mentions the case of a soldier who was operated on for a supposed abscess in the hip joint, the fifth process of the kind, each time the fever and hard edema suggesting an acute osteomyelitic process. The patient bled to death thirty-six hours after the operation. When a process of this kind, generally bilateral and recurring at intervals, develops in a youth of a pale aspect, and especially if Roentgen-ray examination shows the unmistakable contracted bleeder joint, no operation should be attempted if avoidable; but if required, the patient should be kept under the prophylactic influence of injections of normal horse or human serum. In dubious cases, he remarks, it is much safer to make the injections sometimes when they are not needed rather than to omit them in the true bleeder cases.

109. **Traumatic Tabes.**—Ladame's patient was a previously healthy man of 52 who developed symptoms of incomplete tabes a few months after a severe railroad accident followed by a traumatic neurosis, the symptoms of which persisted for years with varying intensity. Although everything in this case seemed to speak for traumatic tabes and there was nothing to suggest syphilis in the family history, yet Ladame is inclined to believe that an ignored syphilis was at the root of the nervous affection, as the patient had had a brief mild gonorrhea in youth. No tests were made for the Wassermann reaction; the Argyll-Robertson sign was pronounced.

110. **Tides and Predisposition to Disease.**—Brunner has been keeping records for thirty years in regard to the incidence of disease in connection with the reduction in the atmospheric pressure which accompanies the periods during which the attraction of the moon is supplemented by that of the sun increasing the effect of gravitation. This tide in atmospheric pressure is manifested by the changes in the weather and possibly also by changes in the circulation of the sap in plants, the vitality of pathogenic germs and the blood pressure in man. The maximal effect is therefore experienced when the moon is nearest the earth, and especially at the time of the great spring tides. He gives a table of the date of onset of the first symptoms of pneumonia in all cases of pneumonia in his charge during the last 2 years, a total of 25 cases. In 6 cases the onset was within 2 or 3 days of each other in different villages, and in 21 it coincided with the new or full moon, only 4 occurring at the first or last quarter of the moon. He thinks that the influence of the maximal effect of the attraction of the moon is evident also in the commencement of labor, the incidence of epileptic seizures, crises in disease and death.

### Deutsche medizinische Wochenschrift, Berlin

*April 28, XXXVI, No. 17, pp. 785-824*

113 *Banti's Disease. (Zur Bantischen Krankheit.) Momm.
114 *Non-Parasitic Chyluria. J. Hnatek.
115 *Pus Flooding Gastrointestinal Tract from Emphysema in the Nasal Sinuses. (Eiterüberschwemmung des Magendarmkanals aus Nasennebenhöhlenempyemen, nebst einer Bemerkung über die Bedeutung des Flagellatenbefundes im Magen.) E. Zabel.
116 Formula for Estimating Calories in Infant Feeding. (Die Nahrungseinheit als einfache Grundlage der kalorische Diätberechnung für Säuglinge.) G. Heimann.

113. **Banti's Disease.**—Momm reports a typical case, the history showing some connection with an accident, the patient having been run over by a bicycle. Apparently complete recovery followed removal of the spleen four years after the first symptoms, and the patient feels entirely well at present, six months after the operation. The case shows that ascites may occur quite early in the disease; it is probably the result of abnormal composition of the blood and obstruction of the lymphatics in consequence of swelling of the mesenteric and retroperitoneal glands.

114. **Non-parasitic Chyluria.**—In Hnatek's case, a previously healthy woman of 33 suddenly noticed milky discoloration of the urine and the passage of villus-like clots, with pains similar to stone colic. The night urine contains 7.73 c.c. albumin to the liter; the day urine is normal unless the patient reclines, when it becomes chylous. Catheterization of the ureters shows that the left kidney eliminates four times as much fat as the right, suggesting new problems, as the amount of urine is about the same from each.

115. **Gastrointestinal Disturbances from Swallowing Pus from Sinusitis.**—Zabel has encountered a number of cases of subjective gastric disturbances for which a sinusitis was responsible. The disagreeable sensations were most marked in the morning. Bad taste in the mouth, gases in the stomach, lack of appetite and loss in weight, and altered stomach content is suggestive of chronic catarrh. His experience warns that in all cases of gastric disturbance it is wise to seek for the presence of pus in the nasal apparatus or throat, in the teeth or from a cavity in the lungs. He found flagellates numerous in the stomach content in 2 cases described in detail; the patients were boys of 9 and 15 and the microscope showed numerous scraps of mucosa in the stomach content swarming with the parasites, and with traces of punctate hemorrhages. The disturbances in the intestines from this cause may be so serious as to suggest appendectomy.

### Deutsche Zeitschrift für Chirurgie, Leipsic

*March, CIV, Nos. 3-4, pp. 209-423*

117 *Functional Results of Resection of the Elbow with Interposition of a Muscle-Flap According to Helferich. H. Reiner.
118 Case of Ligation of the Innominate Artery for Arteriovenous Aneurism of Common Carotid. P. Herzen.
119 Firearm Wound of Heart without Perforation of the Pericardium. (Fall von Perforation des Herzens durch Schussverletzung ohne Durchschlagung des Herzbeutels, zugleich ein Beitrag zur Kasuistik der Verletzungen des rechten Herzohres.) H. Luxembourg.
120 Chemical, Histochemical and Cytologic Research on Tumors of Type of Suprarenal Cortex. (Tumoren vom Typus der Nebennierenrinde.) C. Ciaccio.
121 *Influence of Balsam of Peru on Bacteria and its Therapeutic Value in Treatment of Wounds. J. Sickmann.
122 Etiology of Polymyositis. J. Mayesima.
123 Cancroid in Exstrophic Bladder. A. Wagner.
124 Production and Technic for Use of Compressed Air in Hospitals. (Der Luftkompressor im Krankenhaus.) F. Kuhn.
125 Production of Sterile Catgut. III. (Katgut, steril vom Schlachttier vor dem Drehen mit Jod oder Silber behandelt.) F. Kuhn.
126 *Removal of Bladder for Carcinoma. (Zur totalen Blasenexstirpation bei Carcinom.) N. N. Petrow.
127 Technic for After-Treatment of Suture of the Patella. (Patellarnaht.) E. W. Baum.
128 Injury of Recurrent Nerve During Operations for Goiter. (Rekurrensläsionen bei Strumaoperationen.) F. L. Dumont.
129 *Organotherapy of Acute Postoperative Tetany. O. L. Schneider.
130 Multiple Echinococcus of the Abdominal Cavity. F. Weber.

117. **Resection of Elbow with Interposition of Muscle Flap.**—Reiner reviews the outcome in 23 cases of injury or disease of the elbow requiring resection and treated by interposition of a flap of muscle tissue. The arm was left fairly movable in 82.6 per cent. of the cases. The results were invariably good in the tuberculous cases, the local process healing, and in all the results far surpassed those attainable with other technics, he is convinced.

121. **Balsam of Peru in Treatment of Wounds.**—Sickmann's experience with balsam of Peru and his experimental studies have confirmed, he says, the great advantages of this method of treating recent accidental wounds. The wound is covered with a compress while the vicinity is scrubbed, shaved or washed with alcohol and benzine and painted with tincture of iodin. Then the compress is removed, the minor bleeding arrested, the superficial wound secretions mopped up and, without any further preparation or sterilization, the balsam is poured into the wound until it overflows, after which a dry sterile dressing is applied. The balsam is so heavy that it sinks down into the remotest crevices. The dressing is not changed for a week unless fever or other signs of infection develop. This is by no means an ideal method of treatment, he remarks, but the results are remarkably good in comparison with the simplicity of the method. Especially for the first dressing of the wound, which generally decides the fate of the lesion and possibly of the patient, this technic renders inestimable service. It is also extremely useful in old torpid processes to stimulate them to more active repair. He often uses the balsam. instead of tamponing, to fill up and thus close the holes left by drains in operations on the joints. No inconveniences were ever observed from the use of the balsam; it seems to have a slow but unmistakable antiseptic action on the germs commonly encountered in recent wounds, while its physical and chemical properties oppose putrefaction. It has, further, a positive chemotactic action which enhances the local resistance.

126. **Removal of Bladder for Carcinoma.**—Petrow reports a case in which the patient was in good condition 9 months after total removal of the bladder for malignant disease. In a second case the disease was far advanced and the heart dilated, and the patient succumbed during the preliminary operation. He reviews 64 cases he has found in the literature, the immediate mortality having been 50 per cent., 11 others succumbing in from 2 to 5 years, while 13 others are still living from a month to 16 years since the operation. The ureters were implanted in the intestine in 11 cases, including 6 in which the patients are still living after from 4 to 18 months, while the survival was from 3 months to over 5 years in the 5 other cases. In the 3 cases in which the ureters were implanted in the vagina, the patients are still living, after 3 months, 8 months and 16 years. In 9 cases the ureters were implanted in the skin in the lumbar region front or back, and 5 of the patients died in from 2 to 13 months; the others are still living after 4 months in 1 case and 2 years in the 3 others. The communication issues from Oppel's surgical service at St. Petersburg. Petrow ádvocates operating on the ureters first, not removing the bladder until two weeks after they have been implanted at the desired point. He recommends the intestine for this. The laparotomy for the purpose allows oversight of conditions before the final operation. The outcome depends on the state of the kidneys, as a rule; if they are diseased, as in his second case, there is not much hope of a successful termination.

129. **Effectual Parathyroid Treatment of Parathyreopriva Tetany.**—The thyroid gland was the seat of a sarcoma in the case reported by Schneider. The cancer involved also the parathyroids, and removal of the growth was followed by severe tetany. Fresh parathyroid substance from the horse, dried and powdered, was given, and he says that a specific favorable effect on the tetany was unmistakable. The patient was a woman of 40; she succumbed before the year was out to the progress of her malignant disease.

### Fortschritte der Medizin, Leipsic

*April 7, XXVIII, No. 14, pp. 417-448*

131 Present Status of Differential Diagnosis of Syphilitic and Metasyphilitic Brain Disease. (Heutiger Stand der Diagnostik und Differentialdiagnostik der luetischen und metaluetischen Gehirnerkrankungen.) A. Fauser. Concluded in No. 16.
132 Treatment of Chancroid and its Complications. (Behandlung des Ulcus molle.) G. Hahn.

*April 14, No. 15, pp. 449-480*

133 Opsonin and Vaccine Therapy. H. Reiter.

*April 21, No. 16, pp. 481-512*

134 Psychic Hermaphroditism in Daily Life and Especially as a Basis of Neuroses. (Zur Dynamik und Therapie der Neurosen.) A. Adler.

### Medizinische Klinik, Berlin

*May 1, VI, No. 18, pp. 691-730*

135 *Artificial Dilatation of Cervix Uteri. (Uber Methoden zur künstlichen Eröffnung der Gebärmutter unter der Geburt und zum Zwecke der Geburtseinleitung.) W. Hannes.
136 Nature of Jaundice and its Influence on the Metabolism. (Wesen des Ikterus und sein Einfluss auf den Stoffwechsel.) O. Gross.
137 Lordotic Albuminuria. R. Fischl.
138 Corset for Correction of Lordotie Albuminuria. T. Wohrizek.
139 *Thyroid Treatment in Epilepsy. (Schilddrüse und Epilepsie.) A. Siegmund.
140 *Resistances in the Circulatory System and their Importance in General Practice. (Ueber Widerstände im Zirkulationssystem und ihre Rolle in der Praxis.) L. Sperling.
141 Symptomatology of Senile Polyneuritis. S. Auerbach.
142 Roentgen-Ray Examination of the Heart in Carbonated Bath. (Röntgenuntersuchungen des Herzens im Kohlensäurebad.) A. Selig.
143 Altitude and Forest Climate. (Ueber Höhenklima und Waldklima.) J. Schubert.

135. **Artificial Dilatation of the Uterine Cervix.**—Hannes protests against instrumental dilatation, as it merely stretches the tissues without inducing physiologic dilatation; the latter can be realized with the elastic inflatable bag. This simulates the natural process of stimulation of the cervical musculature to rhythmic contraction by the gentle, gradual pressure of the ovum from above on the cervix. If it is impossible to wait for this natural process, he advises slitting the cervix—vaginal Cesarean section. The incision is under control, which is never the case with the tears resulting from instrumental dilatation

139. **Epilepsy and the Thyroid.**—In the case reported by Siegmund, certain evidences of thyroid insufficiency accompanying the epilepsy suggested possible benefit from thyroid treatment which was systematically applied. The patient was a girl, 9 years old, and the constant improvement has confirmed the assumption that defective thyroid functioning was an important factor in the epilepsy. The child has been under observation for two years.

140. **Obstacles to Normal Circulation and their Importance in Pathogenesis.**—Sperling comments on the interference with the circulation that may be entailed by distention of the stomach or intestines and weakening of the heart action and nerve force from chronic overexertion. In a case described a girl nearly 10 years old had attacks of nervous symptoms, including tonic-clonic spasms, which various courses of treatment by eminent neurologists failed to relieve. Sperling differentiated the trouble as the result of interference with the circulation from overdistention of the gastrointestinal tract. During the intervals between the attacks the skin was pale, the extremities cold, the pulse rapid and the abdomen prominent. The stomach and intestine were distended to two or three times the normal size and this interfered so much with the circulation in the trunk that a reflex nervous syndrome had developed. His assumption as to the nature of the trouble was confirmed by the complete recovery from the nervous troubles as soon as conditions in the gastrointestinal tract had been restored to normal.

### Münchener medizinische Wochenschrift

*April 26, LVII, No. 17, pp. 889-944*

144 Principles for Treatment of Cancer. (Die im Samariterhause Heidelberg geübten Methoden der Krebsbehandlung.) V. Czerny.
145 *Fulguration in Gynecology. (Was leistet die Fulguration im Dienste der Gynäkologie?) A. Richter.
146 *Cancer of the Esophagus. (Die chirurgische Behandlung des Speiseröhrenkrebses, ihr gegenwärtiger Stand und ihre Aussichten für die Sukunft.) M. Tiegel.
147 *Early Diagnosis of Multiple Sclerosis. (Zur Frühdiagnose der multiplen Sklerose—sensibler Armtypus.) R. Finkelnburg.
148 Increased Reaction in Gravid Animals to Subcutaneous Tissue Injections. (Ueber gesteigerte Reaktionsfähigkeit gravider Tiere gegen subkutane Gewebsinjektionen.) F. Schenk.
149 Influence of Mercury on the Wassermann Reaction. (In welcher Weise wirkt das Quecksilber bei der antiluetischen Behandlung auf den Ausfall der Seroreaktion.) A. Brauer.
150 Treatment of Tuberculous Hemoptysis. (Altes und Neues zur Behandlung der tuberkulösen Hämoptoe.) A. Heisler and E. Tomor.

145. **Fulguration in Treatment of Uterine Cancer.**—Richter reports the experiences with various measures in 45 cases at the gynecologic clinic at Dresden in charge of Leopold. Fulguration was systematically applied in all and the palliative effect was very good in some cases, the pains, bleeding and ichor being promptly arrested although recurring later. As fulguration can be applied without general anesthesia, it has this advantage over cauterization. Another advantage is that the tissues are so modified by the fulguration that a cancer which at first seems entirely inoperable may be found to be within the limits, as what was supposed to be carcinomatous involvement of the surrounding tissues may prove to be merely serous infiltration. The best results were attained when the fulguration was supplemented by acetone treatment; the latter alone is also very useful. This is the application of crude acetone, poured into the vagina through a glass speculum until it fills half the speculum. It is left here for 10 minutes or longer and is then swabbed out and a glycerin tampon introduced into the vagina. This procedure is repeated from two to four times a month; the acetone hardens the tissues so that bleeding and ichorous secretions are checked, and it has a most beneficial palliative action. The benefit was striking in one case of inoperable cancer treated with the acetone alone. The patient has had about 80 of these applications during twenty-one months and looks and feels well except for pain in the pelvis, although the growth is so extensive that it almost fills the vagina and compresses the rectum. Another patient comes regularly twice a month from a long distance, requiring over a four-hour railroad journey, for her acetone treatment. The number of cases of uterine cancer in which fulguration has been used is not over 80 to date, he says. He knows of no other means by which patients can so easily

be relieved for a longer or shorter time. Although the fulguration has no permanent effect, it can be repeated at need. It was applied about four times in each of the cases reported in detail.

146. **Cancer of the Esophagus.**—Tiegel thinks that the prospects for recovery are not bad after radical operations on cancer low down in the esophagus. He advocates opening the abdomen and mobilizing the growth from below as a preliminary to the operation proper. He knows of only 2 cases in which the entire operation was done at one sitting. Exploratory thoracotomy is well borne by these patients. In one case the stomach and esophagus were readily reunited after resection of the sound esophagus for 6 cm. He regards tumors high in the esophagus as still beyond the reach of the surgeon.

147. **Early Diagnosis of Multiple Sclerosis.**—Finkelnburg calls attention to certain sensory disturbances which permit the diagnosis of multiple sclerosis at an earlier stage than is otherwise possible, reporting 3 typical examples and a further group of cases in which the ultimate outcome confirmed the presumptive diagnosis based on the change in deep sensibility in the arms while the superficial is still intact, accompanied by an inability to recognize objects by the sense of touch. These sensory disturbances subside to recur again after a longer or shorter interval; not until long afterward does the clinical picture of multiple sclerosis become unmistakable. In one of the cases reported a man of 26 without trauma or preceding infectious disease noticed the progressive development of sensory disturbances in the right arm, shoulder and side of the chest, as if the arm were "asleep," with occasionally severe pain and incapacity to use the arm in drawing, which was his occupation. After being fully incapacitated for a time, complete use of the hand was gradually regained and retained for 6 years when the symptoms returned, but affecting more the legs and vision, and soon progressed to unmistakable multiple sclerosis. In another case a young man presented a transient paralysis of the left arm, aphasia, dysarthria, and disturbances in the deep sensibility of the right hand. No signs of pressure on the brain were observed at any time but the affection rapidly progressed, with spastic paresis, anarthria, bladder disturbances and death in less than six weeks. The diagnosis wavered between multiple sclerosis and multiple neoplasms, but autopsy six weeks after the onset of the severe phase revealed multiple sclerosis. In 2 other cases the sensory disturbances were restricted to the arms—merely isolated changes in the deep sensibility of the right or left hand, accompanied by paresthesias. These patients were men of 19 and 22. No other nervous disturbances were evident except a tendency to slight paresis in the limb involved and to slight nystagmus or suggestion of ataxia in the arm. In both cases the symptoms gradually subsided completely and the patients still feel well 4 and 2 years afterward, but there are signs in both of oncoming multiple sclerosis. In 8 other cases of fully developed multiple sclerosis he was able to ascertain a history of sensory disturbances like the above before the development of the actual trouble. The interval was as long as 10 years in some of the cases. Especially characteristic is the isolated disturbance in the deep sensibility and the course of development in its successive progression and complete decline.

### Virchows Archiv, Berlin

*April, CC, No. 1, pp. 1-192*

151 The Two Hundredth Volume of the *Archiv.* (Rückblicke.) J. Orth.
152 Waxy Transformation of Muscle Fibers. (Die Zerreissungen der Muskulatur, die wachsartige Umwandlung überlebender Muskelfasern, die bei Massenligaturen entstehenden wachsartigen Umwandlungen derselben und ihre Beziehungen zu den bei Abdominaltyphus beobachteten Veränderungen.) R. Thoma.
153 Morphologic Research on Muscle Glycogen and Method of Fixation for it. P. Neukirch.
154 Peculiar Cell Forms in Dental Granulomas. (Eigentümliche Zellformen bei Zahngranulomen.) H. Dreuw and C. Rumpel.
155 Experimental Research on Formation of Bone from Displaced Periosteum Osteoblasts. (Zur Frage der Knochenbildung aus verlagerten Periostosteoblasten.) T. Tsunoda.
156 Multiple Bone Peritheliomas with Lymphosarcoma of the Lymph Glands. (Knochen-Peritheliome mit Lymphosarkom der Lymphdrüsen.) A. Bevacqua.
157 *Tumors in the Pineal Gland. (Ueber Geschwülste des Corpus pineale.) A. M. Pappenheimer.
158 Endothelioma of the Dura. H. Ribbert.
159 Case of Bilateral Cystic Suprarenals. (Fall doppelseitiger Nebennierenzysten.) B. de Vecchi.
160 Behavior of Appendix Vermiformis in Intestinal Catarrh, Especially in Children. (Verhalten des Epityphlon bei Darmkatarrhen mit bes. Berücksichtigung des kindlichen Alters.) M. Meyer.

157. **Tumors in the Pineal Gland.**—Pappenheimer gives the clinical and autopsy details of the case of a boy of 10, previously healthy, who developed symptoms of a brain tumor; the sudden onset and brief duration of the affection were particularly noticeable. The main symptoms had been headache, vomiting, stupor and severe optic neuritis. A tumor the size of a walnut was found in the region of the pineal gland, its characteristics entitling it to be called an ependymal neuroglioma. He compares the data with those of 37 other tumors of the pineal gland he has found on record, Virchow opening the list in 1863. The age of the patients ranged from 2, 4, 6 and 9 up to 50 and 59 years. Only 3 were women in the 31 cases in which the sex was mentioned.

### Wiener klinische Wochenschrift, Vienna

*April 28, XXIII, No. 17, pp. 614-650*

161 *Pathogenesis of Epileptic Seizure. A. Fuchs.
162 Connection Between the Suprarenals and Increased Pigment Production. (Beziehungen gesteigerter Pigmentbildung zu den Nebennieren.) H. Königstein.
163 *Relative Benignity of Many Sarcomas and Carcinomas. (Zur Frage der relativen Gutartigkeit mancher Sarkome und Karzinome.) H. Koschier.
164 Bilateral Deafness after Injury of the Head. (Fall von beiderseitiger Taubheit nach einem Kopftrauma.) O. Mayer.
165 The Wassermann Reaction in Syphilis and Psoriasis. G. Gjorgjevic and P. Savnik.
166 Dislocation of Carpometacarpal Articulation. (Zur Kasuistik der Luxationen.) J. Berdach.

161. **Pathogenesis of Epileptic Seizure.**—Fuchs reports experimental research on convulsions of toxic origin (cocain) and on means to control such convulsions. It seems to be evident that sodium bromid has a specific action on the cortex, he concludes, and that its action is restricted to the cortex. It thus controls the cortical elements of the epileptic tendency, but has no influence on the subcortical element, the tonic spasm. His research has shown further that the effect of the administration of the bromids can be gaged by the difference in the behavior of the reflexes with a cortical lesion in one hemisphere. The reflexes on the side affected become abolished under the influence of the bromid, while they persist unmodified on the sound side. This reaction to the bromids was pronounced in 18 out of 21 cases of epilepsy with hemiplegic symptoms. For example, a boy with right hemiplegia had the superficial abdominal reflexes alike on both sides. Forty-five minutes after ingestion of 1.5 gm. sodium bromid the abdominal reflexes on the affected side were abolished and the Babinski positive while on the sound side there had been no change in the reflexes. This behavior of the reflexes was striking in 6 cases, as he relates in detail. In the remaining 59 cases of epilepsy little if any benefit was derived from the bromids. There was nothing in these cases to indicate a cortical lesion.

163. **Relative Benignity of Certain Cancers.**—Koschier reports in detail 8 cases of sarcoma or carcinoma in the upper air passages in which the cancer spontaneously retrogressed or subsided after an entirely inadequate operation. The growths must have been of very slight virulence and the individuals exceptionally resistant. In one case a woman of 28 had no recurrence for nearly three years after partial removal of an epithelial carcinoma in the nasopharynx. When it recurred, mercurial treatment was instituted which seemed to aggravate the growth and the patient soon succumbed to its progress. In another case a woman of 42 refused to permit the removal of an epithelial carcinoma in the nasopharynx and accustomed herself to breathing through the mouth after slight improvement had followed the exploratory incision. The cancer has persisted through 9 years without inducing cachexia, and the patient is free from further disturbances, except that vision in one eye has been lost in the last year, and there is now exophthalmos. He does not know of another case in which a histologically diagnosed carcinoma has persisted free from glandular or other metastasis and cachexia for more than 9 years. The features of these cases bear some resemblance to those of mouse cancer; they suggest the pos-

sibility that recoveries after extensive operative treatment may sometimes be due to the nature of the process rather than to the surgeon's skill.

### Zeitschrift für klinische Medizin, Berlin

*LXX, Nos. 3-4, pp. 185-357. Last indexed April 30, p. 1488*

167 Estimation of Viscosity of the Blood. (Zur Kritik der Viskosimetrie des Blutes.) H. Determann.

168 Interpretation and Importance of Esophagocardiogram. W. Janowski.

169 *Auscultation in Testing Heart Functioning Before and After Light Exercise. (Zur Functionsprüfung des Herzens.) J. Tornai.

170 Pathology of Addison's Disease. II. (Glykogenschwund nach doppelseitiger Nebennierenexstirpation bei Hunden.) O. Porges.

171 The Iodophil Substance in the Leucocytes. (Die iodophile Substanz der Leukozyten und ihr Verhalten zur Bestschen Färbung.) P. Neukirch.

172 Diastatic Ferment in Adrenalin Glycosuria. (Das diastatische Ferment in der Adrenalinglykosurie nebst Bemerkungen über den Glykogenabbau.) H. Schirokauer and G. G. Wilenko.

173 Importance and Extent of Diapedesis in Spontaneous Bleeding. (Bedeutung und Umfang der Diapedesis bei den spontanen Blutungen.) C. Focke.

174 Relations between Optic Activity and Reduction of Diabetic Urine. (Weitere Studien über die Beziehungen zwischen optischer Aktivität und Reduktion von Diabetesharnen.) H. C. Geelmuyden.

175 *Relations between Disturbances in Innervation and Organic Heart and Vessel Disease. (Ueber das Verhältnis zwischen Innervationsstörungen und organischen Herz- und Gefässerkrankungen.) J. Pawinski.

176 Case of Mixed Septicemia. (Form von Mischseptikämie: *Micrococcus melitensis* und *tetragenus*.) S. Ceraulo and G. Vetrano.

177 Chemical Changes in Myocardium with Heart Disease. (Ueber chemische Veränderungen des Herzmuskels bei Herzkrankheiten.) C. v. Rzentkowski.

178 Angina Pectoris in the Light of the Past. (William Heberden—Angina pectoris.) J. Pawinski.

179 Influence of Respiration on Blood-Pressure and Size of Heart. (Einfluss der Respiration auf Blutdruck und Herzgrösse.) G. Holzknecht and L. Hofbauer.

169. **Functional Tests of the Heart.**—Tornai has elaborated into a system the method of estimating the functional capacity of the heart by auscultation of the sounds audible as an artery is compressed by a Riva-Rocci cuff and the compression then gradually released. The stethoscope applied to the artery below, where it divides, will perceive a maximal systolic sound which becomes rhythmical with each systole as the pressure becomes lower and lower after removal of the compression until the sound finally disappears. There is a regular variation in the intensity and characteristics of the sound heard under these circumstances, varying from the maximum to the minimum of the pressure artificially heightened by the compression. This auscultatory pressure measurement is proving valuable as a means of estimating the functional capacity of the heart, and he tabulates the findings in a number of cases before and during treatment. In one case of Addison's disease conditions in the blood pressure were restored approximately to normal during a systematic course of epinephrin treatment, but in a second, similar case, the abnormal auscultation findings persisted and no benefit was derived from the treatment, the patient soon dying. Tornai urges others to adopt this simple and reliable method of estimating the dependability of the heart and the improvement and strengthening of the heart under appropriate therapeutic and other measures. He adds that it is the most difficult, but at the same time the most satisfactory, task of the physician to estimate in each individual case the actual functional capacity of the heart, conserve its resources and train it to increased functioning. All this is facilitated by this method of auscultation.

175. **Relations Between Disturbances in Innervation and Organic Heart Disease.**—Pawinski comments on the remarkable influence of heart disease on the mind and moods, which feel its influence to a greater extent than is the case even in tuberculosis. Patients with heart disease as a rule do not feel badly or depressed until the fact that they have organic heart disease is revealed to them. The depression that follows is peculiarly aggravated as more serious symptoms follow. With a valvular defect associated with a tendency to neurasthenia or hysteria, or both, there is generally either excitement with unusual cheerfulness or a hypochondriac depression. The first type is observed mostly with a valvular defect of rheumatic origin in the young, of a lively, excitable temperament, fond of sports and excesses. It is possible that the abnormally powerful contractions of the heart, sending exceptionally large waves of blood to the brain and then sucking it all away again may maintain the condition of extreme excitability. This type is also observed with pure mitral stenosis or insufficiency especially in women. The changeability of the objective symptoms is a special feature of this group, the diagnosis wavering between valvular defect, chronic disease of the myocardium and a mere cardiac neurosis. The morose type is most common in men with mitral insufficiency. Recurring dyspnea accompanied by depression, especially in the obese, psychic asthma occurring often at night, especially with a tendency to obesity, during the menopause, and also the climacteric cardiovascular weakness and the dyspnea simulating angina pectoris which is observed at times in men, especially after exercise—all these are due to disturbances in the innervation, but they may blend into or accompany an organic affection. Sometimes the functional disturbances mask the organic trouble or pave the way for their development. Pawinski is convinced that disturbances in the sexual sphere are at the root of most cases of heart neuroses. The knowledge of the relations between the innervation and the circulation is of extreme importance for the general practitioner, he adds, as on this depend not only the prognosis but the whole plan of treatment, and it protects against too exclusive reliance on heart stimulants, while it points the way to effectual psychotherapy.

## Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

A Study of the Anatomy of Watsonius (N. G.) Watsoni of Man and of Nineteen Allied Species of Mammalian Trematode Worms of the Superfamily Paramphistomoidea. By C. W. Stiles and Joseph Goldberger. Treasury Department, Public Health and Marine-Hospital Service of the United States. Hygienic Laboratory, Bulletin No. 60. Paper. Pp. 264, with 202 illustration. Washington: [Superintendent of Documents] Government Printing Office, 1910.

Pulmonary Tuberculosis and Its Complications. With Special Reference to Diagnosis and Treatment for General Practitioners and Students. By Sherman G. Bonney, M.D., Professor of Medicine, Denver and Gross College of Medicine, Medical Department of the University of Denver. Second Edition. Cloth. Price, $7 net. Pp. 955, with 243 illustrations. Philadelphia: W. B. Saunders Co., 1910.

A Contribution to the Comparative Anatomy of the Prostate Gland. Being a Thesis for the Doctorate of Philosophy in Biology at the Illinois Wesleyan University, Bloomington, Ill., June 17, 1909. By C. W. G. Rohrer, M.D., Associate Professor of Pathology and Assistant in Genito-Urinary Diseases, College of Physicians and Surgeons, Baltimore. Cloth. Pp. 124.

Physiology and Pathology of the Semicircular Canals. Being an Excerpt of the Clinical Studies of Dr. Robert Barany with Notes and Addenda Gathered from the Vienna Clinics. By Adolph E. Ibershoff, M.D. And a Foreword by Royal S. Copeland, M.D. Cloth. Price, $1 net. Pp. 64, with illustrations. New York: Paul B. Hoeber, 69 E. 59th St., 1910.

Diseases of the Eye. A Hand-book of Ophthalmic Practice for Students and Practitioners. By G. E. deSchweinitz, M.D., Professor of Ophthalmology in the University of Pennsylvania and Ophthalmic Surgeon to the University Hospital. Sixth Edition. Cloth. Price, $5 net. Pp. 945, with 351 illustrations. Philadelphia: W. B. Saunders Co., 1910.

A System of Syphilis. In Six Volumes. Edited by D'Arcy Power, M.B., and J. Keogh Murphy, M.C. With an Introduction by Sir Jonathan Hutchinson, F.R.S. Volume IV, Syphilis of the Nervous System. By F. W. Mott, M.D. Cloth. Price, $13.50. Pp. 502, with 57 illustrations. New York: Oxford University Press, 1910.

Surgical After-Treatment. A Manual of the Conduct of Surgical Convalescence. By L. R. G. Crandon, M.D., Assistant in Surgery at Harvard Medical School. Cloth. Price, $6 net. Pp. 803, with 265 illustrations. Philadelphia: W. B. Saunders Co., 1910.

Twenty-fourth Annual Report of the Ohio Dairy and Food Commissioner to the Governor of the State of Ohio. For the Fiscal Year Ending Nov. 15, 1909. Renick W. Dunlap, Commissioner [Columbus, Ohio]. Paper. Pp. 93.

Life and Health. By James F. Rogers, M.D., Assistant Instructor Physicial Diagnosis, Yale University. Cloth. Pp. 202. Price, $1 net. Philadelphia: J. B. Lippincott Co., 1910.

The Family Health. By Myer Solis-Cohen, M.D., Fellow of the College of Physicians of Philadelphia. Cloth. Price, $1. Pp. 267. Philadelphia: The Penn Publishing Co., 1910.

Proceedings of the New Hampshire Pharmaceutical Association at the Thirty-sixth Annual Meeting. Held at the Weirs, N. H., June 29 and 30, 1909. Paper. Pp. 125, with illustrations.

Fifty-Sixth Annual Report of the New York Infirmary for Women and Children. Dispensary, 321 East 15th St., New York, 1909. Paper. Pp. 51.

The Care of the Child. By Mrs. Burton Chance. Cloth. Price, $1. Pp. 242, with illustrations. Philadelphia: The Penn Publishing Co., 1909.

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# METHODS FOR EXTENDING POPULAR EDUCATION IN PUBLIC HEALTH AND PREVENTIVE MEDICINE*

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PHILADELPHIA

If a text were necessary for my address to you to-day, I should at once select the declaration of the revered Pasteur that "it is within the power of man to rid himself of every parasitic disease." Correlated with this is the more recent and almost equally impressive statement of Prof. Irving Fisher that "fifteen years at least could be at once added to the average human lifetime by applying the science of preventing disease," and that "more than half of this additional life would come from the prevention of tuberculosis, typhoid, and five other diseases, the prevention of which could be accomplished by purer air, water and milk."[1]

Note that this latter authority says that these results could be achieved "at once" and, by inference, with the knowledge that we already possess concerning the causation and elimination of transmissible maladies and the possibilities of preventive medicine. We need not wait indefinitely for further necessary contributions at the hands of those searching for the secrets of unsolved problems of disease; we have abundant equipment for action and results even now.

In raising the question as to why we are not already enjoying a consummation so devoutly to be wished for, I would not have you feel that I desire to minimize or to mar in any way the glory of the wonderful and all-important achievements in the conservation of human life, health and happiness that have already been secured by zealous workers, almost all of whom, I am proud to say, have been members of our beloved profession. Their fame is secure, but their work has only blazed the way and opened up vistas of the far greater possibilities of the future.

Nevertheless, the query is insistent why, where so much is at stake, the potentiality of the future is not already the accomplishment of the present. Considering what physicians actually do and have always been striving to do along these lines, it cannot be fairly said that the incompleteness of the present status is due to lack of either faith or effort on their part. Whether we like it or not, we must realize that the time has come when it is absolutely necessary that others—yes, many others of many varied pursuits and callings—should take up a share of this portion of the "white man's burden" in which the physician has been the pioneer. A striking analogy in the field of human uplift which exists at the present moment will serve to validate this latter assertion.

From time immemorial the clergy of practically all religious creeds have been the leaders in and have done the chief work in all phases of religious activity. The laity have been content to give moral and financial support, more or less hearty according to conditions and circumstances. But suddenly within the last few years there has been developed a tremendous laymen's missionary movement in which are enlisted men of all creeds and denominations, which has already shown great power and influence and which promises to accomplish more in a few decades than has been achieved in many centuries of the past. I could speak of other manifest signs of social awakening, of the realization on the part of the good citizen that he is his brother's keeper, and that active altruism must supplant selfish inactivity and indifference. Therefore, the time is ripe to call the laity to our aid, and already the first steps have been taken toward this end.

Thus, we find not only that do current newspapers and magazines contain with increasing frequency popular articles on subjects pertaining to preventive medicine, but that the American Medical Association has organized a Board of Public Instruction on Medical Subjects—whose work will be largely along the lines that I am indicating—and especially that at our meeting last year in Atlantic City this Section became sponsor for and the Association authorized the Public Health Education Committee, of whose purposes and work I shall have more to say later.

It is entirely unnecessary and it would be a waste of your time and an abuse of your patience even to mention the many subdivisions and phases of preventive medicine which any plan of general popular education for this purpose involves. My desire is rather to discuss some of the means whereby positive results may be most readily secured under present conditions and by which the most profitable expenditure of effort and energy may be made. Nor am I unmindful that some, if not all, of the suggestions may seem trite and commonplace to you who have been for years engaged in the pioneer work of this great propaganda. In my own teaching I constantly find the tendency to overlook or to minimize important features because, through frequent repetition, I have become imbued with the feeling that they must be known and recognized by every one. Nevertheless, we have evidence on every hand that many of the simplest sanitary truths and principles are entirely unknown or unheeded by many of even the intelligent members of our communities. And as some of the most important and most insistent features of our work has to do with those persons who cannot be thus classified, but whose ignorance prevents even the appreciation of the importance of hygiene and prophylaxis, I trust that any review of familiar methods may not seem inappropriate and out of place.

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* The Oration on State Medicine in the Section on Preventive Medicine and Public Health of the American Medical Association, at the Sixty-first Annual Session, held at St. Louis, June, 1910.

[1] Abstract of the Report on National Vitality of the Committee of One Hundred on National Health.

Moreover, I shall scarcely attempt to present the several methods in a logical sequence or with any idea of their respective correlation. In fact, I doubt whether one could place them in scientific and orderly array at this time, especially when different localities and conditions demand varying means and application of means. But, as our hope is in the future, and as the children of this generation are to be the citizens of the next generation, I may as well begin with them and with the chief medium of their education, the schools. Schools imply teachers, and so the question arises: Whence come the teachers and what preparation have they had for giving instruction, both subjective and objective, both didactic and practical, on the fundamentals of health and life? Surely no one at this day will cavil at the proposition that physical development is as important as mental, and that every child should be informed as to the functions and needs of the body, as well as of the mind. But we have scarcely appreciated the equally important fact that the future citizen should be taught his duty in conserving the welfare of others and the altruistic aims of modern hygiene and sanitation. Can his teachers give him this training? I think that any extended investigation will convince you that the number of those capable of doing this in a thoroughly satisfactory manner is very small in comparison with the total number. No criticism of the average teacher is altogether fair under present conditions, however, as the blame for his or her inefficiency lies higher up and chiefly with us, ourselves. Really, we are more concerned with the future, provided we date from now.

According to the United States Commissioner of Education, there were in the public and private normal schools of the country for the year ending June, 1909, 82.288 students enrolled in the regular training courses for teachers, and 14,155 graduates therefrom. Added to these, there were in public and private universities, colleges and high schools enough others pursuing teachers' training courses to bring the total up to 103,824; and if the latter institutions "had furnished from their normal students the same proportion of graduates" as did the normal schools, the additional "number would have been 3,704, thus increasing the number of trained teachers to be added to the teaching force of the country in 1909 to approximately 17,859." Provided that each one of these teachers shall have been equipped and qualified to teach what every boy and girl has a right to and should know about personal hygiene, public health and preventive medicine, there is here a mighty power for good whose benefits to the next generation and to the country's welfare no man can calculate. And yet this is but one year's output.

Few here would argue, I take it that any pupil of high-school grade should not be thoroughly instructed in the fundamentals of sanitation and public health, or that our higher institutions of learning should not help to make better citizens along these lines. What a potentiality for good, then, was there enfolded in the 1,034,827 students of high-school grade that the Commissioner of Education tells us were enrolled for the year ending last June, or in the 331,418 students in higher education, even though the proportion of the former was only 11.72, and of the latter, 3.75 to each one thousand inhabitants!

In addition, more than sixteen million other children were enrolled in the public schools of the country in 1909, and it is also estimated that the total number of children from 5 to 18 years of age was 24,613,783, or almost half a million more than the estimated number of males 21 years of age and over. Is it not worth while to attempt to awaken the interest of our superintendents of public instruction and other educational authorities?

Another way of reaching many of these children and some of the adults is through the public playgrounds and recreation centers which are being established in many of our cities. The number of these is already greater than most persons realize. Thus, in 1909, there were 1,535 of them in 267 of the 336 municipalities in which supervised playgrounds are maintained, and in 259 of these cities there were 3,756 persons employed as supervisors and play-leaders. The latter large and increasing body of intelligent men and women, many of whom have had expert training in physical culture, can exert a tremendous influence, not only indirectly by subjectively developing in their charges an active appreciation and desire for health and sound bodies, but directly by inculcating whenever opportunity offers many of the fundamental principles of personal hygiene and public health. That this may be done most happily in an environment of baths, gymnasium apparatus, open-air sports and games for children of all ages must be obvious to all.

Leaving the children for a time, and considering the public at large, we find it no small problem to determine how we may reach and benefit the largest number most efficiently. Those who have undertaken the work have found that no one plan or method will suffice, and that the best intentions and service is oftentimes illy repaid or appreciated. In planning work of this kind, however, it may be said that the methods adopted should be devised so as to attract and hold the attention of the individuals concerned and to convince them that they are personally and especially interested. We cannot afford to ignore the fundamental principles of psychology and pedagogy in this domain.

Heretofore the brunt of what work has been done has fallen on our national, state and municipal health officers and their assistants, and the country will ever owe an irredeemable debt to these men who have done and are doing such valiant service. They realize, however, that the task has grown too large for them, backed, though they are with official power and funds, and they welcome the aid of every progressive physician and earnest citizen who will help to further the physical welfare of the people committed to their care.

Among the efficient means which these health officers have heretofore employed to extend sanitary knowledge are, on the one hand, the weekly or monthly bulletins and the annual reports on the state of health of the communities under their respective jurisdictions, and on the other, the special tracts or pamphlets carrying precise information relating to the precautions to be observed when certain specific diseases occur in either sporadic or epidemic form. The latter have the great advantage that they reach the individual when he is in a highly receptive mood and most likely to heed and to be impressed by the information they contain. As for the bulletins and reports, there is the twofold danger that their distribution may be too much limited, whereby they may fail to reach those whom they might benefit the most, and also that they may fail to interest the average individual by being made simply a compilation of dry vital statistics. There are, however, many of these publications to which this latter criticism does not apply, a notable example being Chicago's weekly bulletin which bears the title "Chicago School of Sanitary Instruction," and which has at its head the statement that it is "sent free to those of our citizens who should be benefited by it." The annual health reports of our states and larger cities also contain much valuable and interesting information, and are worthy of a wider distribution and more extensive study than, I fear, most of them receive.

A number of progressive health officials are now using the newspapers of their territory more extensively than ever before as a means of reaching the public and keeping it in touch with the progress of their work, their needs and their purposes and aims. The Commissioner of Health of my own state, Dr. Dixon, systematically takes his constituency into his confidence by utilizing the facilities of the newspapers of the state to the extent of 600 or more, and the corresponding official of Philadelphia, Dr. Neff, has likewise greatly strengthened his administration in the public estimation by a free and frequent use of the city papers.

Other agents under the direction of directors, commissioners of boards of health are the medical and other inspectors, including school and visiting nurses, all of whom are enabled to give direct, positive and timely instruction and advice to those who most need it and who are often least likely to get it from other sources. School medical inspectors also have demonstrated their value and the enormous advantage they have in detecting abnormalities and defects in their incipiency. Dr. Osler is reported to have calculated that there was in New York City "on account of the lack of medical supervision of educational work a yearly financial loss of $1,666,666," and also to have said in effect that "he considered it of greater importance to the nation that the question of sound teeth be intelligently considered than that the consumption of alcohol be restricted, important as the latter problem is."[2]

Reference to the newspapers calls attention to the fact that in the public press we have one of the most powerful and practicable factors for disseminating information and developing education along our special lines, and that as yet we have barely tested its possibilities. It is only when we realize that we have in this country almost 2,500 daily and over 16,000 weekly newspapers, not to speak of the great number of popular magazines and periodical publications of other kinds, that we can appreciate the opportunity they give us to reach the mass of the population. Moreover, their editors and publishers, almost without exception, are ready and even eager to give us abundant space for anything authoritative that has to do with the improvement of public health. They have realized even more quickly than we have the popular demand for such information. In evidence of this, note the recent increase in the number of magazine articles on health topics.

It certainly should not be difficult to plan measures by which we could make use of this great medium to the fullest extent. Suppose, for instance, a health column supplied by some competent authority were printed in every weekly newspaper in a given state throughout the year—something by no means difficult to secure. Comparatively few families subscribe for and few individuals read more than one of these weekly papers. Hence the same "copy" could be used for many, either simultaneously or by judicious distribution, and the same editorial effort applied to an extended territory. If, too, the state department of health should undertake such work, as is, in fact, being done in my own state, great economy of labor and expense would be secured, the matter for publication would go out with the stamp of authority, and the health department would be brought into that close touch with the people that is so essential for its success.

A caution is to be observed, however, whether state officials or others take up this line of work. Such published matter should be authoritative, educational and not above the capacity of understanding of the average reader. If the series could in part develop systematic instruction along certain lines, so much the better, but care should always be had that misleading or exaggerated statements should not be made, and that statistical or other information should be well grounded in fact.

Magazine articles, such as those by Dr. Woods Hutchinson in recent numbers of the *Saturday Evening Post*, and others with which you are doubtless familiar, are also of great value in fixing and molding opinion, and writers with special talent in this line should be encouraged to contribute their aid to the work. Likewise, publishers of religious, trade, agricultural and other specialized periodicals should also be urged to make the relationships of public health to their respective fields of work frequent and special features of their publications. As I have indicated, the opportunities for disseminating information in this way are almost innumerable.

Life-insurance companies and fraternal organizations that maintain insurance departments are in an especially favorable position to greatly benefit both their own and public interests, and some of them are already seizing the opportunity by official communications to their medical examiners and policy holders. In a circular letter to its medical examiners, dated April 15, 1910, the chief medical director of the Provident Savings Life Assurance Society says:

> The Policy Holders' Health Bureau, established by this society in August, 1909, has passed beyond the preliminary experimental stage. Tangible and practical results are already in evidence, which warrant the prediction of a permanent and growing field of usefulness for the activities grouped under the organization of such a bureau. . . . We have referred to our bureau work as "semi-public," for the reason that as the number of policy-holders benefited by our system increases, the general public will also become informed as to the value of periodical medical examinations, and there will be a growing tendency to employ physicians as inspectors and regulators of human machinery, rather than as necromancers who are expected to work miracles in the cure of established and progressive disease.

Dr. Dwight, medical director of the New England Medical Life-Insurance Company, says:

> For more than sixty years the life-insurance companies of this country have been storing up ammunition and developing an organization which, if properly used, would be almost sufficient in itself to turn the tide of battle for public health in favor of the forces of scientific effort.

Dr. Hiram J. Messenger, actuary of the Travellers' Insurance Company, prepared a table for Professor Fisher's Report on National Vitality, to show that the life-insurance companies could probably make money now by taking a hand in the public health movement, and says:

> This table shows that if the companies were to expend $200,000 a year for this purpose and as a result should decrease their losses by the almost insignificant amount of twelve one-hundredths of 1 per cent., they would save enough to cover the expense. If such a plan as this were placed on a purely scientific basis and carried out by good business methods and all the companies pulled together for the common good, I should expect a decrease in death claims of more than

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[2] Fisher: Report on National Vitality, p. 73.

1 per cent. And a decrease in death claims of 1 per cent. would mean that the companies would save more than eight times as much as they expended or would make a net saving of more than seven times the expense—which would be about a million and a half dollars a year.

I need not dwell on the importance of public lectures on health topics, but it must be noted that these will not realize their full value for good unless attention be given not only to the selection of speakers and their choice of subjects, but also to proper advertising and the securing of large and interested audiences. In many instances, their values would be enhanced if they were given in connection with public exhibits, such as those on tuberculosis recently held in many of our cities; and in any community there would doubtless be a decided gain if most or all of such lectures in a season were systematized and arranged in a logical course under the superintendence of some organized body, such as a county medical society, women's club, college settlement or the like. It is also advisable that such organizations in the large cities should provide lectures in their respective tongues for the masses of foreign population that we find in certain districts. It may even be advantageous to increase the attraction by illustrating the talks with lantern-slides, or by providing some additional musical entertainment. But it is on these addresses and the visits of medical inspectors, district nurses and other sanitary missionaries that we must chiefly rely for the principal education of these alien masses of our population.

In fact, I would recommend that in each of our towns and cities of moderate size, and in localized districts of the larger cities, there should be organized public welfare clubs, whose chief business should be the carrying on of this propaganda of public health work and sanitary instruction. Such clubs might be independently developed, or they might be made up of representatives from associations and organizations already in the locality, such as the beneficial and fraternal societies, women's or mothers' club, library association, Christian Endeavor and church clubs, etc. They should naturally include the physicians and clergy of the community, and every public-spirited man and woman who has an active interest in neighborhood improvement and the welfare of humanity at large.

Such clubs could thus not only arrange for a systematic course of public lectures and exhibits, but could institute and develop public health measures and improvements of all kinds. You will at once realize the many lines of activity which they might follow. They could call on the central health department of the state for statistics, charts and other material for exhibits on tuberculosis, typhoid fever, etc., and, in passing, I would remark that it would be well for the state health departments to have such exhibits prepared for the special use of just such clubs and organizations, which could use them in turn and on proper request and notification. The winter course of lectures would include discussions of local sanitary conditions, the dangers of patent medicines, the prophylaxis of social disease, the theory and use of antitoxins and vaccines, as well as the ordinary questions of hygiene, and would soon be appreciated by the public as of great educational value.

Organizations such as these could also make use of a means of arresting and fixing public attention that has as yet been too rarely employed—the public poster. These posters, which have already been used in some of the large cities, as in Philadelphia and Chicago, are probably more practicable in smaller communities, because the smaller number needed greatly reduces the expense. Notwithstanding the multiplicity of newspapers and magazines and the opportunities they offer for exploiting our work, we must realize that not only do many of their users peruse them but carelessly and hurriedly, but also that many of the general public do not read them at all. Hence we should provide some other means by which "he who runs may read" and whereby he may be induced to take heed of that which is for his own or his neighbor's welfare. This the poster does, and it may be used in all sorts of places, such as billboards, shop-windows, street-cars, etc., where it will catch the eye and fix attention.

Care should be taken not to attempt too much on a single poster, since an excess of reading-matter in small type may lead to a failure to attract due notice. A few pithy, epigrammatic sentences, or often a single one, with at times a touch of local or timely wit, or, perhaps, a sketch or cartoon, will do more to fix the purport of the poster in the minds of those who take it in at a glance in passing than will a lengthy exposition that requires a halt of five minutes or so for its reading. We can afford to take a lesson here from successful advertising agents whose business it is to know human psychology to the end that they may drive impressions home within the space of the fleeting moment.

I feel confident that the judicious use of such posters in a community of moderate size would do much to secure public attention and excite comment, and that the public welfare clubs, health officers or others may well employ them to do what the newspaper and magazine articles cannot do. The poster will also be especially useful when printed in other tongues than our own and properly distributed in the foreign districts of our larger cities.

A failure to mention the potential assistance which we may have from the clergy and our churches would be to lose sight of a most important and powerful component of our body politic. The signs of the times show most positively that henceforth the minister to the soul and the physician to the mind and body must be more closely linked in their labors than ever before, that they must work together and not pull apart or against one another, and especially that this great field of preventive medicine is the domain of both. Ministers of all denominations should be encouraged properly to encourage and to instruct their congregation in the acquisition of the fundamental principles of bodily hygiene and altruistic sanitation and in the appreciation of these as important and necessary to the securing of spiritual health. Churches and parish-houses which now are idle on too many week-days should be opened and used for public lectures and meetings. What places could be more appropriate for joint talks from pastors and physicians on questions that pertain to the proper instruction of youth, the abuse of alcohol, social purity, etc.? Where better could the two professions join to combat false gods and dangerous doctrines? The physician can assist the preacher by giving him sound information and trustworthy data for his sermons, and by encouraging him in dealing with such topics, and the preacher can support and help the physician in his campaign against all that makes for disease and pain and suffering in their common neighborhood. That the congregation can do much in doing their share of the work, if they are only shown the way, is so obvious that I need but mention it.

Within the past few years the Department of Health of Pennsylvania has established 114 tuberculosis dispensaries, which are doing much good in an educational as well as philanthropic way. The professional nurse, who is attached to each of these dispensaries is especially valuable in this direction and "her ministrations amount to a liberal education in the treatment of tuberculosis." She not only makes a first-hand investigation of each patient's case, securing data as to his family history, occupation, financial resources, etc.; but she visits him at his home and there instructs him and the other inmates as to his proper care and handling, how the others are to escape infection, and especially devotes particular attention to diet, telling the housewife what to cook and how to cook it. Thus far over 130,000 of such visits have already been made, each one affording an opportunity for instruction in sanitary details with a direct and immediate application thereof. The value of such educational work needs no argument for its appreciation.

I might continue to consider with you other ways and means for carrying on this missionary work of ours, but your patience may be approaching the limits of tolerance. Therefore, as the last but by no means the least of these beneficent and efficient agencies to which your attention is directed, I trust you will give full support and encouragement to the work and efforts of the Public Health Education Committee that had its inception in this Section a year ago.

No one at this time can afford to deny that one of the most powerful factors in general public uplift and especially in the extension of the very work in which we are interested, is the collective influence of the good and intelligent women of this country, as manifested not only in their special clubs, mothers' meetings, etc., but also in their individual homes and neighborhoods. It is this influence which the Public Health Education Committee desires to weld and unify into a mighty agent for this special work, and both this attempt and the primary endeavor to enlist in the campaign the women members of the American Medical Association is, I believe, worthy of our hearty commendation and support. Here certainly is a wide field for the energies of the woman physician and none of us need feel jealous or envious of her entry on it. She can do more in certain directions than can the man; she has more leisure and adaptability for certain phases of it, and she can bring in, as the man cannot do, the joint influence and power of other women's organizations that will all work for better and healthier homes, communities and the common country. Let us congratulate the committee, therefore, on what it has already accomplished and help it to do still more in the future.

I shall not take time to do more than to mention the work of our Board of Public Instruction in Medical Subjects, for I assume that you are all so familiar with it that nothing that I could say would add to your sense of its importance, especially in this field of ours.

With this review of the means at our command, and from which many details have necessarily been omitted, I trust that I have made you feel that we are well armed for the educational campaign which must be conducted before we can hope to secure the results in the conservation of life, health and human vitality that we know it is in our power to have. Dr. Rosenau has recently said:

> The public health militia that I have in mind calls for the enrollment of all good citizens. Preventive medicine is the watchword of the hour, and enlistment in the cause can come only through education. There are two important factors in efficient public health work. One is the gaining of new knowledge through scientific research; the other is the diffusion of this knowledge through education. The two go hand in hand. Not only the medical profession, but the people must be the reserve militia in any effective warfare against disease.

Professor Fisher likewise says in the conclusion of the summary of his report from which I have already quoted:

> Money estimates of waste of life are necessarily imperfect and sometimes misleading. The real wastes can only be expressed in terms of human misery. Poverty and disease are twin evils and each plays into the hands of the other. From each springs vice and crime. Again, whatever diminishes poverty tends to improve health, and *vice versa*. . . .
>
> The conservation of our natural resources—land, raw materials, forests, and water—will provide the food, clothing, shelter and other means of maintaining healthy life, while the conservation of health likewise tends in many ways to conserve and increase wealth. The more vigorous and long-lived the race, the better utilization it will make of its natural resources. This will be true for two reasons in particular: First, the greater inventiveness or resourcefulness of vigorous minds in vigorous bodies. Civilization consists chiefly in invention and the most progressive nations are those whose rate of invention is most rapid. Second, the greater foresight and solicitude for the future. As it is usually the normal healthy man who provides life-insurance for his family, so it will be the normal healthy nation which will take due care of its resources for the benefit of generations yet unborn. . . .
>
> Federal, state, and municipal boards of health should be better appreciated and supported. Their powers of investigation, administration and disseminating information should be enlarged. School hygiene should be practiced, and personal hygiene more emphasized. The multiplication of degenerates should be made impossible.

If one state, through the administration of one man and his staff and supported by the hearty co-operation of its municipal and county health officers, can within four years not only organize and establish a department of health almost *de novo*, but also show a positive saving to the commonwealth of $23,000,000 of human life value with an expenditure of $3,000,000; if it can, as Pennsylvania has done, within that time cut the typhoid mortality to less than half that it was before, bring down the tuberculosis death-rate from 134 to 120, and show a net saving of almost 14,000 lives, is there not every encouragement to continue with renewed energy whatever efforts we have been making in the past? Even though we are tempted at times to feel that much of the seed falls among thorns or on stony ground, we have no reason or right to conclude that the sowing is not well worth while; that the labor will not bring a bountiful harvest. Fortunate is he whose field of endeavor shows the promise of a more abundant reaping or fuller granaries in the end.

4814 Springfield Avenue.

# THE INSTITUTIONAL TREATMENT OF NERVOUS AND MENTAL DISEASES*

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It is my pleasant duty in opening the proceedings of this Section to thank you for the honor you have bestowed on me in making me the Chairman of the Section for the year. I may further say that the honor is a real and unexpected one; for the first intimation which I had that I was to be chairman for the year was the report of the nominating committee to the Section at the meeting of the Association last year at Atlantic City. And this leads me to believe that, whatever may be said of the past, or of any other Section of this Association, in the Section on Nervous and Mental Diseases, medical politics plays no part whatever.

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* Chairman's address before the Section on Nervous and Mental Diseases of the American Medical Association, at the Sixty-first Annual Session, St. Louis, June 7-10, 1910.

I believe that it should be the aim of this Section to discuss all the varied phases of nervous and mental diseases, and that its officers should endeavor to assemble together the best available men in the country on its program. And I further believe that it should be the especial aim of this Section to present the subjects of neurology and psychiatry in such clear, simple and attractive manner that its proceedings may serve to interest and instruct not only neurologists and alienists, but also general practitioners and internists and a certain number of those whose field of activity lies in work in other specialties. It may be truthfully said that the problems which engage the interest of the members of this Section also possess in themselves more or less interest for all members of the profession. Neurology and psychiatry in their several aspects and in their manifold interests call on those who pursue them as specialties to take more or less account of every other department in the broad domain of medicine and, indeed, much outside it, for example, law, social science and penology.

It is with this understanding of the subject that I have endeavored to cooperate with our secretary (and to work with him has been a genuine pleasure) in making out the program for this meeting.

The criticism is often made of programs of associations of neurologists and alienists that they present little or nothing on the subject of treatment; and for one, I have the feeling that this reproach is not wholly undeserved. Hence it has been our aim in making up the program for the Section this year to secure an unusual number of good and practical papers dealing with the treatment of nervous and mental diseases; and I believe that if you will look over the program in your hands you will agree with me that we have attained a very fair measure of success.

I wish to address the Section briefly on a subject which I believe to be one of vast and far-reaching importance, even though I shall be able to speak only in general terms and must treat it most inadequately and leave much that I should say unsaid. I refer to the institutional treatment of nervous and mental diseases.

This subject becomes one of vast importance when we consider the large number of patients for the adequate or proper care of whom institutional treatment is required. In nearly all cases of insanity institutional treatment is demanded and received; in nearly all the severer cases of inebriety institutional treatment is demanded, but in few is it received; and very many of the cases of organic and functional nervous diseases demand and some receive institutional care.

As years go by and hospitals for the insane improve their equipment, and as the public becomes better educated as to the value of institutional treatment for the insane and less and less suspicious of these institutions, the percentage of insane and feeble-minded outside of hospitals grows less and less, and these institutions everywhere throughout the broad land are becoming more crowded. Nor does the provision for additional accommodations in any state in the Union keep pace with the growing demands for such accommodations. Despite many drawbacks and obstacles, and despite the great work of improvement which yet remains to be accomplished, these institutions have made fair progress in their methods and equipment for the care and treatment of the insane and feeble-minded.

In this connection I desire to direct attention to the subject of the treatment of insane in institutions other than regular hospitals or asylums for the insane. So far as I know, there are only two general hospitals in the United States—St. Francis Hospital, Pittsburg, and Albany Hospital, Albany, N. Y.—which are equipped to receive insane patients. There are several large hospitals for the insane which are departments of general hospitals, but which possess separate buildings and separate managements and must be regarded as practically separate institutions.

I wish to say a word here regarding St. Francis Hospital in Pittsburg and its work to illustrate some of the points I wish to make. This is a large general hospital and has connected with it a psychopathic ward. In this ward or department there are about 100 patients, including a great many acute cases; and it has been the aim to have only acute cases in this department. A resident physician and intern devote all their time to this department, which is under the medical direction of three visiting physicians. The members of the medical and surgical staff are frequently conferred with regarding these patients. While the psychopathic department of St. Francis Hospital is not entirely ideal and much remains to be done to make it so, yet it stands for a most valuable principle, namely, the treatment of insane in a general hospital. This means much, very much. Our experience at St. Francis is that patients suffering from acute psychoses are admitted early, and that their friends do not feel that the same stigmata is placed on them going to and coming from this hospital as in the case of the regular hospital for insane. It is well known that certain psychoses can be and have been treated in general hospitals, but the difficulty is that if such patients become noisy or troublesome the management generally demands their removal. I am strong in the conviction that in every large city there should be at least one general hospital ready to receive cases of insanity and equipped to treat these patients. A large general hospital can easily have a properly equipped wing or even detached section to hold 25 or 50 patients, and thus it can accomplish a great purpose and fill a great need in any large community. The noise and disturbance of such patients can be kept from the general hospital if the wing or separate building is properly planned and built.

Psychiatry should be regarded as a department of internal medicine, and I trust that the time will come when the psychoses will be discussed in general textbooks in the practice of medicine. And the day is coming also, I trust, when patients with acute psychoses will receive treatment in general hospitals and not have to go to hospitals for the insane unless the disease is unduly prolonged or appears to be incurable. When the treatment of insanity is undertaken by general hospitals, as I have indicated, I believe that an entire change will come over the profession and the public regarding their attitude toward the insane. The profession will realize in a practical way that what is called insanity is an expression of sickness; and the laity will learn the same lesson. Another result would be that the skill of the various specialties would be brought to the insane; and these patients would be a constant source of education for all physicians connected with hospitals maintaining such psychopathic departments. And then psychoses would be described in the textbooks on the practice of medicine and the general profession would learn something about them.

It appears to me that, viewed from almost any aspect, the treatment of insanity in general hospitals is greatly to be desired and promoted. Nor do I believe that separate psychopathic hospitals, isolated and apart from the general hospital, possess the advantage which a psychopathic division of a general hospital possesses; for sooner or later they are sure to be regarded by the general public as "insane asylums."

There is a large and sadly growing class of individuals for whom large provision should be made for institutional treatment and for whom such provision is now sadly lacking if we are to hope to give anything like adequate treatment; I refer to the inebriate, addicted to the excessive and uncontrolled or uncontrollable use of alcoholic drinks or morphin, cocain or other drugs. The present inadequate treatment of inebriety is to-day, in my opinion, a standing reproach to society and to the medical profession. The inebriate who seeks or whose family seeks for him institutional treatment meets at all hands with invitations from quackish institutions whose treatment in the main is simple humbug. And yet I think that it will be generally admitted that for a large number of inebriates there can be no adequate treatment, indeed none worth the name, other than that afforded by a well-equipped institution. And such institutions are few in number; so few, indeed, that many an honest practitioner knows not where to find even one for his inebriate patient.

While there is and will be an increasing number of private institutions for inebriates, these are and must be wholly inadequate to meet the needs of the situation. As the result of much thought and investigation, I have reached the conclusion that the several states must provide separate institutions for inebriates, and such institutions should be governed by clear, adequate and comprehensive laws.

Massachusetts and Iowa are, so far as I know, the only states which at present maintain state hospitals for inebriates; and both have adequate laws governing them. We are fortunate in having with us at this meeting Dr. Neff, the superintendent of the Massachusetts State Hospital for Inebriates, who is to tell us of the workings of that institution. Minnesota is about to provide a state institution for inebriates, and the subject has been urged before the New York and New Jersey legislatures, but as yet without success.

In Pennsylvania, the state medical society has for several years been trying to persuade the legislature to build a state hospital for inebriates. A bill providing an appropriation for the creation of such an institution was passed by the last assembly; but it was vetoed by the governor because of his belief that the financial situation would not warrant this new expenditure. Pennsylvania already has a law which provides that an inebriate may be committed by a judge, after a hearing, to a "proper hospital or asylum" for a period not to exceed one year. Under this law, a number of inebriates have been committed to various hospitals for the insane throughout the state. Superintendents of these institutions are unanimous in saying that they do not desire these patients, as they do not properly belong there, that they are hard to get on with and upset the discipline of the institution. On the other hand, the inebriate himself strongly resents being committed to an insane asylum; and in consequence he goes there, when compelled to, in a frame of mind little calculated to effect a restoration to health having in it the elements of stability.

Our argument to the Pennsylvania legislature has been brief and to the effect that the adequate treatment of inebriety requires a separate and properly equipped institution and a proper law governing it and the inebriate. It was urged that, since the state has taken the first step in providing a law governing inebriates, it should logically take the second step and provide the institution which the law contemplates. We hope next winter to succeed in our endeavors with the legislature.

Thus it will be seen that already a start has been made in the matter of provision of state institutions for inebriates and I trust that in the near future we shall see the establishment of many such institutions, so that ultimately every state shall possess at least one.

And now, finally, I shall consider one other class of institutions, namely, sanitariums having for their object the care and treatment of persons suffering from organic and functional nervous disease. These institutions are of all sorts, kinds and descriptions and they are found in all parts of the country. They are large and small; meagerly equipped and elaborately equipped; they are operated by religious associations and by commercial companies and by individuals; they are ethical and semi-ethical and quackish in character. And after a large experience with them, covering something like a score of years, I am bound to say that, generally speaking, sanitarium treatment in this country leaves much, very much, to be desired. My objections to sanitariums are various. This one is entirely too large and has too many patients and too large and complicated machinery and possesses the "sanitarium atmosphere" which is oppressive and depressive. Another is small and badly equipped and affords too little diversion; treatment is slovenly and routine. It appears to me that it is perfectly proper and desirable that sanitariums should afford an opportunity for religious devotions, but it also seems highly objectionable to me that a religious atmosphere should be forced or obtruded on patients. Again, we find that some articles of diet are recommended and others prohibited which are in ordinary use, and thus patients run a great risk of becoming diet cranks. We see sometimes an elaborately equipped sanitarium with all sorts of apparatus, all of which looks very impressive to the casual visitor, but which is too often used improperly. It is used improperly, I believe, when used unnecessarily or too frequently, or when the ends to be gained are not properly considered. I have known more than one self-centered, introspective patient to be made worse by the constant round of ill-planned or unplanned examinations and "treatments" in sanitariums. Again, there may be an excellent medical man at the head of a sanitarium; but the physician finds that when this patient goes to the institution he did not see this excellent chief, but an underpaid and inadequate subordinate. Generally speaking, sanitariums do not sufficiently provide for outdoor games, exercises, walks and varied amusements; and the treatment is slovenly and too mechanical and routine.

Instead of going further into the matter of my objections to sanitariums as I have found them, I shall endeavor to make a little sketch of the ideal sanitarium as I see it in my mind's eye, and as one often finds it abroad; and as one very, very seldom sees it in this country.

It is not very large; it accommodates from 50 to 100 patients. It is situated in the country about three-quarters of a mile from the railroad and is reached by a charming drive; it is in the midst of a very charming landscape in which are found no objectionable features. A large wood in the neighborhood belongs to the sanitarium and has many paths and walks running through it, and these are marked off so that patients can estimate the distance they have walked. Scattered along these walks at intervals are various benches and a few pavilions.

A stable is attached to the sanitarium; drives in the neighborhood are attractive and varied. In a separate building, but very close to the sanitarium and connected with it by a passage way, is an amusement hall containing auditorium for private theatricals and concerts, etc., and in the basement there are billiard tables and a bowling alley and a swimming pool, all of which are used every day. Closely adjoining the amusement hall there is a small but well-equipped bathing establishment with Turkish baths and other provisions for hydrotherapy. Those taking Turkish baths have easy access to the swimming pool.

Now as to the sanitarium itself. It has been especially built and equipped for sanitarium purposes. The building is modest and attractive and entirely free from any freakish design. It has a home-like appearance. The furnishings throughout are simple and modest and thoroughly good, and the whole place throughout is absolutely clean. Nothing is obtrusive. The physician in charge is a man well known for his excellent general character, his ethical standing and his sound conservatism, and the fact that he keeps in touch and abreast with the medical world of the day. In short, he is a man of experience and soundness of character and he possesses tact in a high degree so that he gets on well with the various patients. His position is secure and his time is wholly devoted to his medical duties. He never hesitates to recommend the dismissal of a patient when such dismissal seems to be for the best interests of the patient or the institution. When patients become insane or unmanageable he has backbone enough to demand their dismissal and that they be placed in a proper institution.

The physician in chief is assisted by one or two younger medical men who breathe the atmosphere of their chief and work in complete harmony with him.

The various apparatuses for laboratory work and investigation and therapeutic purposes are at hand. These are used with caution and discretion and not in blind routine fashion and seldom needlessly. One of the main features of the sanitarium is the stress laid on individual treatment; and the doctor avoids, so far as possible, cut-and-dried routine in all his examinations and treatments. The rules governing the sanitarium are simple and clear. Nothing is obtrusive or "peculiar" in these rules regarding religion, diet or anything else. The dietary is simple, but sufficiently varied and thoroughly good. A short religious service is held every day, and any one can go to it; it is held in a place apart and is not in any way obtruded on those who do not wish to go and no one is ever pressed to go.

This is to my mind, as nearly as I can picture it for myself, the ideal sanitarium. The rates are a little high; but not higher than they ought to be considering what the patient gets. And whether or not you accept this ideal sanitarium, I believe that there is to-day a great need and growing demand for better sanitarium treatment in this country.

Westinghouse Building.

# THE BASAL PRINCIPLES OF VACCINE THERAPY*

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Perhaps it is as well that the time allotted to me this afternoon only permits that I should, as it were, expose before you the broad ground plan of the territory of vaccine therapy. To criticise adequately but one of the many moot points would in itself occupy more than the given period.

Thus, therefore, in the first place as the main basal principle, it may be laid down that bacterial infection is primarily local and that even when the microbes spread from the primary focus, nay even when a bacteriemia is set up, there still persist tissues of election in which alone those bacteria find conditions for active growth. We may put this otherwise and say that *when bacteria gain entrance to the system they find but a limited opportunity for growth, nay indeed, they are destroyed in, if not by, the majority of the tissues.* Let me afford a familiar instance. Consider the course of a malignant streptococcus endocarditis. The very development of the endocardial lesions demonstrates that the streptococci have been circulating in the blood. Make blood cultures in such a case and without difficulty growths of the streptococci are obtainable. There is no question about the bacteriemia. But in such a case how rare it is to find a true abscess in the spleen, with active proliferation of streptococci in that organ! That the spleen becomes potentially infected is obvious enough; the conditions of the circulation here are just such as to filter and to arrest bacteria brought by the blood; and this organ is one of the seats of election for the arrest of loosened vegetations with their mass of included germs. Infarcts are common enough, but how infrequently do these pass on to true abscess formation! The only conclusion we can reach from this and other cases is that the splenic tissue indifferently destroys the various bacteria brought to the organ and possesses this power to an extraordinary degree. And what is true of the spleen is true also of some of the most widespread and some of the most important tissues of the body. How extraordinarily rare, for instance, it is to find abscesses developing in the skeletal muscles in a case of bacteriemia, or in the liver; or in the brain and cord. In all these tissues the capillary network is so fine that it is impossible that bacteria conveyed by the blood do not become arrested. And here in passing it must be laid down that in the normal animal it is not the circulating blood that itself destroys them. If, as Briscoe has shown, bacteria be introduced into the ventricle of an excised heart, clamped at the auriculo-ventricular groove in such a way as to preclude clotting of the contained blood, then the bacteria undergo little or no destruction on the part of the blood; they are not even taken up by the leucocytes, or more accurately the amount of phagocytosis is minimal. Nor again is it the specific cells of the various tissues to any marked extent that destroy the bacteria, with the exception of the hemolymph system, and I may add as a private heresy, probably the liver. As can be seen by inoculating bacteria into the circulation, killing within a quarter of an hour and making sections of the liver and other organs, those bacteria are actively taken up and destroyed by the endothelial cells lining the capillaries of these organs.

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* The opening address of a Symposium on Vaccine Therapy, at the meeting of the Association of American Physicians, at Washington, May 4, 1910.

This fact, then, that bacterial infection is primarily local carries with it the corollary that *there is a natural or indifferent or non-specific immunity toward most bacteria exhibited in most of the tissues of the organism.* This, it is true, has its limits; it can be overcome by the exhibition (mostly under experimental conditions) of excessive numbers of bacteria, or of smaller numbers of bacteria of exalted virulence, its extent also varies as regards any particular species of bacteria in the different tissues. But I would lay stress on it inasmuch as it has been too much neglected. It fails to be demonstrated by experiments *in vitro* and so is apt to be overlooked, nevertheless, it is of high importance in this matter of vaccine therapy.

It is the existence of this natural and cellular immunity possessed, with the limitations above noted, by most of the tissues of the body, in relationship to any specific bacterial form that renders vaccine therapy possible. Time forbids that I should discuss the most interesting and important matter of its relationship to acquired immunity.

The second great underlying principle to be recognized is that once bacteria have established themselves within a given tissue and have undergone proliferation there, that in itself is a sign that that particular tissue is not immune, that the subsequent arrest of their growth is not due to an exaltation of the bactericidal powers of the local tissues, but is due to aid contributed by the organism from without.

This is now-a-days so generally accepted that I need but indicate the main facts on which it is based, namely, the leucocytic invasion of the infected locality on the one hand and on the other the evidence afforded by Bier's treatment that the local proliferation of bacteria is arrested by favoring the inflow of exudate into the part. I would but call attention to Hektoen and Carlson's[1] recent brilliant and convincing demonstration that just as the natural or non-specific immunity is cellular and not humoral, so the antibacterial substances are not elaborated in the blood itself but in the tissues; that the circulating blood to which toxins have been added is rapidly deprived of those toxins and now transfused into another animal of the same species sets up no production of antibodies in that animal, whereas, the original recipient of the toxins, although deprived of its own blood and transfused with that of a third animal, proceeds to develop immune bodies.

These are the two basal principles, but in order to utilize them, and by introducing the specific bacteria, either living or dead, away from the primary focus of the bacterial growth to induce an increased antibacterial reaction on the part of the other tissues, there are certain precautions to be taken and certain subsidiary principles which must be heeded.

### DOSAGE

First, as to dosage. The fact that definite fever and malaise may accompany the development of a (to others) insignificant streptococcus papule, say, on the nose—of a local inflammation not yet elevated to the dignity of a pustule, still less to that of a good honest boil—is a clear indication that a minute growth of a not specially virulent microbe may nevertheless induce pronounced general reaction; or otherwise, minute amounts of toxins are capable under natural conditions of setting up a profound systemic response. The fact noted by more than one observer,[2] that the application of a minute quantity of tuberculin to the skin slightly scarified is adequate to induce an inflammatory reaction around tubercles of the iris, shows similarly that incredibly minute amounts of toxin gaining entrance into the circulation can produce effects, even if in this case it be in a tissue that is sensitized.

It must ever be kept in mind that the first serious endeavor to employ vaccine therapy dates not from Wright but from Koch, or even more accurately from Pasteur, although the latter in his method of preventive treatment of rabies sought to intervene during the incubation period rather than during the frank exhibition of the infectious disease. Koch employed at first extracts of old bacterial cultures as a therapeutic agent, so old that they contained the diffused products of dead bacilli; later, what we now are accustomed to speak of as true vaccines, namely the killed bacilli. He did not at first recognize the significance of administering minimal doses. Wright's brilliant recognition of the possibility of guaging the extent of the reaction that follows hetero-inoculation has, I am inclined to think, been of service not so much as affording an accurate index, as in affording a means of demonstrating that the best results are apt to follow inoculation of doses of vaccine so small that they need induce no systemic reaction obvious during the next few hours by ordinary clinical means. We may thus take it as a generally accepted principle that minute rather than massive doses of vaccine are to be employed.

### QUALITY OF VACCINE

As to the qualities of vaccine, what is true regarding preventive immunization would seem to apply to their therapeutic employment, namely, that a more effective reaction and surer results are obtained by the employment of minute non-lethal doses of the specific bacteria, than by the exhibition of dead cultures, and by the latter than by injecting the products of bacterial growth. But inasmuch as in a frank infection we cannot consider the resistance of the organism as normal, and as, in conformity with what has already been stated the virulence or non-virulence of a given microbe and given dose of the same is implicitly determined by its action on the normal organism, so in vaccine therapy it is, in general, unwise to employ inoculations of the living bacteria.*

So also, on general principles, it is obvious that when the various strains of not a few bacteria present wide variations in their capacity to induce the production of the various antibodies in the animals of the laboratory, more constant results are to be gained by the employment of what have been termed autogenous vaccines, namely, the dead cultures of the particular strain of pathogenic bacteria causing the infection in, and isolated from the patient rather than laboratory stock cultures. Such vaccines liberating a particular order of toxins and other bacterial products will more surely stimulate the production of just the particular order of antibodies necessary to counteract and destroy the infective micro-organisms.

### CASES SUITABLE FOR TREATMENT

Now as to what may be laid down regarding the cases suitable for this means of treatment. We may broadly express the severity of any given case of infectious disease as the difference between the resisting powers of the organism and the virulence of the microoganism. In other words, a like grade of disease is to be anticipated when the resisting powers are considerable and the virulence of the microbe also considerable, and when the bodily resistance is feeble but the virulence of the microbe also feeble. The most hopeless cases of disease belong therefore to the categories of intense virulence of the specific bacteria, and of extreme depression of the systemic resistance. In neither of these cases, whatever indicator we employ, whether we estimate the agglutinins, the bacteriolysins or the opsonins of the blood do we find other than a lowering of our index of systemic reaction. To inoculate vaccines in either order of cases is, not to set up a reaction on the part of tissues that are exhausted or incapable of stimulation, but is merely to increase the amount of toxic material circulating in the blood, and to accelerate the final event.

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[1] Jour. Infect. Dis., 1910, vii, 319.

[2] Emery: Immunity and Specific Therapy, London, 1909, p. 381.

* The only exception that I can call to mind is the most cautious method introduced by Williams and Webb of treatment of tuberculosis by inoculating first either a single lung bacillus, or a very few, accurately counted, and at intervals steadily increasing the dose. This demands technical skill of the highest order.

Thirdly, as to the great mass of intermediate forms. what is to guide us? With Wright we may distinguish between two main groups of cases, those in which the growth of the specific organism within the body is accompanied by a febrile state, and those in which a continued febrile state is wanting, although on occasions rise of temperature may show itself. The febrile state is the sign of diffusion from the foci of growth of the bacterial toxins, and possibly also of the products of local tissue disintegration, and of reaction to the same.

With Wright we accept that the non-febrile cases indicate a limited and confined local growth of the bacteria, under conditions which do not readily permit the infusion of lymph either for the continued nourishment of the bacteria or for the conveyance of antibodies, and which, coincidently, arrest the effusion of toxins and products setting up the general reaction. These conditions may be due to the tissue in which the growth occurs being by nature dense and poorly supplied with vessels, or may be of secondary development, the specific microbes being of a relatively low grade of virulence, so that the tissues immediately surrounding the foci of growth instead of being depressed become stimulated to proliferate, whereby there is developed a surrounding capsule, well seen, for example, in connection with many tuberculous foci.

As we see, I might almost say daily, in the postmortem room, in connection with obsolescent tuberculous foci, this capsule formation may be so dense that in itself it must be regarded as a means of arrest of disease; or otherwise we may reasonably deduce that there can be a grade of self-limiting infection which, as there is no general reaction, is a potential rather than an actual infection, and in which vaccination is, it might seem, unnecessary. All the same, bacteria so fenced in are not absolutely innocuous. Clinical and post-mortem room experience demonstrate that they are apt to be latent and not destroyed. It would seem that hyperemia of the surrounding tissue and increased infusion of lymph may stimulate the bacteria to renewed growth and, whether by leucocytic agency or by necrosis and solution of the capsule, the bacteria may escape and set up active infection. The advantage of vaccination in this order of cases is that it replaces an unprepared by a prepared organism, and that through the sensitization of the immediately surrounding tissue it induces a very definite grade of hyperemia and leucocytic infiltration of that tissue, which, if the encapsulation is not too dense, must favor the entrance into the focus of antibacterial agencies; its disadvantages is that owing to the process of encapsulment the prepared lymph and leucocytes percolate with difficulty into the focus and thus are apt to be presented in quantities insufficient to bring about bacterial destruction. Vaccination alone in this stage does not surely bring about cure. What is necessary is the employment of auxiliary methods promoting the freer flushing of the focus or foci with antibacterial lymph as by Bier's methods for inducing hyperemia or Paterson's method of graduated exercise.

Why, it may be asked, do I categorically lay down here that the lymph is the important agent It may well be urged in objection, that, owing to the contradictory results obtained by different observers, one is not justified in concluding that the blood plasma and lymph, as contrasted with blood serum *in vitro,* possess either antibacterial or opsonizing properties, whereas, on the contrary Metchnikoff has proved to the hilt that the leucocytes of an immunized animal possess far more active phagocytic properties than those of the non-immunized. Quite so. But this is to me a very striking fact that neither Metchnikoff nor any of his school have succeeded in proving that the leucocytes of the immunized animal *per se*— the leucocytes separated from the plasma have greater phagocytic powers than those of the non-immune animal. And, this being so, we must hold as the simplest explanation that without the influence of the immune plasma or lymph the leucocytes are relatively inactive. Nor is it an adequate argument to urge that the leucocytes after centrifugalization and washing are depressed in their functions when placed in normal salt solution, if those same leucocytes transferred to serum will take up a score or more bacilli in a quarter of an hour. My colleague, Dr. Meakins, permits me to quote a yet more effective demonstration of this fact, repeatedly made by him, namely, the leucocytes of a highly immune animal placed in non-immune, normal serum do not take up any greater number of bacteria than do the leucocytes of a normal animal placed in the same serum.

We come now to the consideration of those cases in which the diffusion of bacterial products from the foci of growth has already caused a reaction on the part of the organism. Can we vaccinate with impunity in these cases—in the course of typhoid, pneumonia, and other acute diseases attended by manifest fever? Is there not the danger of adding to the amount of circulating toxins, and thereby exhausting the distant tissues—lymphoid, vascular endothelial tissue or what not—rather than the benefit of stimulating them to produce additional antibodies? Here I am inclined to lay down that the fatal event in the majority of severe infections is not brought about by exhaustion of the tissues in general, but by action of the circulating toxins on the medullary nerve centers, and that the sign of exhaustion of the tissues or paralysis of the same and inadequate reaction on their part is a lowering and not a rise of the body temperature. Thus in the first place it may be laid down that, to guard against excessive action on the nerve centers, *vaccination should never be directly into the blood stream but should be subcutaneous,* allowing a slow percolation of the added bacterial products into the lymph and blood; and, in the second place, that the febrile temperature as such is the evidence of capacity on the part of the tissue to react. This may, I think, safely be laid down that on the one hand a sinking temperature accompanied by increased weakness of pulse and respiration and advancing "toxic" state is a clear signal that the reactive powers of the patient are being overcome and exhausted, so that vaccination can only be harmful, and on the other hand if the fever be somewhat high, provided that the pulse is steady with no signs of cardiac weakness, then vaccination may safely be undertaken. The good results obtainable in these cases can no longer be questioned, and what is interesting is that the system evidently benefits from the slight temporary added rise of temperature which shows itself during the six hours or so immediately following the vaccination.[3] Hyperpyrexia is a contraindication.

Time forbids me to do more than note the curious paradox that often such vaccination converts a disease like typhoid that ordinarily recovers by lysis into one recovering by crisis, and *vice versa* time and again causes a disease like pneumonia culminating in crisis into one healing by a relatively slow but favorable lysis. I can only emphasize that the physician must be prepared for these modifications of the normal course of disease.

### THE OPSONIC INDEX

In conclusion there remains to be noted what Wright—and rightly—made the guiding principle in the development of his methods of vaccine therapy, namely, the establishment of an index whereby to determine the effects and course of the subsequent reaction. This was a notable advance. Nevertheless, serviceable as it has been in establishing vaccine therapy as a rational procedure and in determining both the intervals that should elapse between vaccinations and the augmentation of successive doses, it has to be admitted that Wright's index is faulty. The principle is all important, the means of application of the same imperfect. When two of the leading experts in London working with samples of the same blood taken before and after vaccination can report, the one that the index is raised, the other that it is lowered, by the process,[4] when, as pointed out by Meakins,[5] a given serum may afford a higher opsonic index when it is diluted than when it is undiluted, and when, as noted by more than one observer,[2] during a long and continued negative phase, which according to Wright is a danger signal, the patient may obviously be making rapid improvement, something must be wrong. The dilution method introduced by Neufeld and Hüne[6] and employed on this continent by Klien,[7] Meakins[5] and Hektoen[1] clearly reduces the error of the personal equation, and, giving a vastly greater scale of the same order as that employed for the estimation of agglutinins and lysins, permits a comparison to be made between the opsonins and other antibodies of the serum. But if Wright's method is laborious and time consuming, this is more so. The only practical course to recommend is that, in connection with each particular nfection that it is sought to treat, the observer first studies thoroughly the variations in the opsonic and other indices in a series of cases, while carefully observing the effects of the vaccination treatment at the bedside, and then, armed with this foundation knowledge of the results of different strengths of doses in the different orders of cases, he educates himself to depend more and more on clinical symptoms in determining the trength and the frequency of his inoculations. Thus as shown by Latham[8] and by Hort,[4] it is possible in tuberculosis to read a temperature chart in terms of an immunity curve, the latter employing not the daily variation but joining the evening temperatures into a continuous curve.

In short vaccine therapy to be a success must be undertaken, not by the busy consultant, nor again by the confirmed habitué of the laboratory, but must be placed in the charge of one who, combining a thorough laboratory training with a certain amount of time not consecrated to other engagements, and a recognition that his future field lies in clinical medicine, accepts gladly the opportunity here afforded to apply his technical knowledge and to make intimate studies of individual cases of disease. Vaccine therapy lies in the hands of those younger well trained physicians whom happily the foremost schools of this continent are producing in increasing numbers.

Thus as a final principle it may be laid down—and I do this with full sense of the necessity and of the responsibility that attaches thereto—that vaccine therapy is not to be undertaken by the ordinary practitioner; there are too many dangers attaching thereto; and with this the corollary that, excellent as may be the stock vaccines prepared by certain firms, to advertise these lightheartedly and recommend them and their employment far and wide deserves the condemnation of this Association and of all interested in the well being of their fellow men.

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[3] A rise which, it is interesting to note, is wanting in the class of limited infections already discussed, and is suggestive of increased sensitiveness of the tissues already stimulated by the circulating toxins discharged from the infected focus.

[4] Hort, E. C.: Rational Immunization in the Treatment of Pulmonary Tuberculosis, London, 1909; and Brit. Med. Jour., Feb. 3, 1909.

[5] Jour. Exper. Med., 1909, xi, 100.

[6] Arb. a. d. Kais. Gesundheitsamte, 1907, xxv, 164.

[7] Johns Hopkins Hosp. Bull., 1907, xviii, 245.

[8] Proc. Roy. Soc. Med., Med. Sect., April 1, 1909.

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# THE EPIDEMIOLOGY OF POLIOMYELITIS

## A PLEA THAT IT MAY BE CONSIDERED A REPORTABLE QUARANTINABLE DISEASE*

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Half a century has elapsed since Heine published the first known description of the disease which is now commonly called anterior poliomyelitis, or as he designated it, spinal infantile paralysis. Half a century is an extremely short time for a disease so hideous and uncompromising to hide the secret of its being; it might have done so much longer had it not been for the ghastly epidemic that occurred in New York in 1907, which permitted Flexner to initiate the experiments from which has flown his brilliant discovery of its cause.

### EPIDEMICS

Poliomyelitis has prevailed epidemically in many parts of the world during the past twenty-five years. The great epidemics have been, that of Norway in 1887 and 1895; 43 cases in the first, and 20 in the second, recorded by Medin; that of Rutland, Vermont, in 1894, 126 cases, recorded by Caverly; that of Queenland in 1904, 108 cases, recorded by Ham; that of northern Norway in 1905, 437 cases, and of southern Norway in the same year, 103 cases, recorded by Wickman; that of Vienna in 1908, 266 cases, recorded by Zappert; that of Wisconsin in 1908, 352 cases, recorded by Manning; that of Rhenish Westphalia in 1909, 500 cases, recorded by Rekzheh, Krause and others; and the New York epidemic in 1907, 2,500 cases, recorded by a collective investigation committee in 1909.

In 1908 Holt and Bartlett[1] collected the literature of thirty-five epidemics which had occurred prior to the year 1907. Since that time about twenty epidemics, large and small, have been reported. Reference to the literature of these latter epidemics are appended to this article. The literature of the early epidemics will be found in the article by Holt and Bartlett.

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* Read before the Association of American Physicians, May 2, 1910.

[1] Amer. Jour. Med. Sc., 1908, lxxxv, 647.

The large number of cases in the recent epidemics indicate that many cases formerly diagnosticated as grip, rheumatism, neuritis, bulbar paralysis, etc., are now recognized to be clinical varieties of poliomyelitis. It is the signal service of Wickman to have emphasized the various clinical forms under which the disease may display itself.

### A NEW DISEASE

The most remarkable secular mutation of poliomyelitis is that it is apparently a new disease. So far, nothing has been found in the literature to indicate that previous to 1843 the disease existed. In that year Colmer published[2] the report of a case of infantile hemiplegia that he had seen in West Feliciana, Louisiana, and brief mention of ten other cases of various forms of paralysis occurring in children which were probably dependent on poliomyelitis. It is worthy of remark that cerebrospinal meningitis escaped recognition up to the year 1834. The unheralded advent of a disease of which no trace has been met in history, is not uncommon. The English sweating sickness made its appearance abruptly in 1486, and disappeared with equal abruptness in 1551.

Because of the short time that we have been familiar with epidemic poliomyelitis we are unable to say whether or not it is subject to the alternating periods of quiescence and recrudescence that are so common in other epidemic diseases. In this country it has not prevailed epidemically twice in the same place, unless the mild epidemic of 1909 in that portion of Brooklyn known as East New York may be so considered, nor can we say that it displays conspicuous multiannual nutations, to use Ransome's designation for fluctuations in prevalence and virulence extending over periods of from ten to fifty years. Poliomyelitis may be constantly more or less existent in a densely populated large city such as New York, but its existence is known only to individuals who may come in contact with it. When the disease shall be put on the list of reportable diseases, then it can be determined what its multiannual fluctuations are. One fact that is worthy of attention, is that during the epidemic of 1907 in New York, the death rate from other epidemic diseases was not lower than it usually is. This is contrary to what has been noted in other epidemic diseases. For instance, when scarlet fever prevails, the death rate of measles is apt to be low and *vice versa.*

### SEASONAL OCCURRENCE

The most remarkable thing in the epidemicity of poliomyelitis is its seasonal occurrence. It occurs as invariably in the summer months as smallpox does in the winter months, and the advent of cold weather seems to terminate epidemics in every instance. One may readily draw the inference from this, that cold is inimical to the saprophytic growth of the non-obligatory parasite, but to make such inference legitimate, it would first have to be proved that the virus is parasitic in nature. In several instances it has been noted that the summers have been particularly dry. The only exceptions to this are a small epidemic reported by Litchfield, of Sydney, who notes that the summer was wetter and cooler than usual, and one in San Francisco in May and June, 1901, reported by Woods,[3] in which there were fifty-five cases.

### COMMUNICABILITY

The next most interesting feature of epidemic poliomyelitis is its communicability. Until recently it has been a matter of personal opinion whether or not the disease was communicable. Those who have reported epidemics have expressed their conviction that the disease was probably contagious and such occurrence as that reported by Pasteur,[4] in which seven cases occurred in one family, seemed to leave no doubt of the contagiousness of the disease. The description of an extensive epidemic in Stockholm in the summer of 1899, in which in various houses two cases of the disease occurred, and in several families, in which two or three cases were observed amongst relatives who had had contact with the sick, went far to corroborate this belief, and when Geirsvold was able to trace the disease from one village to another, and from one house to another, the contagiousness of the infection began to be realized. Since the publication by Wickman[5] of the epidemic which occurred in the summer of 1905 in southern Norway, the contagiousness of the disease has been admitted. In the majority of instances some contact could be traced between one patient and another, and even the spread of the disease from one village to another could be traced by the passage of the individuals from town to town.

The most remarkable contribution to the study of its contagiousness, however, has been made in our own country by Dr. George P. Shidler,[6] of York, Nebraska. Dr. Shidler seemed somewhat in doubt whether the spinal disease which prevailed epidemically in York county in July, 1909, was poliomyelitis or cerebrospinal meningitis, but there can be no doubt that it was the former. Some of his cases are most illuminating in showing the contagiousness of the disease. For instance, a woman went with her child to the wedding of a sister in whose house a younger sister was ill with the disease; nine days afterward the mother, with the child, returned to her own home another of her children came down with the disease. In an adjoining house there lived a family of six children; all of them developed the disease; a woman who came to visit this family brought her baby; in five days it died of the disease. Soon after this, quarantine was established, and the disease was checked. A number of other instances quite as striking as this are published, but the most important contribution to the epidemiology of the disease, is the number of cases that occurred in families in which there were two or more children, all of whom acquired the disease. There were six cases in a family of six children; four cases in a family of six, four cases in a family of five, four cases in a family of four.

Contact with a person sick of the disease is not necessary that another person may contract it. There are numerous examples of contagion by indirect contact; that is, a person who does not have the disease carries it from a victim of the disease to another at a distance, who then falls ill of it. This has been established by the record of several epidemics, but by none more strikingly than those reported by Wickman and by Shidler.

### INCUBATION, DISTRIBUTION AND MORTALITY

The period of incubation may be as brief as four days, or it may be a fortnight. From a study of their publications alone, it must be accepted that poliomyelitis

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[2] Colmer: Amer. Jour. Med. Sc., 1843.

[3] Occidental Med. Times, xvii, 77.

[4] Pasteur: Tr. Clin. Soc., 1897, p. 143: Taylor, J. M.: Philadelphia Med. Jour., Jan. 28, 1898; Neumark: Med. News, Jan. 28, 1899; Geirsvold: Norsk Mag. f. Laegevidensk, 1905, p. 1280.

[5] Wickman: Beitrage zur Kenntnis der Heine-Medinchen Krankheit, Karger, Berlin, 1907.

[6] Shidler, George P.: The Epidemic of Spinal Disease in Nebraska, The Journal A. M. A., Jan. 22, 1910, liv, 277.

STATISTICS OF EPIDEMICS

| Year and Season. | Locality. | Topography and Hygienic Surroundings. | Number of Cases. | Deaths. | More Than One Case in Family. | Author. | References. | Remarks. |
|---|---|---|---|---|---|---|---|---|
| 1907<br>Summer and early autumn. | Sweden. | Towns and county. | 100 in the epidemic of '05, 50 in '06. | 159 corrected mortality. 167%. | Many examples. | Wickman | Beiträge zur Kenntnis der Heine-Med. Krankheit, Berlin, 1907. | The most complete presentation of the subject extant. |
| 1907<br>Summer | Pennsylvania.<br>Ridgway | County—good | 50 | 4 | No | Terriberry | Long Island Med. Jour., Dec. 1907. | The disease extended down the valley in a definite direction. |
| 1907<br>Summer | Michigan.<br>Occana Co |  | 20 | Not given. | No | Griffin | Jour. Michigan State Soc., Feb., 1908. | Meningeal symptoms were common. Pigs and chickens also affected. |
| 1907<br>Summer | Pennsylvania.<br>Dubois. | County and village. | 100 | A few |  | Free | Jour. Nerv. and Ment. Dis., Apr., 1908, a brief abstract of paper read before the Phila. Neurological Soc. |  |
| 1907<br>Summer | Wisconsin.<br>Galesville |  Rural | 22 |  |  | Jegi | Wisconsin Med. Jour., Apr., 1909. |  |
| 1908<br>August to October. | Wisconsin. | Bad sanitation and sewerage; surface wells in marsh and near privy. | 352 in the state. 167 in Eau Claire County. | 54 |  | Manning | Wisconsin Med. Journal, April, 1909. | 29 cases followed direct exposure to infection; 25 cases immediately after a case in same house; 2 in houses where disease prevailed 3 and 20 years before. |
| 1908<br>Summer | Minnesota.<br>Moose Lake, Barnum, Wadena. | Rural |  |  | In 1 family of 6 children, 5 ill; 2 died, 3 recovered; another of 5 children, 3 ill, 1 died. | Hamilton | Wis. Med. Journal, April, 1909; Northwestern Lancet, Minnesota, Oct., 1909. | Disease assumed type of neuritis; several patients had tonsillitis. |
| 1908<br>Summer | Michigan.<br>Flint | Rural and village. | 30 | 5 | One family: 2 little girls within a week. | Manwaring | Jour. Michigan State Med. Soc., April, 1909. |  |
| 1908<br>Hot, dusty weather. | Minnesota. | Good hygienic surroundings. |  |  | A few cases only; no isolation of any cases. | Hill | Northwestern Lancet, Sept. 1, 1909. | No evidence of the transmission of the disease from person to person or through infected houses or water, or by animals or by dirt-eating (common among children eating raw vegetables direct from the garden). |
| 1908<br>April - June after dry weather. | Australia.<br>Victoria | Densely populated districts: sanitation fair. | 137 | 6 | Majority of cases in families where 3 or 4 slept in same room or same bed. | Stephens. | Intercolonial Med. Jour. Australasia, Nov. 20, 1908. | No severe pain in disease. Incubation period 3 to 16 days. Invasion, 0 to 7 days. |
| 1908<br>uly to September. | Minnesota.<br>Northfield |  | 20 | 4 | 4 in 1 family; 3 in another; 2 in another. | Strang | Jr. Minn. State Med. Assn. and Northw. Lancet, July 1, 1909. |  |
| 1908<br>une to September. | Virginia.<br>Salem | Town and vicinity. | 25 | 3 | No 2 cases in 1 family, even when other children were exposed. | Wiley and Darden. | THE JOURNAL A. M. A., Feb. 20, 1909. | Cool weather interrupted epidemic for 3 weeks; then hot weather brought on 2 new cases in August. Patients had pronounced hyperesthesia and sweating. |
| 1908<br>une to September. | Massachusetts.<br>Western part. | 3 contiguous and 11 neighboring towns, on banks of streams; detached houses, no sewers in majority of houses. Sanitation not good. | 69 | 5 | 2 cousins in same house, 2 brothers in a family, 2 cousins in another, 2 brothers in another, 2 sisters in another. | Lovett and Emerson. | Monthly Bul. Massachusetts State Board of Health, July, 1909. | All patients were exposed to valley influences. No correlations to curves of the temperature, rainfall and number of cases. Two to three times the number of children sick were exposed and did not become ill. Six patients over age of 17. |
| 1908<br>ummer | Westphalia.<br>Hagen | Not remarkable. (See note.) | 100 | Not stated: 9 autopsies. |  | Krause | Deutsch med. Wochenschrift, Oct. 21, 1909. | Great mortality among chickens. Shoots of small oaks covered with white fungus. |
| 1908<br>ummer | Vienna and Lower Austria. | Ordinary; not bad. | 266 |  |  | Zappert | Wiener med. Wochenschrift, Nov. 13, 1909. |  |
| 1908<br>ummer | New York.<br>Schenectady. | Good | 29 |  |  | Clowe | Albany Medical Journal, vol. 19, 1908. |  |
| 1908<br>ummer | Germany.<br>Marburg. |  | 50 |  |  | Romer and Muller. | Münchener med. Wochenschrift, Dec. 7, '09; ditto, Nov. 30, 1909. | Sore throats extremely common. Many examples of communicability from person to person. |
| 1908<br>ummer | Pennsylvania.<br>Lewiston |  | 30 | 3 | Two | Barnett | Therap. Gazette, Sept., 1909. |  |
| 1908<br>ummer | England.<br>Essex |  | 8 | None | Three and two. | Trevis | Brain, Nov., '09. | Could not trace spread of disease. |
| 1909<br>ummer and autumn. | Rhenish Westphalia. |  | 500 | 18.2 in 1 vicinity. |  | Rekzeh | Med. Klin., 1909. No. 45, p. 1704. | It followed an outbreak of acute poliomyositis. |
| 1908<br>ummer | Russia. | Not remarkable. | 49 |  | Several instances. | Schwarz | St. Petersburg Med. Wochenschrift, Jan. 10, 1909. | In a village of 500 inhabitants. |
| 1909<br>ummer | Nebraska.<br>York County. | Hygienic surroundings good—fair. | 200 | 15 =7.5% | Over 1 in family; 44% occurred in families with more than 2 children, all of whom took the disease. | Shidler | THE JOURNAL A. M. A., Jan. 22, 1910. | Shows the necessity of having epidemics properly studied. Perhaps the most important on record. The report is unfortunately fragmentary. |

is a contagious disease. That its contagiousness varies needs scarcely be said. In the New York epidemic, the most extensive on record, the only evidence of its contagiousness was that there were two or three cases in a few families, but the most painstaking care to detect any evidence of its communicability was unrewarded.

The territorial distribution of some of the epidemics is noteworthy, especially the epidemic of Sweden in 1905. Although the disease was pretty generally distributed through the entire country, there were well-marked foci in which the disease was prevalent to a considerable extent, or to a slight extent, and the large intermediary areas in which the disease did not exist. This has been noted in several other instances, but in the New York epidemic there certainly were no foci of the disease. The disease has no apparent relationship to density of population.

The next most important fact obtainable from a study of these epidemics is that the mortality rate varies very decidedly in different epidemics. In some it is as low as 5 per cent., in others it is nearly 20 per cent. (the highest ever recorded was in an epidemic in Sweden in which the death rate was 46 per cent.) The former figures approximate the death rate in the New York epidemic, the latter that in York county, Nebraska.

### INFLUENCE OF SURROUNDINGS

The most careful investigations have failed to reveal that the epidemic prevalence of the disease has anything to do with unhygienic surroundings. To be sure, in some instances it was noted that the sanitary conditions were poor, especially in some of the epidemics of Norway, (Geirsvold) but in the majority of the large epidemics such as those of Vermont, New York, Nebraska, Australia, and Westphalia, the hygienic conditions were good, and in some instances excellent.

The association of poliomyelitis occurring epidemically with other diseases has been made a rather important feature by many writers, and there are in the literature a number of cases showing such association. As a matter of fact it has no noteworthy relationship to infectious diseases. In several instances there was a great mortality among chickens (Caverly, Krause) and the latter writer made the interesting observation that the shoots of small oak trees surrounding a house in which several cases occurred were noted to be covered with white fungus. This disease of the young oak shoots had only existed for a short time. This author also observes that there was a great number of cases among breast-fed children, and a number of writers point out that disorders of the digestive organs were very common. Personally, I made a close study of this question in the several hundred cases that I saw in the New York epidemic, and the conclusion that I drew was that digestive disturbances had no relation to the occurrence of the disease.

### RECRUDESCENCE

A very remarkable fact was noted by Stephens[7] that there was a recurrence or recrudescence of the disease occasionally observed in the same child. Dr. A. A. Eshner thinks that he has observed a second attack of poliomyelitis in the same patient. It is most probable, however, that one attack of poliomyelitis gives immunity for a long time.

### MODE OF INFECTION

We need no longer conjecture whether or not the disease is contagious. The points for our consideration are, what the spreading powers of the virus are, and what the facilities are for the spread of the contagion, and how does it gain entrance to the system. Spreading powers of the virus vary unquestionably with the epidemics. In some cases apparently it is impossible to make it out, and in other cases, as in the Nebraska epidemic and in the Westphalia epidemic, the spreading powers of the virus were commensurate with social contact, and the facilities for the spread of the contagion depend on such contact. From a study of the disease clinically, no information has been obtained as to how the virus gains entrance into the system. From experiments on monkeys, however, Flexner is convinced that the portal is the same as in epidemic cerebrospinal meningitis, namely the nasopharynx. The necessity of adopting measures to keep this mucous membrane in a state inimical to infection in children of a community in which the disease is prevailing is obvious. The period of incubation is from five to ten days. It may be longer in some instances, and quarantine for a fortnight or longer would seem to be proper.

### NEED OF QUARANTINE

Boards of health should be urged at once to place poliomyelitis on the list of reportable diseases and to formulate measures which may be quickly enforced to constitute the strictest quarantine. Although the death-rate is comparatively low in some epidemics, it is apparently high in others, and our utter inability to influence the disease after it has begun, in conjunction with the fact that it maims the vast majority of those that survive it, should spur us to every effort, individually and concertedly, to stamp out the ghastly disease. That quarantine shall be of real value we must learn to detect the so-called atypical cases, particularly the "meningeal" cases, and those in which paralysis does not occur.

### PATHOLOGY AND DIAGNOSIS

We must forget the description of the text-books and realize that poliomyelitis is an acute infectious disease of the cerebrospinal axis and its covering, the pia, with a pronounced and inexplicable predilection for the gray matter of the anterior portion of the spinal cord, which it nearly always succeeds in affecting before its pathogenic impetus is satisfied. But it affects the gray matter in one case profoundly; in the other triflingly, and the symptoms that result must of necessity vary with the intensity of this affection and with the portion of the cerebrospinal axis that bears the brunt of the lesion.

We must also learn to diagnosticate the disease early, a task more difficult than the interpretation of the so-called atypical cases. It has been recently suggested by Flexner (verbal communication in the discussion of this paper) that in view of the frequency of a degree of leptomeningitis in perhaps the majority of cases, the spinal fluid withdrawn early in many of these cases will show an increase of proteids and changes in the lymphocytes which will suggest the diagnosis before the disease has an opportunity to attack the cord itself. We might legitimately entertain the hope from our knowledge of the diffusion of formaldehyde within the system that soon we may be in possession of a substance which will be adequate to check the progress of the disease.

37 West Fifty-fourth Street.

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**Strangulated Ovarian Tumor in a Child.**—J. M. G. Swainson (*Proc. Roy. Soc. Med.*, February, 1910) reports the case of a child aged 2, brought to the hospital with acute abdominal symptoms, pain and vomiting of four days' duration. The abdomen was rigid, somewhat distended, and the temperature was 100.4 F. A tumor was felt in the right iliac fossa. Operation revealed a strangulated ovarian tumor about the size of a tangerine orange and greyish black in color. The other ovary was normal.

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[7] Stephens: Intercolonial Med. Jour. of Australasia, xiii, 1908.

# PARALYSIS OF THE NECK AND DIAPHRAGM IN POLIOMYELITIS*

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The knowledge of the nature and symptoms of poliomyelitis has expanded enormously within the last five years. New ideas of the communicability and pathology of the disease have been accepted. Landry's paralysis, polio-encephalitis, and various painful paralyses are now included in one disease-concept. It is therefore with the hope that an unusual symptom-complex of poliomyelitis may find a place in the literature of the disease that I report a case of high cervical poliomyelitis causing a paralysis of the diaphragm and neck muscles and terminating in complete recovery.

The existing literature on this subject is very scanty. Neck paralysis in combination with loss of power in the extremities is not unusual; on the contrary, isolated neck palsies are excessively rare in poliomyelitis.

Paralysis of the diaphragm is scarcely mentioned in treatises on poliomyelitis except with the fatal type of Landry's paralysis.

There is but one recorded case (Erb's[1]) of a combined paralysis of the phrenic and spinal accessory nerves existing as the sole lesions of a high cervical poliomyelitis. The origins of the spinal accessory and phrenic nerves are close together on the upper cervical cord. The spinal branch of the spinal accessory originates in the anterior horn of the cord, as low as the sixth cervical nerve. It is simply a motor spinal nerve which has the unusual course of ascending into the skull and of leaving it again with a cranial nerve. In the neck the spinal accessory inosculates with the second, third and fourth cervical nerves and forms a plexus which innervates the sternomastoid and the trapezius muscles.

The phrenic nerve—4th cervical-nerve—arises from about the same tissue and innervates the diaphragm. Thus the two pairs of nerves originate in about the same area of spinal gray matter, and a focus of inflammation in the cervical cord might easily injure the functions of both phrenic and spinal accessory nerves. The rarity of paralysis of the phrenic nerve may be due to the resisting power of its tissues to disease.

With paralysis of the neck muscles the symptoms are characteristic. The patient cannot rotate the head, hold it erect or raise it from the pillow. In sitting or standing, the head falls forward, backward and sidewise, not following the movements of the body; the head wabbles around on the body like the headpiece of a disabled marionette.

In Wickman's analysis[2] of the distribution of paralysis in the Swedish epidemic of poliomyelitis in 1905 with 479 cases, neck paralysis existed in nine patients. This does not include cases described as Landry's paralysis or paralysis of respiration, or cases of ascending paralysis in which all four extremities and the neck were paralyzed before the fatal issue. Thus, palsy of the neck muscles occurred in 1.9 per cent. of cases of the benign type of the disease; in only one case was there an isolated palsy of the neck. With the others loss of power in the neck was associated with paralysis of the extremities.

From the report[3] of the Collective Investigation Committee of the New York epidemic of poliomyelitis of 1907, one would conclude that loss of power in the neck is common. In 679 cases loss of motion in the neck occurred as the first symptoms in two instances, and at the height of the disease 299 patients (39.8 per cent.) could not hold up their heads. As to this symptom both the questions of the committee and the resulting answers are vague as to whether the inability of the patient to raise his head came from general prostration or from paresis of the sternomastoid and trapezius; yet a fair conclusion is that in a considerable number of cases there existed a motor palsy of the neck.

It is interesting to note that the committee made an analysis of the residual disability in 318 cases in the same epidemic of poliomyelitis and no mention is made of a neck palsy, so that one may draw the conclusion that this symptom generally disappears. That with the neck paralysis of poliomyelitis a complete recovery generally follows may also be inferred from the last edition of Starr.[4]

In an analysis of 1,292 permanent palsies from poliomyelitis collected from the statistics of Starr, Duchenne, Seligmuller, Sinkler, Lovett, no paralysis of the neck is recorded. Starr, however, states that during the disease, the neck muscles are occasionally weak and that the paralysis may extend to the neck, throat, face and even the eyes, giving rise to the symptoms of bulbar palsy, the polio-encephalitis inferior and superior of Wernicke.

Oppenheim and Zappert[5] do not mention paralysis of the neck or diaphragm in their articles on poliomyelitis.

Fetra[6] states that in 63 cases rigidity of the neck existed in eleven cases and a paralysis of the neck and larynx in one case.

Buzzard[7] says that in poliomyelitis there is occasionally a rapid atrophic paralysis of the muscles of the head and trunk; and Holmes states that paralysis of the diaphragm is in the majority of cases only part of a general peripheral neuritis or poliomyelitis.

### PARALYSIS OF THE DIAPHRAGM—PHRENIC NERVE

Wickman[8] says that the pathologic disturbances of the mechanism of respiration in poliomyelitis are partly due to an affection of the spinal center of the intercostal muscles and diaphragm, and partly to a lesion of the origin of the vagus nerve. It is not always possible to distinguish whether the respiratory distress comes from a high cervical or a pontine source. An injury to the pneumogastric of medullary origin usually shows itself by recurring attacks of dyspnea and tachycardia.

With an isolated bilateral paralysis of the diaphragm the symptoms are usually very clear. The respiratory abdominal movements are the reverse of normal. In health during inspiration the abdominal viscera are depressed and the abdomen is protruded. With a diaphragmatic palsy the upper abdomen recedes during inspiration and is pushed out during expiration. Breathing is labored and difficult. Any effort causes cyanosis and dyspnea. The lungs are nevertheless clear of pathologic sounds. The prognosis is always serious, partly from the danger of pulmonary infection, and is especially grave if associated with bulbar symptoms. If the paralysis of the diaphragm is complicated with a loss of power of the intercostal muscles the patient will probably suffocate. This danger is greatest in the first week, after which time the outlook improves.

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*Owing to lack of space, this article is here abbreviated by the omission of citations from the literature of the subject. The complete article may be found in the author's reprints.

[1] Erb: Deutsch. med. Wchnschr., 1906, p. 1899.

[2] Wickman: Heine-Medinschen Krankheit, pp. 139-276.

[3] Report of the Collective Investigation Committee on the New York Epidemic, 1907, p. 45.

[4] Starr, M. Allen: Diseases of the Nervous System, 1908, p. 270.

[5] Pfaundler & Schlossman: Diseases of Children, iv, p. 172.

[6] LaFetra: Trans. Am. Pediat. Soc., 1908, p. 164.

[7] In Osler's Modern Medicine, vii, 258.

[8] Wickman: Heine-Medinschen Krankheit, p. 34.

### REPORT OF CASE

The history of my case of cervical poliomyelitis causing paralysis of the neck and diaphragm is as follows:

*Patient.*—John D. was a boy of 4, a patient of Dr. Villiaume. Previous to his illness a baby brother, breast-fed, had sickened August 29 with fever, vomiting, diarrhea and general tenderness and died in a few days; and a cousin, also in the same house was attacked with symptoms of meningitis and taken to Ohio. Both these were probably cases of poliomyelitis spreading by direct contagion. John D. sickened September 4, with pain and tenderness in the limbs, trunk and neck, vomiting, fever, 104, pulse 150, and retention of urine. Later the pain and tenderness lessened, but there was still soreness and muscular twitching in the limbs, and in a day or two a flaccid palsy developed in the muscles of the neck. There were no convulsions; the boy was slightly delirious at times.

*Examination.*—I saw the patient first September 8, the fifth day of the disease. He was a well-developed boy, lying in a reclining chair, breathing with great difficulty. The pulse was 110, regular; respiration 42. The lungs were clear; there was a complete paralysis of the neck muscles so that the patient had no control of his head. The head fell backward and forward and sidewise unless held with the hands or resting on a pillow. The neck was not tender. Its muscles did not respond to the galvanic or faradic current. Evidently there was present a paralysis of both spinal accessory nerves injuring the function of the sternomastoid and trapezius muscles. Most of the child's distress arose from difficulty in breathing. The whole chest moved with great effort during respiration. With inspiration there was slight recession of the anterior ribs and the upper abdomen was drawn in; it bulged out at expiration, indicating a bilateral paralysis of the diaphragm. The right knee-jerk was absent, the left normal; sensation was normal.

*Course of Disease.*—In the evening there developed great cardiac depression, rapid pulse and intense dyspnea, giving rise to the fear that the myelitis had invaded the medullary tract. This distress passed away in a few hours. After this for ten days the child remained in stationary condition and was fairly comfortable except that the respiration was labored and rapid and that the neck muscles were useless.

September 17: Fourteenth day of illness. Dr. James W. Putnam in consultation. There was no fever; respirations 40, pulse 120 to 140. The face was often flushed; the pupils were evenly dilated; the lungs were clear; the heart sounds good. The neck muscles were still paralyzed; did not respond to faradism. The abdominal muscles responded to faradic current; the upper abdomen receded at inspiration. Evidently the condition was due to a high cervical poliomyelitis affecting a focus at the origin of both pairs of phrenic and spinal accessory nerves.

October 21: Forty-seventh day of illness. There had been general improvement since last mentioned date. Respirations were 31; pulse 96. Both knee-jerks were lost. Respiration was easy and normal. The abdomen bulged at inspiration; the abdominal reflexes were good on both sides. The head could be moved rather feebly from side to side and also drawn forwards. The sternomastoid was partly restored. The head could not be moved backwards. There was no power in the trapezius; all the neck muscles wasted and flabby; all twitch with the galvanic current.

The paralysis of the diaphragm began to improve after the third week and had disappeared by the sixth week. The child improved rapidly in health. A jury-mast support enabled him to support his head. About March 1 the jury-mast support was discarded and the child played about without artificial support to his head. All of the muscles of the neck could be moved, although the sternomastoid was still somewhat weak. There was no apparent wasting of any muscle. The course of the disease showed that the myelitis affected a small focus in the cervical cord between the third and sixth cervical nerves, temporarily destroying the function of both phrenic and spinal accessory nerves; the lesion about the phrenic nerve caused a severe but temporary disturbance of respiration. The paralysis of the neck muscles lasted about four months, after which time both sternomastoid and trapezius recovered their power.

The treatment—protection from chill and respiratory infections, rest, diet, strychnin, electricity—was skilfully carried out by Dr. Edward Villiaume.

### CONCLUSIONS

From the meager literature of paralysis of the neck and diaphragm in poliomyelitis I would draw the following conclusions:

1. Cervical poliomyelitis affecting only the origins of the phrenic and spinal accessory nerves is rare, but in the two recorded cases recovery occurred.
2. Paralysis of the neck muscles occasionally occurs in poliomyelitis and except in Landry's paralysis the prognosis is favorable as to restoration of function; some improvement always takes place.
3. Paralysis of the diaphragm is exceptionally seen in poliomyelitis and that, although dangerous, recovery is possible.

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# THE PROBLEMS OF THE PHYSICIAN CONCERNING THE CRIMINAL INSANE AND BORDERLAND CASES

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The usual way to learn about diseases is to take up individual cases and to determine what specific matters stand out in the experiment of nature, and what special things shall be formulated into a plan of treatment or management.

When a whole field like that of psychiatry and its legal aspects in criminal cases is to be the starting point, one likes to take for granted a considerable experience with specific cases of the disorders to be subjected to such a special inquiry. But I do believe that even a general discussion of the general topic is bound to throw some light on how to become better acquainted with such a class of people as the insane.

At the very outset the problem appears rather different to the physician from what it appears to-day to the layman. The layman, and I am afraid most lawyers, consider insanity as a condition characterizing a more or less final subdivision of humanity, which is, or should be, fenced in by asylum walls. Asylum walls have indeed long been the most impressive and most intelligible definition of the whole group. Our text-books of mental diseases have up to recently been to a remarkable extent descriptions of what belongs in asylums, very careful of making their distinctions in the traditional terminology of mania, melancholia, paranoia and the terminal and senile and paralytic dementias. To make my first point as briefly as possible: Insanity is not a "disease" in the sense in which tuberculosis or leprosy are diseases, but it is a condition to which a number of totally different diseases may lead; some of them clearly mental disorders from the outset, mental defects, or poorly balanced mental habits miscarried to a point where the individual is no longer able to extricate himself, where he cannot be considered competent to manage his own affairs and to look out for his personal interests, not to speak of the altruistic demands. Some of these other diseases which may lead to insanity are more or less clearly the effect of poisons or of the undermining of the metabolism of the nervous system. Still others are diseases directly affecting the structure of the brain, through tumors, or injuries, or vascular disease or the like.

The nervous system is in one way a very enduring and hardy tissue; it loses least in states of emaciation, but it has little power of reconstruction if once organically damaged. This is the cause of the existence of the irrecoverable wrecks who no doubt form a class, requiring for life special care and protection against themselves and the encroachment by others.

But on the other hand functional disorders of a character most alarming to the uninformed are absolutely curable; the patients pass through periods in which they are not themselves, and then again reach a comparatively normal state in which they can hardly understand the abnormal actions ascribed to them. The fact that 20 to 25 per cent. of those who come to our state hospitals can be discharged recovered, and nearly as many fit for a protected home existence, shows that we are dealing not with a permanent class of individuals but with a group of diseases apt to present a common feature of more or less deep and more or less permanent disorder of conduct and behavior. The number of those who pass merely as nervous, but who have really the same disorders with less marked affection of conduct, is difficult to guess. From a medical point of view it is well to remember that the common saying that neurasthenics and hysterics and psychasthenics do not become insane, is a comforting tradition, but one not well borne out by experience, when these terms are used in a broad sense.

If we do not deal with a definite unit but with widely differing disorders, what is the common link that makes us speak not of "insanities" as we should, but of "insanity"?

They tend to make it necessary to interfere with the patient's own control and legal responsibility. They affect the patient's ability to regulate his conduct and behavior, and expose him and others to risks, perhaps only through the patient's "self-respect," or through his unwillingness to accept ordinary rules of hygiene and medical direction, refusal to rest, refusal of food, tendency toward self-mutilation or suicide, or aggressiveness and liability to disturbance of the peace, or actual violent assault. Or the patient may betray an unwarranted yielding to impulses, such as unchecked sexual yearnings, from merely platonic pursuit and insistence by letter to startling expressions of affection, proposals and attack, or a mere surrender to the opportunities of immoral houses; or the impulse leads to drink and its dangers; or to a wild and reckless spirit of expenditure, shown, for instance, by buying a dozen pairs of shoes, ordering a champagne bath in the Waldorf-Astoria, or ordering a piano each to a whole string of female friends; or inner emptiness and unrest combine to prompt kleptomania, or incendiarism. Or a husband says that his wife has either become a tantalizing fault-finding devil, making his life miserable by insinuations and scenes and complaints and inconsistent behavior, or she must be sick; it is a question which he cannot settle or put up with any longer; something must be done to control the aberration. Or the wife of a well-known ghost-hunter begins to take the spirit-warnings too seriously, beyond all reason, and creates embarrassing situations; he has to check her even against her remonstrations. Or note the attacks of terror in epilepsy, to the fright or suspicion in alcoholic delirium and states of persecution, and to all the strange and startling outbreaks of the fantastic dementia præcox. These are some of the innumerable difficulties the patients, or their friends, get into and the point is reached at which the former have to be checked. When the danger is acute and great as in a fever delirium, matters are not minced; the patient is unquestioningly left under the direction of the physician, taken to a hospital, kept there and if necessary, held in bed and subjected to the treatment and hospital rules without any discussion about the legal rights of the citizen. The citizen's first duty there is to submit to lawful order and best régime. In many other "insanities" the patients are just as unable to control themselves and to look out for themselves; they also remonstrate and resist; but in such a way as to appeal more connectedly to the fellow-citizen and to demand legal consideration. To take such patients to general hospitals is unsuitable, because they often do not do well there, are disturbing, often do not feel sick, and feel out of place. They need physicians and nurses trained to meet the peculiar demands, and perhaps merely a routine of orderly quiet life with occupation, and sufficient rest and protection against irritating influences. The only available places are the private sanitariums and our state institutions which serve as homes for the incurable and for the acutely disturbed and also for those in the protracted states of mental unbalance. To judge from contact with many trustees and visitors, these institutions are places really little known by the public; little known even by the authorities controlling these hospitals, and by the judges and the average physician and other persons likely to be appealed to for advice when the conduct of a patient becomes difficult to control. Outsiders repeat antiquated tales not much better than the gossip palmed off by the "antivivisectionists." The consequence has been a barbarous inconceivably stupid fence of laws around the institutions which alone are adequately equipped to bring timely or lasting help to the affected patients. The whole conspiracy of facts and imaginations and traditions has created a class of humanity under a special legal ban called forth for the protection of a few cantankerous individuals, where all that is necessary is the application of the quarantine principles, and provisions for legal reinforcement of medical persuasion and advice, or provisions for legal relief from unwarranted interference.

Nobody has a right to go where he pleases with diphtheria or small-pox. Nobody has a right to display himself in the street in a delirium. Nobody has a right to attempt or to commit suicide. The more we look on the matters as issues of health, the more do we accept even the impending danger as reason for action. We do not want to wait until a person exposed to small-pox breaks out all over, because he is a danger to the community before that. Even if a diphtheria-carrier has not diphtheria sores, he must be quarantined if he is the carrier of a virulent strain. In the mental cases much stronger evidence is asked for as a rule by those who do not know the seriousness of the conditions. Danger and threat of suicide can be foreseen by any experienced physician; but a judge may want evidence of unmistakable threats and attempts made. It actually looks more as if the field were ruled by the principles of criminal law with its provisions that nobody can be punished for a thing that has not been done.

We see then even in the case of non-criminals that the term "insane" is a high-water mark justifying the application of *some process of quarantine* or commitment. It applies to a stage or condition of many kinds of disorders which can exist without being destructive of safety or self-control, but are apt to involve the behavior so as to make protective measures necessary. Quarantine principles would be the ideal thing. Since the restriction applies to individuals who often do not submit to persuasion (as do most reasonable subjects of quarantine) but who object and fail to understand the situation, the right of legal appeal must, of course, be freely granted. It is decidedly an anomaly that has made legal decision obligatory for all admissions to a hospital even if there is not the slightest objection on the part of the patient or friends, or on the part of any one except the patient deprived of his own judgment—merely to do justice to the railroading yarns of the dime-novel type or to relieve the superintendent of responsibility.

By another anomaly the committing judge asks the testifying physician whether the patient is insane. To my mind it is the physician's business to state what the patient says and does and shows in the way of disease, and that the disorders thus reported prove him to be incompetent to direct his own case. It is the judge's privilege to declare that the patient's condition is that of insanity, while the physician uses whatever medical terminology he may favor, terms which hold good whether the case has reached the high-water mark of insanity or not, and which do not put a painful stamp on the patient and family.

Whenever we say that a patient is insane, we say no more than that he is sick, and that the disorder is one of the ways of disorder of conduct and behavior demanding certain special precautions of management and especially protection against his or her own warped judgment and impulses. The nature and condition of the disorder which is the physician's chief concern is immaterial to the judge, who cannot know it without study and thus has to keep alive a phantom-unit "insanity" and the notion of an insane class, instead of a problem of quarantine.

We hear sometimes of a contrast of medical and legal definitions of insanity. This is an absurdity. "Insanity" is a term that I, as a physician, hardly ever use spontaneously. It is a practical designation for a practical situation and through our laws it has become a legally sanctioned term, while in psychopathology it has become a secondary issue. In some text-books there are peculiar strings of words called definitions of insanity. One of the simplest definitions demands that there should be protracted morbid deviation of the condition and conduct of the patient, such as incapacitates him to think, feel and act in relation to his environment in harmony with the standards of his bringing-up, and such as would entail a danger to himself and others.[1]

Law wisely abstains from any attempt at a definition of "insanity."

As a matter of fact it has several widely distinct standards and always according to the specific issue, namely:

1. Commitments.
2. Legal and testamentary competency.
3. Criminal responsibility.

The common link is the question of the existence of a mental disorder. The declaration of the legal status of insanity depends on special conditions for each of the three issues mentioned. The commitment, of course, is the most widely and fortunately most liberally applied category. As such it means nothing but "fit to be taken to a hospital against his consent." For certain contracts and even as a witness such a patient can still be competent, at least as much as a child between twelve and the age of majority, and in many points more. To take away the right of management of the property requires an additional legal procedure.

With regard to testamentary capacity, the law has definite standards of a peculiarly broad character: the testator may be as insane as can be in any other sense as long as he knows the nature of the bounty and his natural responsibilities to his family, and the property-relations. Any delusions or disorders not involving these do not make the person incompetent.

With regard to crime the matter is not simple.

Many physicians think that a declaration of insanity is equivalent to a declaration of irresponsibility. The consequence of this assumption is an endless quibbling and begging the question. If one feels that one should say irresponsible, one says insane; if responsible, not insane. And yet afterward the excuse is urged that the person was irresponsible because of insanity; or the public may demand the execution of a Prendergast or a Guiteau, in the face of undeniable mental abnormality, so that evidently the issue must be different from that of mere mental disorder.

In this matter the written law is somewhat misleading. The pertinent paragraphs of the New York Code read as follows:

> § 20. Irresponsibility, etc., of idiots, lunatics, etc.
>
> An act done by a person who is an idiot, imbecile, lunatic or insane, is not a crime. A person cannot be tried, sentenced to any punishment or punished for a crime when he is in a state of idiocy, imbecility, lunacy or insanity so as to be incapable of understanding the proceeding or making his defense.
>
> § 21. Irresponsibility, etc., of idiots, lunatics, etc.
>
> A person is not excused from criminal liability as an idiot, imbecile, lunatic, or insane person, except upon proof that, at the time of committing the alleged criminal act, he was laboring under such a defect of reason as either
>
> 1. Not to know the nature and quality of the act he was doing; or,
> 2. Not to know that the act was wrong.

A similar see-saw appears in Section 22 in regard to intoxicated persons.

> No act committed by a person while in a state of voluntary intoxication, shall be deemed less criminal by reason of his having been in such condition. But whenever the actual existence of any particular purpose, motive or intent is a necessary element to constitute a particular species or degree of crime, the jury may take into consideration the fact that the accused was intoxicated at the time, in determining the purpose, motive or intent with which he committed the act.

In practice, physicians are inclined to appeal to Section 20 for simplicity's sake. The legal practice calls for the application of Section 21.

Another complication comes through the relation of the corollaries of a state of "insanity" to the punishment. When punishment is measured by responsibility and mental disorders reduce the responsibility, we come to the further inference that the perpetrator of an insane act shall go free. We shall discuss this monstrosity later.

Let us turn first to the criminal acts themselves. Crime is any act that subjects the doer to legal punishment. Without a specific law no act can be called a crime. Which of these acts occur among the insane?

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[1] This is a good formulation for matters of commitment but too lax for those who assume that insanity should spell irresponsibility. The following definition of the issue in criminal cases was offered by Judge Barnes: "If at the time the crime was committed the defendant knew it was wrong to commit such a crime and had the power of mind to choose either to do or not to do the act and of controlling his conduct in accordance with such choice, then he ought to be held responsible, although he was not entirely or perfectly sane." This definition does not use the term insanity, which really becomes an undesirable complication.

In this description of how morbid disorders of conduct and behavior can influence action, I have already pointed out various ways that make the patient liable to misdemeanor. Looking over the mental disorders we see certain types predisposing to special types of crime.

The bulk of morbidly determined crimes is attributable to states of defective or uneven abnormal development, i. e., the various grades of imbecility, probably about 22 per cent. Certain forms of imbecility and defective balance are directly called moral insanity. Here we find thefts, forgery, swindling, sexual assaults and exhibitionism and other perversions, sexual murder, acts of revenge and spite, or mere impulse such as incendiarism. About 12 per cent. of the cases in Köppen's statistics belong to the paranoic group, much more likely to present distinctly aggressive impulses: murder and assault, disturbance of the peace in church or homes, insults, libel, threats and forgery or acts of revenge and sham defense. The simply paranoid forms of the deterioration-processes lumped together as dementia præcox shine with tramp-life, prostitution, exhibitionism, forgery, thefts and occasionally acts of revenge or sham-defense. The paralytic and senile become collectors, thieves, sexually aggressive, perjurers. Their occasional impulsive acts ally them with the epileptics, who present the most dangerous and brutal assaults, murder, rape, theft, and calumny; hysterics follow similar paths, alcoholics perform acts of revenge, and supposed self-defense, and at times epileptoid murders. Depression has led to family murder, a sort of vicarious suicide; or even murder committed for the sake of a passive suicide by execution, and other abnormal ways of breaking through the morbid feeling of tension and restraint. Manic excitements prompt to transgressions and excesses, especially in sexual matters, or vituperation or violence.

The question arises: are there any crimes which are clearly the act of an insane person? Concerning this point I should be cautious. Some of the crimes are so blind and violent that they exclude all cool consideration. But this may hold for any acts of passion. If a murder is well planned and well covered up, or if the delinquent acts normally and with perfect coolness, the act may still be the clear result of an abnormal mental state. It is by far the best rule to claim that no crime or act as such can be estimated properly without a study in the light of other acts and tendencies and the general reaction and complete record of the person.

The practical side of the question of the criminal insane is to determine not so much what crimes occur among the insane as what shall be done about certain crimes in which the issue of insanity is raised, and what the aims are of the criminologist and the judges in their decisions. I assume that the aims are: (1) to ascertain the facts; (2) to determine the guilt; (3) to assign the punishment or judicial remedy; (4) to bring about the effects expected from punishment. As to the determination of guilt, we seem to have a three-cornered interdependence between responsibility, guilt and punishment. The only safe statement is, I suppose, that responsibility is liability to punishment. We might make that mean that every defendant exercised a certain amount of choice to do better or worse. The lesson which the punishment should teach him and others is that he should have chosen the better course and that, not having chosen it, he has made himself liable to that punishment. It is further supposed that it is his duty as a citizen to know that lesson and that he cannot be excused for not knowing it. Irresponsibility through insanity would, I suppose, only apply if on account of mental defect he never could have learned this, or even with this helpful experience or knowledge, he would not have been able not only to choose the better, but really to know his moral lesson. The whole question of guilt is forced to operate with a hypothetical argument because it presumes an answer to the question whether his condition did allow or might have allowed him to know certain things and to make the proper use of what he did not use or choose. It is the theory of the intent that looms up. However that be, it certainly is best to leave out of discussion the question of free will and determinism which divides the camps in Germany. Practical will and practical determinability is all that concerns us. We need not prejudge the universe by a doctrine.

But now how about punishment? It is after all more than retaliation or correction. Our aim is also prevention and protection of society. In this direction jurisprudence cannot remain behind medicine very long. Its rule is, of course, that the individual shall not be punished for acts not committed. We cannot well speak of punishment for mere intentions. Yet we must correct intention. And those intentions which lie as it were in the flesh and blood of a constitution long before they are conscious, call for some measures, if the protection of society demands it. Social quarantine is the only hope for the future. Actual detention of antisocial elements and the prevention of their propagation are as much or much more our duty than is the quarantine of the leper and of Typhoid Mary and the temporary quarantine of the carrier of small-pox. Punishment which does not prevent is insult added to injury. The question thus should arise in every case and it should be addressed to the competent expert or a commission of experts: Should the mental disorder or condition found modify the punishment, or to speak more exactly, the disposal of the case? Is the person fit to undergo the ordinary course of justice? Will he be improved by it? Will he need other measures for prevention than the punishment which law considers a good enough method for the average? On this score I should like to say most emphatically that medical jurisprudence has made egregious blunders. It has been sentimentality-mad or the victim of verbal logic. Infinitely less harm would come from making the sick man take the consequences of his liability to such sickness just as we put a man liable to small-pox under quarantine, instead of letting free a lot of unworthies and raising an appetite for the plea of insanity to a point with exhibits which nauseate every sober-minded citizen. Physicians do not care to be the vaulting pole for escape from natural and proper consequences of a person's nature. It is true we want decent places for the persons detained, chances for a decent and profitable life. Men like Forel have long written and spoken for special colonies for special types of cases. My own feeling is that if we get decent prisons run as they ought to be, many persons now sent to asylums for criminals or let loose had better be sent to prison unless it can be shown that actual harm to their mental health would come from it.

Punishment was and is a means of correction in normal education. This has changed much during the past two generations. There has probably been too much of a reaction from the life of puritan duty. Laws would mean more if we could keep them stern and firm. Among the insane we have abolished the word and thought of punishment. But we have the responsibilities for discipline. We want to make our patients as responsible as possible and it is mainly our task to protect them from spheres in which they would flounder helplessly. If you abhor the conception of relative or partial responsibility, I should stand up for the principle that there is no absolute irresponsibility even among the insane and that it is much better to deal with them from case to case for what there is sane in them, not with the principle of retaliation, but by placing them with a clear understanding just where they belong, according to their make-up and temporary condition. Where mental disorder is demonstrated, none but the principles of equity will wear well. Can they ever be looked forward to here? They would be as little cherished by the real criminal as the indeterminate sentence is liked by the professional; but every fair-minded victim would fare better than with our present way of using legal rules. A common-sense consideration of the facts of conduct and behavior is in order, if possible to avoid that the victim really becomes dangerous and is allowed to perpetuate the poor stock of our race. What a preposterous condition when juries have merely the alternative between the electric chair and acquittal! This is where help is needed and an introduction of equity-principles might justify preventive considerations.

We may be a long way from special colonies. Certain individuals can be employed *near* institutions, if they are too well to be kept there and too dangerous to go wholly free. And others should at least be asexualized—a point on which I hope more of our citizens will in time agree with us when enough evidence is at hand to convince open-minded opponents.

To look back one moment: The law must give us more clearness as to what it wants. It must be ready to deal with disease according to the principles of disease, and therefore realize the necessity of equity principles (rather than the "rules of the game" of evidence in a fight about liberty) and the necessity of consulting the expert not only concerning the indefinable term "responsibility," but also the effect of the special condition on the preventive steps required.

How, now, about the physician in a concrete case? In a genuine and unmistakable case of mental disorder in which an accident otherwise amounting to a crime failed to be prevented, the perpetrator will, according to our present practice, be taken to a jail, but probably be seen by a physician, if not taken immediately to the proper reception hospital, if one exists.

In almost all the *questionable* cases no move was made to get a competent and trained physician until the question of a "plea of insanity" arose. It should always be a suspicious sign if no move is made equivalent to the examination of the patient for a commitment as soon as possible after the act. Where the defense of the criminal is the main thing and insanity the only means of saving him from the consequence of his act, the procedure is usually from the start a perversion of psychiatry. Physicians are called as partisans; examinations must be made under the most unpropitious circumstances. There is no official impartial record kept such as we demand in a well-conducted hospital to-day; there are no trained attendants employed. As soon as the authorities have reason to suspect a mere suspicion of insanity, or of a plea of insanity, the immediate attention of a trained physician should be called; and to be on the safe side every prison physician should have training and experience in psychiatry. He should make a full examination with a satisfactory record and should have the proper type of attendants for the examined prisoner. During the whole stay of the prisoner or suspect the written record of the physician should be kept up, consisting of statements of what the prisoner said, did, and showed on medical examination. Where the condition is doubtful, some states can send the prisoner to a hospital for observation for a maximum period of six weeks. In making an examination for one side or the other the only way to proceed is to come as near as possible to the plan mentioned. Under well-regulated conditions the competent hospital men of the district should do the work for the state as state officials and they should have the right to apply for a period of hospital observation of the patient and always the duty to furnish a written report. The alienists of the defendant would naturally and automatically be guided by the standards of the official physicians.

Now the physician's share in the determination of guilt! The physician's duty above all things is to determine and report the existence of any mental defect or disorder at the time of examination and in the record of the past. This should consist in the simplest possible terms of what the patient did and said and showed medically, rather than a mere learned treatise on the diagnosis and symptoms which should be reserved for the summing up of the written record, if one can be demanded.

If there are no plain facts sufficiently convincing to form a demonstration of an abnormal trend, learned terms will only confuse. The aim should be to show that, in other situations and actions, an abnormality was present, and that it played a definite rôle in the determination of the act under legal consideration. To avoid ambiguity, the term "insane" and "insanity" should be replaced by "mental disorder," specified by its effects in various actions, including or not the act *sub judice.* In this, Mercier insists on a psychologic analysis of the acts. I agree to this only as long as we move on objective ground. The main question is that of intent. Therefore the relation of the existing disorder to the intent must be defined, and here comes the chief point at issue.

Unfortunately the rôle of the physician is at this point involved in an issue which I think should not be looked on as a medical question. If the physician has to say "yes" or "no" to the questions: Do you consider the patient "responsible"? and Do you consider the patient "insane"? he becomes part of the jury or in the absence of a jury expresses himself in a judiciary capacity. Neither responsibility nor insanity are medically useful or even admissible terms. The physician must make it clear that there is a mental disorder and that it had or had not a bearing on the act and, as far as possible, the evidence by which he can prove it. But the rest is a judicial interpretation gratuitously offered by a physician at the risk of being turned down by a jury or a judge who knows more of the law than the doctor, and, at the same time, appears to decide a medical question for him. I do not want to jeopardize the rest of my propositions by insisting too much on this subordinate point, however. I favor it because physicians are too well trained in their business and science to believe themselves able to give always an out-and-out positive or negative reply to a question to which they know science and plain fact can give only a conditional reply. Legal practice opposes the concepts of relative or diminished responsibility and for this the plain man or layman can be had more readily than a man who must aim to keep toward the scientific attitude.

In each case in which a mental disorder is demonstrated, no matter whether it figures as insanity or not, the alternatives of allotment of punishment should be put before the expert for a statement as to the probable effect on the success of the aim of punishment or the effect on the disorder and the needs of protection of society.

Much has been said, and with sad justification, of corrupt medical testimony. It is one of the most disheartening displays of the low standards of our general and business morality. When nobody steps forward to slap the one who can say with impunity: "Every man has his price," we have to hear it until it becomes an accepted standard. And if the professional expert works for his client, what does he do? Ninety times out of a hundred his worst crime is that he assumes what he calls the lawyer's attitude. Where are the legal standards of the great masters? Why do we not ostracize a man who sacrifices the facts and his better knowledge to the undeserved success of his client? This is a matter of public standards of business morality and of morality within the professions. The scandal I am afraid is a symptom of our kind of general ethics. I do not know how the legal profession will check the doings of some of its most successful agents of perversion of fact. We physicians are trying to make some of the men accountable for their statements. But they invariably put the blame on the legal methods, the questions asked and the like.

For this reason I urge a wider use of the *written reports* of the observations and conclusions made by the medical expert which exclude the gambling of the questionaire without in any way excluding the most searching cross-examination. Most cases are simple and cause little trouble. But the cases which give trouble are just the ones in which a man who poses as expert should make a statement for which he makes himself wholly and unmistakably responsible, without any excuse or subterfuge. German expert testimony has its high standards through no other one tangible thing but this accessibility of written and responsible documents.

In trying to prepare this paper I deplored the absence of digests of the practice of our courts. When will the judiciary and legal world introduce research as an obligatory condition of a career of a teacher and put the young elements to work to keep up a system of monographs and digests and to make inquiries into groups of concrete cases and their specific difficulties and demands, rather than dialectic dissertations? The consideration of concrete cases as practical experiments alone will bring order into the bewildering chaos.

My theses are:

1. The solution of the medicolegal problem of mental disorders generally lies in a further development of the quarantine principle, medically and legally.

2. In handling the criminals presenting mental disorder, jurisprudence will have to develop rules of preventive care beside the rules concerning acts already committed.

3. To avoid begging the question, and confusion of definitions, the question of the bearing of mental disorder should not be settled under the heading of guilt only. Insanity and irresponsibility are not coextensive and should not be made so and are not safe terms medically and legally. Therefore, the procedure should cover:

A. The fact of commitment of the act.

B. The existence of mental disorder at the time and its bearing on the act.

C. The bearing of any existing mental disorder or tendency on the legal consequences of the act, the punishment, the prevention of similar acts, etc. In every case with mental disorder it should be obligatory to ask: What is the relation of the mental disorder to the act? and what does the mental disorder demand to make the punishment and correction and further prevention efficient?

4. In order to meet the problem of partial responsibility and crimes of passion, the law should create better alternatives than the unwritten law, and in cases of mental disorder, the equity procedure should be substituted for an unconditional declaration of not guilty.

5. I strongly suggest the requirement of written statements of facts and opinions by the experts employed as the only means of establishing standards.

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# THE PHARMACOLOGY OF IODIN AND THE IODIDS*

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A satisfactory explanation for the action of medicines can be found only in a consideration of their chemical relations since drugs can act only by producing chemical changes. In the case of iodin the interrelation between its chemical properties and its physiologic action ought to be found quite readily, since it is an element and its chemical characteristics are well understood. A difficulty arises, however, in discussing the relations of any drug, from the fact that the animal system on which it acts exhibits such a complexity of chemical changes that we cannot adequately explain the effects of even the simplest element on it. Nevertheless it will be worth while to review briefly the more marked chemical properties of iodin to see how far we can go on the road to a rational explanation of its pharmacologic and therapeutic action. This element is remarkable, in the haloid group, for the comparative weakness of its chemical affinities and the ease with which it is freed from its compounds. In consequence of this property it is easily displaced from its combinations by oxygen, chlorin, and bromin. Hydrogen iodid or hydriodic acid is especially unstable. Iodin shows a tendency to form peculiar double salts, such as the combination with potassium iodid, giving the hypothetical compound, $KI_3$, and the double salts with mercury, such as potassium mercuric iodid, $2KI, HgI_2$, or $K_2HgI_4$. The readiness with which it becomes free is shown in the well-known incompatibility between potassium iodid and ferric chlorid, in which case ferrous iodid is formed instead of ferric and a portion of the iodin assumes the free state. This reaction is largely due to the fact that ferric salts are capable of reverting to the ferrous condition and *vice versa,* but it must be remembered that quite similar changes are constantly occurring in the animal organism. Another property of iodin which must be of physiologic importance is its tendency to combine with fats and fatty acids. Similar reactions occur with alkaloids, with which it forms insoluble compounds, and with proteins, into the composition of which it enters to form new compounds and in many cases to displace the corresponding chlorin ion. The iodo-organic compounds are comparatively stable and inactive and it is chiefly as the result of oxidation that the iodin again becomes liberated. One of the most important organic compounds of iodin is the globulin found in the thyroid gland, which undoubtedly plays an important rôle in the metabolic processes of the normal body. This substance has its analogues in other parts of the organism and it is believed that no living cell is entirely devoid of its organic iodin compound.

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* Read at a meeting of the Evanston and North Shore Pharmacologic Society, at Evanston, Ill., April 14, 1910.

When we consider the unstable nature of its compounds and its readiness to enter into all sorts of compounds it is easy to see what a disturbing element free iodin must be in the animal economy. It may readily be compared to fire, which, useful, when under control; for the warmth which it affords, is to be dreaded when it is allowed to exert its destructive action unrestrained. That the system is able to use this agent in ordinary metabolism is undoubtedly due to the fact that the protein combination in which it is deposited in the thyroid is so slowly decomposed that its destructive action is just enough to secure the physiologic changes necessary for the removal of waste and for the control of nutrition. When for any reason this control is lost we see in the phenomena of hyperthyroidism the manifestation of a mild form of iodin poisoning.

From its chemical nature iodin can exist only for a short time in the animal system in a free state and when absorbed iodin is changed to an iodid or to a protein compound so that the internal actions of iodin are practically identical with those of the iodids and are to be considered with them. It is, not to be forgotten, however, that the iodids are readily decomposable with the liberation of iodin so that it is probable that the action of iodids on the cells and fluids of the body includes the temporary action of free iodin to a limited extent in their ordinary activity and to a much greater extent in circumstances in which this action amounts to that of a toxic agent.

The iodids are mainly very soluble, easily dialyzable, easily ionizable salts. These properties are responsible for much of their pharmacologic and therapeutic action. The easy solubility makes it possible for the organism to dispose of such amounts as are not easily combined with protein by elimination through the various emunctories. Thus, according to H. C. Wood,[1] John Marshall recovered 265 grains daily from the urine, in a patient under his care who was receiving 360 grains of potassium iodid daily. The dialyzable character of these salts enables them to enter cells readily but when within the cell they have combined with protein molecules they become colloids that will not dialyze out again until they have been changed to the crystalloid condition. Their ionizable character makes them ready to enter into double decompositions that disturb the chemical relations of the other conditions of the cell and alter the character of the cell plasma. Particularly the iodid ion tends to displace the chlorid ion and to cause its extrusion from the cell probably in combination with the potassium ion which is usually the metal introduced in combination with iodin.

With this brief discussion of the chemical relations of iodin we are prepared to enter on a consideration of the pharmacology of this element and its salts. We shall consider first the local action of iodin and second the action of iodids and the constitutional action of iodin.

### LOCAL ACTION OF IODIN

Iodin is essentially an irritant which destroys the cell, combining with its protein constituents and provoking a reactive inflammation on the part of tissues less violently affected. The affinity of iodin for the protoplasm of the cell is seen when vegetable cells are stained with Lugol's solution. The protoplasm receives a marked yellow stain indicating that the iodin has penetrated the cell and entered into combination with its protein constituents. The experiments of Lillie[2] on unfertilized *Arbacia* eggs indicate that, next to cyanids, the iodids of potassium and sodium have the greatest power of increasing the permeability of the plasma membrane and that they thus make possible the loss of the cell constitutents, instituting a series of changes which eventuate in the death of the cell. The destructive action of the element on the lower forms of life constitutes it a good disinfectant. Its value in the treatment of many skin diseases is largely owing to its disinfecting action. Iodin appears to be somewhat astringent, drying and puckering the tissues to which it is applied. The irritation of the deeper tissues develops, somewhat slowly, inflammatory changes which result in throwing off cells destroyed by the iodin and replacing them by new formed tissue. Iodin applied to wounded surfaces and to ulcers acts as an efficient disinfectant and promotes the subsequent healing of the underlying surface. Goebel[3] found a diluted Lugol's solution (iodin, 5 parts, potassium iodid, 10 parts, distilled water, 250 parts) an efficient disinfecting fluid for surgical use. The value of iodin in surgery has been the subject of several recent communications showing a renewed appreciation of an old and well-known remedy.

On mucous membranes the action of iodin is quite superficial, and especially when applied to the gums its destructive action is so limited that it forms one of the best applications for gingivitis. Especially in the treatment of interstitial gingivitis, the so-called pyorrhea alveolaris, it has proved to be one of the best of remedies. Its action on other mucous membranes is similar and the good results obtained from its use are easily explained by its disinfectant action, its destruction of tissue, particularly that of low vitality, and the stimulation of healthy tissue to regenerative action. The hyperemia induced by such stimulation plays a very similar part to the hyperemia induced by the method of Bier in the treatment of inflammation and infection.

### INTERNAL ACTION OF IODIN

When absorbed into the blood iodin necessarily enters into combination so as to form iodids or possibly combinations with protein material. Its solution in the akaline media of the blood and lymph can be effected only with the formation of some oxidized form of iodin, such as iodates or perhaps a transient occurrence of the lower acids, which we know are very unstable. The action of iodin in its free state cannot, therefore, be quite equivalent to the action of the iodids since it involves the action of these unstable compounds which must have a destructive action corresponding to their instability. Iodin is not absorbed to a perceptible extent from the sound skin but from raw surfaces, wounds, and mucous membranes it may be readily taken up so that it may be demonstrated in the urine and may even produce symptoms of poisoning. In some forms absorption may take place through the skin. Thus Kellermann[4] by inunction with iothion found that from 8 to 18 per cent. of the iodin was absorbed by the skin and excreted in the urine. Himmelsheber[5] attributes the occurrence of acute hyperthyroidism following operation for prolapsus uteri to the absorption of iodin from iodized catgut sutures.

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[1] Wood, H. C.: Principles of Therapeutics, Ed. 14, p. 375.

[2] Lillie: Am. Jour. Physiol., xxvi, No. 1.

[3] Goebel: Centralbl. f. Bakteriol., 1906, xliii, 86.

The symptoms of iodin poisoning are throughout characterized by their irritant character. According as the irritation is produced on the mucous membrane of the gastro-intestinal tract, the internal organs, the respiratory mucous membrane, or the skin, various types of reaction are produced and these types are worthy of special study as they may point the way to therapeutic applications.

Large doses of iodin are irritating to the stomach and may produce gastritis. Suppurative gastritis has been attributed to the action of iodin, it being supposed that iodin produced a pustular eruption in the stomach similar to that sometimes occurring on the skin under its influence. From experiments on dogs with Pawlow's miniature stomach, A. Bickel[6] found that iodin and potassium iodid increased the amount of gastric juice, thus tending to produce hyperacidity. This was followed by an increased secretion of mucus, so that these agents, like alcohol and other irritants, are capable of producing a gastritis having the characters of acid gastritis. A similar action was produced by an albuminous compound containing iodin. Bickel proposes to use this experimental production of gastritis as a test to determine whether a preparation contains iodin in a therapeutically active form. If such a compound increases the acid and mucus of the stomach experimentally it may be assumed that it will exhibit the therapeutic properties of iodids in the organism.

Colic and diarrhea are frequent symptoms of acute iodin poisoning. Vomiting may occur. The inflammation of the gastro-intestinal tract is seldom severe, and if it is not, large doses do slight harm. In spite of the active symptoms produced, iodin poisoning is seldom fatal. This result is averted by the conversion of the element into compounds which are non-irritating and readily eliminated. In cases in which absorption has already taken place the gastric and intestinal symptoms of iodism are usually lacking or very slight. In small doses suitably diluted the gastro-intestinal irritation is not noticeable, and the remedy is often used for symptoms of irritation of the stomach, such as vomiting, gastralgia, etc. It has been prescribed along with phenol for the treatment of typhoid fever, probably on the supposition that it would exert an antiseptic action, but such an action in the alkaline contents of the intestine is very unlikely, if not impossible.

The action of iodin on the internal organs is also that of an irritant and when marked is shown by rapid pulse, flushing of the surface, increase of temperature, tremor, dizziness, and general weakness. Iodin introduced into the circulation takes the form of an iodid or of an organic iodin compound. It is removed from the circulation by the cells in general and especially by the cells of the thyroid gland. The varying capacity of the cells to take up iodin leads to a varying distribution of the element in the various tissues. The amount deposited depends not only on the character of the tissue, but also on the nature of the compound in which the iodin is introduced.

Labbé, Lortat-Jacob, and Boulaire[7] conclude, from experiments to determine the coefficient of accumulation of iodin in the various organs, that the element has a great affinity for lymphoid tissue. It was deposited most abundantly in the spleen and lymph glands and next in the liver, which contains lymphoid tissue. Iodin, iodids and iothion cause the greatest accumulation in the lymphoid tissue while the fatty compounds leave very little. Loeb found the brain, spinal cord, bones, and fat free from iodin after the administration of potassium iodid, but found in the blood and liver, after removal of soluble iodin, a small quantity which was probably in the form of an organic compound. When iodoform, iodanilin, and ethyl iodid were administered, a considerable amount of iodin was found in the fatty tissue. It would seem that the presence of the iodin in an organic combination makes it possible for certain tissues to absorb it that cannot take it from the inorganic forms.

In the thyroid iodin is stored in the form of a colloid, not in the cell, but in the intercellular spaces. That the amount of iodin which can be stored in the thyroid is greater than that which is taken up by other organs is well demonstrated. This is not accounted for by the colloid character of the thyroid secretion, for other colloids, like that of the hypophysis or pituitary gland, do not contain an especial amount of iodin. The thyroid appears to act as a detoxicating organ to remove irritating poisons from the blood and to store them in its tissues. That the substance removed is not always iodin appears from the fact the colloid is frequently secreted by the thyroid cells without containing any iodin. In these cases it may be that the gland has removed other irritating substances by combining them with the colloid and storing them in the intercellular spaces. However, this may be, the removal of iodin from the circulation by this means is a most interesting phenomenon. If we look on this production of iodin-containing colloid by the thyroid as a detoxicating process, it will be readily understood that marked effects from the ingestion of iodin occur only when the iodin is present in the blood in such quantity that the thyroid cannot remove it fast enough to prevent toxic effects or when the thyroid has already exhausted itself in the production of colloid and small quantities of iodid pass constantly into the blood either from the colloid secretion stored up in the thyroid or from other sources. The colloid, once deposited, appears to remain until it is taken up by the same cells which produced it and returned to the blood. Experiments by Carlson[8] show that the colloid is not taken up by the lymph which contains no iodin. When this introduction of iodin from the colloid into the blood takes place in normal amounts it may perform a useful function in metabolism; if the amount thus set free is excessive, symptoms of iodism appear which seem to be identical with hyperthyroidism. Whether the iodin produces these effects as an organic compound with protein or whether a decomposition of the protein must first take place so that the iodin becomes free or, at least ionic, is not determined.

That iodin released from the thyroid proteid may act as an immunizer against other poisons is shown by the experiments of Reid Hunt[9] with acetonitrile. This observer found that mice treated with thyroid extract containing iodin would survive a dose of aceto-nitrile from one-half to twice larger than that which was fatal to control mice. The protective power was shown to be nearly proportional to the iodin content of the thyroid extract. Hunt also found that iodids and other compounds of iodin afforded a similar protection, although not to the same degree. It is probable, therefore, that iodin plays an important rôle in the control of nutrition and metabolism by the thyroid gland and that the gland may act both as a moderator and as a stimulant of metabolic activities, according as it removes iodin or other irritants from the blood and stores them in its tissues, or returns them to the blood when needed. Iodin is eliminated by various emunctories, among which the kidneys are of prime importance. The elimination through the kidneys may lead to such irritation of these organs that a nephritis may be set up, which contributes in no small measure to the injurious effects and rare fatal issue of iodin poisoning.

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[4] Kellermann: Ztschr. f. exper. Path. u. Therap., 1905, ii, 416.
[5] Himmelsheber: Centralbl. f. Gynäk., Aug. 28, 1909.
[6] Bickel, A.: Klin.-therap. Wchnschr., 1907, xiv, 1255.
[7] Boulaire: Compt. rend Soc. de biol., Paris, 1906, lxi, 306.
[8] Carlson: Am. Jour. Physiol., xxvi, No. 1.
[9] Hunt, Reid: The Probable Demonstration of Thyroid Secretion in the Blood in Exophthalmic Goiter, THE JOURNAL A. M. A., July 20, 1907, p. 240; The Relation of Iodin to the Thyroid Gland, Ibid., Oct. 12, 1907, p. 1323.

Elimination by the respiratory tract gives rise to some of the most characteristic symptoms of iodism. Salivation is a common symptom. Coryza and more serious inflammation of the nasal mucous membrane may ensue. The irritation of the bronchial mucosa may lead to hoarseness, cough, asthmatic symptoms, etc. These forms of respiratory irritation are easily elicited by the iodids when they produce no especial general or gastro-intestinal symptoms, because on the surface of the respiratory mucosa decomposition with liberation of free iodin most readily occurs. The increase of secretion in the bronchi under the influence of iodids has been made use of as a diagnostic measure to secure the presence of tubercle bacilli in the sputum or by causing the production of râles in the neighborhood of tuberculous foci to facilitate their recognition by auscultation.

Irritation of the skin results in the production of various eruptions such as erythema, acne, bullæ, which may suppurate, and ulcerations. The acne of iodism is likely to result in pustules which may be quite troublesome. The acne has been attributed to a derangement of the circulation in the superficial areas of the skin. F. Schidachi[10] reports 5 cases of erythema nodosum from the use of iodids and discusses some interesting questions in this connection. The suggestion that such eruptions are connected with kidney lesions received no confirmation from these cases, as albuminuria occurred in only one case. The theory that the eruption was due to imperfect elimination of the iodid could not be maintained as quantitative determinations of the iodin excreted showed that the intensity of the eruption did not in any way correspond to a lessened elimination by the kidneys. The lesion seemed to be due to a disturbance of the circulation similar to that supposed to cause acne, but affecting the deep instead of the superficial blood-vessels. Why there should be a difference in the vessels affected in various cases is not explained.

### PHYSIOLOGIC ACTION OF THE IODIDS

The iodids are, as has been said, mostly soluble, dialyzable, and easily ionizable salts which are eminently fitted to produce a slow but profound effect on the changes going on in the cells. Under their influence cells waste and the more lowly organized the tissue, the more readily is it affected, so that fibrous tissue is especially likely to be softened and removed during the action of the iodids. In their internal activity the iodids repeat the actions of free iodin, causing the symptoms of iodism when they are administered in large doses. Their rapid elimination and the probable transformation into a colloid form prevent a marked development of this action so that the acute manifestations of iodism are seldom noticed in the administration of the iodids and then usually only for a short time. Iodids give important assistance in the elimination of metallic poisons, particularly lead, mercury, and arsenic. The explanation of this action is not positively known. It is believed that the iodid acts by producing a soluble salt of the metal, but it seems quite as likely that the iodid may release the metals by breaking up proteid compounds which they may have formed. A similar action may explain the increase of elimination of toxins under their influence.

The action of iodids on the circulation has been much studied but it is not certain whether they possess any marked action on the arterioles or not. It has been claimed that they lower blood-pressure, but some of the experiments seem to indicate that the first effect is that of an irritant to the vessel walls, causing contraction of the arterioles and a consequent temporary rise of blood-pressure, and that they develop their influence in lowering blood-pressure only by their action on the fibrous tissue of the blood-vessels, by which they diminish arteriosclerosis and eventually lessen arterial tension. However a lowered arterial tension is a prominent feature of hyperthyroidism and would seem to indicate a similar action on the part of the iodids.

Loeb[11] found that the use of iodin preparations by injection did not hinder the degeneration of the aorta produced in rabbits by injections of adrenalin, but very large doses increased the extent of the lesion. On the other hand, Martinet[12] attributes the good effect of iodids on arteriosclerosis to three factors: 1. They lessen arterial tension to a certain extent and relieve the heart. 2. They act as lymphagogues; they lessen edema although at first they increase it. 3. They are useful by their action on nutrition.

Iodids are useful in asthma, but the mechanism of this action is unknown. They are good expectorants because being excreted by the bronchial mucous membrane, they tend to liquefy secretions and to promote the expulsion of the sputum. A similar explanation will suffice for their favorable action in coryza and nasal catarrh.

### IODISM

The occurrence of iodism during the administration of iodids suggests the following important questions: 1. To what is iodism due? 2. What circumstances favor its onset? 3. Is iodism necessary to the therapeutic action of iodids?

According to A. Djelogolowy[13] iodism is an iodin intoxication which may have more than one cause and is to be attributed to the setting free of nascent iodin by the action of some oxidizing agent on the iodids. This oxidation may take place in the stomach or after absorption into the blood or after the iodid is eliminated on a surface exposed to the air like the respiratory mucous membrane. Djelogolowy concludes that in certain individuals the conditions in the stomach are especially favorable to the spitting off of free iodin and the production of an iodin intoxication. In these individuals the acidity of the gastric juice is high and the stomach contents contain nitrous acid produced from nitrites derived from the saliva or from the food. The nitrous acid sets free iodin from iodids when given as medicine. This theory affords a useful hint as to the giving of iodids, viz., to give with them something to neutralize the excess of acid in the stomach. The ordinary precaution to administer them in milk is seen, therefore, to be based on sound principles. The protein of the milk tends to neutralize the excess of acid in the stomach and thus to prevent the action of nitrites on the iodid. Probably the administration of alkalies would afford a like security. Djelogolowy finds that the amount of nitrites in the stomach contents varies with the abnormal secretion relations. On the amount of nitrites depends the amount of iodin split off and to a corresponding extent the sensitiveness of the patient to iodin preparations. The setting free of iodin and the presence of nitrites are constant symptoms presented by the patient in whom they are found, for they are always found on repeated examinations with unimportant variations.

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[10] Schidachi, F.: Med. Klinik, 1907, iii, 169.

[11] Loeb: Deutsch. med. Wchnschr., 1907, xxxiii, 382.

[12] Martinet: Presse méd., Paris, 1906, xiv, 351.

[13] Djelogolowy, A.: Arch. f. Verdauungskr., x, No. 3.

Not less important in this connection are the views promulgated by Erlenmeyer and Stern,[14] who, in discussing the use of iodin in arteriosclerosis, conclude that iodism is a necessary accompaniment of the therapeutic action of the iodids. They regard the action of iodin as essentially the action of the iodid ion, and hence think that it cannot be exhibited unless the iodin is in the ionic form. It can be obtained only from such preparations of iodin as dissociate in the system. Of these the iodids of the alkali metals are the most powerful. Iodism is an unavoidable side-action of the activity of the iodid ion. Its intensity is to be moderated, but the occurrence of iodism is neither to be dreaded nor to be entirely suppressed by antagonistic agents. If the views of these authors are correct, the administration of iodids should be conducted with the definite aim of developing a mild form of iodism with as small doses as possible. In the opinion of Erlenmeyer and Stern organic compounds of iodin are therapeutically efficient only on condition of their splitting off iodin in the body so that such compounds can be only somewhat uncertain substitutes for potassium or sodium iodid. If we can guard the stomach from the injurious action of iodin it would seem that potassium iodid is still the best salt to develop the therapeutic activities of iodin.

While we must leave a number of theoretical questions unsolved the preceding discussion suggests the following practical problems worthy the attention of clinicians and pharmacists. Since the liberation of iodin appears to be the cause of the untoward effects of iodin and the iodids what means can be taken to avoid this occurrence or to restrain it within moderate limits? This is a problem to the solution of which the knowledge of the pharmacist may bring valuable aid.

Again what is the proper treatment of this condition when once produced? In answering this question pharmacy and toxicology should come to the aid of practical medicine.

Lastly, if this condition in a mild degree is the indispensable condition of therapeutic efficacy from the iodids, pharmacologists ought to find some way to evoke it in the system without allowing it to go too far and should teach us how to avoid the injurious action of the remedy on the gastro-intestinal tract and the excretory organs.

I shall not attempt to discuss these questions, but will leave them to the reader in the hope that some substantial contribution to their solution may be presented.

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[14] Erlenmeyer and Stern: Klin.-Therap. Monatsh., March, 1909.

# THE EXPERIMENTAL PRODUCTION OF SECONDARY UNION BETWEEN NORMAL AND CARCINOMATOUS EPITHELIUM—PSEUDO-METAPLASIA*

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In the never-ceasing discussion on the origin of cancer, much attention has always been given to that continuity between normal and carcinomatous epithelium which is so frequently observed at the edges of tumors. Many pathologists hold that the transition here noted is evidence at once of the primary seat of the growth and of its manner of origin. Certainly this evidence would seem strong, and those who do not accept it are few. Ribbert has long held that a secondary union really explains such pictures, and Borrman,[1] his pupil, has collected many specimens which histologically further this view. Experimental evidence for it, however, has been lacking.

In the course of a comparison of the conditions regulating the growth of transplanted tumor and a transplanted normal tissue[2] I have examined many grafts in which mixed tumor and embryonic tissue have grown intimately together in the new host. A few of these have shown microscopically an undoubted union between the carcinomatous and the embryonic epithelium, especially that of the skin (which, on its growth in the new host, tends to assume the mature form). Mouse tumor, adenomatous or alveolar in character, and hashed mouse embryos, 1.0 to 1.6 cm. in length, have been used. The tumor is easily recognizable in such a mixed graft. The union of it with the normal epithelium is seen most often where tongues of the two, growing in opposite directions along a rift in the injected mass, have met. In some cases a real fusion does not take place, and where the tissues have come in contact they remain sharply distinguishable, although no fribril or free space separates them. In other instances there occurs such an intermingling of cells at the meeting-point that with the microscope it is impossible to determine exactly where normal epithelium ceases and carcinomatous begins. Indeed, on histologic evidence alone, it would be said that here was a metaplasia. The possibility that in these instances one may be dealing, not with tumor tissue at all, but with a junction between skin and skin appendages, can be excluded.

The fact thus experimentally brought out that normal and carcinomatous epithelium may secondarily unite probably explains only a part of the recorded cases in which a continuity between the two has been observed. It does not prove that such a continuity may not often be primary. But it should lead to more caution in the acceptance of pictures at the edge of a growth as evidence for the growth's point of origin, or for its having arisen by a metaplasia. At the edge of an ulcerating epithelioma, for example, where the skin epithelium is making attempt at repair, and the tumor tissue is extending toward it, there must occur many opportunities for a secondary fusion of the two, such as has been here reported.

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* From the Laboratories of the Rockefeller Institute for Medical Research.

[1] Borrman, R.: Ztschr. f. Krebsforsch., 1904, ii, 1.

[2] Rous, Peyton: Jour. Exper. Med., 1910, xii, 344.

# THE EXCRETION OF HEXAMETHYLENAMIN IN THE SALIVA*

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The excretion of hexamethylenamin in the urine was reported by Nicolaier[1] in 1899. The favorable results obtained from its use as a urinary antiseptic created an interest in its mode of excretion by other channels. Crowe[2] has reported its excretion in the bile, pancreatic juice, cerebrospinal fluid, synovial fluid, and in the saliva and milk of dogs, and has used the drug as a prophylactic and therapeutic agent in meningitis, but particularly in gall-bladder disease due to gall-stones complicated with *Bacillus typhosus*. The excretion of hexamethylenamin in human milk has also been observed.[3]

Recently W. M. Barton[4] and E. J. Brown[5] have reported the use of hexamethylenamin in the treatment of otitis media and suppuration of the right antrum. The possibilities of treatment of meningitis complicated with otitis media and infections of the sinuses were suggested in Crowe's work. In Barton's case the excretion of the hexamethylenamin by the mucous membrane was shown by the chemical test. In Brown's cases no attempt was made to detect the appearance of the drug in the secretions.

The mode of excretion of hexamethylenamin as such or as formaldehyd plays an important part in the estimation of its value as an antiseptic. In the urine it has been observed that at least a part of it appears as formaldehyd if the urine is not voided too frequently. Sollmann[6] has shown that a considerable part (if not all) of hexamethylenamin is excreted unchanged in the urine, but when the urine was retained in the bladder for one and a half hours, it showed a slight trace of free formaldehyd. Imitations, outside the body, of the conditions of the urine in the bladder gave practically the same effect as to the rate of decomposition of hexamethylenamin. These results show, therefore, that the conditions of the body and urine favor the decomposition of hexamethylenamin into formaldehyd when taken internally, although the process goes on very slowly. As to the excretion of free formaldehyd in the bile, pancreatic juice, milk, blood, and cerebrospinal fluid after the internal administration of hexamethylenamin no data are as yet available. The tests which were applied for the detection of the drug in these fluids apply to free formaldehyd or formaldehyd liberated by the catalytic action of sulphuric acid on hexamethylenamin.

About a year ago Professor Sollmann suggested that I investigate whether hexamethylenamin is excreted by the human saliva, either free or as formaldehyd. So far only two experiments have been made, but since these gave identical results, a preliminary communication may now be in place. A normal subject took by mouth in gelatin capsules, respectively, 0.6 and 0.3 gm., hexamethylenamin, and the saliva was collected and the following tests applied every fifteen minutes for at least one hour:

For hexamethylenamin direct, the bromin test was used, the saliva being previously boiled with a few drops of dilute acetic acid to remove the troublesome mucin and then filtered. The phloroglucin test was applied for the detection of free formaldehyd; the phenol and salicylic acid tests were also used. Checks, with the same test, were made on the same saliva before the drug was taken.

Experiment 1.—One-half hour before the drug was taken, the saliva was negative to all tests; on the addition to it of hexamethylenamin it gave positive results with all tests, while the formaldehyd test was negative. At 9 o'clock 0.3 gm. hexamethylenamin was taken. Samples tested with bromin water gave results as follows: Fifteen minutes later, cloudiness; thirty minutes later, a precipitate; forty-five minutes later, a small precipitate; sixty minutes later, a faint cloudiness. The salicylic acid and phenol tests gave corresponding results but in sixty minutes the phenol test was entirely negative. No free formaldehyd was found at any time.

Experiment 2.—One-half hour before taking the drug, saliva was negative to all tests; on adding to it hexamethylenamin it gave positive results with all tests, but the formaldehyd test was negative. At 8:50, 0.6 gm. hexamethylenamin was taken. Samples tested with bromin water fifteen minutes later gave a cloudiness; thirty minutes later, a precipitate; forty-five minutes later, a small precipitate; sixty minutes later, very cloudy; seventy-five minutes later, faintly cloudy. The salicylic and phenol tests gave corresponding results. No free formaldehyd was found at any time.

## SUMMARY

The above experiments indicate that hexamethylenamin is excreted unchanged in the saliva. The greatest amount of the drug seemed to be excreted during the first thirty minutes after its administration. This is indicated by the character of our precipitates with bromin water and the color reactions obtained with the other tests. It is also in accordance with Crowe's observation on its rate of excretion in the cerebrospinal fluid, bile and pancreatic juice, and in the urine as noted by Sollmann.

I have not yet investigated whether the excretion of hexamethylenamin in the saliva has any antiseptic value. The absence of free formaldehyd makes this rather improbable. It must be remembered that the conditions in the saliva are quite different from those in the urine, bile, or cerebrospinal fluid. It is known that the liberation of formaldehyd is a very slow process. The stagnation of these fluids in the body would probably give time for this process to occur; but in the case of saliva, there is no stagnation and consequently it is rather improbable that any effective quantity of formaldehyd could ever be liberated.

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* From the Pharmacological Laboratory of Western Reserve University.

[1] Nicolaier: Deutsch. Arch. f. klin. Med., 1899, xxxviii.

[2] Crowe: Bull. Johns Hopkins Hosp., 1908, xix, 109; 1909, xx, 102.

[3] Bucura: Ztschr. exper. Path. u. Therap., 1907, iv, 308.

[4] Barton, W. M.: The Elimination of Hexamethylenamin by the Mucous Membrane of the Middle Ear, The Journal A. M. A., March 12, 1910, liv, 871.

[5] Brown, E. J.: Hexamethylenamin in Suppuration of the Middle Ear and the Nasal Sinuses, The Journal A. M. A., April 16, 1910, liv, 1308.

[6] Sollmann, T.: Formaldehyde Derivatives, The Journal A. M. A., Sept. 5, 1908, li, 818.

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# LOCAL ANESTHESIA WITH QUININ AND UREA HYDROCHLORID

## REPORT OF FOUR CASES*

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LOUISVILLE, KY.

Through the courtesy of Dr. Bolling, I have had opportunity to use as a local anesthetic quinin and urea hydrochlorid in four selected cases. The preparation was supplied for experimental purposes only in 5 c.c. ampoules of a sterilized 1 per cent. aqueous solution.

Case 1.—A woman, aged 21, presented a fissure with sentinel pile in the right posterior anal quadrant. A 1 per cent. solution (50 minims) was injected and as shown by repeated tests with the needle it was necessary to distend the tissues before complete anesthesia could be obtained. It was also necessary because of a short needle to make several punctures, and it required twenty-three minutes to obtain complete anesthesia. Induration became manifest in about ten minutes and continued until the twelfth day. Some capillary bleeding, though very slight, followed the extirpation of the hemorrhoid and the incision of the fissure, which latter extended about one-half inch up the anal canal and to the depth of about one-fourth inch above and one-half inch below. There were no apparent general symptoms from the anesthetic, though the patient complained much of headache, which grew steadily worse, until the completion of the operation, and which most likely was due to fright. Before applying the dressings examination revealed a zone of hyperesthesia (to touch, not pain) extending about one-half inch from the injected area on all sides. The process of healing was uninterrupted by complications and lasted about two weeks. The anesthesia diminished until the ninth day, and normal sensation was apparently restored on the twelfth day. Throughout the healing process the surface of the wound presented a pale, grayish appearance and bled slightly on manipulation.

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*Read before the Louisville Society of Medicine, May 5, 1910.

Case 2.—A man, married, aged 42, presented a thrombotic pile in the posterior median line about the size of a hazelnut, which was inflamed and had existed a week. The entire mass was extirpated under a 1 per cent. solution of quinin and urea hydrochlorid, 45 minims being required: Distention was necessary and anesthesia was complete in seven minutes. There was slight capillary oozing and two small vessels spurted, one of which was tied. Slight induration was noticeable about one hour after the injection, but apparently disappeared by the fifth day. Much pain was caused by the introduction of the needle and there was no hyperesthesia to touch. No general symptoms were present. Anesthesia continued in a modified degree, until the fourth day, after which there was apparently more than usual pain and tenderness throughout the remaining time of granulation. There was also, during this time, a tendency to capillary bleeding, at the times of dressing and with the movements of the bowel. The granulating area presented a pale grayish appearance.

Case 3.—The patient was a woman aged 40, married; diagnosis, external hypertrophic hemorrhoid, situated in the anterior median line. A 1 per cent. solution of the anesthetic (80 minims) was almost painlessly injected into the tissues, with two introductions of the needle. It was necessary to distend the tissues and anesthesia was complete in ten minutes. There were no general symptoms. The mass was extirpated and two small arteries spurted, and were caught with hemostats, but not tied. There was slight capillary oozing, though sharp bleeding came later from one vessel and continued for about three hours. Twenty minutes after the operation there was smarting pain which lasted four or five hours. After the pain subsided the wounded surfaces seemed incompletely anesthetized for about twenty-four hours. There was apparently no induration and hyperesthesia was not noticeable. During the process of repair the wounded surface was pale, and there was considerable pain with the movement of the bowel on manipulation of the parts, while walking or maintaining the erect posture. There was slight tendency to bleed even with the movement of the bowel. The wound healed in three weeks leaving a slight scar.

Case 4.—Female, aged 20, single. Prolapsing internal hemorrhoid, situated in the right anterior quadrant, about the size of a hazelnut. A 1 per cent. solution of quinin and urea hydrochlorid (55 minims) was injected without pain, the tissues were distended and anesthesia followed in four minutes. Induration appeared in about ten minutes and was apparent for ten days. Hyperesthesia was noticeable for about twelve days, extending over the anal canal and lower rectum. The primary incision at the base of the tumor made preparatory to applying the ligature, was followed by only slight capillary oozing. There were no general symptoms. The ligature came away on the fifth day and the entire granulating area presented a whitish appearance with little tendency to bleed. Anesthesia seemed complete for seven days and normal sensation was restored about the eighth day.

RECAPITULATION

1. Diagnosis: First case, fissure; second case, thrombotic external hemorrhoid; third case, hypertrophic external hemorrhoid; fourth case, internal hemorrhoid.
2. Solution 1 per cent. quinin and urea hydrochlorid.
3. Amount of solution used, 45 to 80 minims.
4. Distention necessary in all cases.
5. Anesthesia more or less complete; it began in a few minutes (varying from four to twenty-three), and lasted from twenty-four hours to nine days.
6. Bleeding: Capillary much reduced, arterial and venous not controlled; possibly reduced.
7. Induration in three cases appeared in ten minutes to one hour; continued from five to twelve days.
8. Normal sensation restored in twenty-four hours to twelve days, apparently.
9. General symptoms absent (in all cases).
10. As indicated the fibrinous exudate seemed absorbed in from five to twelve days.
11. Hyperesthesia for sensation present in two cases. In one hemorrhoidal case it lasted twelve days.

607 Second Street.

# PELLAGRA COMPLICATING A LAPAROTOMY

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*Patient.*—A white woman, aged 30, born and raised in South Florida; married, and having one child aged 3. When I first saw her in December, 1908, she had had a menorrhagia for six weeks, the flow being irregularly profuse, but without pain. The patient was badly nourished, almost emaciated. Although very weak she was able to move about the room. She was markedly melancholic, or rather in varying stages of hysteromelancholia, with occasional suicidal tendencies. There was no rise of temperature or pulse and there were no definite points of pain or tenderness. She gave a history of having had dysmenorrhea for years, and of having temporarily lost her mind twice.

*Examination.*—I found a relaxed vaginal outlet, uterus in extreme retroflexion, marked endometritis, with both ovaries enlarged and tender. At times she talked rationally and gave me a fairly clear history of her troubles. There was no apparent loss of sense perception; the knee-jerk was slightly exaggerated; Babinski was not present; pupils reacted to both light and accommodation. The patient complained of indigestion, apparently both gastric and intestinal, and stated that she was usually constipated, but had an occasional diarrhea. Examination of the urine gave strong reaction for both indican and indol-acetic acid, but no evidence of kidney lesion. Blood examination showed secondary anemia, with many microcytes and megalocytes. The differential leucocyte count gave 66 per cent. polynuclears, 28 per cent. lymphocytes, 2 per cent. eosinophils, and 4 per cent. transitionals. At this time it appeared that the mental and constitutional symptoms were secondary to the pelvic disorders and to an intestinal autotoxemia.

*Treatment and Course of Disease.*—Intrauterine douches controlled the menorrhagia without difficulty. The patient was put on supportive and nourishing treatment to prepare her for operation. She was treated from Jan. 8 to Jan. 21, 1909, without much improvement, except a rise in hemoglobin to 95 per cent. Operation was performed at DeSoto Sanatorium under ether anesthesia. The uterus was curetted and a median abdominal incision made. I removed one subperitoneal uterine fibroid, did a ventrosuspension, and resected both ovaries, which were fibrous and cystic. The patient recovered nicely from the operation and the wound healed kindly. For the first few days following the operation she seemed in much better spirits and her mind was apparently clear. Following this she gradually became more and more melancholic, and after leaving the hospital lapsed gradually into a state of dementia. At this time the gastrointestinal disturbances became marked; diarrhea was more or less constant. The tongue was swollen and red, in the fifth or sixth week after operation becoming black and completely filling the mouth. During the last week there was a continued flow of offensive saliva from the mouth. When I first saw the patient she had on the backs of the hands and on the extensor surfaces of the forearms small dry scaly patches resembling a mild psoriasis. I gave this no thought at the time.

Within two weeks after operation, however, these patches increased in extent and on parts of the arms, back and chest there was a condition resembling in places a dry eczema, and in others an erythema. The patient gradually lost strength and flesh. Her insanity became violent and she died six weeks after operation in a state of acute mania.

It was not until after the death of the patient and after reading Dr. J. H. Randolph's paper on pellagra[1] that it occurred to me that this case was undoubtedly pellagrous.

The interesting feature of the case, if any, lies in the apparent rapid development of pellagrous symptoms after the anesthetic and operative work.

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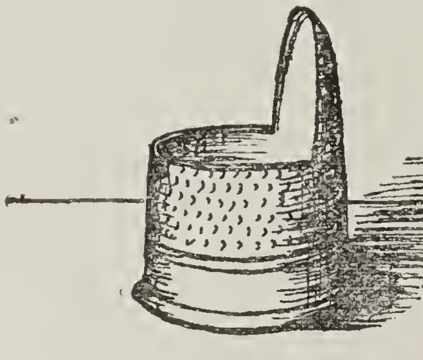
## A SIMPLE TONSILLOTOME

JOHN P. DOUGHERTY, A.M., M.D.
SIOUX CITY, IOWA

This little device may be of interest to those who remove the tonsil by means of the finger-nail, or to those who avoid the finger-nail method, solely from fear of the resultant trauma. It is in principle merely a very strong finger-nail, which can be made as sharp as desired and freely modified as to shape and length. A simple way of making it is to take an ordinary thimble of a size which loosely fits the middle finger, and which is, therefore, very loose for the index-finger on which it is to be used. A hole is filed in the top of the thimble and this enlarged until, with the exception of a lateral projection about the size and shape of a finger-nail, about half the thimble has been cut away. This projection, both at its tip and at its base, should be rather narrower than the finger-nail, and should not include any part of the top of the thimble, as this might interfere with the tactile capacity of the index-finger when thrust into and partly through the instrument. If the instrument be made but slightly sharper than the finger-nail, the tonsil can be removed neatly, quickly and without trauma, and at the same time the danger of cutting adjacent structures is largely obviated. A narrow piece of gauze or tape must be threaded through the instrument to facilitate its recovery in case it slips from the finger.



A simple tonsillotome.

In other than the tonsillar region it may also prove a useful adjuvant to finger-nail dissection, and in some cases may be used in place of a scalpel or scissors.

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## POPLITEAL ANEURISM SUCCESSFULLY OPERATED ON BY MATAS' METHOD

GEORGE P. HAMNER, M.D.
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*Patient.*—P. E., negro, male, married, aged 52, gave negative history of syphilis and tuberculosis, though he had a number of suspicious old scars on legs; probably syphilitic. He felt a dull, aching sensation in the left popliteal space a few days after stepping into a post-hole and falling backward with all the weight of his body thrown on the leg behind the knee. Aching and pain continued to grow worse until, two months after the injury, on January 7, I was called in and found the patient suffering considerably and complaining of pain in the left popliteal space, which showed a plainly visible and palpable pulsating tumor about the size of a lemon, making the diagnosis of aneurism unquestionable. The patient was put on potassium iodid grs. x t. i. d. with an increase of one grain daily while the advisability of waiting longer before operation to insure sufficient endothelial lining of the sac was under consideration. On the above treatment the pain soon disappeared and the patient seemed to improve for a time. I saw him at intervals of three or four days, and he remained very comfortable until January 31, when I was called rather hurriedly and found the patient in great pain. The tumor had suddenly increased very much in size, being now about the size of a large orange and hard and tense with pulsation not visible, and only felt slightly on deep pressure, which caused the patient to cry out with pain. The leg below the knee did not look well at all and was beginning to feel much cooler than the other, showing the effects of the pressure on the circulation. Immediate operation was advised.

*Operation* (February 1).—An Esmarch bandage and tourniquet were applied from the toes to the junction of the lower and middle third of the thigh, and after the tourniquet was made fast the bandage was removed and a free incision made through the skin. The sac was encountered just beneath the skin and was so thin and necrotic in character that portions of the clot protruded. The clot was turned out and the sac washed, the latter being in such a necrotic condition that the greater part of it had to be dissected out. The main trunk of the artery was located just posterior to the sac and after some little search the distal and proximal openings were found about one and one-half inches apart. It was clearly a saccular aneurism, with no collateral openings and occupied the middle third of the popliteal artery. My first intention was, of course, to do a restorative endo-aneurismorrhaphy but the sac was so friable, as to make this unsafe, so I had to resort to obliterative endo-aneurismorrhaphy, closing the openings with several tiers of sutures. I first tried to suture with fine silk but it did not stand tying well and showed a tendency to cut out. The suturing was, however, successfully done with No. 2 iodized catgut, and when the tourniquet was loosened only a small amount of venous ooze took place, which readily yielded to hot compresses. The wound was then closed, muscles, fasciæ and skin, but as the fat, which normally occupies this space, had all disappeared a small dead space was necessarily left.

*Post-operative History.*—The patient was taken from the table in good condition and the leg bandaged with warm cotton and hot-water bags applied. In about two hours he had reacted and the leg operated on was as warm as the other, a condition which had not existed for some days before the operation. With the exception of a temperature of 100 F. on the second day the patient appeared normal in every way until the seventh day. The dressings were taken off on the fifth day and showed a firm primary union. On the seventh day after the operation the temperature was again 100 F. The wound was again examined and showed a clean dry union. The cause of the temperature was rather puzzling until the ninth day, when pus was discovered oozing from under the edges of the bandages. This time when the dressings were removed pus was flowing freely through two small openings in the skin from deep pockets, one just behind the joint and another higher up the thigh. These pockets resulted from the dead space left when the opening was closed. They were irrigated with a

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[1] Randolph, J. H.: Notes on Pellagra and Pellagrins, Arch. Int. Med., January, 1909, p. 553.

1 to 1,000 bichlorid solution and hydrogen dioxid and packed with iodoform gauze. In twenty-four hours the temperature had returned to normal, and in three or four days the small wounds were covered with healthy granulations. They were kept clean with the antiseptics and packed to the bottom and gave no further trouble. At the end of the third week the patient was taken to his home and in another week, four weeks from the date of the operation, he was able to get about on a crutch. He has been at work for about a week at his usual occupation, that of driving a two-horse dray.

I learned two things from this, my first experience with this operation: First, that it is much better to operate early in such cases, while the tumor is pulsating, than to wait until a clot forms with the resulting damage from pressure, as in this case; and second, that the resulting dead space should never be closed without proper drainage. I think that a small cigarette drain in the wound would have obviated the trouble I had with suppuration in the sac.

1016½ Church Street.

## THE AUTOLYSIS OF PNEUMOCOCCI AND THE EFFECT OF THE INJECTION OF AUTOLYZED PNEUMOCOCCI*

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CHICAGO

Pneumococci when suspended in sodium chlorid solution disintegrate and become Gram-negative. The greater the virulence the more rapid the destruction. Non-virulent pneumococci often resist disintegration unless chloroform is added. This process has been proven to be a true autolysis and not due to the action of sodium chlorid in the solution, or to the solubility of the protoplasm of the pneumococcus in water. Several years ago it was shown that the autolytic extract of highly virulent pneumococci in sodium chlorid contained an antiopsonic substance. Similar results have been obtained repeatedly since.

Further studies of the soluble substances and the autolyzed pneumococci are in progress and the following preliminary statements can be made. It seems that by means of autolysis it is possible to separate at least to a large degree the toxic from the non-toxic or antigenic parts of the pneumococcus. The part which goes into solution is the toxic portion. It causes peritonitis and leucocytosis in animals, marked local reaction, leucocytosis, and some fever when injected subcutaneously in man. The opsonic curve shows only a slight rise. It is impossible to immunize animals to any marked degree by repeated injections. Intravenous injections into rabbits may prove fatal.

The injection of the non-toxic and as it appears, the antigenic portion—the autolyzed pneumococci—on the other hand, causes practically no local reaction, only slight increase in the number of leucocytes, but a marked increase in the immunity curve as measured by the specific increase in pneumococco-opsonin.

The usual negative phase is absent. From a number of tests it appears clear that the simultaneous injection of the toxic part interferes to a marked degree with the immunity curve produced by the non-toxic portion.

The injection of autolyzed pneumococci into twenty-five patients with lobar pneumonia seems to show that we have in this material a valuable aid in the treatment of this disease. In two cases of pneumococcus empyemia it seemed to have a marked beneficial effect. Further tests will, of course, be necessary to prove this point. However, it would seem from the evidence at hand that we can by this means stimulate the formation of antibodies at an earlier period than occurs naturally by the infecting pneumococcus.

150 Michigan Avenue.

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* From the Memorial Institute for Infectious Diseases and the ane Billings Fellowship in Medicine, Rush Medical College, Chicago.

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# Therapeutics

## ULCERS OF THE LEG

In spite of the advance in methods and technic in most surgical lines, there is as yet no one orthodox method of treating an indolent ulcer of the leg. Physicians and surgeons differ in their methods of treating this condition, and all are more or less successful. The difficulty is to select the particular treatment that is best adapted to the particular kind of ulcer in a leg with a particular condition of the circulation, at a particular age of the patient, with the particular kind of work that he must do. It is self-evident that for the successful treatment of ulcer of the leg all of the above items must be taken into careful consideration before the best treatment for the individual patient can be decided on.

There are certain principles of treatment which must be observed, but which may be carried out in different ways, while there are certain indications, which, in many instances, cannot be carried out. Under these circumstances the obstacles to success are greatly increased, and the good effect of rational therapeutic procedures is greatly impaired, and a considerable prolongation of treatment is thereby rendered necessary.

When the physician undertakes to treat a case of ulcer of the leg, he must consider whether there is a syphilitic element in the case. This is especially likely to be found when the ulcers are multiple and affect both legs somewhat symmetrically. If there is reason to believe that a syphilitic taint is present constitutional treatment, with a mercurial, such as the yellow iodid of mercury (hydrargyrum iodidi flavum), in doses of 0.015 gram (¼ grain), three times a day, after meals, may be desirable. This may be followed after several weeks by the iodid of potassium in 0.30 to 0.60 gram (5 to 10 grain) doses, well diluted with water, half an hour after each meal.

Next, it must be considered what conditions exist remote from the local lesion which tend to perpetuate it. It will at once be found that most of these ulcers are associated with impaired circulation of the limb, which in many cases has resulted in a varicose condition of the superficial veins. This impairment of the circulation may be due to valvular or degenerative muscular disease of the heart, to impairment of the function of the kidneys, to tumors in the abdomen, and, by far the most frequently of all, to pregnancy. Other less frequent causes are an hereditary weakness of the vessels, especially the veins, hard work, especially lifting heavy weights, constriction of the limbs by garters, and sitting with the legs crossed. The defective circulation in the leg often causes edema of the connective or cellular tissue, and congestion of the skin, which may become a dermatitis or an eczema, accompanied by tormenting itching.

Obviously the most logical and the easiest way of combating this impaired or deficient circulation in the leg is to keep the patient in bed with the affected limb elevated. But most persons who suffer with ulcer of the leg must work every day, and cannot afford the time to go to bed and wait for the ulcer to heal; hence we must try to have the ulcer heal even under unfavorable conditions.

Other resources must be utilized in order to overcome the deficient circulation. If there is constipation, with edema and congestion of the skin, a saline laxative is likely to prove of advantage by depleting the vessels of the intestines or a vegetable laxative may be of value by stimulating the secretion of the liver and intestinal glands and so promoting elimination of toxic products which impair the circulation.

If there is valvular disease of the heart or weak action of the heart not dependent on advanced muscular degeneration, the tincture of digitalis in doses of 15 or 20 drops, three times a day will prove useful. This drug, however, should not be continued in this dose if the pulsations of the heart are reduced below 60 a minute.

If the peripheral vessels show signs of weakness, and are dilated, the fluidextract of ergot, in doses of 1 to 2 c.c. (15 to 30 minims), should be given, well diluted with water, three times a day, after meals.

If there is thickening of the tissues, of if the vessels show signs of commencing arterial sclerosis, the iodid of potassium or sodium should be given in 0.30 gram (5 grain) doses, well diluted with water, half an hour after meals. After a week one dose of iodid a day is sufficient.

If the urine is scanty, or highly acid, or contains much uric acid, an alkaline diuretic should be prescribed, such as the potassium citrate in 2.0 gram (30 grain) doses, in half a glass of water, after each meal.

If the ulcer is sluggish and heals slowly the solution of potassium arsenite (Fowler's solution) given in 5 drop doses, in water, three times a day, after meals, will sometimes prove beneficial. If anemia is present, iron must be prescribed.

Turning now from the constitutional and general treatment to the local treatment, it will be instructive to read the description given by Dr. Alfred J. Buka, of Pittsburg, Pa. (*Medical Record*, Oct. 9, 1909), of the method of treatment followed in one of the divisions of the Department of Charity and Correction of the City of New York, where during five months he actually handled and treated about 125 patients who had ulcer of the leg. Buka describes this method as follows: The ulcer was first made anesthetic with a 2 per cent. solution of cocain or betaeucain. The floor of the ulcer was then curetted so that all of the granulations were removed. Sometimes where the margins were deep, the floor of the ulcer was scarified, as well as the margin. If the bleeding was free, it was allowed to go on for a few minutes. "If the ulcer bed showed a tendency to tardy or poor granulations it was livened up by painting with iodin or by destruction of the granulations with lunar caustic, 50 per cent. silver nitrate, or pure carbolic acid, to be washed off with alcohol. After the treatment for exuberant or tardy granulations the ulcer area was treated with warm 1-2000 or 1-5000 bichlorid dressings. Sterile gauze pads (about 4-6 inches) were placed in the warm bichlorid solution, and after a free removal of the excess solution, they were placed on the ulcer. Rubber tissue was placed over the gauze and the part was bandaged with 3-inch gauze (not too tight). If the patient remained in the wards rubber tissue was not used and the bandage over the ulcerous area was kept wet with bichlorid solution. All patients were instructed about the importance of rest, elevation, and aeration. After forty-eight or seventy-two hours the patients presented themselves for examination either at the clinics or in the wards. Each patient had the same kind of dressing placed upon the ulcer again and internal medication was instituted. Fluid extract of ergot was administered, 7 to 15 minims, three times a day, and this remedy was to be continued indefinitely."

After two or three dressings of this character, repeated at intervals of forty-eight or seventy-two hours "the ulcer appeared as a bright red, freely bleeding area, and on closer examination small, pinhead granulations could be seen." At this time the character of the applications was changed, as further described by Buka: To stimulate healthy granulations "iodoform (for which there is no excuse in modern esthetic medicine), thymolis iodidum (aristol), or bismuth subgallate" are used. Also frequently combined with these dusting powders were acetanilid or acetphenetidinum (phenacetin). When there is eczema around the ulcer the powder was used freely in combination with salicylic acid. He does not state the strength. A simple, efficient, and antiseptic dusting powder, however, is as follows:

| ℞. | Gm. | |
|---|---|---|
| Acidi salicyli | 1 | gr. xv |
| Acidi borici | 49 | or |
| Talci purificati | 50 | āā ℥iss |

M. et Sig.: Use externally.

Buka says that wherever it is possible to keep the area moistened with bichlorid 1-5000. it is done. This, of course, would prevent infection, but it would seem that such solutions long continued would tend to inhibit healing rather than promote it, and the continuous application of physiologic saline solution might be better.

If the eczema which was around the sore tended to spread more widely, tincture of iodin was painted about the outer healthy surface, or on the outer zone of eczema. Such applications were repeated occasionally, or until the patient complained no longer of itching at the margins of the ulcer. A salicylic acid powder also tends to prevent the itching. When the applications cause troublesome burning, Buka found that this disappeared after the second or third application, and the patient did not again complain of it. After from three to five dressings he found that healthy granulations would be present and the irritation from eczema would cease; this from the fourth to the sixth week, at which time an "opalescent film" would be found on the ulcer surface. At this stage ointments are used, *i. e.,* after the granulations are covered with a protective layer, the above-mentioned opalescent film. Sometimes the change from irritating powders to ointments was made earlier on account of the patients' complaining of the burning. It seems inadvisable to use an ointment which will promote the growth of bacteria, especially before the granular absorbent tissue has been protected from absorption; hence the object, after the sore is made sterile, of causing granulations to occur and then become protected from absorption by antiseptic powders. This at least is the object of this treatment. A 10 to 20 per cent. ichthyol ointment was used as both stimulating and healing. When ointments are used they should be spread thickly over the ulcer. Ichthyol ointment may be made as follows:

| ℞. | Gm. | | |
|---|---|---|---|
| Ichthyol ........................... | 10 | or | ʒiii |
| Petrolati ........................ad | 50 | | ad ʒii |

M. et Sig.: Ichthyol ointment 20 per cent.

From this description certain definite principles of treatment may be deduced. First is the necessity for thoroughly cleansing the affected limb with antiseptic solutions. Those readily available and most generally useful are a hot solution of carbolic acid from 1 to 2½ per cent. (1-100 to 1-40), which is especially useful on account of its anesthetic properties, when there is considerable pain in the ulcer; solution of the corrosive chlorid of mercury, 1-1000 to 1-5000; and solution of dioxid of hydrogen in full strength or diluted with 2 to 4 parts of water. The weaker solutions of carbolic acid and corrosive chlorid of mercury may with advantage be applied continuously for a few days, especially if the patient can be kept in bed, until the congestion and inflammation of the tissues surrounding the ulcer have partially or completely subsided, and the discharge from the ulcer has considerably diminished in amount. When this stage has been reached it is necessary to use remedies which will stimulate the healing of the sore by the growth of granulations. Sometimes the stronger antiseptic solutions, as above stated, seem to inhibit the healing of the ulcer rather than stimulate it. Therefore, many times, and this is especially true when there is a profuse discharge or exudate from the ulcer, either physiologic saline solution, or often better, the official liquor antisepticus perhaps diluted, kept thoroughly applied to the ulcer by repeatedly saturating the gauze in contact with the ulcer, makes the most healing application that can be used. This solution is slightly antiseptic, while the liquor antisepticus alkalinus of the National Formulary is alkaline and not antiseptic. This solution also has healing properties.

When a powder has been applied to the ulcer, it should be covered with a pad of sterile gauze large enough to extend several inches beyond the edges of the sore in every direction. A bandage should then be applied smoothly and moderately firmly from the toes to the knee. This fulfills a third indication by applying gentle, uniform pressure which supports the circulation and tends to prevent swelling and congestion of the leg. The bandage also protects the leg from friction with the garments, and prevents contamination with dirt and infection with microorganisms. This dressing should be repeated every second or third day, according to the amount of the discharge from the ulcer.

With reference to the use of bandages to support and improve circulation, Dr. Edward Adams, of New York, (*New York Med. Jour.*, Sept. 29, 1908) writes:

> The essential feature of ambulatory treatment is a good bandage to prevent congestion, and, to my mind, Unna's bandage is the ideal one. The paste necessary for the bandage is prepared as follows: First dissolve four parts of the best gelatin in ten parts of water by means of a hot-water bath. While the fluid is hot add ten parts of glycerin and four parts of powdered white oxid of zinc; stir energetically until the mixture is cold. Always melt the paste before using by placing the receptacle in a hot-water bath, as it must be applied while hot, it solidifying on cooling and resembling rubber. The limb should be carefully cleansed with soap and water, then with alcohol, and it must be thoroughly dried before the paste can be used. After heating it is brushed on from knee to foot and a gauze bandage is applied, cutting it frequently instead of reversing, in order to prevent wrinkles; then another layer of paste and another layer of bandage, until a support of several thicknesses is obtained. If the ulcer is secreting freely, a window may be provided or the dressing changed. After the last application of the paste some non-absorbent cotton can be applied, giving the bandage a mole skin finish; or some talcum powder can be used, giving the appearance of a plaster-of-Paris dressing. The bandage can be worn anywhere from two to eight weeks.

If during the course of the healing of the ulcer the granulations grow excessively so as to become exuberant, as it was formerly the fashion to say, and project above the level of the surrounding skin, they should be touched with the nitrate of silver stick.

Another therapeutic device formerly much employed, but at present less in vogue, is the application of strips of adhesive plaster. They should be about one inch in width, and long enough to nearly, but not quite, encircle the leg. They should be applied obliquely, alternate strips overlapping each other about one-quarter or one-third of an inch, and the adjacent strips making an obtuse angle with each other. The ulcer should not only be covered, but also a space from one to two inches above and below the ulcer. A dry powder is dusted on the ulcer before the strips of plaster are applied, and the limb is bandaged over the plaster. Strips of plaster applied in this way tend to draw together the edges of the ulcer, to lessen its depth by depressing the edges, to diminish the congestion and swelling of the surrounding tissues, and by securing these results to promote healing of the ulcer.

Where an obstinate ulcer is dependent on large varicose veins, operative treatment of them may be demanded. This subject has been discussed very clearly by Dr. Edward Adams (already quoted) who writes:

> The radical method of treating varicose ulcers after healing, especially when caused by enlarged veins, is by operative interference. The operations chiefly performed are those of Trendelenburg, Schede or Mayo. Trendelenburg's operation is the ligation and extirpation of the internal saphenous vein by a longitudinal or transverse incision at the upper and middle thirds of the thigh, about one and one-half inches in length, along the course of the vein. In suitable cases the relief follows quickly, the wound healing by primary union in about ten days. The operation, however, is not without its dangers, for, in spite of complete asepsis, thrombosis of the proximal stump and embolism have occurred, giving a warning against operating without a strict indication.
>
> Schede's operation consists of a circular incision at the junction of the upper and middle third of the leg, encircling the limb, and removing all the veins to the deep fascia.
>
> Mayo's operation is by the subcutaneous method of dissection. He exposes the vein high up, divides it, and passes over the lower portion an instrument which resembles a dull wire curette. This can be wormed along beneath the skin, dissecting out the vein until it breaks, usually three to four inches from the first exposure. The instrument is reintroduced and the procedure followed as above.
>
> After an operation for varicose veins, the leg should be placed in a Volkmann splint and the patient should remain in bed for three weeks. Massage with active and passive motion should be gradual, and no active work should be attempted until three weeks more have elapsed. A supporting bandage should also be worn for at least six months after an operation of this character.
>
> The chief complication occurring with varicose ulcers is phlebitis. Rest, with elevation of the limb and a wet dressing, must be insisted on; however, if the case is seen early enough, an operation can be performed with excision of the thrombus.

When the ulcer is healed the circulation of the leg should be improved by daily cold bathing and gentle massage, and finally over a thin cotton stocking a well fitted elastic one should be worn.

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[For other information see second page following reading matter]

SATURDAY, JUNE 11, 1910

## THE SANITARY SITUATION IN CUBA

That the example of the United States during its occupancy of the Island of Cuba following the Spanish War in the matter of public health and sanitation is being followed out by the present authorities is seen in the official bulletin of the public health department, the January and February numbers of which have just been received.

The fact that Cuba has ceased to be a focus of yellow fever infection at our doors is one for which we in this country have scarcely ceased to feel and to express relief; and Americans have not been reluctant to admit that the reorganized sanitary administration of Cuba deserves credit for carrying on the work inaugurated during the American occupation. As sometimes happens, however, praise from abroad is an embarrassment at home. Local critics of the Cuban government have lately been accusing its Department of Public Health of allowing tuberculosis to increase in Cuba, while using the public funds to eradicate the disease that is most injurious to foreigners, especially Americans. To this accusation Dr. Juan Guiteras, the director of public health, replies[1] with evident feeling in the current number of the official bulletin of his department.

There was a very rapid fall in the death-rate from tuberculosis during the first years of American intervention; but Dr. Guiteras says that this was due to the fact that the enormous mortality of the reconcentration régime had used up the material that furnished the tuberculosis mortality. This decrease was followed by an increase when the children who had survived the miseries of reconcentration arrived at tuberculous age. The influence of the sanitary measures instituted at the time of the intervention and developed and carried out since is shown very clearly in recent years after reestablishment of the natural levels. The Cuban health department has been developing its plans for the last ten years, and the tuberculosis death-rate has fallen from 21.42 per ten thousand in 1900 to 14.9 in 1908. The fall in the mortality from tuberculosis in Cuba, Dr. Guiteras says, has been no slower than in France, Ireland, Norway and portions of Austria-Hungary. The statistics for 1909 are not yet available, but it is believed that the mortality from tuberculosis as well as the general mortality has continued in its descent since the adoption of preventive measures during the first American intervention and since the nationalization of the sanitary service and the creation of a secretary of public health with a place in the cabinet. The director of the health department admits that the immediate results in the campaign against tuberculosis contrast strongly with the results in the campaign against smallpox and yellow fever, but he insists that this is not due to incompetency or neglect. The campaign against yellow fever, he says, is not carried on out of regard for treaties but out of regard for humanity, for the good name of the Cuban people and for the upbuilding of a strong and capable race.

Dr. Guiteras' defense of his department seems a good one; and his resentment at undeserved censure is natural. From this distance, however, we may be permitted to observe that Cuba, having a department of public health to criticize, is to that extent more fortunate than the United States. Moreover, if writers in the Cuban political press, whatever their motives or purposes, find public health measures a good theme on which to harp, this would seem to show that the public mind is either interested in or open to the subjects of hygiene and public well-being—in short, that a healthy public opinion on these subjects is in process of formation. Still more, it is in itself a testimony to the enormous advance which Cuba has made that it is now possible to pick out for criticism a really or supposedly weak spot in the condition of public health in Cuba. Remembering the Havana of old, once called "the filthiest city in the world," if we can suppose that the words "public health" had any other than a sarcastic meaning in the Cuba of Spanish days, can we imagine a Cuban public with any interest to spare for such an abstraction?

"When we contemplate the true sanitary regeneration of the old Spanish colony," says Dr. Guiteras; "when we study the increment in the Cuban population owing both to the increase of natality and the decrease of the mortality; when we can point to the disappearance of smallpox, the reduction of the mortality from malaria to the extent of bringing it down from the first to the eighth place in our records of mortality; when we can place to our credit the eradication of yellow fever with its average yearly record of 600 deaths of Spaniards in the city of Havana alone, the disappearance of the borras fever, so fatal to Cuban children; the gradual decrease of the mortality from infantile tetanus and tuberculosis; when we have seen this tropical country come into competition with the lands most favored by what used to be called a salubrious climate; when we contemplate all this work in the pride of Cuban nationality, we must feel deeply pained to hear it stated that the public treasury is employed by the Department of Public Health mainly to 'prevent the disease that may affect the stranger and more especially of American nationality.'"

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[1] Guiteras, J.: Tuberculosis in Cuba, Sanidad y Beneficencia, January-February, 1910, p. 6.

We believe that our Cuban confrères can afford to disregard the light affliction of an unjust criticism, which is but for a moment, seeing that the achievements of the past and the faithful cultivation of the opportunities of the future are sure to work for them a far more enduring weight of glory.

## FOURTH OF JULY AND TETANUS ARE COMING

We await the returns from the coming Fourth-of-July casualty list with interest, but with only a moderate amount of optimism. After seven years' experience in the compilation of the statistics of this day of wanton bloodshed and slaughter, we have passed through the stage of righteous indignation and are resigned to doing our best, in the hope that some day the indignation that we have felt will become transmuted into public opinion that will lead to the long-urged reforms. There are not wanting signs that the awakening is coming. The public press, which has always taken an active part in the campaign, seems to recount more instances than in previous years of communities where something is being actually accomplished in the way of prevention. In many cities and towns citizens' committees or other organizations have secured reforms or prohibition of the sale of dangerous explosives, while in many places there has been substituted a program of public exercises and illumination far more fitting to the occasion of the anniversary of American independence than is the annual carnival of noise, smoke and bloodshed by which we have desecrated the day for so many years. Enough cities have tried with success the experiment of enforcing laws prohibiting the use of explosives on Independence Day to establish its feasibility, and it is within the power of every community to rid itself of this annual catastrophe; all that is needed is an efficient and clear-seeing chief magistrate, or a few active public-spirited citizens, or some energetic organization which sees its opportunity for service in this matter. Here is a place where medical societies have done good work in a few localities, and there is an unexcelled chance for efficient service by every society located in a town where dangerous methods of celebration are permitted; but some more active and persistent exertion than the passing of resolutions is required if results are to be obtained.

The wide-spread use which has been made of the statistical material collected by The Journal after each Fourth-of-July celebration is highly gratifying, and we shall continue the accumulation of statistics this year as before.

Last year we were disappointed by an unexpected and not inconsiderable increase in the number of tetanus cases, which fact incites us to continue the urging of vigorous prophylactic measures by physicians who attend to wounds received from explosives. Nothing less than thorough surgical cleansing, supplemented by a preventive dose of at least 1,500 units of tetanus antitoxin, should suffice to satisfy the conscience of any physician. Certainly the experience of the last six years has been conclusive enough as to the almost absolute protection afforded by tetanus antitoxin when given early to patients with properly treated wounds of this kind. It is a matter of some interest that nearly all the recorded cases of failure of tetanus antitoxin to prevent tetanus have occurred in Europe; the reason for these failures is almost certainly to be ascribed to the inferior quality of antitoxin which is on the market over there. Anderson[1] states that the tetanus antitoxin in use in this country, as tested by the Public Health and Marine-Hospital Service, showed much higher antitoxic value than most of the European specimens; the American antitoxins on the market before the adoption of a standard unit containing in different samples 434, 166, 77, 700, and 769 units per c.c., as contrasted with 40, 40, 83, 66, and 50 units in the French and Italian serums. In cases in which the wound does not heal well because of mixed infection, it is desirable to repeat the antitoxin, for, as Rowan[2] has pointed out, in these cases, the tetanus bacilli may continue to multiply in the pus-infected tissues until the injected antitoxin has been exhausted or eliminated, when there may occur a late development of tetanus.

There is nothing new to advocate in the matter of curative treatment, unfortunately. As ever, in the cases with a short incubation period the patients die with but few exceptions, while in those with longer periods of incubation the patients sometimes recover under the most diverse treatments. Free use of antitoxin is indicated, since it will at least neutralize such toxin as is free in the circulation and thus lessen the amount that will act on the nervous tissue; and there seem to be both theoretical and clinical grounds which support the practice of administering it by the intraspinal route when practicable. The use of magnesium sulphate, eucain, or other sedatives by the spinal route is still in the experimental stage, with sufficient favorable results on record to warrant trial by those who are competent to make and to observe such experiments.

## ACCELERATIVE AND RETARDATIVE FUNCTIONS OF THE GLANDS OF INTERNAL SECRETION

Important and interesting facts have been brought to the attention of the medical world as a result of investigation into the functions of the ductless glands. It is to the correlation of these facts that we must look for a satisfactory understanding of the part played by these glands in the regulation and maintenance of life. The difficulties of research have been so many and the establishment of facts so gradual that progress in our knowledge of these glands has seemed slow. At present, however, there has accumulated a sufficient number of observations to render it probable that some insight into the workings of these obscure glands might result from an attempt to unify the isolated facts.

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[1] Anderson, John F.: The Commercial Preparations of Tetanus Antitoxin, The Journal A. M. A., Jan. 22, 1910, liv, 253.

[2] Rowan, Charles J., The Prophylactic Use of Tetanus Antitoxin, The Journal A. M. A., Feb. 12, 1910, liv, 533.

This work of unification has been very well begun by members of the Vienna school. They have pointed out the striking fact that, beside their own specific action, the ductless glands interact among themselves, and that any disturbance in the working of one results in an upset to the equilibrium of the rest; in consequence, the body metabolism is disturbed in many of its subdivisions—protein, carbohydrate, fat, and mineral. It has been the special service of this school to attempt an arrangement of the ductless glands into groups using disturbances of the metabolic functions of the body, to which they give rise, as a basis for classification.

On broad lines of function the ductless glands may be divided into two groups: (1) the accelerative, and (2) the retardative.

Into the first group fall the thyroid, the adrenals and the hypophysis. On study of the reactions of the body to injections of their prepared substances and on observation of experimental interference with their functions it has been found that all three increase protein exchange, the most marked effects being noticeable in the case of the hypophysis. The adrenals cause mobilization of the carbohydrates, and the thyroid leads to increased destruction of fat.

Into the second group fall the pancreas and the parathyroids. Both retard protein destruction, the pancreas being the more effective. Both likewise restrain the mobilization of carbohydrate; here too the pancreas is the more active. Likewise, the pancreas causes decrease in fat consumption.

A consideration of the relation of the ductless glands to mineral metabolism is of much interest. Feeding of thyroid tablets has been found to be followed by increased output of phosphates by the intestines, while feeding of hypophysis leads to a decrease in phosphates in the urine and an increase of the same in the feces. After the administration either of thyroid or of hypophysis extract, dogs show a great increase of calcium in the feces and of magnesium in the urine. With epinephrin it is different; the ratio of nitrogen to phosphorus pentoxid decreases and the calcium and sodium output is increased. The parathyroids exert a special restraining influence on calcium metabolism as shown by the increase in calcium in the urine and loss in the tissues when this gland is removed experimentally. Such findings suggest the inquiry whether the ductless glands directly influence the metabolism of the minerals of the body, or whether such changes are secondary results of some primary general disturbance. Exact quantitative experiments alone can solve this problem.

The effects of the thyroid and of the parathyroids on the nervous system are strikingly different from one another. With excision of the parathyroids the galvanic irritability of the nerves decreases, while in dogs deprived of the thyroid it increases. This may possibly be brought into relation with the loss of calcium in parathyroidectomy, as calcium strongly decreases the irritability of the central nervous system.

Do the ductless glands have any influence on the blood? On this point some experimental findings are of interest. After epinephrin injection a leucocytosis develops, which is of the neutrophilic polymorphonuclear type; there is also a decrease in eosinophils. Thyroid extract likewise causes a decrease in eosinophils, which is slower to make its appearance, while hypophysis extract has no definite influence.

A comparison of the action of the glands in the same group has been fruitful. For example, both epinephrin and hypophysis extract, when injected into dogs, raise the blood-pressure, but the action of the hypophysis is slower and weaker. Hypophysis extract slows the heart but little while epinephrin does so powerfully. On section of the vagus nerve no change in rate takes place after hypophysis injection, while in the case of epinephrin a marked increase in rate comes on. Pituitary extract narrows the coronary arteries while epinephrin widens them; the opposite is true of the kidney vessels, a fact which probably explains the polyuria in some diseases of the hypophysis.

Do the ductless glands act through the discharge into the circulation of specific hormones? Such is the conception of Falta regarding the action of epinephrin, which he considers as having a special affinity for the sympathetic nerves. The mobilization of sugar in the liver is, according to his view, under the influence of the sympathetic, by mediation of the adrenals.

Though the observations on the activity of this group of glands are still meager, and their interpretation difficult, the work of unifying these results has already forecast important relations between them. The activity of many laboratories in this special field promises much for the future. Perhaps it is not too much to hope that, through the study of these glands, important light may be shed on the etiology and treatment of the still obscure metabolic diseases.

## THE CARNEGIE FOUNDATION REPORT ON MEDICAL EDUCATION

So many marvelous things have been brought about in the domain of medical education during the past few years that great changes now seem commonplace and events of even greater magnitude would be taken as a matter of course. Nevertheless, all who are acquainted with the work which the Carnegie Foundation for the Advancement of Teaching has been doing in the investigation and standardizing of universities and colleges, have been awaiting with eager interest that body's report on medical education. The report has just appeared and undoubtedly will meet the highest expectations of those who have been watching for it.

As has been stated in these columns,[1] the Carnegie Foundation was established in 1905 by Andrew Carnegie, who set aside a fund of $10,000,000 to provide retiring allowances and pensions for teachers in colleges and universities. At first, state universities were excluded, but later the endowment was increased by $5,000,000 in order that the benefits of the fund might be extended to them also. Realizing that not all institutions which call themselves colleges or universities are worthy of such titles, the foundation made an investigation of educational institutions in order to determine which were acceptable. Only the professors of such colleges as came up to the standards fixed by the foundation were eligible to receive pensions. Many of the universities found acceptable had medical departments and already not a few medical teachers have retired on Carnegie allowances. The Carnegie Foundation consequently stands for the advancement of medical teaching to quite the same degree as it stands for the advancement of teaching in other branches.

At the beginning, the investigations of the foundation were directed toward the college as the portion of the educational system most directly benefited by the endowment. This led to a study also of the university with its various departments, including the medical school. In the natural evolution of the foundation's work, therefore, medical education was taken up, and apparently at the psychologic moment, following as it did the first inspection made by the Council on Medical Education and being made simultaneously with the Council's second inspection. The reports of both of these bodies will have added importance, inasmuch as the two deal largely with the same problems.

The investigation of all the medical schools of the United States and Canada has been completed, and apparently with the same thoroughness as the study of other institutions in which the foundation has been interested. The foundation has quite properly taken the position that medical schools as well as colleges and universities are in truth public-service corporations, whether supported by taxation or private endowment; that the public has a right to know the facts concerning their equipment and ability to furnish education; and that only by a publication of the facts, unbiased by local ambitions or points of view, can the best interests of education be subserved. From the view-point of the needs and qualifications of the medical student and the interests of the general public, the foundation has examined carefully into the demand for physicians, the number of colleges necessary to satisfy that demand and the standards of preliminary education, teachers, laboratory equipment and clinical facilities which could reasonably be required of the medical schools.

Emphasis is laid on the fact that the social order is best served when the number of men entering a given profession reaches and does not exceed a limited ratio and that the present condition of the medical profession, overcrowded by ill-trained physicians, is very unsatisfactory. The illustration is used that "when six or eight ill-trained physicians undertake to make a living in a town which can support only two, the whole plane of professional conduct is lowered, and, in the struggle which ensues, each man becomes intent on his own practice, public health and sanitation are neglected, and the standards of the profession tend to demoralization." The best interests of the general public are certainly not best subserved under such conditions.

The report also suggests that with the present oversupply of medical schools, a state having no medical schools may be supplied with as good, or possibly better, physicians than other states which may possess several medical colleges, and that, at the present time at least, a community's best interests may be best served by the absence of medical colleges.

Regarding sectarian medicine, the foundation has taken the only logical position, namely, that, regardless of the method of treatment employed, all practitioners alike should have a thorough grounding in the fundamental medical sciences. Unless the physician is sufficiently well trained to make a proper diagnosis, treatment by any method would be mere guess-work, unscientific, and more apt to do harm than good.

This report is evidently the result of an enormous amount of painstaking work and is worthy the most careful study.[2] Coming from an agency outside and independent of the medical profession, it is sure to have a most profound influence on medical education in general, and claims of partiality or prejudice cannot be made against it. It is the more valuable since it comes from an agency whose function it is to investigate, compare and standardize all departments of education, technical and professional as well as general and collegiate, and indicates how the medical school, as a part of the educational system of our country, compares with the other parts of that system. If the conditions revealed by this extensive investigation are given a wide publicity, the result to medical education can be only good. The actual facts, in the end, will be more helpful than the poetry of the medical school catalogues and advertisements, especially to state licensing boards, some of which are now endeavoring to ascertain the actual character of the medical schools that send them applicants for license. Noteworthy forward steps, especially in the line of consolidation of medical schools, have already received effective encouragement from the Carnegie Foundation, and undoubtedly, this report will call the attention of men of wealth to the need of endowments for medical education. It is evident that the Carnegie Foundation is in a position in which it may exert a powerful and growing influence for good on the development of medical education in this country.

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[1] THE JOURNAL A. M. A., Aug. 14, 1909, p. 559.

[2] A copy of the report may be obtained by sending 17 cents, for postage, to The Carnegie Foundation, 576 Fifth Avenue, New York City.

## WOMAN'S MEDICAL COLLEGE OF BALTIMORE PERMANENTLY CLOSED

A letter from Dr. John R. Abercrombie, dean of the Woman's Medical College of Baltimore, informs us that, at a recent meeting of the faculty, it was decided to close that college permanently at the end of the present session. The reasons given are that sufficient funds were not available to make the improvements in the equipment and teaching facilities which the faculty considered essential and that the faculty preferred to close the college, rather than continue it as a medical college of other than the first rank, thereby preserving the excellent record maintained during the twenty-eight years of its existence. This is another instance in which faculty members have been willing to sacrifice personal interests that medical education might be improved, better standards prevail, and the public be provided with better trained physicians. After all, it is not strange that we seldom hear of such action as this being taken by colleges conducted solely for profit. It is almost invariably the colleges with higher ideals than those based on commercialism which, seeing the impossibility of maintaining those high ideals, voluntarily close. The colleges inspired by profit will enforce reasonable standards or close only when required to do so by state licensing boards.

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## THE ST. LOUIS SESSION

As we go to press the St. Louis session promises to be one of the most successful in the history of the Association. The weather is magnificent and augurs well, not only for a highly satisfactory Session, but also for the success of the outdoor entertainments planned. The first meeting of the House of Delegates was held Monday under the presidency of Col. Gorgas, and the usual routine business was transacted; the account of the proceedings appears on page 1963. A cordial reception was given to the visiting physicians. The registration on Monday was 1,400 and that number was greatly exceeded on Tuesday.

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# *Medical News*

### ARKANSAS

**Sanatorium for Odd Fellows.**—The Arkansas Grand Lodge of Odd Fellows has selected a farm near Walnut Ridge, Lawrence county, as a site for a tuberculosis sanatorium for which $100,000 was devised under the will of the late A. W. Shiery, Little Rock.

**Personal.**—Dr. Morgan Smith, Little Rock, has been appointed assistant secretary for Arkansas, of the Rockefeller Sanitary Commission.——Dr. William W. Rice has been appointed president and Dr. Albert S. Buchanan, secretary of the Prescott Board of Health.

**Commencement.**—The fourth annual graduating exercises of the College of Physicans and Surgeons were held in Little Rock, April 29. Dr. C. H. Hoffman delivered the address to the graduating class which numbered 26 and the diplomas were presented by Dr. Joseph P. Runyan, president of the board of directors of the college.

**County Society Meetings.**—At the annual meeting of the Randolph County Medical Society, held in Pocahontas, April 21, Dr. John W. Brown, Swartz, was elected president; Dr. William E. Hughes, Pocahontas, secretary; Dr. Carl Scheidt, Pocahontas, treasurer; Dr. H. B. Hull, Ravenden Springs, delegate to the state society, and Dr. Thomas Z. Johnson, Holmes, alternate.——Howard County Medical Society at its recent meeting in Ashdown, elected Dr. W. M. Gibson, Nashville, president, and Dr. William H. Toland, Mineral Springs, delegate to the state society.

### CONNECTICUT

**Tuberculosis Farm Sanatorium Prospers.**—At the sixth annual meeting of the New Haven County Antituberculosis Association, held at the Gaylord Farm Sanatorium, Cook's Hill, Wallingford, Dr. Edward T. Bradstreet, Meriden, was elected a director. The average number of patients under treatment during the year was 59, and the total number of patients treated 117. Up to date 1,007 have applied for admission to the sanatorium, of whom 668 were accepted. During the last year 62 patients remained at the sanatorium for less than three months, 50 of whom left the institution distinctly improved; 104 patients remained for three months, and of these 23 were incipient cases, of which 21 were discharged with the disease arrested; 75 patients came with the disease moderately advanced, and of these 51 were discharged with the disease arrested, and 11 improved; 6 patients came in a very advanced condition of the disease; in 2 of these the disease was arrested and in 2 the patients improved.

**Societies Meet.**—At the annual meeting of the Norwich County Medical Society, in Norwich, May 16, the following officers were elected: Dr. Patrick H. Harriman, president; Dr. Dennis J. Shahan, vice-president, and Dr. William B. Casey, secretary and treasurer, all of Norwich.——At the one hundred and eighteenth annual meeting of the Tolland County Society, held in Rockville, April 20, the following officers were elected: President, Dr. Cyrus E. Pendleton, Hebron; vice-president, Dr. Frank M. Dickinson, Rockville; secretary and treasurer, Dr. Elip P. Flint, Rockville; councilor, Dr. Thomas F. Rockwell, Rockville, and delegate to the state association and censor, Dr. Frank L. Smith, Stafford Springs.——At the meeting of the newly organized Connecticut Society of Social Hygiene, held in Hartford, May 14, Dr. Phineas H. Ingalls was elected president; Dr. Carles S. Stern, treasurer; Dr. Thomas N. Hepburn, secretary; Dr. Oliver C. Smith, chairman of the treatment committee; Dr. Frederick T. Simpson, chairman of the publication committee, and Dr. Alva E. Abrams, chairman of the educational committee, all of Hartford.

### DISTRICT OF COLUMBIA

**District Association Election.**—At the annual meeting of the Medical Association of the District of Columbia, April 26, Dr. Noble P. Barnes was elected president; Dr. Edwin B. Behrend, vice-president; Dr. Luther H. Reichelderfer, secretary, and Dr. Frank Leech, treasurer.

**Personal.**—Dr. Thomas E. Satterthwaite, New York City, was a guest of honor at the annual dinner of the Washington Medical and Surgical Society, May 4, and delivered an address on "Some Newer Conceptions of Myocardial Disease."——Dr. Henry W. Miller, clinical director of the Government Hospital, Washington, has been appointed superintendent of the Maine Insane Hospital, Bangor.——Dr. Francis Dowling, Cincinnati, gave an illustrated lecture, May 27, before the U. S. Naval School, Washington, on "The Medical Giants of France." The occasion was the eighth anniversary of the founding of the school.

**Pasteurized Milk Laboratory Opened.**—Exercises attendant on the formal opening of the Nathan Straus Pasteurized Milk Laboratory were held at George Washington University Medical School, May 11. Hon. Jacob H. Gallinger, M.D., U. S. senator from N. H., presided and addresses were made by Surgeon-General Walter Wyman, Dr. A. D. Melvin, chief of the Bureau of Animal Industry, Hon John Johnson, commissioner of the district; Dr. William C. Woodward, health officer of the district; Dr. Milton J. Rosenau, professor of preventive medicine and hygiene in Harvard University, Dr. James H. M. Knox, Jr., Baltimore, president of the National Society for the Prevention of Infant Mortality, and Dr. Arthur R. Green, medical director of the Nathan Straus work in New York City.

### INDIANA

**Antituberculosis Society Organized.**—The Deleware County Antituberculosis Association was organized at Muncie, May 5. Dr. William J. Molloy was elected vice-president and Drs. Hugn A. Cowing, Clarence G. Rea, Clay A. Ball and Earle S. Green were elected members of the executive committee.

**Found Guilty.**—Dr. Eugene V. Redlinger, Huntington, charged with incest and the crime of abortion on his step-daughter, is said to have pleaded guilty to the charge of abortion, April 29, and to have been sentenced to be imprisoned in the penitentiary for a term of from three to fourteen years and to pay a fine of $500.

**District Society Meetings.**—At the annual meeting of the Twelfth District Medical Society, held in Fort Wayne May 17, the following officers were elected: President, Dr. Fred A. Metts, Ossian; vice-presidents, Dr. Douglas A. Swartz, South Whitley, and Dr. Woodward H. Hayes, Albion, and secretary and treasurer, Dr. Garrett Van Sweringen, Fort Wayne. In the evening Dr. Mazyck P. Ravenel of the University of Wisconsin delivered an address on "The Transmission of Bovine Tuberculosis to Man."——The Ninth Councilor District Medical Society held its annual meeting in Tipton, May 20, and elected the following officers: President, Dr. Andrew S. Dickey, Tipton; vice-presidents, Dr. Edgar Cox, Kokomo, and Dr. William J. Fernald, Frankfort; secretary-treasurer, Dr. Paul J. Barcus, Crawfordsville, and assistant secretary-treasurer, Dr. George T. Williams, Crawfordsville. The next meeting of the society will be held in Kokomo.——The sixth annual meeting of the Indiana Fourth District Medical Society was held in Lawrenceburg, May 27. Dr. John P. Ward, Vevay, was elected president; Dr. John Elfers, Rising Sun, vice-president; Dr. Curtis Bland, Greensburg, and Dr. James H. Green, North Vernon, treasurer. The next meeting will be held in Greensburg.

### MARYLAND

**Personal.**—Dr. J. Frank Miller, a graduate of the Baltimore Medical College, 1909, has opened an office in Reisterstown, Baltimore county.

**Aged Physician Convicted.**—Dr. David W. Jones, Hagerstown, is said to have been found guilty, May 25, of attempted malpractice on a young woman and to have been sentenced to pay a fine of $100 and costs.

**Tuberculosis Sanatorium Managers Meet.**—The managers of the Maryland State Tuberculosis Sanatorium at their annual meeting, May 19, reelected Dr. H. Warren Buckler, Baltimore, vice-president; Dr. Victor F. Cullen, state sanatorium superintendent, and Drs. Edson M. Glidden and W. Miles Garrison, assistants.

**Health Officers Appointed.**—The following have been appointed health officers of Carroll county: Taneytown, Dr. Franklin H. Seiss; Uniontown, Dr. Luther Kemp; Myers, Dr. Levi Wetzel; Woolery's, Dr. Robert F. Wells; Freedom, Dr. Milton D. Norris; Manchester, Dr. John F. B. Weaver; Westminster, Dr. Charles R. Foutz, for the district and at large; Hampstead, Dr. Richard C. Wells; Franklin, Dr. Edwin D. Cronk; Middleburg, Dr. Charles H. Diller; New Windsor, Dr. George H. Brown; Union Bridge, Dr. James Watt; Mount Airy, Dr. William E. Gaver; Berrett, Dr. Daniel B. Sprecher.

### MASSACHUSETTS

**Bequest to Hospital.**—By the will of the late Mrs. Annie Prescott Lincoln, Boston, $25,000 is devised to Grace Hospital, formerly Emergency Hospital, Boston, for a bed to be maintained in memory of her husband, Joseph Bates Lincoln.

**District Medical Society Elects Officers.**—Berkshire District Medical Society, at its annual meeting held in Pittsfield, May 3, elected the following officers: President, Dr. Harry B. Holmes, Adams; vice-president, Dr. Clifford S. Chapin, Great Barrington; secretary, Dr. Isaac F. Dodd, Pittsfield; treasurer, Dr. Joseph D. Howe, Pittsfield; trial commissioner, Dr. John J. Hassett, Lee; councilors, Drs. James F. A. Adams, Pittsfield; Lyman A. Jones, North Adams, and Orland J. Brown, North Adams, and censors, Drs. James F. A. Adams, Pittsfield; Albert T. Wakefield, Sheffield; Martin M. Brown, North Adams, Stephen C. Burton, Pittsfield, and John B. Thomas, Pittsfield.

### NEW YORK

**Public Health Association.**—The Rochester Public Health Association held its annual meeting, May 10, and adopted resolutions commendatory of the stand taken by the local officials for the preservation of the cleanliness of the city and for proper sanitation. Dr. Montgomery E. Leary was elected secretary and supervising director of the association.

**Attempt to Defeat Undesirable Bill.**—A bill has been presented to Governor Hughes and to Mayor Gaynor which changes the existing medical law in regard to the fines imposed on violators of the medical law. At present when violators are successfully prosecuted the fines go to the Medical Society of the County of New York for the support of its work in seeking out offenders. The new bill adds, "Provided, however, that in the City of New York no fines shall be paid to any such societies, but shall belong to the said City of New York." At the present time practically the only check on unlicensed practitioners, midwives, druggists selling abortion drugs, quacks, corporations advertising the practice of medicine by unknown physicians, and fakers of all kinds who practice medicine under the cloak of religion or occultism, is the active prosecution of the Medical Society of the County of New York and hence it is urged on all the members of the county society that they use their influence to prevent the passage of this bill.

### New York City

**Smallpox in Manhattan.**—Five cases of smallpox were recently detected in a tenement in Harlem. It was found that many persons had been exposed and the Board of Health made over 500 vaccinations in the immediate neighborhood.

**Crusade Against Wood Alcohol.**—The first cases in the present campaign against wood alcohol that is being conducted by the Board of Health have been found guilty and fined $100 and $150 for selling adulterated whisky. Of the samples collected on the East Side and analyzed, 20 per cent. were found to contain wood alcohol. Several cases have been put over as it is expected that the United States government will take some action against the wholesalers who have sold the poison to the retailers.

**Inebriate Bill Signed.**—Mayor Gaynor has approved the bill passed by the legislature which permits the board of estimate to establish a commission for dealing with inebriates and a hospital and industrial colony to be used for the reformation of drunkards. It has been stated that the board of estimate will not furnish money for the scheme as drunkenness is decreasing very markedly in recent years and it is claimed that present educational and social work is largely doing away with the evil.

**A New Move to Guard Public Health.**—Dr. Charles Mallory Williams, Executive Librarian of the New York Academy of Medicine has asked for a collection of the reports of committees appointed at various times to investigate questions of public health so that they may be available for workers. Dr. Williams would like to have the reports of investigations along such lines as harbor pollution, the alcohol question, the prevention of tuberculosis and of occupational diseases and the sanitation of tenements.

**To Establish Optometry Course.**—Columbia University has just sent out announcements that it will start the first optomety course to be offered by any college or university in this country. The course will begin in September and intends to equip graduates so that they may examine people's eyes and fit glasses, but they are not to use drugs. The course will be made a part of the department of physics. The Michigan State Optical Society has telegraphed that it will give the first free scholarship in the new course.

**Free Dentistry for School Children.**—The free dental clinic that was established in January on One Hundred and Twenty-first street to care for the teeth of school children has completed its first four months of work. During this period more than 5,000 school children have been treated. The Department of Health maintains the clinic and children are not treated until a personal visit has been made to the home of the child to see that the parents are unable to pay for treatment. Dr. S. Josephine Baker, chief of the division of child hygiene, states that out of 323,000 school children examined during the 1908-09 school year 183,000 had defective teeth.

**New Hospital Building for Post-Graduate Medical School.**—Work has been commenced on the new building for the New York Post-Graduate Medical School, which is to cost $6,000,000, making the institution's capacity about 400 beds. The building proposed is to be twelve stories in height and will include a tower with rooms for fifty private patients and a pavilion on the roof for open-air treatment. A loggia on three floors open to the street front and to the rear is also planned, where beds can be kept permanently with exposure to the air. In addition, three long balconies to the eastward are proposed, and the entire top of the main building, seven stories high, with the exception of the space taken up by the tower, will be occupied by a roof garden, so that unusual provision will be made for giving the patients fresh air. There are to be eight small operating rooms and a number of well-equipped laboratories for research work. After the new building is completed the present quarters of the Post-Graduate, adjoining, will be converted into a nurses' home in connection with the college.

### Buffalo

**Commencement Exercises.**—The annual commencement exercises of the Medical Department of the University of Buffalo were held May 27 when a class of thirty-eight received diplomas. Dr. Matthew D. Mann delivered the Doctorate address.

**Dinner to Dr. Mann.**—A dinner was given to Dr. Matthew D. Mann by the Alumni Association of the University of Buffalo, May 26, on the occasion of Dr. Mann's retirement as Dean and Professor of the department of Obstetrics and Gynecology. A loving cup was presented to Dr. Mann by the faculty of the University with suitably embossed resolutions by the graduating class on it.

**Personal.**—Drs. Roswell Park, Charles Cary and Gustav Hitzel, Buffalo, have started for Europe.——Dr. Roswell Park, Buffalo, has resigned as a trustee of the J. N. Adam Memorial Hospital.——Lieut. Col. Albert H. Briggs, major of the 65th Infantry, N. G. N. Y., has been promoted to Chief Medical Officer of the 4th Brigade and Dr. Nelson G. Russell has been appointed Surgeon of the regiment with the rank of Major. Dr. Carroll J. Roberts has been promoted to Captain and Assistant Surgeon and Dr. William T. Getman has been appointed Assistant Surgeon with the rank of 1st Lieutenant.

## PENNSYLVANIA

**Negroes League Against Tuberculosis.**—Fifty of the leading negroes of western Pennsylvania on May 21 applied for a charter for the Negro Tuberculosis Hospital League, to provide separate tuberculosis sanatoria in the state for the afflicted of their race. The tuberculosis hospitals of the state refuse to admit them, although such hospitals which have state aid, are willing to and do furnish milk, eggs and other foodstuffs needed by negro consumptives in their homes. It is the intention to raise a fund to get state aid to erect one hospital near Philadelphia and another near Pittsburg.

### Philadelphia

**Personal.**—Surgeon-General George H. Torney, U. S. A., and Surgeon-General Charles F. Stokes, U. S. N., will be the guests of honor at a reception given by the Medical Club of Philadelphia, at the Bellevue-Stratford Hotel, Friday evening, June 17.——Dr. J. H. Parson, of London, England, the official guest of the Section on Ophthalmology of the American Medical Association, was the guest of honor at a dinner given by Dr. George E. de Schweinitz at the Bellevue-Stratford Hotel, May 31.——Dr. Alfred Saenger, Hamburg, Germany, was the guest of honor at a dinner given by Drs. Francis X. Dercum and Charles K. Mills at the Art Club on May 31.——The honorary degree of LL.D. was conferred on Dr. S. Weir Mitchell by Jefferson Medical College at the annual commencement exercises, June 6.

**Hospitals in Philadelphia Improved.**—More than fifty hospitals at present supply the physical and teaching requirements of this medical center, and these plants are undergoing constant expansion. The Rush Hospital for the Treatment of Consumption and Allied Diseases, at Lancaster avenue and Thirty-third street, on May 21, opened for inspection of the public the newly completed portion of its intended group of buildings. The University Hospital on May 12 broke ground for a new group of laboratory structures at Pine and Thirty-seventh streets. A new section of the Nurse Training School dormitories (with capacity for 40 additional nurses) at the Philadelphia General Hospital, Pine and Thirty-fourth streets, was opened May 12.

## VIRGINIA

**Northern Neck Physicians Hold Meeting.**—At the annual meeting of the Northern Neck Medical Association, the following officers were elected: President, Dr. Andrew C. Fisher, Emmerton; vice-presidents, Drs. C. T. Pierce and Loren E. Cockrell, Reedville; secretary, Dr. Robert O. Lyell, Warsaw, and treasurer, Dr. Walter N. Chinn, Hague.

**Personal.**—Dr. Roscoe C. Carnal, Ballsville, has been appointed hookworm inspector for the district composed of the counties of Princess Anne, Norfolk, Nansemond and Isle of Wight.——The Norfolk school board has elected Drs. Julian A. Norfleet, S. Roszel Donohoe, Millard P. Doyle and J. Judd Miller medical examiners for the public schools of the city.

## WASHINGTON

**State Medical Board Appeals.**—The State Medical Board, on May 13 gave notice of appeal to the Supreme Court from the decision of the Superior court of King's county ordering the Board to grant a physician's license to Mrs. Lucile Berfield Hazzard, a woman who is said to have used starvation methods in treatment of disease.

**Hospital Corner Stone Laid.**—The corner stone of the new Providence Hospital, Seattle, was laid with impressive ceremonies by the Bishop of Seattle, May 1.——The contract for the addition of a new wing to St. John's Hospital, Ketchekan, has been awarded. The wing will be two stories in height and will contain operating rooms, wards, private rooms, etc.

**Personal.**—Dr. J. Earl Elsie, Pullman, has been elected delegate to the state medical society and Dr. William B. Palamountain, Colfax, alternate.——Dr. Elisha B. Schrock has resigned as a member of the staff of the Municipal Hospital, Seattle, and has been succeeded by Dr. J. M. Lea, Knoxville, Tenn.——Dr. James A. LaGasa, formerly Commissioner of Health of Tacoma, was operated on for appendicitis, May 4, and is reported to be doing well.

**Tuberculosis Notes.**—Two lots in the town of Glacier have been deeded to the Whatcom County Anti-Tuberculosis Society on which it is hoped that a sanatorium will be established in a short time.——The Everett Anti-Tuberculosis Society at its annual meeting elected Dr. Albert P. Duryee a director.——Whatcom County Anti-tuberculosis League was organized at Bellingham, April 28, and the following physicians were elected to office: President, Dr. Edward C. Ruge, Bellingham, and directors, Drs. Orville E. Beebe, Everson, and Spencer S. Howe, Lynden.

## WYOMING

**Will Prosecute Illegal Drug Sellers.**—The State Board of Medical Examiners, at its quarterly meeting, adopted resolutions setting forth that hereafter it would revoke the certificate of any physician who violates the laws of the state by selling cocain or other drugs to drug addicts.

**Personal.**—Dr. F. Di Giacoma, Rock Springs, is said to have been adjudged insane and committed to the state hospital at Evanston.——Dr. Harry H. Ainsworth, Cody, who was operated on recently for appendicitis, is reported to be convalescent.——Dr. William A. Wyman has been elected president, Dr. George L. Strader, secretary, and Dr. Otto K. Snyder, treasurer, of the medical staff of St. John's Hospital, Cheyenne.

## GENERAL NEWS AND COMMENT

**Physicians of Virginia and the District Meet.**—The medical societies of Northern Virginia and the District of Columbia, at their annual meeting in Manassas, Va., elected the following officers: Dr. A. Barnes Hooe, Washington, president; Dr. A. H. Coombs, Fairfax, Va., recording secretary; Dr. Charles S. White, Washington, corresponding-secretary, and Dr. Frederick M. Brooks, Fairfax, treasurer.

**Southern Railway Surgeons Meet.**—The fifteenth annual meeting of the Association of Surgeons of the Southern Railway was held in Richmond, May 24-26, under the presidency of Dr. Charles H. Starkel, Belleville, Ill. Among the interesting topics of discussion were the address of Surgeon Charles P. Wertenbaker, U. S. P. H. and M.-H. Service on "Sanitation of Railway Stations," and the paper of Dr. Henry T. Bahnson, Winston-Salem, on "Alcohol as a Dressing for Wounds." The Samuel Spencer Memorial Address was delivered by Dr. Lucien Lofton, North Emporia, Va. The Owen Bill calling for the establishment of a federal department of health was unanimously endorsed. Mobile was selected as the next meeting place. The following officers were elected: President, Dr. William C. Day, Danville, Va.; vice-presidents, Drs. H. J. Milliken, R. A. Smith, Hales Mill, Va.; Ambrose McCoy, Jackson, Tenn., and James P. Salb, Jasper, Ind.; secretary and treasurer, Dr. Jacob U. Ray, Woodstock, Ala., and member of the executive committee, Dr. Jay H. Durkee, Jacksonville, Fla.

**Meeting of National Association for the Study and Prevention of Tuberculosis.**—The sixth annual meeting of the above association, held in Washington May 2 and 3, was briefly reported in The Journal, May 14, page 1621. The resolution in regard to the pasteurization of milk placed the association on record as favoring clean milk and declaring that pasteurization is valuable where certified milk cannot be obtained, but that the process should be carefully supervised. The same resolution, however, declared that tuberculosis of the glands and lymph nodes in children, or other forms of tuberculosis are rarely caused by infection from bovine sources. Dr. William H. Park, of the New York Health Department, also showed in his paper that from a careful study of 400 cases of tuberculosis of all types chosen at randon, only 2.5 per cent. of tuberculosis in New York comes from infected milk, butter or meat, and this small percentage is found mainly in children and that tuberculosis in adults therefore comes from human beings. His conclusions were confirmed by about 500 cases studied in other parts of the world. Considerable interest was manifested in the paper of Dr. Lee K. Frankel, of New York, on the compulsory establishment of a fund from the wages of workmen to provide for their fellows who become afflicted with tuberculosis. Dr. Frankel believed this feasible and constitutional, but that a system of voluntary insurance would be impracticable. Dr. Livingston Farrand, executive secretary of the national association, reported that since May 1, 1909, the number of state and local antituberculosis associations has increased from 297 to 431, a gain of 134; the number of special dispensaries from 222 to 286; the number of sanatoriums and hospitals from 294 to 393, and the number of beds for tuberculosis cases from 15,244 to 22,720, a gain of 7,476. Eleven state legislatures in session since that time have enacted some law with reference to tuberculosis.

## FOREIGN

**Other Deaths in the Profession Abroad.**—Besides the losses in the profession mentioned elsewhere, the death of the following eminent medical men should be recorded: E. van Beneden, professor of zoology at the university of Liège, Belgium, and founder and editor of the *Archives de Biologie*, noted for his important research on embryology, comparative anatomy and histology, president of the Belgian academy of sciences, corresponding member of five other academies, and recipient of honorary degrees from five British and German universities. His studies of hookworm disease and suggestions for prophylaxis were instrumental in stamping out the disease in the Belgian mines. The institute of zoology at Liège became under his guidance one of the foremost research laboratories of Europe.——E. L. V. Oedmannson, until recently professor of skin and venereal diseases at the university of Stockholm.——V. Mirbelli, professor of skin and venereal diseases at the university of Parma, Italy, one of the leaders in his specialty in Italy.——Although not a member of the medical profession, the death of S. Cannizzaro at the age of 84 may be mentioned in this connection, as his research on organic chemistry, the specific heat of elements, the distinction between atoms and molecules, his work on benzyl alcohol, etc., have aided in the solution of medical problems. He was professor of organic chemistry in the university of Rome and a senator of the realm.——C. Zanghello, an Italian physician, recently succumbed to bubonic plague at his post in the isolation hospital at Djeddah on the Red Sea, another victim to professional duty.

## LONDON LETTER

*(From Our Regular Correspondent)*

LONDON, May 28, 1910.

### The Study of Tropical Diseases

Sir Francis Lovell, dean of the London School of Tropical Medicine, has returned to this country after a tour extending over five months in the West Indies for the purpose of interesting those colonies in the work of the school and obtaining subsidies from them in aid of research work in tropical disease. He visited Barbados, the Windward and the Leeward Isles, Jamaica, Trinidad and British Guiana, at all of which places he was received cordially by the authorities and promised grants for the school. The total amount is about $2,500 a year for the next five years. Since its establishment ten years ago the school has trained 1,100 postgraduates in the study and investigation of tropical diseases. The income from fees and subscriptions is not sufficient to defray the cost of ordinary instruction, so that if research work is to be carried out on an adequate scale grants of some kind are necessary. The school has recently sent an expedition in charge of Dr. Bahr to Fiji to study tropical dysentery and another to Bagdad in charge of Dr. Wenyon to study "Delhi boil," which has been found to have some connection with kala-azar.

### The Survival of Bedbugs

The length of time which bedbugs can survive without food is a point of practical importance. It has arisen in connection with the use of flock bedding made from filthy rags without disinfection. It was thought that, whatever its dangers, such flock would not contain living bugs as these animals were incapable of surviving many days without food. A correspondent of the *British Medical Journal*, Dr. W. Habgood, a health officer, has pointed out that this is not true. On having a house cleaned Sept. 1, 1909, he had 25 bugs collected in a clean bottle in which was placed a piece of clean white paper and clean calico. The mouth of the bottle was covered with a piece of clean calico. On October 26 all were alive. On Jan. 21, 1910, three or four old ones and one young one were alive. On February 26, nearly six months after capture, one large bug was running actively over the paper after the bottle had been warmed. The doctor's object in making the experiment was to find out whether the statement made by new tenants of a house that had been empty for months that bugs were there before their arrival was true.

### The Development of Specialism

Like everything new the development of specialism in this very conservative country met with great opposition. Many specialties such as laryngology, proctology and genitourinary diseases were at first regarded with disfavor. They were long unrecognized by the large general hospitals and had to establish themselves at first in small hospitals built for the purpose. The force of events has proved too strong for the conservatives and also for the law of differentiation of advancing knowledge which evolutionists teach is being continually exemplified here as elsewhere. Still the suspicion with which specialists have been regarded has not wholly passed away. One of the most famous of the London hospitals—Guy's—has just made a remarkable advance in the recognition of specialism. The magnitude of the change will be appreciated by looking back on its history. Not until 1824, a century after its foundation, did any special department exist. In that year the ophthalmic department was created. In 1833 the electric department was established; in 1842 the obstetric department; in 1885 the throat department, and not until 1907 the orthopedic department. In this, as in many of the London hospitals, a general physician or surgeon might hold an appointment in the special department. Thus a general physician might be the dermatologist or a general surgeon the laryngologist. Now it has been decided to establish in Guy's Hospital a number of appointments which can be held only by specialists. These are to be appointed for diseases of the ear, throat, genitourinary organs and orthopedics. The reason is given that for the first three such special skill in the use of instruments is required for diagnosis and operations that it can hardly be expected in one who also practices general surgery. Special departments are also to be created for nervous diseases and diseases of children, but specialists are not necessary for these appointments, which may be held by general physicians. The beds of the hospital are to be rearranged so as to provide increased accommodation for these specialties.

### Medical Entomology

The secretary of state for the colonies has appointed an "Entomological Research Committee" for tropical Africa for the purpose of organizing and coordinating the investigations of the numerous insects which from time immemorial have been the bane of that country. The committee is publishing a valuable periodical called the *Bulletin of Entomological Research*. Arrangements have been made by which the committee will be kept in touch with the organizations for the study of entomology that exist both to the north, in the Soudan and Egypt, and to the south in Rhodesia and the South African states. The number of known species of insects in tropical Africa has increased enormously. According to Dr. Shipley in 1830 the number of insects described and named was under 50,000; by 1881 it had risen to 220,000; now the number has reached 450,000 and thousands more await classification and description in collections deposited in museums, where no one has had time to work them out. It is calculated that the yet uncaptured species run into millions. To promote the work of sorting and studying the life-cycles of these insects two entomologists have been despatched, one to East Africa and the other to West Africa. They will instruct the residents, especially the government servants, in the methods of collecting and studying ticks and insects and of preserving them for transmission home. So far as is known many large genera, such as Lepidoptera and Neuroptera, exert but little influence on human affairs.

### New X-Ray Department of the London Hospital

A new *x*-ray department has been completed at the London Hospital and is now in use. The most modern equipment has been provided and neither trouble nor expense has been spared. In 1899 the rays were first used therapeutically in the hospital for the treatment of lupus vulgaris. Since then many changes have been made. The old platinum hammer break and accumulator have been replaced by a copper rod and mercury bath transformer. The coils now used are much heavier and the quality of the *x*-ray tubes has been considerably improved. Formerly exposures were given by time, that is, for so many minutes. Now Sabouraud's pastilles are used. They are flat discs of platino-cyanid on cardboard. When exposed to the rays their bright green color turns first to yellow, then to orange, and finally to red. The pronounced orange color is called the "B dose" and is taken as the standard. This dose causes temporary epilation without permanent alopecia and does not produce dermatitis. Hence its value in the treatment of tinea tonsurans. In carcinoma stronger doses are given. Usually these are filtered through a sheet of aluminum or leather so as to allow the passage of only the higher rays, thus obtaining a deeper reaction and preventing dermatitis. There are four cubicles in the department, each fitted with a separate installation. The walls of these cubicles which reach from floor to ceiling, are made of lead and iron one-fourth inch thick, faced on both sides with pine. In these are windows of lead glass for observation purposes. This glass has been thoroughly tested and is impervious to the passage of the rays. The whole of the installation, except the controlling and driving gear, is inside the cubicle. When the patient and apparatus have been suitably arranged the operator comes outside the cubicle, shuts the door and switches on the current. Any movement or change of expression of the patient can at once be detected through the window. If the operator opens the door the current is stopped automatically. When the necessary number of revolutions of the motor have been made the current similarly stopped and an electric lamp over the cubicle is illuminated, thus attracting the operator's attention should he for the moment have been called to another part of the room. By these arrangements it is believed that the intractable dermatitis with its consecutive cancer from which so many operators have suffered will be prevented. The number of patients treated daily in the department amounts to from 35 to 40.

## PARIS LETTER

(*From Our Regular Correspondent*)

Paris, May 20, 1910.

### Admission of Foreigners to the Concours of the Externship and Internship of Hospitals

Unlike certain other countries where foreigners not infrequently occupy university chairs. France does not permit foreigners to hold any post, no matter how modest, bestowed by the national government. The apparent exceptions presented by the positions of hospital extern and intern are accounted for by the fact that these places are bestowed, not by the national government, but by the Public Charities or the municipalities. The bestowal of these positions, however, has aroused protest recently. The question has just been discussed in the Réunion médico-chirurgicale des hôpitaux de Bordeaux. The society wisely admitted that the great number of the candidates enrolled for the concours of the externship and internship of hospitals must stimulate the zeal of all the competitors; that, moreover, an admission of foreign students would serve to disseminate the renown of French medical science in all parts of the world; and that, consequently, the higher patriotism would authorize this admission.

### The Suppression of Fraud in Foods

In order to suppress fraud and to guarantee to producers and to honest retail dealers the protection which they deserve, the minister of agriculture has just taken two interesting measures. In the first place, each year at the end of November, there are to be collected at the mayor's office of each wine-growing commune two series of samples of the wines of that harvest. The first series is to be reserved for the departments of agriculture and finance, which cooperate in the suppression of frauds; the second is for the use of the judicial tribunals, in the expert examinations which may be ordered. Thus wines which are under suspicion may at any time be compared with authentic samples. The second innovation has to do with dealers in foodstuffs, who often have trouble through unwittingly selling adulterated foodstuffs. Hereafter the commercial organizations may nominate, subject to the approval of the prefect, an agent paid by themselves who, on requisition of the members, will take samples out of goods on their arrival at the transportation terminal. These samples, to the number of four, are to be ticketed, sealed, registered and deposited in a place designated by the association. If, later on, foodstuffs which are below standard are seized at the retail dealers, comparison with the samples will clear up the question of culpability.

## BERLIN LETTER

(*From Our Regular Correspondent*)

Berlin, May 19, 1910.

### Personals

At the annual meeting of the German laryngologic society a few days ago, the prize founded on the occasion of the seventieth birthday of Prof. B. Fraenkel, was awarded for the first time; it was given to Professor Killian of Freiburg for his notable work in laryngology.

The Siebel prize, given by the Senckenberg foundation in Frankfort a. M. for the best work on children's diseases or embryology published in the last four years, has been awarded to the Berlin pediatrist, Professor Finkelstein, for his investigations on alimentary intoxication.

### Women Students

The number of women attending the Prussian universities in 1910 has risen to 2,824 as compared with 1,680 in 1908-09. The women students in the medical department numbered 266 as opposed to 188 in 1908-09.

### The Number of Lepers

The number of lepers in the German empire at the end of 1909 amounted to 23 (1908: 25), of whom 18 were in Prussia, 4 at Hamburg, and 1 in Bavaria.

### The Campaign Against Mosquitoes

As the destruction of the larvæ of mosquitoes in water can not be accomplished on certain lakes and ponds by the use of petroleum or the establishment of drainage on account of the cost, it is recommended by a ministerial decree, based on research by Professor Schilling in the institute of infectious diseases, to encourage the increase of the natural enemies of the mosquito larvæ. The so-called water beetle (the *dyticus*, *nepa* and *notonecta* species), the stickleback (*Gasterosteus*), the small water salamander (*Triton taeniatus*) and the larvæ of dragon flies are the best destroyers of mosquito larvæ. It is recommended to protect the enemies of the mosquito and to introduce them in pools where they are not present, especially during the winter. It is also important to destroy the mosquitoes which are hibernating during the winter. As mosquitoes in the beginning of winter resort to the cellar, stable, etc., and cling to the walls and ceiling, they can easily be smoked out of their resting places and killed with a good insect powder.

### Museum for Infant Hygiene in Munich

The headquarters for the care of infants in Bavaria contemplates the establishment of a permanent museum for infant hygiene. The government has made the first contribution of $360 (1,500 marks) and has placed rooms at its disposal. The museum which will be the first of its kind in Germany is for the purpose of spreading information regarding the need and the prospects of the fight against the excessive infantile mortality among the lower classes of the population. The museum is to be simple and adapted to the common people and so organized that parts of it can be transported to other parts of Bavaria as traveling expositions or to illustrate lectures. The various departments comprise (1) infant hygiene, (2) the extent and causes of infant mortality, (3) the development, structure and function of the infant's body, (4) infantile nutrition, (5) care of infants, (6) children's diseases, (7) vaccination, (8) milk, (9) public and private care.

### Mothers' Home at Hamburg

The Hamburg league for the protection of mothers contemplates the foundation of a small home for mothers, especially with the aid of a small legacy of $12,000 (50,000 marks) that has fallen to it. The home is to possess at most 20 beds. It will be limited to economic aid and not serve like the home in Bremen for charitable purposes. For instance, the three months' gratuitous care of mother and child as is the custom in Bremen will not be provided for, but the mother will be given the opportunity to earn her way by the provision of sewing, washing and similar work. Homeless pregnant women, for the most part illegitimate mothers, are received. Delivery will occur in the hospital. After dismissal from the hospitals which takes place twelve days after delivery, puerperal women in need of convalescent care will be received into the home for mothers. The price for bed and room is 8 cents (30 pfennigs), for board 12 cents (50 pfennigs) per day. Each woman must furnish her own crib.

## VIENNA LETTER

(*From Our Regular Correspondent*)

Vienna, May 23, 1910.

### Housing of the Poor

To provide cheap and healthful housing for the poor, a law has been passed in Austria which authorizes the government o devote a sum of 6,000,000 kronen (about $1,500,000) every ear from 1910 till 1920 for the purpose of giving loans free from all duties and interest to such building-societies as will rect small lodging-houses. The idea has been much agitated y the Society for Prevention of Tuberculosis. The management of the fund mentioned above will be in the hands of a oint committee, selected by the government and the society. Special regulations will be imposed on the building companies. Each room will have to contain at least 30 cubic meters of air-space per person living in it. No back yard will be allowed of ess than 6 meters' depth, thus giving a clear space of 12 meters (13½ yards) between two back windows of opposite houses. The houses will be two stories high. Up-to-date water-closets, kitchens, and arrangements for dust-removal are also required. The latter point is especially well worth mentioning, for it is a constant outcry of the hygienic authorities in this ity that the present mode of removing household refuse here is hamefully primitive. No home work except domestic household labor and light sewing will be allowed in these lodgings. Playgrounds for children, kept free from dust, are also to be provided. It is intended to give the loans in the first place for he relief of the population in Vienna, Prague, Graz and a few ndustrial cities where tuberculosis is present.

### The First Fight Between Practitioners and Krankenkasse

Owing to the "social reform" bill which threatens the profession with very severe losses of the material whence to obtain private practice, a preliminary trial has been made to see whether the organization of our profession is efficient enough or the coming events. In industrial towns in Lower Austria, ifferences of opinion as regards remuneration of clubwork, as well as to the eligibility of a member to the club, prompted the practitioners to refuse all work for the *Krankenkasse*. The atients were informed that they would be treated at reduced ates, but not on behalf of the *Kasse*. The managing board of he club (*Kasse*) tried in vain to obtain the services of other octors; the medical organization proved effective and thus he club had to make its terms with the practitioners. It was greed that, in future, appointments of doctors will be negoiated through the medical council, thus insuring uniform ates of payment and recognition of the right of the practitioner to apply against orders of the board of the club to he Council. The result of this fight shows that if the social eform bill should become law the profession has it in its ower to turn it into a weapon for its own good.

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## Pharmacology

Contribution from the Chemical Laboratory of the American Medical Association.]

### HYMOSA

**W. A. Puckner and W. S. Hilpert**

Frequent requests for information regarding the composition f hymosa, manufactured by the Walker Pharmacal Co., St. ouis, and a perusal of the extensive and nostrum-like advertising the product is receiving, made the chemical examination f the preparation seem desirable. If the label is to be be-eved, hymosa has been of use in "acute and chronic muscular nd articular rheumatism, gout, sciatica, lumbago, pleurodynia nd neuralgia, whether due to uric acid diathesis or not . . ."

The composition of hymosa as given by the proprietors is et forth in the following statement:

> ". . . Hymosa, in which the remedies Frangula, Actea picata, Stellaria Media, Franciscea Uniflora, Rhus Toxicodendron, assiflora Incarnata, Phytolacca Decandra and Echinacea Angusti-lia are combined in the proportions which experience has shown will obtain the quickest and best results without any of the stomach and heart complications so often following the administration of salicylic acid."
>
> "Contains no Salicylic Acid."

Thus the explicit statement is made that hymosa contains certain vegetable drugs (most of them obsolete and valueless) and that it does not contain salicylic acid. By inference the claim repeatedly is made that the nostrum does not contain any salicylates.

> ". . . Hymosa has achieved most remarkable results in overcoming rheumatism in cases where salicylates have been tried in vain . . ."
>
> "Salicylic acid was not successful in this case of rheumatism of the stomach."
>
> "Negative results from salicylates—Hymosa cures."
>
> ". . . the salicylates didn't help? Then we must try Hymosa."

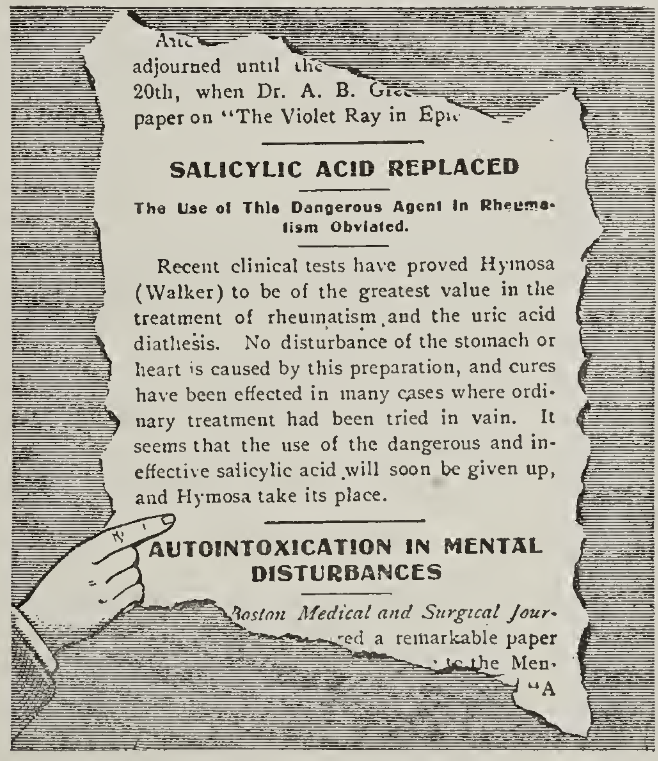
Still harping on the undesirability of salicylates and the value of hymosa the advertising pamphlets state:

> "Salicylic Acid Replaced. The Use of This Dangerous Agent in Rheumatism Obviated."
>
> "It seems that the use of the dangerous and ineffective salicylic acid will soon be given up and hymosa take its place."
>
> "Former methods of treating rheumatism . . . have been very unsatisfactory . . . because of the heart and stomach difficulties brought on by salicylates of which most rheumatism remedies are composed."
>
> "Could not tolerate the salicylates."

Finally in a letter issued to physicians we are told:

> ". . . you will find hymosa to possess prompt and positive curative action with the additional advantage of avoiding the heart and stomach complications, which the salicylates too often cause."

It is evident from the above quotations, in which the salicylates are denounced specifically or by implication, and from the label which states that no salicylic acid is present, that the exploiters of the nostrum deliberately intended to give the impression that hymosa is free from salicylates or salicylic acid and contains only the vegetable or plant drugs enumerated. The very fact that the proprietors make such repeated efforts to give the impression that hymosa is free from salicylates is in itself sufficient to arouse suspicion and hence in the examination particular attention was given to the detection of salicylic acid or salicylates with the following results:



Anc

adjourned until the

20th, when Dr. A. B. Gre

paper on "The Violet Ray in Epi

SALICYLIC ACID REPLACED

The Use of This Dangerous Agent in Rheumatism Obviated.

Recent clinical tests have proved Hymosa (Walker) to be of the greatest value in the treatment of rheumatism and the uric acid diathesis. No disturbance of the stomach or heart is caused by this preparation, and cures have been effected in many cases where ordinary treatment had been tried in vain. It seems that the use of the dangerous and ineffective salicylic acid will soon be given up, and Hymosa take its place.

AUTOINTOXICATION IN MENTAL DISTURBANCES

*Boston Medical and Surgical Jour-*

red a remarkable paper

to the Men-

"A

Reproduction (reduced) of an advertisement of Hymosa. This indicates the attempt made to convey, by implication, the idea that the salicylates are absent from Hymosa.

*Examination.*—Hymosa as purchased on the market is a dark brown liquid with an odor of sassafras and a rather sweetish taste, reacting acid to litmus. Qualitative tests having indicated the presence of salicylate, iodid, sodium, potassium, alcohol and some organic matter, presumably sugars and some plant extractives, these were determined quantitatively.[1] It was found that a part of the salicylate was present as free salicylic acid and part in a combined form. The sodium determinations indicated that all the salicylate, excepting that in the form of free salicylic acid, was present as sodium salicylate. From the results of the potassium estimations, it was evident that the iodin was present in the form of potassium iodid.

From the results of the analysis it is believed that the preparation has approximately the following composition:

| | |
|---|---|
| Salicylic Acid | 0.32 gm. |
| Sodium Salicylate | 1.15 gm. |
| Potassium Iodid | 0.32 gm. |
| Sugars and extractives | 4.60 gm. |
| Alcohol, U. S. P. | 16.86 c.c. |
| Water to make | 100.00 c.c. |

These results indicate that hymosa is essentially a solution containing salicylic acid, sodium salicylate, potassium iodid, alcohol, sugars and plant extractives in the proportions given above, and show that the various statements referred to, regarding the absence of salicylic acid and salicylates are misleading and untrue. It further illustrates the repeatedly demonstrated fact that nostrums exploited as wonderful and new discoveries are new in name only—and whatever therapeutic value they possess depends on old and tried medicinal agents.

Editorial Note: In describing the methods employed by the manufacturers of Manola in exploiting their product, attention was called to the fact that the Manola Company was reported as being a subsidiary affair of the Luyties Homeopathic Pharmacy Company of St. Louis. It is reported that this same company also operates the Walker Pharmacal Company, which exploits hymosa and pas-avena.

## REVISION OF THE PHARMACOPEIA

### Report of the Committee of the Section on Dermatology

### INDICATION OF EXTERNAL DOSAGE

We respectfully offer the following suggestions:

Articles in the Pharmacopeia which are used externally should, we believe, have indicated the strength in which they are used externally as well as their internal doses. For example:

*Boric Acid.*—Strength for external use as well as doses should be mentioned.

*Carbon Dioxid.*—This should be in Pharmacopeia and mention should be made of its use as a freezing agent.

*Picric Acid.*—This should be in Pharmacopeia and strength for use in burns given.

*Salicylic Acid.*—Strength for external use should be given, say from 2 per cent. in ointment base as antiseptic, up to 20 or 25 per cent. as caustic.

*Sulphurous Acid.*—Mention should be made of external use in skin diseases.

*Tannic Acid.*—Some indication of external use should be given.

*Silver Nitrate.*—Indication that it is a caustic should be given.

*Arsenic Trioxid.*—Its use as a caustic and its dosage should be indicated.

*Balsam of Peru.*—Its external use should be indicated.

*Bismuth Subnitrate.*—Its external use should be indicated.

*Cantharis.*—Its external use and dosage should be mentioned.

*Guaiacol.*—Its external use and dosage should be mentioned.

*Mercuric Chlorid.*—Use as antiseptic and caustic should be mentioned and strength of solutions given.

*Oleum Cadini.*—Strength for external use should be given.

*Pix Liquida.*—Strength for external use should be given.

*Pyrogallol.*—External use and dosage should be mentioned.

*Resorcinol.*—External use and dosage should be mentioned.

*Sulphur.*—External use and dosage should be mentioned.

*Zinc Chlorid.*—External use as caustic should be mentioned.

### SUBSTANCES RECOMMENDED TO BE ADDED

Adeps anserini (goose grease) should be added.

Liquor guttæ perchæ should be added.

Chaulmoogra oil should be added and its internal and external dosage given.

Some additional salts of mercury, from the many now in use, especially in the treatment of syphilis, should be added. We suggest as eligible salts the following: benzoate, cyanid, salicylate, succinimid. These are among those most frequently used for hypodermic medication.

Liquor alumini acetatis is a much-used preparation in dermatology which might well be added to the Pharmacopeia.

Potassa sulphurata, much used in dermatology, should be added and its external dosage given.

There should be some powder in the Pharmacopeia of brownish pink tinge with which to make external applications of flesh color. Calamine is widely used for that purpose now and because of its wide use it is the most eligible powder for this purpose. The objection to calamine is that it is not standardized. We would suggest that if possible some standard color or composition for calamine should be adopted and that it be added to the Pharmacopeia. Zinc oxid, if properly colored, would be a better powder than calamine because it is lighter. A powder of the proper pinkish tint can be made by the addition of 0.3 per cent. of jeweler's rouge. The addition of this or some other artificially colored powder might possibly be made to the Pharmacopeia as a standard flesh-colored powder. It is necessary that the pigment in such a powder be insoluble in ordinary solvents.

Coal-tar (pix carbonis) should have official recognition.

A soluble, non-irritating salt of arsenic for hypodermic use should be given in the Pharmacopeia. Sodium cacodylate seems the most eligible.

The soft soap of the Pharmacopeia is not a good soap for therapeutic use because of its disagreeable odor of linseed oil. There should be an official soft soap made with olive oil or cotton-seed oil which would avoid this disagreeable odor.

The same objection to the odor of soft soap made with linseed oil holds against the present linimentum saponis mollis and if an olive oil or cotton-seed oil soft soap could be adopted in the Pharmacopeia it should be used in making the liniment of soft soap for therapeutic purposes.

The name "tincture of green soap" as a synonym of "linimentum saponis mollis" should be given in the Pharmacopeia because of its almost universal use.

Emplastrum acidi salicylici 10 per cent. is used in dermatology and might well be made official.

### SUBSTANCES RECOMMENDED TO BE DROPPED OR REDUCED

The various forms of external applications used by dermatologists are well covered in the Pharmacopeia and National Formulary. Many local applications are included which dermatologists do not use but the dropping of which we do not deem it proper to recommend because of their possible use in other departments of medicine.

In general we find little use for the mixed ointments containing active ingredients, as there is the same objection to their use that obtains against all ready-made prescriptions. As a rule the proportions of active ingredients in the official ointments are stronger than these medicaments are commonly used in dermatology.

Unguentum hydrargyri dilutum should be dropped. It is confused with 50 per cent. mercury ointment; and the preparation of dilute mercury ointments from the 50 per cent. ointment is so easy that the dilute official ointment is of no use.

Unguentum hydrargyri nitratis, 10 per cent., is too strong; a better preparation would be 5 per cent.

Unguentum hydrargyri oxidi flavi, 10 per cent., is too strong; a better ointment would be 5 per cent.

Unguentum hydrargyri oxidi rubri, 10 per cent., is too strong; a better one would be 5 per cent.

Unguentum picis liquidæ, 50 per cent., is very much too strong. It should be reduced to at least 20 per cent.

Unguentum potassi iodidi should be dropped.

Unguentum sulphuris, 15 per cent., is too strong. It should not be more than 10 per cent.

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[1] The details of the analysis will be sent on receipt of a stamped, addressed envelope; they will also be published in the annual report of the Chemical Laboratory.

Unguentum zinci stearatis, 50 per cent., is, so far as we know, not used by dermatologists and we know no reason of its inclusion in the Pharmacopeia.

Of the cerates, ceratum is a good base, though we know no reason why it should not as well be made with white petrolatum 70 per cent. or benzoinated lard 70 per cent., instead of white petrolatum 20 per cent., and benzoinated lard 50 per cent.

The other cerates in the Pharmacopeia have practically no use in dermatology.

Unguentum is a satisfactory base.

Of the medicated plasters, emplastrum plumbi and emplastrum hydrargyri are the only ones which have any use in dermatology.

W. A. Pusey, Chicago,
M. B. Hartzell, Philadelphia,
George T. Jackson, New York,
Committee.

# Correspondence

## Age and Exercise

*To the Editor:*—You were kind enough to publish (Aug. 28, 1909, p. 730) a letter from me on the subject above cited, in which I took strong ground in favor of the proposition that "most men lie down and die, not knowing what they are capable of, either mentally or physically." This letter had been called out, you may remember, by an editorial of yours under the title "The Septuagenarian Pedestrian" which, of course, referred to Mr. Weston and his walk from New York to San Francisco. I thought when I wrote you, nine months ago, that perhaps sometime I should try to demonstrate in my own body the truth of my assertions. Accordingly, a week ago last Thursday (May 12, 1910), I set out to walk from Newark, N. J., to Philadelphia, intending to accomplish the feat in twenty-four hours if possible. I lost my way during the night, and by so doing, added several miles to the walk, so that I calculated that in twenty-two hours I had walked over ninety miles, when I reached the city line of Philadelphia. In two months from to-morrow I shall be 59 years old. The principal reason for undertaking the walk was that I wished to demonstrate experimentally that people over middle age can improve their physical condition as well as their mental powers, as they grow older, if they really wish to do so. Mr. Weston's career goes a long way in support of the above assertion. He walked from Portland, Maine, to Chicago in 1907 in sixteen and one-half hours' less time than it had taken to accomplish the same feat forty years before.

The walk that he has just completed from Los Angeles to New York is not only the greatest feat of its kind on record; but far better than Mr. Weston ever did or was capable of doing in the earlier years of his life. So far from this man finding himself broken down and ready to die at 70 years of age, he seems to be capable of doing more than he ever could have done before.

Now why is this? Is it a miracle or a reversion of Nature? Or is there some fake about it? The answer is very plain and simple. It is merely a case in which a man has gradually developed great powers of physical endurance and has conserved them by abstinence from liquor and tobacco and by great moderation in diet. So firmly convinced was I that nearly any one could effect a similar improvement in his powers by following a similar regimen that I determined to try some experiments on myself. I had stopped the use of tobacco and all forms of alcoholic drink some years ago, and since I have been eating whole wheat bread and bran bread my general health and my powers of endurance have notably improved. For twenty years before beginning to eat whole wheat products I was so constipated that my bowels never moved without medicine. When I began to have natural movements again I began to feel like a different man, so much brighter and more cheerful and more ready for work or for play. I could not help observing that my capacity for all sorts of prolonged exertion had greatly augmented.

Finally, to put the matter to the test, I determined on an endurance walk for twenty-four hours and chose the journey from Newark to Philadelphia as a good test. That I was able to accomplish this feat at my age with only some stiffness of the muscles and some blisters, I attribute entirely to my diet and my abstemious habits, added to the fact that I am and always have been a staunch advocate of walking as a wholesome and delightful pastime.

Yet I have never before attempted an endurance test of any description. Now I feel so elated over the success of my first attempt that I may start out again some time to see what I can do, and when I am as old as Mr. Weston I may perhaps have improved as much over my present walking capacity as he has improved in the last twelve years. It is quite needless for people to give up doing anything that is to be done because they are approaching 70. That is really the age when they should be in their prime mentally and physically.

Most people who have accomplished anything worth while have worked long after they were 70. Yet the sad part of the matter is that they—at least many of them—have been obliged to do their work in spite of bodily weakness and the so-called infirmities of age, whereas had they known how to take care of their bodies and followed out my simple rules of life, they would have enjoyed their work at 70 as much as they did at 50.

As Parkes said years ago, "our fate is in our own hands," and it is because I am trying to teach people that truth that I am so much pleased that I have been able to demonstrate it, in great part at least, in my own case; for people will, I hope, now begin to believe that I know whereof I speak.

Richard Cole Newton, Montclair N. J.

## Hypertension and Treatment

*To the Editor:*—From my standpoint, the medical profession is much indebted practically to Dr. Miller's article in the last issue of The Journal.* The prevailing fashion nowadays is, so soon as hypertension is revealed, either by palpation of the radial or by means of the finger and the sphygmomanometer, to recur to medication of an active sort to neutralize the condition, and this is done not only when there are unpleasant or it may be threatening symptoms, but also when those that exist are of very mild type, or, indeed, none is present. The condition is there and that is all. It has been clear to me and others for a long while, that hypertension may be a wholly conservative process, and on that account should not be interfered with, except for good and sufficient reasons, and then only in a judicious and temporary way. Again, it is also evident that the cause of symptoms is not always simple, but rather a combination of factors which require close attention to interpret correctly. To medicate actively before one understands fully what one is doing is not useful. For my part I am satisfied that harm has been done by too great reliance on the mere reading of the sphygmomanometer. Many things should be considered before the height of the column of mercury becomes a reliable guide as to treatment. It is not essential, however, for the attending physician to be an expert in the application of the instrument in order to give it proper interpretation, but it is necessary that the instrument should be properly used. This is manifest in the same way that is true of the ophthalmoscope or laryngoscope. It is also true now of many laboratory researches in hospital or consulting room, which are made with special instruments.

Beverley Robinson, New York.

## Rare Fetal Monstrosity

*To the Editor:*—In The Journal, May 28, 1910, page 1786, is a report of a case of "Rare Fetal Monstrosity" by Dr. Aranow, in which he says he has found but one case reported in medical literature of "entire absence of abdominal parietes" in a new-born child. I call attention to a case reported by me in *American Medicine*, vol. ii, page 208, the case being almost identical with the one mentioned by Dr. Aranow, the chief difference being that in my case there was entire absence of sexual organs and anal aperture.

H. H. Loveland, M.D., Republic, Mich.

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* May 21, 1910.

### Table of Contents Misleading in Its Reference to Chinosol

*To the Editor:*—In The Journal, May 28, containing the report on Chinosol by the Council on Pharmacy and Chemistry, the table of contents (second cover page) is so worded as to have caused an entirely incorrect interpretation. The report of the Council states that Chinosol is non-poisonous and that it is an intensely powerful antiseptic, much stronger than phenol (carbolic acid) and even stronger than bichlorid. It is as an antiseptic that we are introducing Chinosol; thus as a matter of justice to Chinosol and to us, we ask that you publish this letter.

The Chinosol Co., New York City,
by Charles Roome Parmele, President.

### Warning Against an Impostor

*To the Editor:*—A man pretending to be my brother is traveling through the south and west borrowing money from physicians. If you can warn the profession against such an impostor you would, I am sure, be doing a public service.

L. Emmett Holt, New York.

## Medical Education and State Boards of Registration

### COMING EXAMINATIONS

Delaware: Regular, Dover, June 21; Homeopathic, Wilmington, June 21. Secretary of the Medical Council, Dr. Henry W. Briggs, Wilmington.

Kansas: Scottish Rite Temple, Kansas City, June 14. Sec., Dr. F. P. Hatfield, Olathe.

Maryland: 1211 Cathedral St., Baltimore, June 15. Sec., Dr. J. Mc.P. Scott, Hagerstown.

Minnesota: State University Laboratories, Minneapolis, June 14-17. Sec., Dr. W. S. Fullerton, American National Bank Bldg., St. Paul.

Missouri: St. Louis and Kansas City, June 13-15. Sec., Dr. Frank B. Hiller, Jefferson City.

New Jersey: State House, Trenton, June 21. Sec., Dr. H. G. Norton.

New York: Albany, June 28-July 1. Chief of Examinations Division, Mr. Charles F. Wheelock, Albany.

North Carolina: Wrightsville, June 15. Sec., Dr. Benjamin K. Hays, Oxford.

Pennsylvania: Regular, Philadelphia and Pittsburg, June 21; Homeopathic, Philadelphia, June 21; Eclectic, Harrisburg, June 21. Secretary of the Medical Council, Mr. Nathan C. Schaeffer, Harrisburg.

Ohio: Columbus, June 13-15. Sec., Dr. George H. Matson, State House.

South Carolina: State House, Columbia, June 14. Sec., Dr. Harry H. Wyman, Aiken.

Texas: House of Representatives, Austin, June 28-30. Sec., Dr. M. E. Daniel, Honey Grove.

Virginia: Richmond, June 21-24. Sec., Dr. R. S. Martin, Stuart.

Wyoming: Laramie, June 22-24. Sec., Dr. S. B. Miller.

### Wisconsin January Report

Dr. John M. Beffel, secretary of the Wisconsin State Board of Medical Examiners reports the written examination held at Milwaukee, Jan. 12-15, 1910. The number of subjects examined in was 21; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 16, of whom 14 passed, including 1 osteopath, 1 failed and 1 was conditioned. Twenty-six candidates were licensed through reciprocity. The following colleges were represented:

| College | Year Grad. | Per Cent. |
|---|---|---|
| PASSED | | |
| College of Physicians and Surgeons, Chicago | (1909) | 80 |
| Northwestern University Medical School | (1909) | 79 |
| Hamline University | (1909) | 87 |
| Jefferson Medical College | (1909) | 84 |
| Marquette University | (1908) 75, 77; (1909) | 75, 75, 77, 78 |
| Wisconsin College of Physician and Surgeons | (1909) | 82 |
| McGill University, Canada | (1909) | 89 |
| University of Heidelberg, Germany | (1905) | 85 |
| FAILED | | |
| Marquette University | (1909)* | |

LICENSED THROUGH RECIPROCITY

| College | Year Grad. | Reciprocity with |
|---|---|---|
| George Washington University | (1905) | Maryland |
| Northwestern Univ. M. School | (2, 1904) (1907) (1908) | Illinois |
| College of Physicians and Surgeons, Chicago | (1902)<br>(1904)<br>(3, 1908) (1909) | Minnesota<br>Maryland<br>Illinois |
| Bennett Coll. of Ec. Med. and Surgery | (1904) | Missouri |
| Rush Medical College | (1875)<br>(1901)<br>(1904)<br>(1906) | Minnesota<br>Illinois<br>Missouri<br>Illinois |
| Hering Medical College | (1902) | Colorado |
| Iowa Medical College, Eclectic | (1883) | Illinois |
| University of Iowa, College of Medicine | (1890) | Iowa |
| College of Physicians and Surgeons, Baltimore | (1908) | Virginia |
| Johns Hopkins University | (1908) | Maryland |
| St. Louis University | (2, 1908) | Illinois |
| Woman's Medical College of Pennsylvania | (1908) | Maryland |
| Wisconsin College of Phys. and Surgeons | (1897) | Iowa |
| University of Toronto, Canada | (1909) | Iowa |

* Percentage not given.

### Connecticut March Report

Dr. Charles A. Tuttle, secretary of the Connecticut Medical Examining Board, reports the written examination held at New Haven, March 8-9, 1910. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 19, of whom 14 passed and 4 failed and 1 withdrew. The following colleges were represented:

| College | Year Grad. | Per Cent. |
|---|---|---|
| PASSED | | |
| Yale Medical School | (1908) 81.9; (1909) | 79.7, 84.8, 89.3 |
| Georgetown University | (1907) 81.9; (1908) | 78, 81.3 |
| Johns Hopkins University | (1906) | 84.5 |
| Harvard Medical School | (1903) | 75.8 |
| Dartmouth Medical School | (1909) | 85.3 |
| Cornell University Medical College | (1905) | 87.3 |
| Long Island College Hospital | (1907) | 83.7 |
| Jefferson Medical College | (1909) | 75.8 |
| University College of Medicine, Richmond | (1903) | 78 |
| FAILED | | |
| Howard University | (1909) | 69 |
| Baltimore Medical College | (1909) | 68.5, 68.9, 71 |

## Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

### PROPHYLACTIC USE OF ANTITETANIC SERUM

*To the Editor:*—Please publish a list of articles on the use of antitetanic serum as a prophylactic measure, with names of authors.

H. J. Scherck, St. Louis.

Answer.—The following articles deal with this subject:

Scherck: *Therapeutic Gazette*, November, 1904.

Anders, J. M., and Morgan, A. C.: Tetanus, The Journal A. M A., July 29, 1905, p. 314.

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## HAIRY TONGUE

*To the Editor:*—In The Journal, July 24, 1909, p. 324, is a short abstract (No. 81, Arrowsmith, H.: *Laryngoscope*, July, 1909) on black hairy tongue, or glossitis nigra, which, however, does not speak of the treatment. Please give me any information or references available on the pathology and treatment of the condition.

Harry S. Bull, Auburn, N. Y.

Answer.—Hairy tongue is a rare affection, consisting of an overgrowth of the epithelium covering the filiform papillæ, forming a growth that closely resembles tendrils, lashes, seaweed or hairs, and has been in some cases compared to feathers. The hypertrophied epidermis is colored dark brown or black, the coloring being variously attributed to colors produced by mold or other microorganisms or to staining of the epithelium, sometimes intentionally in the case of hysterical patients. No symptoms are usually produced beyond a mawkish taste and occasionally pains. In Curtis' case the pain was quite pronounced. The condition may persist for a variable time, but as a rule eventually disappears spontaneously. Treatment seems to be of little avail. The patch may be painted with 2 per cent. salicylic acid or with diluted lactic acid; or a solution of phenol, 1 in 60, may be rubbed in with a clean piece of cloth, three or four times a day. Reference may be made to Butlin ("Diseases of the Tongue," p. 145), Stelwagon ("Diseases of the Skin," Edition 5, p. 1119) and Pusey ("Principles and Practice of Dermatology," Edition 1, p. 996). The latter authors give full bibliographies. Blegvad (*Ann. Otol., Rhinol. and Laryngol.*, September, 1908, p. 753) has an exhaustive article on the subject with bibliography.

## METHOD OF ESTIMATING THE AMMONIA COEFFICIENT OF URINE

*To the Editor:*—Dr. Adam H. Wright, of the University of Toronto, speaking about pernicious vomiting of pregnancy, (The Journal, May 7, 1910, p. 1503), refers to Dr. Whitridge Williams of Baltimore, as having demonstrated, by chemical examination of the urine, a "decrease in the amount of nitrogen excreted as urea, and an increase in the amount excreted as ammonia." Can you refer me to a description of these chemical tests? G. N. P.

Answer:—Briefly speaking, the method which has generally been used in Toronto for the estimation of the ammonia coefficient may be described as follows: (1) estimation of the total nitrogen by Kjeldahl's method; (2) estimation of ammonia by Folin's method; and (3) division of ammonia nitrogen by total nitrogen to get the ammonia coefficient. It is difficult to carry out the Kjeldahl method in an ordinary office, but Prof. J. B. Leathes, of the Department of Pathological Chemistry, University of Toronto, has simplified the process to such an extent that any physician may use it. Professor Leathes estimates the ammonia nitrogen by a method introduced by Ronchèse and Malfatin about two years ago, which takes less time han Folin's method. Dr. F. W. Rolph furnishes the following description of the methods now used in the laboratory of the University of Toronto:

The combustion of the nitrogenous substances in urine and the conversion of this nitrogen into ammonium sulphate by the action of strong sulphuric acid can be accurately effected if a smaller quantity than that usually prescribed is taken, in a test-tube, in any oom without any inconvenience if the following arrangements are made:

With a pipette exactly 1 c.c. of the urine is introduced into a est-tube made of Jena glass, or some other equally resistant glass. Two or three times this volume of strong, pure sulphuric acid is dded, and a few milligrams of copper sulphate or copper wire. The tube is then set in a holder obliquely over a small Bunsen ame, and an inverted flask is held over the mouth of the tube by nother holder fixed to the same stand. This flask contains 1 or 2 c.c. of strong caustic alkali solution and the inside of the flask has een moistened all around with this alkali. The flask can be kept ool by placing on it a piece of wet filter-paper, and by keeping the aper moist by means of a siphon thread leading from a vessel of water. The strongly acid and offensive fumes that are given off rom the mouth of the test-tube may in this way be completely ondensed in the flask, and absorbed by the alkali without any scape into the air of the room. The combustion is usually finished in about twenty minutes, and the amount of ammonia found can e determined either by distillation or a current of air as usually one.

The formalin method of estimation of ammonia nitrogen introduced by Ronchèse, Malfatin and others is as follows:

Take 20 c.c. of urine. Dilute with water and add some crystals f neutral potassium oxalate and a few drops of alcoholic solution f phenolphthalein. Titrate with decinormal caustic soda until a efinite red tinge appears. Now add to the urine 2 c.c. of previously eutralized commercial formalin. In a few seconds the pink colortion of the mixture disappears. This is due to the fact that the mmonia present in the urine combined with acids has united as condensation reaction with formaldehyd as hexamethylenamin. Thus the acid which was previously combined with this ammonia base has been set free, causing the disappearance of the pink color. Further titration is now carried out with the same decinormal caustic soda solution, until the pink color reappears.

Each cubic centimeter of decinormal soda used in this second titration represents 0.0014 gm. of nitrogen in the form of ammonia.

Example.—Amount of urine in 24 hours = 1500 c.c.

No. of c.c. of n/10 soda used in 2d. titration = 8.

20 c.c. of urine were used for testing.

∴ 8/20 × 1500/1 × .0014/1 = 0.84 gm. of ammonia nitrogen in 24 hours.

Or if we want to find the amount of ammonia nitrogen in 100 c.c. 8/20 × 100/1 × 0.0014/1 = .056.

Now if the total nitrogen were 15 gm.

The nitrogen in 1500 c.c. urine would be 15 gm.

The nitrogen in 1 c.c. urine would be 15/1500

The nitrogen in 100 c.c. urine would be 15×100/1500 = 1 gm.

∴ the ammonia nitrogen would be to the total nitrogen as 5.6 to 100

∴ ammonia coefficient = 5.6.

# The Public Service

## Medical Department, U. S. Army

Changes for the week ended June 4, 1910:

Huntington, P. W., capt., detailed for duty in the Bureau of Navigation, Philippine Islands.

Ireland, M. W., Howard Deane C., majors, detailed to represent the Medical Department of the Army at the meeting of the American Medical Association at St. Louis, Mo., June 7-10, 1910.

Van Poole, Gideon McD., capt., detailed as chief surgeon during the military tournament at Chicago, during the month of July, 1910.

Owen, Leartus J., capt., detailed as sanitary officer during the military tournament at Chicago, during the month of July 1910.

Casaday, George H., dental surgeon, relieved from temporary duty at Fort Rosecrans, Cal., and to return to Presidio of Monterey, Cal., for duty; when his services are no longer needed at the latter post, will stand relieved and will proceed to Army General Hospital, San Francisco, Cal., for duty.

Napier, Edward L., 1st lieut., M. R. C., granted 10 days' leave of absence.

Casaday, George H., dental surgeon, left from duty at Fort Rosecrans, Cal., en route to Army General Hospital, San Francisco, Cal., for duty.

The following named officers of the Medical Reserve Corps, having completed course at Army Medical School, have been ordered to stations designated: Casper, Joseph, 1st lieut., Du Pont, Del., Dept. of the East; Sheep, William L., 1st lieut., Ethan Allan, Vt., Dept. of the East; Davis, William C., 1st lieut., Ethan Allen, Vt., Dept. of the East; Knox, Howard A., 1st lieut., Fort Hancock, N. J., Dept. of the East; Beeuwkes, Henry, 1st lieut., Fort Jay, N. Y., Dept. of the East; Crum, Wayne H., 1st lieut., Madison Barracks, N. Y., Dept. of the East; Carr, William B., 1st lieut., Fort Monroe, Va., Dept. of the East; Holmes, Robert W., 1st lieut., Plattsburg Barracks, N. Y., Dept. of the East; Darby, Taylor E., 1st lieut., Fort McPherson, Ga., Dept. of the Gulf; Davis, Arthur O., 1st lieut., Fort Ogelthorpe, Ga., Dept. of Gulf; Beery, Harry R., 1st lieut., Fort Benjamin Harrison, Ind., Dept. of the Lakes; Mount, James R., 1st lieut., Fort Sheridan, Ill., Dept. of the Lakes; Demmer, Charles C., 1st lieut., Fort Thomas, Ky., Dept. of the Lakes; Bowen, Albert S., 1st lieut., Fort Snelling, Minn., Dept. of Dakota; Etter, Harry B., 1st lieut., Fort Snelling, Minn., Dept. of Dakota; Fisk, Owen C., 1st lieut., Fort Crooke, Neb., Dept. of Missouri; Fletcher, John P., 1st lieut., Fort D. A Russell, Wyo., Dept. of Missouri; Ferenbaugh, Thomas L., 1st lieut., Fort Des Moines, Iowa; Dept. of Missouri; Burket, John A., 1st lieut., Fort Riley, Kan., Dept. of Missouri; Kramer, Floyd, 1st lieut., Fort Robinson, Neb., Dept. of Missouri; Fox, James S., 1st lieut., Fort Sam Houston, Tex., Dept. of Texas; Aydelotte, John T., 1st lieut., Fort Sam Houston, Tex., Dept. of Texas, relieving First Lieutenant Albion McD. Coffey; Cook, George W., 1st lieut., Fort Douglas, Utah, Dept. of Colorado; Johnson, Thomas H., 1st lieut., Fort Baker, Cal., Dept. of California; King, Charles T., 1st lieut., Presidio of Monterey, Cal., Dept. of California; Holmberg, Carl E., 1st lieut., Presidio of San Francisco, Cal., Dept. of California; Kremers, Edward D., 1st lieut., Presidio of San Francisco, Cal., Dept. of California; Hill, Felix R., 1st lieut., Fort George Wright, Wash., Dept. of the Columbia; Woodson, Thomas D., 1st lieut., Vancouver Barracks, Wash., Dept. of the Columbia; McCornack, Condon C., 1st lieut., Vancouver Barracks, Wash., Dept. of the Columbia; DeVoe, Ralph G., 1st lieut., Fort Worden, Wash., Dept. of the Columbia; Jones, Edgar C., 1st lieut., Fort Liscum, Alaska, Dept. of the Columbia, relieving Captain John A. Clark, Medical Corps; Allen William H., 1st lieut., Fort Slocum, N. Y.; Jones, Glenn I., 1st lieut., Fort McDowell, Cal.; Weed, Mark D., 1st lieut., Walter Reed General Hospital, Takoma Park, D. C.; McAlee, Larry B., 1st lieut., Army and Navy General Hospital, Hot Springs, Ark.; Welles, Edward M., Jr., 1st lieut., Army General Hospital, San Francisco, Cal.; Napier Edward L., 1st lieut., Army General Hospital, San Francisco, Cal.; Reynolds, Royal, 1st lieut., Co. B, Hospital Corps, Presidio, San Francisco; Austin, Thomas C., 1st lieut., Co. B, Hospital Corps, Presidio, San Francisco; Bastion, Joseph E., 1st lieut., Co. C, Hospital Corps, Walter Reed General Hospital, District of Columbia; Schlanser, Adam E., 1st lieut., Co. C, Hospital Corps, Walter Reed General Hospital, District of Columbia; Cooper, Wibb E., 1st lieut., Fort D. A. Russell, Wyo., Dept. of the Missouri; Haverkampf, Charles W., 1st lieut., Co. A, Hospital Corps, Fort D. A. Russell, Wyo., Dept. of the Missouri; Edwards, George M., 1st lieut., West Point, N. Y.

Coffey, Albion McD., 1st lieut., M. R. C., when relieved from Fort Sam Houston, Tex., will proceed to Fort St. Philip, La., relieving First Lieutenant Samuel A. Springwater, M. R. C., who will proceed to his home and report arrival to The Adjutant General.

Clark, John A., Major, M. C., when relieved from duty at Fort Liscum, Alaska, to proceed to Seattle, Wash., and report arrival to The Adjutant General.

Koerper, Conrad E., M. C., major, relieved from Fort Slocum, N. Y., on arrival of First Lieutenant William H. Allen, M. R. C., and ordered to Fort Bayard, N. Mex., relieving Major Charles N. Barney, M. C., ordered to Fort Wadsworth, N. Y.

Dawe, Courtlandt W., M. R. C., ordered from Plattsburg Barracks, N. Y., to home; report arrival to The Adjutant General.

Persons, Elbert E., M. C., major, and Nichols, Henry J., capt., M. C., appointed members of retiring board at Governor's Island, N. Y.

Banister, John M., col., M. C., ordered to U. S. Military Prison, Fort Leavenworth, Kan., on official business and on completion to return to his proper station.

Austin, Thomas C., 1st lieut., M. R. C., granted 10 days' leave, effective on or about June 1, 1910.

Fuller, Leigh A., M. C., granted 10 days' leave of absence, effective June 3, 1910.

Graham, George D., dental surgeon, returned to Fort Leavenworth, Kan., from duty at Fort Des Moines, Iowa.

### Medical Corps, U. S. Navy

Changes for the week ended June 4, 1910:

Stibbens, F. H., P. A. surgeon, commissioned passed assistant surgeon from Jan. 4, 1910.

Allen, A. H., P. A. surgeon, detached from the Naval Hospital, New York, and ordered to duty at the Navy Yard, Boston, Mass., in connection with Navy rifle team.

Pugh, W. E., Jr., P. A. surgeon, ordered to duty at the Naval Hospital, New York.

### U. S. Public Health and Marine-Hospital Service

Changes for the week ended June 1, 1910:

Cofer, L. E.: asst.-surgeon-general, granted 3 days' leave of absence from May 26, 1910; directed to proceed to Reedy Island Quarantine Station on special temporary duty.

Banks, Charles E., surgeon, granted 12 days' leave of absence from June 12, 1910.

White, J. H., surgeon, detailed to attend the annual session of the American Medical Association, to be held in St. Louis, June 7-10, 1910.

Woodward, R. M., surgeon, leave of absence for 7 days from May 15, 1910, amended to read 1 day, May 14, 1910.

Lumsden, L. L., P. A. surgeon, detailed to attend the annual meeting of the Carolina Municipal Convention, to be held at Winston-Salem, N. C., June 2-3, 1910.

McClintic, T. B., P. A. surgeon, directed to proceed to Toledo, Ohio, Lansing, Mich., and Chicago, on special temporary duty.

Goldberger, Joseph, P. A. surgeon, granted 2 days' leave of absence from May 24, 1910, under paragraph 191, Service Regulations; directed to proceed to New York City on special temporary duty.

Vogel, C. W., P. A. surgeon, granted 10 days' leave of absence from June 1, 1910.

Long, J. D., P. A. surgeon, detailed to represent the Service at the annual session of the American Medical Association, to be held in St. Louis, June 7-10, 1910.

Frost, W. H., P. A. surgeon, directed to proceed to Williamson, W. Va., on special temporary duty.

Bean, L. C., acting asst.-surgeon, granted 3 days' leave of absence from June 2, 1910.

Frissell, C. M., acting asst.-surgeon, granted 3 months' leave of absence, without pay, from June 1, 1910.

Riemer, H. B. C., acting asst.-surgeon, granted 2 days' leave of absence from May 23, 1910, and 7 days from May 27, 1910, under paragraph 210, Service Regulations.

Watson, H. J., acting asst.-surgeon, leave of absence for 19 days from May 30, 1910, amended to read 19 days from May 7, 1910.

Board of medical officers convened to meet at Detroit, for the purpose of reexamining an alien. Detail for the board: Passed Assistant Surgeon M. J. White, chairman; Acting Assistant Surgeon Charles Bell, recorder.

## *Marriages*

Leo Christian Huelsmann, M.D., to Miss Harriet Sturdy, both of St. Louis, May 25.

John Patrick Brandon, M.D., to Miss Anna Bradford Hux, both of Essex, Mo., June 1.

J. Fred McBride, M.D., Coleta, Ill., to Miss Elizabeth Buchborn, of Philadelphia, May 25.

Wilber Elmer Post, M.D., Chicago, to Miss Louise C. Morrison, of Springfield, Ill., June 1.

William S. Weakley, M.D., York, Pa., to Miss Zella Olivia Keepers, of Greencastle, Pa., May 21.

Harry Richard Brown, M.D., Daykin, Neb., to Miss Alta Briggs, of Broken Bow, Neb., June 1.

Elsey W. Howell, M.D., to Miss Bessie Willey, both of Oakton, Ky., at Union City, Tenn., May 25.

Edward Stanley Abbott, M.D., Waverly, Mass., to Miss Marian Wetherill, of Philadelphia, May 26.

William Ernest Blodgett, M.D., Detroit, to Miss Mary Charlotte Bishop, of New York City, June 2.

William Thomas Trewyn, M.D., Peoria, Ill., to Miss Gertrude Cross, of Marshalltown, Iowa, at Chicago, June 2.

Joseph John Sinnott, M.D., Mount Vernon, N. Y., to Miss Cecilia Margaret Cook, of Poughkeepsie, N. Y., at Mount Vernon, June 8.

## *Deaths*

**Elizabeth Blackwell, M.D.** the first woman to be graduated from a modern medical school; an alumna of the Geneva (N. Y.) Medical College, in 1847; later a student in Paris and London; who in 1867, in connection with her sister, organized the Woman's Medical College of the New York Infirmary; who registered in England as a physician in 1869, and has since practiced in London and Hastings; one of the founders of the London Medical School for Women, and of the National Health Society of London; died at her home in Hastings, England, June 1, aged 89.

**Edwin Forrest Preston, M.D.** New York University, New York City, 1871; a member of the Medical Society of the State of New York; for more than 25 years health officer of Babylontown, for 20 years a member and chairman of the board of education of Amityville; for three terms coroner of Soffolk county; formerly president of the Bank of Amityville; died at his home in that place, May 26, after the amputation of a toe for gangrene, aged 69.

**Montrose Reuben Richard, M.D.** College of Physicians and Surgeons, New York, 1877; of New York City; formerly a member of the American Medical Association; a fellow of the New York Academy of Medicine; formerly president of the Nott Medical Society, Mobile, Ala., and of the Harlem Medical Association; resident physician in the Touro Infirmary, New Orleans, from 1880 to 1883; died at the home of his brother in Mobile, Ala., May 25, aged 53.

**John T. Wilson, M.D.** Jefferson Medical College, 1867; of Sherman, Texas; a member of the American Medical Association and Southern Surgical and Gynecological Association; formerly president of the Texas State Board of Medical Examiners, superintendent of the Texas State Hospital, Austin, and of the North Texas Hospital for the Insane, Terrell; a Confederate veteran; died in Washington, D. C., May 22, aged 64.

**Charles Edwin Goodwin, M.D.** University of Michigan, 1883; College of Physicians and Surgeons, Chicago, 1904; of Shepherd, Mich.; a member of the Michigan State Medical Society, health officer of Coe township, Isabella county, and vice-president of the Isabella County Medical Society; died at the home of his brother in Ithaca, Mich., May 24, from pernicious anemia, aged 49.

**George Wiley Holmes, M.D.** Bellevue Hospital Medical College, 1871; University of Michigan, Ann Arbor, 1873; a veteran of the Civil War; for several years a practitioner of Cedar Rapids, Iowa; for more than 15 years a medical missionary in Tabriz, Persia, and physician to the Shah; died at his home in Boonton, N. J., May 10, from organic heart disease, aged 69.

**William August Mogk, M.D.** University of Michigan, Ann Arbor, 1898; physician of the hospital department of the construction force of the Los Angeles Water Supply Co., and in charge of a hospital northeast of Mojave; was found dead in the Sand Canon Desert of Southern California, May 20, from exhaustion and thirst, aged 35.

**John M. Pischczak, M.D.** University of Lemberg, Galicia, Austria, 1862; a member of the American Medical Association; at one time professor of pharmacy in the University of Austria; for two terms president of the Polish Medical Society; died at his home in Chicago, June 1, from angina pectoris, aged 72.

**William Frederick Mead, M.D.** College of Physicians and Surgeons, Boston, 1883; Dartmouth Medical School, Hanover, N. H., 1886; one of the founders of the Dartmouth Medical Alumni Association; also a practitioner of dentistry of Boston; died at his summer home in Hingham, Mass., May 21, aged 63.

**William H. Hornaday, M.D.** Central College of Physicians and Surgeons, Indianapolis, 1876; of Frankfort, Ind.; a veteran of the Civil War, and for many years a practitioner of Clinton county and justice of the peace of Forest; died in the Palmer Hospital, Frankfort, May 30, from senile debility, aged 73.

**David M. Ogden, M.D.** George Washington University, Washington, D. C., 1888; a member of the Medical Association of the District of Columbia, and the District of Columbia Medical Society; died at his home in Washington, April 10, from valvular disease of the heart, aged 58.

**Theodore Secor, M.D.** 1877; one of the oldest residents of Minneapolis, and an original "free-soiler;" a member of the Wisconsin Constitutional Convention in 1847; died at the home of his granddaughter, in Minneapolis, April 24, from chronic nephritis, aged 96.

**Johnson Pillmore, M.D.** Cincinnati College of Medicine and Surgery, 1872; a member of the Medical Society of the State of New York; physician to the Rome Hospital; died at his home in Delta, May 20, from disease of the bladder of long standing, aged 62.

**Samuel B. Coe, M.D.** Western Reserve University, Cleveland, 1886; who attended lectures at Rush Medical College in 1855 and 1856; for many years a practitioner of Fitzgerald, Ga., but later of Minneapolis, died at his home in Rochester, Minn., May 29, aged 75.

**La Fayette Hussey, M.D.** University of Pennsylvania, Philadelphia, 1863; a member of the Medical Society of the State of North Carolina; one of the oldest practitioners of Duplin county; died at his home in Warsaw, May 22, from senile debility, aged 78.

**George Whitfield Furey, M.D.** University of Michigan, Ann Arbor, 1877; a specialist in diseases of the eye and ear; for five years a member of the pension board of Sunbury, Pa.; died at his home in that city, May 20, from nephritis, aged 57.

**Alexander C. Smith, M.D.** Long Island College Hospital, Brooklyn, 1874; a member of the American Medical Association; president of the pension board of Sterling, Ill.; died at his home in that city, May 27, from heart disease, aged 69.

**William Stewart Downey, M.D.** Victoria College, Toronto, 1865; Bellevue Hospital Medical College, 1865; a member of the American Medical Association; died at his home in Chicago, June 1, from heart disease, aged 70.

**Henry Thomas Simmons, M.D.** University of Pennsylvania, Philadelphia, 1908; of Altoona; died in the Charity Hospital, Cleveland, Dec. 6, 1909, from the effects of a fall and fracture of the base of the skull, aged 26.

**Thomas M. Price, M.D.** University of Louisville, 1875; one of the oldest practitioners of Hinds county, Miss.; was found dead in his buggy near his home in Raymond, Miss., May 28, from angina pectoris, aged 56.

**John Lucas Corlew, M.D.** Keokuk (Ia.) Medical College, 1883; formerly a member of the Missouri State Medical Association; died at his home in Columbia, April 8, from pulmonary tuberculosis, aged 55.

**Calvin Anderson, M.D.** College of Physicians and Surgeons, New York City, 1865; a member of the Medical Society of New Jersey, and mayor of Madison; died in that city, May 26, from heart disease, aged 69.

**Arthur Steele Andrews, M.D.** Eclectic Medical Institute, Cincinnati, 1875; formerly president of the Washington (Kan.) National Bank; died at his home in Topeka, Kan., May 19, from nephritis, aged 59.

**Isaac P. Farquhar, M.D.** Miami Medical College, Cincinnati, 1869; of Zanesville, O.; a veteran of the Civil War; died at the home of his son in Cleveland, May 28, from cerebral hemorrhage, aged 67.

**William B. Chambers, M.D.** Homeopathic Medical College of St. Louis, 1881; for many years a practitioner of Crawfordsville, Ind.; died at his home in Shelburn, from nephritis, May 26, aged 53.

**Henry E. Misener, M.D.** Physio-Medical College of Indiana, ndianapolis, 1882; for many years a resident of Servia, Ind.; ied at the home of his son at Mechanicsburg, Ind., May 23, ged 51.

**Hiram C. Driggs, M.D.** Hahnemann Medical College, Philaelphia, 1854; a retired physician of New York City; was run ver by a fire engine tender, May 24, and instantly killed, ged 82.

**James W. Foster, M.D.** Cincinnati College of Medicine and Surgery, 1870; for 35 years a practitioner of Kansas City; ied at his southern home in Blessing, Texas, May 18, aged 63.

**John Dolway Wilson, M.D.** Trinity Medical College, Toronto, 883; formerly mayor of London, Ont.; died in that city, May 6, from septicemia, due to an operation wound, aged 52.

**W. H. Blankinship, M.D.** Western Eclectic Medical College of Medicine and Surgery, Kansas City, Kan., 1908; died at his ome in Umpire, Kan., May 15, from pneumonia, aged 28.

**George Hugh Bacon, M.D.** University Medical College of Missouri, Kansas City, 1892; of Carthage, N. M.; died at the home of his mother in Jonesboro, Ill., May 7, aged 45.

**George W. Divert, M.D.** Medical University of Ohio, Cincinnati, 1868; one of the oldest practitioners of Bedford County, Pa.; died at his home in Imlertown, May 23, aged 71.

**Peter G. Johnson, M.D.** Cleveland University of Medicine and Surgery, 1892; for 36 years a practitioner; died at his home in Battle Creek, Mich., May 18, aged 82.

**Arthur Delavan DeLong, M.D.** New York University, New York City, 1888, formerly of Jersey City, N. J., died at his home at Newark, May 13, aged 43.

**Frederick John Garraty, M.D.** University of Bishop's College, Montreal, 1904; died in Prestea, Gold Coast, West Africa, Oct. 28, 1909, from polyneuritis.

**Theodore A. Kimmel, M.D.** Cincinnati College of Medicine and Surgery, 1870; formerly of Kansas City, Mo.; died recently at his home in Payette, Idaho.

**John W. Daly** (license, Arkansas, 1903); a Confederate veteran; of Nashville, Ark.; died at the home of his son in that city, May 13, aged 75.

**Robert Gordon Leverty, M.D.** New York University, New York, 1885; died at his home in Bridgeport, Conn., May 27, from pneumonia, aged 37.

**Harry Martin Smith, M.D.** Jefferson Medical College, 1887; of Red Lion, Pa.; died in the York (Pa.) Hospital, May 19, from septicemia, aged 44.

**Richard John Egan, M.D.** New York University, New York City, 1886; died at his home in Harlem, N. Y., May 24, from pneumonia, aged 46.

**George O. Cromwell,** Missouri Medical College, St. Louis, 1876; died at his home in Nebo, Ill., March 22, from pneumonia, aged 57.

**Michael A. Wesner, M.D.** Jefferson Medical College, 1876; died at his home in Johnstown, Pa., May 24, from heart disease, aged 65.

**George T. Rankin, M.D.** Philadelphia University of Medicine and Surgery, 1868; died at his home in Linesville, Pa., May 8, aged 71.

**John Cipperly, M.D.** Albany (N. Y.) Medical College, 1856; died at his home in Little Falls, N. Y., February 7, aged 79.

**Julius H. Eigholz, M.D.** Toledo (Ohio) Medical College, 1885; died at his home in Los Angeles, April 26, aged 74.

**Francis Marion Proctor, M.D.** Vanderbilt University, Nashville, 1879; died at his home in Alvord, Texas, May 16.

**W. P. Adkins, M.D.** Tulane University, New Orleans, 1870; died at his home in Fort Worth, May 1, aged 62.

## Association News

### NEW MEMBERS

List of new members of the American Medical Association for the month of May, 1910:

ALABAMA

Baird, R. H., Cullman.
Dawson, J. R., Birmingham.
Jones, R. C., Mobile.
Ward, D. W., Tuscaloosa.

ARKANSAS

Cooksey, W. P., Atlanta.
Drummond, R. M., Russellville.
Early, C. S., Camden.
Evans, L. T., Barren Fork.
Gilbrech, A. H., Clarendon.
Howton, Oleander, Osceola.
Kelly, J. L., Hope.
Philp, W. H., St. Francis.
Summers, D. C., Elm Springs.

CALIFORNIA

Chaffin, R. C., Los Angeles.
Clarke, W. T., Los Angeles.
Forline, Hamilton, Redlands.
Greene, Frances M., Berkeley.
McKenney, A. C., San Francisco.
Newman, W. H., Long Beach.
Russell, P. N., Fresno.
Taylor, A. H., San Francisco.

COLORADO

Burnett, N. M., Lamar.
Campbell, W. H., Pueblo.

CONNECTICUT

Tuch, Morris, Hartford.

FLORIDA

Hurchinson, Clarence, Pensacola.
Rivers, T. M., Kissimmee.
Gaskins, J. D., Jacksonville.

GEORGIA

Gibbs, E. T., Gainesville.
Joyner, A. S., Sylvania.
Kennedy, W. D., Metter.

ILLINOIS

Ash, J. C., La Harpe.
Bailey, H. B., Rockford.
Bartholomew, E. K., Chicago.
Burns, W. I., Witt.
Chapman, W. D., Silvis.
Cohen, Hyman, Chicago.
Curtis, A. H., Chicago.
Dewey, Grace, Jacksonville.
Dattelzweig, M. F., Chicago.
Drake, C. St. Clair, Chicago.
Fitzpatrick, E. H., Pontiac.
Glasen, G. M., Chicago.
Grayson, W. F., Granite City.
Green, J. A., Rockford.
Griffeth, F. W., Elgin.
Gunn, J. C., Belleville.

Harlan, N. R., Freeport.
Harris, Monroe, Newton.
Heldring-Fabricius, L. J., Chicago.
Kirk, E. G., Chicago.
Klotz, O. P., Cheneyville.
Kleckner, R. E., Mattoon.
Koch, W. A., Middletown.
Liston, J. B., Shipman.
Massey, C. V., Chicago.
Moldenhauer, William J., Chicago.
Motley, E. G., Virden.
Nason, W. C., Ashkum.
Neal, J. R., Springfield.
Nyman, C. V., Rockford.
Perry, W. H., Sterling.
Seely, W. J., Red Bud.
Spyker, J. H., Decatur.
Steely, G. W., Louisville.
Thomas, E. H., Argenta.
Tonney, F. O., Chicago.
Vanatta, H. B., Lerna.
Vermeren, C., Chicago.
Wells, J. W., Waltonville.
Wetherla, W. W., Chicago.
Von Zelinski, W. F., Chicago.

## INDIANA

Brown, K. T., Crawfordsville.
Cain, D. B., Evansville.
Charles, Etta, Summitville.
Dobyns, P. K., Franklin.
Dow, W. S., Indianapolis.
Harold, A. R., Indianapolis.
Harold, N. E., Indianapolis.
King, W. F., Columbia City.
Markley, W. H., Pennville.
Prather, S. A., Vincennes.
Reed, J. H., Logansport.
Rice, T. R., Petersburg.
Simonds, J. P., Indianapolis.
Terry, O. P., Lafayette.
Thomas, E. C., Indianapolis.

## IOWA

Anspach, R. G., Colfax.
Besser, E. F., Newton.
Crary, A. W., Boone.
Earl, H. D., Cherokee.
Grimwood, W. H., Ft. Madison.
Patterson, A. W., Linden.

## KANSAS

Battendieri, O. D., Pittsburg.
Billings, A. E., Topeka.
Burk, F. O., Iowa City.
Everhardy, J. L., Leavenworth.
Meyer, Grant, Lincolnville.
Moore, R. W., Arcadia.
Navem, H. A., Argentine.
Philipp, Herman, Wichita.
Ratliff, H. S., Cawker.
Reed, E. W., Holton.
Risdon, J. W., Leavenworth.
Schrader, L. M., Kinsley.
Wolfe, R. D., Council Grove.
Young, R. C., Arkansas City.
Zinke, S. G., Leavenworth.

## KENTUCKY

Behrman, Michael, Covington.
Brummett, U. G., Middlesboro.
Eckler, C. M., Williamstown.
Goodloe, E. R., Little Cypress.
Gossett, W. L., Franklin.
Hopson, J. L., Cadiz.
Jones, R. M., Calvert City.
Langolf, F. A., Louisville.
Lukins, J. B., Louisville.
McEuen, H. B., St. Charles.
Offutt, W. N., Lexington.
Stone, T. W., Bowling Green.
Wahle, A. J., Lonisville.
Woodburn, J. C., Bremen.

## LOUISIANA

Adams, J. M., St. Joseph.
Hargrove, M. V., Oakdale.
Ledoux, A., New Orleans.
Lilly, J. G., St. Joseph.
Trahan, A. R., Lafayette.

## MARYLAND

Gombel, William, Baltimore.
Laroque, H. E., Baltimore.

## MASSACHUSETTS

Adamion, P. A., Boston.
Bieberbach, W. D., Worcester.
Crawford, F. W., S. Weymouth.
Shaw, J. W., Newburyport.

## MICHIGAN

Arminen, K. V., Hancock.
Collins, W. E., Kalamazoo.
Force, W. H., Ludington.
Johnson, R. K., Detroit.
Krickard, P. J., Grand Rapids.
Linn, R. S., Detroit.
Repp, W. A., Detroit.
Stone, Harriette M., Kalamazoo.

## MINNESOTA

Field, Merton, Minnesota Lake.
Norman, J. F., Crookston.
Olsen, S. H., Milaca.
Ratcliffe, J. J., Aitkin.
Rogers, G. M. F., Austin.

## MISSISSIPPI

Barnes, I. F., Gulfport.
Johnson, G. E., Hudsonville.
Keithly, C. L., Rome.
McLean, E. R., Cleveland.

## MISSOURI

Aldridge, M. R., Jefferson City.
Armstrong, C. L., Webster Groves.
Ash, O. O., Moberly.
Baker, J. H. P., Salisbury.
Baker, Marshall, Webster Groves.
Barger, J. N., Albany.
Barker, W. S., St. Louis.
Barnhart, D. A., Huntsville.
Baumgartner, C., St. Louis.
Bell, E. T., Columbia.
Bellaire, R. F., St. Louis.
Bentele, Elizabeth, St. Louis.
Biewend, E. F., St. Louis.
Boyd, F. R., St. Louis.
Cameron, Solon, St. Louis.
Coil, P. E., Mexico.
Dalgliesh, G. D., Rockville.
Dames, A. F., St. Louis.
Davis, F. L., St. Louis.
Douglas, J. T., Ferguson.
Doyle, J. M., St. Joseph.
Drace, J. J., Kennett.
Dreyfus, J. W., Louisiana.
Dutton, C. K., Moberly.
Elkins, W. H., Crystal City.
Evans, E. E., Columbia.
Evans, R. L., Boonville.
Evers, E. T., St. Louis.
Ewing, F. C., St. Louis.
Fischer, O. F., St. Louis.
Frank, Konrad, St. Louis.
Gaertner, C. W., St. Louis.
Ginsberg, E. L., Kansas City.
Gove, H. S., Linn.
Greensfelder, Harry, Kirkwood.
Gundlach, Arthur, St. Louis.
Habermaas, Albert, St. Louis.
Haffner, E. L., Hermann.
Hall, Elizabeth L., Carthage.
Hardaway, W. A., St. Louis.
Hardy, Joseph, St. Louis.
Hawkins, W. R., Glasgow.
Hawley, T. S., St. Louis.
Heuman, G. W., St. Louis.
Hewitt, W. R., St. Louis.
Hill, J. A., Jefferson City.
Hoberecht, C. A., St. Louis.
Horst, O. C., St. Louis.
Hughes, M. R., St. Louis.
Hulen, J. C., Centralia.
Hurt, P. L., Boonville.
Janes, V. B., Cameron.
Johnson, G. A., Moberly.
Juengel, A. H., St. Louis.
Kampschmidt, A. W., Columbia.
Kempff, L. A., St. Louis.
Kesl, G. M., St. Louis.
Koch, O. W., Ballwin.
Larew, J. T., St. Louis.
Lewis, M. D., Columbia.
Magoon, F. L., St. Louis.
Martin, C. P., St. Louis.
McCall, G. D., Fulton.
McCormick, F. L., Huntsville.
Murray, S. A., Holden.
Musser, C. W., Metz.
Newman, Percy, St. Louis.
Niebruegge, H. J., St. Louis.
Norris, W. A., Columbia.
Owen, H. I., Fulton.
Paulin, Stanley, Kansas City.
Porth, J. P., Jefferson City.
Rodes, W. R., Mexico.
Rothwell, C. A., Mexico.
Rotteck, Julius, St. Louis.
Scholz, Phil., St. Louis.
Sewing, A. H., St. Louis.
Sharp, W. L., Little Rock.
Shumate, D. L., Kansas City.
Stewart, E. L., Kansas City.
Storrs, H. J., St. Louis.
Stevens, C. D., St. Louis.
Toalson, G. F., Mexico.
Torrance, L. B., St. Louis.
Walker, R. A., St. Louis.
Weinsberg, J. H., St. Louis.
Wilson, R. E., La Belle.
Wright, U. S., Fayette.
Yost, W. B., St. Louis.
Young, D. H., Fulton.

## MONTANA

Phillips, O. S., Browning.

## NEBRASKA

Langstaff, G. A., Blair.
Myers, B. L., Omaha.
Phillipsen, J. A., Lincoln.
Raines, R. F., Red Cloud.

## NEVADA

Adams, A. F., Ely.

## NEW HAMPSHIRE

Burtt, E. D., Lincoln.
Howland, Clifford, Bradford.

## NEW JERSEY

Dougherty, A. C., Newark.
Flynn, T. H., Somerville.
Foster, G. H., Rockaway.
Miller, H. G., Millville.
Muttart, G. W., Jersey City.
Reid, J. W., Kearny.
Runyon, L. P., New Brunswick.
Winslow, J. H., Vineland.

## NEW MEXICO

Dillon, A. L., Clovis.

## NEW YORK

Anthony, H. E., Moravia.
Brown, H. W., Binghamton.
Brown, Sherman, Kings Park.
Burns, G. S., Rochester.
Carter, DeLancy, New York City.
Crisman, B. J., Utica.
Elmendorf, TenEyck, New York City.
Fincke, H. S., Astoria.
Held, R. J., New York City.
Hoobler, B. R., New Cork City.
Lustig, Emil, Buffalo.
Meyer, W. H., New York City.
Nash, P. I., Coney Island.
Prince, Howard, Byron.
Tecter, L. H., Niagara Falls.
Wilson, R. C., Ithaca.

## NORTH CAROLINA

von Ruck, Silvio, Asheville.

## NORTH DAKOTA

Brugman, F. A., Minot.
Macdonald, A. W., Valley City.
Sorenson, A. R., Barton.

## OHIO

Batte, J. T., Cincinnati.
Blakey, H. B., Columbus.
Cox, E. H., Cleveland.
Griffin, J. G., Kelleys Island.
List, W. E., Cincinnati.
Morrison, F. A., Uhrichsville.
Paul, C. M., Cincinnati.
Roop, W. O., Dayton.
Samson, F. B., Cincinnati.
Smith, W. L., Toledo.
Spicer, D. M., Cleveland.
Wendelken, C. W., Portsmouth.
Williams, J. H., Cincinnati.
Workman, I. S., Gambier.

## OKLAHOMA

Armstrong, D., Mead.
Coppedge, O. S., Depew.
Henderson, C. F., Chant.
Lewis, J. L., Lawton.
Lockett, B. L., Swink.
Long, Dock, Duncan.
McBurney, C. H., Clinton.
Overton, L. M., Guthrie.
Pope, A. J., Hanna.
Reeder, H. M., Asher.
Robinson, E. T., Cleveland.
Thompson, Claude A., Muskogee.
Turpin, C. H., Grandfield.

## OREGON

Booth, C. L., Portland.

## PENNSYLVANIA

Baltz, S. A., Mt. Braddock.
Crothers, S. R., Chester.
Dwyer, J. E., Oil City.
Eshbach, W. W., Allentown.
Heller, S. H., Lancaster.
Heim, L. D., Schuylkill Haven.
Hislop, John, Miners' Mills.
Kohlberger, H. P., Pittsburg.
Lynch, H. P., Morganza.
Moore, W. D., Germantown.
Prowitt, H. P., Washington.
Schatz, H. A., Philadelphia.
Smith, H. F., Scranton.
Stockberger, H. J., Claridge.
Vaux, N. W., Philadelphia.
Whitehead, I. B., Pittsburg.

## RHODE ISLAND

Calder, H. G., Providence.
Glancy, C. A., Bristol.

## SOUTH CAROLINA

Graham, W. F., Summerville.
Guerry, LeGrand, Columbia.
Lemmon, C. J., Sumter.

## SOUTH DAKOTA

Gerdes, P. H., Eureka.
Lloyd, J. C., Platte.

## TENNESSEE

Biggs, V. A., Martin.
Billington, R. W., Nashville.
Dodds, O. L., Eaton.
Dotson, Walter, Gallatin.
Manker, R. A., Whitesburg.
Neely, J. J., Bolivar.
Paschall, J. B., Fulton.
Rice, J. C., Braden.
Thompson, M. E., Laxton.

## TEXAS

Carrick, M. M., Abilene.
Cheaney, Price, Dallas.
Currie, A. B., Rainbow.
Eads, J. W., Barksdale.
Faulk, Lem., Emory.
Florence, J. H., Houston.
Janes, O. Y., Cooper.
Proctor, T. K., San Angelo.
Rogers, J. E., Barksdale.
Ross, Daniel, Denison.
Stokes, E. B., Crockett.

## UTAH

Harvielle, C. P., Mammoth.
Holbrook, H. C., Lehi.
Hunter, H. C., Milford.
Pyne, H. S., Provo.

## VERMONT

Bogue, H. A., Richford.
Edmunds, G. F., Bristol.

## VIRGINIA

Baker, C. H., Buddle.
Hough, Theodore, University.
Hubbard, J. F., Faber.
Lacy, J. B., Nathalie.
Moncure, P. St. L., Norfolk.
Nelson, J. G., Richmond.
Waldron, J. W., Grundy.

## WASHINGTON

Babcock, O. D., Seattle.
Botzer, Wm., Mayfield.
Braden, A. E., Tacoma.
Burke, R. T., North Bend.
Case, S. W., Seattle.
Dallenbach, J. C., Seattle.
Dalton, M. T., Sumas.
Flynn, A. M., Tacoma.
McIntire, H. E., Auburn.
Mills, F. H., Fort Flagler, M.R.C.
Nather, F. B., Spokane.
Porter, L. L., North Yakima.
Quilliam, L. R., Walla Walla.
Smeall, J. S., Tacoma.
Spurgeon, G. C., Seattle.
Stevenson, A. W., Yacott.
Thompson, H. B., Seattle.
Warner, W. H., Walla Walla.

## WEST VIRGINIA

Ballard, S. E., Maben.
Cook, Macdonald, Big Creek.
Hamilton, M. F., Mannington.
Harless, W. F., Clothier.
Hatfield, E. R., Eventon.
Hill, S. W., Switchback.
Matson, F. L., Hundred.
Owens, W. T., Mt. Clare.
Rumisell, C. C., Gassaway.

## WISCONSIN

Elliott, J. T., Rhinelander.
Fidler, C. A., Milwaukee.
Gilberson, P. C., Black Earth.
Keller, J. M., Milwaukee.
Nelson, A. W., Clear Lake.
Newell, G. E., Burlington.
Sykes, H. D., Milwaukee.
Vogel, C. A., Elroy.

## WYOMING

Ainsworth, H. H., Cody.

## PHILIPPINE ISLANDS

Sison, A. G., Manila.

# PROCEEDINGS OF THE ST. LOUIS SESSION

## MINUTES OF THE SIXTY-FIRST ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT ST. LOUIS, MO., JUNE 6-10, 1910

## House of Delegates

### *First Meeting — Monday Morning, June 6*

The House of Delegates convened in the auditorium of the St. Louis Medical Society at 10:35 a. m., and was called to order by the President, Dr. William C. Gorgas, Ancon, Panama.

Dr. H. Bert Ellis, California, presented a preliminary report of the Committee on Credentials, as chairman.

There being no objection raised, the report of the committee was accepted.

The General Secretary called the roll, and 74 members responded.

The President: The next order is the reading, correction and adoption of the minutes of the Sixtieth Annual Session.

Dr. Alexander R. Craig, Pennsylvania: I move that the minutes as printed be approved.

This motion was seconded and carried.

### President's Address

*To the Members of the House of Delegates of the American Medical Association:*

It is customary for the retiring President to make suggestions to the House of Delegates looking to the betterment of the Association. The more or less close contact with the affairs of the Association for the preceding two years should place him in an advantageous position for doing this.

The Association is developing so steadily and running so successfully that I see very little room for suggestion as to change.

During the year the question was raised as to the power of our President, under our constitution, to fill vacancies that may occur in the standing committees during the interim between meetings of the House of Delegates. The matter was referred to our legal adviser. He was not clear in his own mind as to whether the President had the authority or not. I recommend that the matter be authoritatively settled.

The Association is doing a very extensive and good work and is extending its usefulness in many directions, but it seems to me that there is a tendency to take up new work and drop out of sight work already in hand. This, I think, should be borne in mind.

It is probable that most of our members attend these meetings attracted by the scientific phase, which is mostly developed in the Sections. This is a most important part of our work and should be encouraged in every way.

Our constitution says that one of the objects of our Associatino is to safeguard the material interests of the medical profession in the country at large. This phase of our work has come to the front in the last few years through our Council on Pharmacy and Chemistry. This work has been most far-reaching in protecting the people at large against all sorts of patent nostrums. As an Association we have made bitter enemies of the people engaged in the "patent-medicine" business and as they command large capital they are at present making a serious organized fight against us. This is the most altruistic part of our activity for the benefit of others or for the members of the Assoication.

Our Association is probably the most compactly organized body of men in the whole country; its branches are located in every part of the country. Through the county and state society we can reach all national legislators. This gives us great influence on legislation. During the past year our Committee on Medical Legislation has been very active and successful in shaping national legislation. This work is good and should be pushed, but as the Association feels its enlarging powers in this direction care should be taken that we do not become involved in political matters, From this time forward there will be more or less tendency to complication in this direction.

The address was referred to the Reference Committee on Reports of Officers.

### Report of the General Secretary

*To the Members of the House of Delegates of the American Medical Association:*

I submit herewith a report for the year 1909-1910:

#### Membership

The membership of the American Medical Association on May 1, 1909, as shown by the report for that year was 33,935. During the past year 289 members have died, 1,937 have resigned, 625 have been dropped as not eligible, 406 have been dropped for non-payment of dues, and 95 have been removed from the rolls on account of being reported as "not found" or on account of mail returned by the Postoffice Department, making a total of 3,352 names to be deducted from the membership list. Since May 1, 1909, there have been added 3,593 names to the membership list, of which 2,628 were transferred from the subscription list, and 965 were new members. The membership of the American Medical Association on May 1, 1910, was 34,176, a net gain for the year of 241. The explanation of the apparently large number of members entered as resigned is that many who were not eligible under the by-laws were allowed to resign in preference to being entered as dropped, while many others resigned on account of age.

#### Committees Appointed Ad Interim

Since your last meeting, on June 11, 1909, the following committees were appointed by the president:

##### SELECTION OF INSIGNIA FOR THE A. M. A.

Maj. M. W. Ireland, chairman, Washington, D. C.; G. L. Taneyhill, Baltimore, Md.; C. E. Cantrell, Greenville, Texas; Samuel P. Gerhard, Philadelphia, Pa.; Samuel Wolfe, Philadelphia, Pa.

##### COMMITTEE ON ESTABLISHMENT OF PHYSICIANS' SANITARIUM

Edward Jackson, chairman, Denver, Colo.; A. C. Magruder, Colorado Springs, Colo.; Jefferson R. Kean, Washington, D. C.; A. T. Bristow, Brooklyn, N. Y.; H. Bert Ellis, Los Angeles, Cal.

##### DELEGATES TO CONVENTION ON REVISION OF PHARMACOPEIA

J. A. Capps, Chicago; George H. Simmons, Chicago; W. A. Puckner, Chicago.

#### Application from the Medical Association of the Isthmian Canal Zone

In the fall of 1909 an application for recognition and affiliation was received from the Medical Association of the Isthmian Canal Zone. The application, together with the accompanying documents, is referred to the House of Delegates for consideration and action, with the recommendation that it be accepted and that the Medical Association of the Isthmian Canal Zone be recognized as one of the constituent associations of the American Medical Association.

#### Death of Dr. Burrell

A year ago Dr. Herbert Leslie Burrell was President of the American Medical Association, and should have presided over the deliberations of the House of Delegates during the first day of the annual session. Illness, however, prevented his attendance at that meeting. Dr. Burrell did not recover from that illness and died April 27, 1910. During the year he had been unable to attend to any of his professional or college duties. Dr. Burrell was 54 years of age. In his death the Association has lost a distinguished member and a valuable officer; American surgery a skilful exponent; and the medical profession, one who has always been ready to do his duty as he saw it.

#### Membership of State Associations

The membership of the various constituent state associations, according to the records in the General Secretary's office on May 1, 1910, is as follows:

| | | | |
|---|---|---|---|
| Alabama | 1,738 | New Hampshire | 594 |
| Arizona | 131 | New Jersey | 1,340 |
| Arkansas | 989 | New Mexico | 237 |
| California | 2,057 | New York | 6,755 |
| Colorado | 811 | North Carolina | 1,141 |
| Connecticut | 803 | North Dakota | 376 |
| Delaware | 108 | Ohio | 3,934 |
| Dist. of Columbia | 548 | Oklahoma | 1,309 |
| Florida | 339 | Oregon | 391 |
| Georgia | 1,145 | Pennsylvania | 5,351 |
| Idaho | 116 | Rhode Island | 367 |
| Illinois | 5,404 | South Carolina | 740 |
| Indiana | 2,550 | South Dakota | 341 |
| Iowa | 2,081 | Tennessee | 1,253 |
| Kansas | 1,376 | Texas | 3,080 |
| Kentucky | 1,986 | Utah | 210 |
| Louisiana | 1,068 | Vermont | 398 |
| Maine | 574 | Virginia | 1,604 |
| Maryland | 1,107 | Washington | 870 |
| Massachusetts | 3,303 | West Virginia | 971 |
| Michigan | 2,300 | Wisconsin | 1,730 |
| Minnesota | 1,220 | Wyoming | 123 |
| Mississippi | 1,001 | Hawaii | 58 |
| Missouri | 2,862 | Philippine Islands | 95 |
| Montana | 201 | | |
| Nebraska | 1,001 | Total | 70,146 |
| Nevada | 59 | | |

### UNIFORM REGULATION OF MEMBERSHIP

The second report of the Committee on Uniform Regulation of Membership, which was enlarged at Atlantic City by the addition of five state secretaries, will be presented by that committee. The regulation of the details of individual membership is becoming more and more important to the county and state societies, as well as to the American Medical Association, and the uniform, systematic and equitable regulation of membership affairs is deserving of careful attention.

### THE SECRETARYSHIP—A BIT OF HISTORY

Dr. W. B. Atkinson, my immediate predecessor, was elected permanent secretary in 1864. The office was regarded as a permanent one, as the title indicates. For several years preceding 1898 there had been considerable criticism regarding the conduct of the office—whether just or not is immaterial—and this resulted in definite action by the Association at the Denver meeting, 1898. That year certain resolutions, relative to the matter, were introduced, among which were the following:

> "*Resolved*, That a General Secretary be appointed by the Business Committee at a salary not exceeding $3,000 per year, who, under the direction of the Business Committee, shall forward the interests of the Association in every way possible.
>
> "*Resolved*, That the Business Committee be directed to consider the matter and report to the Association in regard to the feasibility of the plan proposed."

The Business Committee, on the following day, reported:

> "While the Committee fully agree as to the desirability of having much more active secretary work done for the Association, and believe that the plan proposed would greatly increase the scope and usefulness of the Association, it is not prepared at the moment to recommend the adoption of the resolution. It is a matter of such very great importance that further consideration of the details involved is necessary, and as it may possibly involve a change in the Constitution and By-Laws, your Committee has decided to recommend that the matter lie over for one year, and hereby gives notice that it proposes such changes, if any are necessary, in the Constitution and By-Laws at the next annual meeting of the Association."

Later, as the matter involved the expenditure of money, it was referred to the Trustees to report the following year. The Business Committee also submitted an amendment to the By-Laws, providing for the annual election of a Secretary.

At the Columbus meeting, 1899, the matter came before the Association in three ways; from the committee to which the proposed amendment of the By-Laws had been referred; from the Board of Trustees; and from the President, Dr. J. M. Mathews, in the annual President's address. I quote from the latter:

> "For several years there has been a heated debate, if not wrangle, at each annual meeting, in general session, over the secretaryship. This is both unseemly and undignified, and is to be much deplored. It seems to me that there is an easy solution to this matter. Let the editor of our Journal be the secretary of the Association. The Board of Trustees has wisely insisted that he devote his whole time to the Journal. It does, therefore, appear that the secretaryship should be one of his duties. By so acting he is brought into a closer relation with the business management of the Association and with the active membership of the same. He would himself be responsible for a correct report of all proceedings, and be enabled to keep them without fault. The question whether or not any addition should be made to his salary for this additional work can be determined by the board of trustees. Our present secretary has served us long and well, and for his services in the past the Association should, and no doubt does, feel deeply obligated to him. I am sure that he would be the first to acquiesce in any move that would enhance the business interests or the prosperity of the Association. I therefore very respectfully offer the suggestion as above stated."

The Committee's recommendations regarding the change of By-Laws and the recommendations of the Trustees were formulated into amendments to the By-Laws, among which was the following:

> "Each officer, except the Secretary, shall hold office for one year, and until his successor is selected. The Editor of the JOURNAL of the American Medical Association shall be the Secretary of this Association, and shall serve as such without additional compensation."

Two years later, in 1901, at my suggestion, the first "shall" in the second sentence above quoted was changed to "may," again placing the election of General Secretary in the hands of the Association, and later all mention of the connection between the two offices was eliminated from the By-Laws.

Thus, in 1899, being editor of THE JOURNAL, against my wishes and under protest I became the secretary. Having accepted the position I tried to perform what I considered the duties pertaining to the office. The work increased rapidly, and within two years I found that I was devoting nearly as much time and energy to the secretarial as to THE JOURNAL work.

About six years ago I suggested to the Board of Trustees that I relinquish the secretaryship on account of the amount of detail work connected therewith. The Board of Trustees, however, advised against this, but recommended and authorized the employment of an assistant to the secretary whose duty should be to look after and carry out the details of that work. After some time spent in looking for a man fitted for the place, the position was tendered to Dr. F. R. Green who accepted it, and in April, 1905, assumed the duties of Assistant to the General Secretary. Since that time he has been taking care of most of the secretarial work.

However, I had decided not to hold the office for longer than ten years, and last year, 1909, fully expected to ask you to elect some one else. For reasons not necessary to mention, I did not do so.

I think the time has come, however, when I should ask you to relieve me of the responsibilities of the office of General Secretary, and this I now do. I realize that it is not usual to refuse a thing, especially an elective office, before it is offered. I think it better, however, to make the announcement now, so that there may be ample time for you to consider carefully whom you shall select for the position.

I want to take this opportunity of thanking you for the kindness, cooperation and assistance that I have received at your hands. Eleven consecutive years I have been unanimously elected General Secretary, twice at the General Meeting, before the reorganization, and nine times by the House of Delegates. During this time much has been accomplished. For only a minor part of what has been done can I claim any credit, but what little may have been accomplished through my efforts was made possible because a host of splendid men in our profession have loyally and unselfishly given their support and cooperation to the work.

Respectfully submitted. GEORGE H. SIMMONS,
General Secretary.

This report, on motion, was referred to the Reference Committee on Reports of Officers.

## Report of the Board of Trustees

*To the Members of the House of Delegates of the American Medical Association:*

The progress made by this Association during the past year has been most encouraging. Anyone who read the elaborate and instructive reports presented by the permanent Committees and Councils to this body at its meeting a year ago, could not fail to be impressed by the earnest, hard work done by these Committees and by the great value of that work to the profession as well as to the people.

As these Committees report directly to this body your Board of Trustees refrains from presenting the details of their work for the past year, but recommends to your careful study and consideration their forthcoming reports, feeling certain that the members of these Committees who do this work at great sacrifice of time, energy and often money will receive at your hands the earnest encouragement and hearty approbation which they deserve.

It is one of the most encouraging features of our organization that men of the character of those forming these Committees will so generously give of their time and labor for the benefit of all.

In looking over these reports one is struck by the numerous lines along which the activities of the Association are extending. Instead of a small body of men meeting once a year for scientific and social purposes we now find a vast organization extending into every county and almost every town in the land deeply engaged not only in the scientific work of the profession but also in the solution of economic and sociologic problems in a manner scarcely dreamed of by the most enthusiastic worker but a few years ago.

Among the numerous subjects which the organization has taken up may be mentioned: The systematic and thorough investigation of the medical teaching institutions of the United States, with a view to elevating the standard of medical education and the moral and scientific attainments of those who seek to enter the profession.

The careful study of the various state laws governing the practice of medicine with a view to the drafting of a uniform medical practice act which shall secure to the people the greatest degree of protection and to the profession the greatest justice:

The systematic education of the people in matters relating to both public and personal hygiene, to the prevention of blindness, to the care of dependents, to the prevention of the propogation of the insane and of the criminal, etc.:

The passage of such laws by the national and state governments as shall secure to the people pure, wholesome food and pure drugs:

The establishment of a National Department of Health with powers and duties commensurate with the importance of the subject:

The adoption of a uniform system of nomenclature and classification of diseases:

The careful study of the rules and regulations governing membership in county and state societies with a view to securing greater uniformity thereof and for the purpose of improving if possible the plan of organization of the local, state and national bodies:

The education of the people in regard to the dangers of the patent medicine frauds and of the profession in regard to the composition and the effects of the proprietary drugs, new remedies, etc.

These are by no means all of the problems which the Association is undertaking but they are sufficient to indicate the various lines along which its activities are extending, and while the Board of Trustees wishes it distinctly understood that it is in accord with all of these movements, yet it cannot refrain from uttering a word of caution against attempting too many things at a time lest we dissipate our energies and forces in a multiplicity of aims.

As the Council on Pharmacy and Chemistry reports to the Board of Trustees, a few words concerning the work done by this Council during the past year may be of interest.

The amount of work done has greatly exceeded that of any previous year and the results of the work as published from week to week in THE JOURNAL have been of the greatest practical value to every physician. In support of this statement we wish to mention briefly the work done by the Council in the examination of the numerous so-called meat extracts and meat juices with which the market, both public and professional, has been flooded.

It will be acknowledged by all that the nourishing of the sick is a subject of the most vital importance and therefore, any product for which the manufacturer claims unusual nutritive value should have its worth carefully determined by competent judges.

After a most exhaustive examination of these products it was found that the meat extracts are practically devoid of nutritive bodies and that while some of the meat juices were shown to contain considerable amounts of bodies of great food value, many of the products on the market which were claimed to be meat juices proved to be nothing but meat extracts or similar non-assimilable products.

Since the prescribing of such products by physicians, under the mistaken idea that they possess food value, must result in harm to the patients, the Council investigated those most widely advertised and published its findings in THE JOURNAL so that no physician need be misled any longer by the erroneous claims made by the manufacturer for any of these products.

Another class of products of great interest and importance at this time and concerning which reliable information has been difficult to obtain is that of the various serums and vaccines.

During the past year the Council has done a most timely piece of work in this direction and has prepared and published descriptions of the several products as they are found on the American market.

These two classes are mentioned, as they are somewhat out of the ordinary, simply to illustrate the character of the work which the Council is doing. That the magnificent work done by the Council is receiving just recognition beyond the confines of our own land is well shown by the fact that during the past year a number of prominent European firms have taken active measures to have all of their products listed by the Council.

One of these firms has opened a branch office in this country because it found that the drug firm which had acted as its representative was also engaged in the exploitation of patent medicines. The submission of products by the foreign firms demonstrates that the listing of new products with New and Nonofficial Remedies is being felt essential as an indication of good faith with the profession.

It may be stated that the Council has examined practically all the non-official articles now on the market and that those not listed by it are deemed by it unworthy of consideration by the profession.

In the main the work of the Council thus far has been to determine whether or not those dealing in medicines were telling the truth.

This work really should have been done by the federal, state and municipal authorities but it required the courage of those who constitute the Council and the prestige of the American Medical Association to antagonize the powerful interests connected with proprietary medicines.

The amount of work done in the Chemical Laboratory in our own building has increased greatly so that it is impossible to even mention all of the products and compounds which have been investigated during the past year.

It seems almost unbelievable that any person or firm would attempt to perpetrate such gross frauds on the profession and the people as have been uncovered in our own laboratory.

For instance a product called "Health Grains" which is offered as a remedy for dyspepsia, indigestion, nervousness, etc., was found to consist of nearly 90 per cent. sand and about 10 per cent. sugar.

Another product sold at an exorbitant price with outrageously exaggerated claims as a face preparation, was found to be about 90 per cent. ordinary Epsom salts and 10 per cent. borax.

A certain product which was submitted to the Council by the manufacturer was found not to contain the substances specified on the label. When attention was called to the fact the manufacturer attempted to explain the discrepancy between the label and the contents by saying it was due to a lack of coordination between the various departments. Remember this was not a patent medicine but a proprietary article offered to and used by the physician. The name of the manufacturer has been withheld because the article has been taken off the market.

Numerous other incidents similar to the above might be mentioned but sufficient has been said to indicate the character of the work done in the laboratory.

Your Board of Trustees desires to bring to your attention at this time a matter of great importance, and in doing so it does not wish to be understood as attempting to anticipate the report nor in any way to interfere with the prerogatives of the special committee appointed by you to consider the advisability of consolidating certain of the present committees, but it wishes to call your attention to the fact that in your earnest endeavor to bring about certain very desirable results you have appointed perhaps unconsciously, a multiplicity of committees whose duties so overlap in many directions as to lead to an unnecessary duplication of the work with a concomitant duplication of expense and loss of energy, and a lack of cooperation and concurrence among the committees renders negative or ineffectual much of the work undertaken.

It will be recalled that those Committees which have been centralized have been productive of the best results. It is therefore believed that if the various Committees which now exist with a similarity of duties were centralized in a single Bureau with a paid secretary and stenographer with headquarters in THE JOURNAL building much more effective work would be done and greater results accomplished.

This does not in any sense mean that fewer individuals would be engaged in the work, as the Bureau should have the power to establish any number of sub-committees to carry on the work along special lines, but it means simply this, that there would be a head to systematize and correlate the work of the various sub-committees.

Closely related to this subject is that of the Women's Committees on Public Educational Matters.

It may be well to state at the outset that the Board of Trustees is in entire sympathy with the movement and believes that an immense amount of good might be accomplished in the manner outlined.

It will be remembered, however, that the resolution having for its object the formation of the Women's Committee was introduced on the afternoon of the last day of the session and owing to a lack of time was passed unanimously by those present without due consideration.

The accidentally faulty wording of the resolution therefore escaped detection and while the mover thereof undoubtedly believed that the resolution, as was intended, actually created a women's Committee of the House of Delegates or of the A. M. A., as a matter of fact it failed to do either and the Committee therefore became a self-appointed one.

The Board of Trustees had no official knowledge of the matter until called upon some time later to meet certain expenses already incurred by the self-appointed Committee. The board believes this a matter of considerable importance.

Should the centralized Bureau above mentioned be created by the House of Delegates at this time, then this Committee would be properly taken care of as a part of the Bureau, otherwise some action should be taken giving this Committee proper standing and defining its duties.

We are pleased to say that the new building authorized by you at your last meeting is in process of erection. Considerable delay was experienced in securing satisfactory bids for the work on account of industrial conditions, but the contracts call for the completion of the building by October 1 and unless some unforeseen complication arises it seems likely that the terms of the contract will be fulfilled.

Appended hereto will be found a detailed report of the business side of the Asssociation and of The Journal, together with an elaborate report from the auditors, bringing everything along these lines down to the end of the fiscal year.

In conclusion the Board may be permitted to express its belief that the future of the Association never was so bright as at the present time.

The profession through the land, year by year is becoming more firmly united in bonds of fraternal harmony and every feeling of internal strife is yielding to the universal desire to uplift the profession and to cause such a dissemination of the knowledge of scientific medicine as shall bring to all mankind that greatest of blessings, good health. But in the earnest endeavor to bring to a fruitful issue the ends toward which we strive, let us guard most carefully against the tendency which so frequently and so insidiously creeps into an organization of the strength of this to dip into politics and thus pollute the honorable traditions of our profession.

Remember that our strength lies in a righteous cause honestly fought.

Respectfully submitted,
W. W. Grant,
Phillip Marvel,
C. E. Cantrell,
Phillip Mills Jones,
W. T. Sarles,
C. A. Dougherty,
W. T. Councilman,
Wisner R. Townsend, Secretary.
M. L. Harris, Chairman.

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## Addenda to Trustee's Report

### SUBSCRIPTION DEPARTMENT

The regular weekly issue of The Journal of the American Medical Association from Jan. 2, 1909, to Dec. 25, 1909 inclusive, 52 issues, was as follows:

| | | |
|---|---|---|
| January 2 | 53,891 | |
| January 9 | 53,253 | |
| January 16 | 53,319 | |
| January 23 | 53,338 | |
| January 30 | 53,283 | |
| | | 267,084 |
| February 1 | 53,476 | |
| February 13 | 53,381 | |
| February 20 | 53,457 | |
| February 27 | 53,452 | |
| | | 213,766 |
| March 6 | 57,052 | |
| March 13 | 55,644 | |
| March 20 | 56,339 | |
| March 27 | 56,409 | |
| | | 225,444 |
| April 3 | 55,923 | |
| April 10 | 56,040 | |
| April 17 | 56,368 | |
| April 24 | 56,414 | |
| | | 224,745 |
| May 1 | 59,106 | |
| May 8 | 56,528 | |
| May 15 | 54,730 | |
| May 22 | 55,591 | |
| May 29 | 54,814 | |
| | | 280,769 |
| June 5 | 56,186 | |
| June 12 | 56,048 | |
| June 19 | 55,120 | |
| June 26 | 55,108 | |
| | | 222,462 |

| | | |
|---|---|---|
| July 3 | 55,440 | |
| July 10 | 55,379 | |
| July 17 | 55,145 | |
| July 24 | 55,028 | |
| July 31 | 54,872 | |
| | | 275,864 |
| August 7 | 55,333 | |
| August 14 | 56,469 | |
| August 21 | 54,600 | |
| August 28 | 54,602 | |
| | | 221,004 |
| September 4 | 54,594 | |
| September 11 | 54,519 | |
| September 18 | 54,213 | |
| September 25 | 54,140 | |
| | | 217,466 |
| October 2 | 54,050 | |
| October 9 | 54,408 | |
| October 16 | 56,044 | |
| October 23 | 56,128 | |
| October 30 | 56,707 | |
| | | 277,337 |
| November 6 | 54,746 | |
| November 13 | 57,034 | |
| November 20 | 54,957 | |
| November 27 | 57,250 | |
| | | 223,987 |
| December 4 | 57,190 | |
| December 11 | 57,123 | |
| December 18 | 57,334 | |
| December 25 | 57,224 | |
| | | 228,871 |

| | |
|---|---|
| Total issue for twelve months | 2,878,799 |
| Weekly average | 55,361 |

As will be noticed, the total number of copies issued during 1909 was 2,878,799. The total issue for 1908 was 2,806,900, an increase of 71,899 copies in 1909 over 1908, or a weekly average increase of 1,382 copies.

### PERCENTAGE OF PHYSICIANS RECEIVING THE JOURNAL

This table gives the number of physicians (based on the second edition of the American Medical Directory) in the United States, number receiving The Journal and the approximate percentage in each state. Copies to physicians in the United States Army, United States Navy, Marine-Hospital Service, etc., omitted:

| State. | Physicians in State. | Number Receiving Journal. | Approximate Per Cent. |
|---|---|---|---|
| Alabama | 2,287 | 648 | 28.3 |
| Arizona | 246 | 142 | 57.7 |
| Arkansas | 2,553 | 595 | 23.4 |
| California | 4,313 | 1,871 | 43.3 |
| Colorado | 1,690 | 798 | 47.2 |
| Connecticut | 1,424 | 675 | 47.4 |
| Delaware | 220 | 78 | 35.4 |
| District of Columbia | 1,231 | 564 | 45.8 |
| Florida | 786 | 318 | 40.4 |
| Georgia | 2,887 | 762 | 26.3 |
| Idaho | 343 | 161 | 46.9 |
| Illinois | 9,744 | 5,023 | 51.5 |
| Indiana | 5,306 | 1,779 | 33.5 |
| Iowa | 3,624 | 1,854 | 51.1 |
| Kansas | 2,650 | 1,119 | 42.2 |
| Kentucky | 3,708 | 1,184 | 31.9 |
| Louisiana | 1,798 | 735 | 40.8 |
| Maine | 1,198 | 407 | 33.9 |
| Maryland | 2,012 | 1,006 | 50.0 |
| Massachusetts | 5,577 | 2,365 | 42.4 |
| Michigan | 4,109 | 1,806 | 43.9 |
| Minnesota | 2,204 | 1,288 | 62.9 |
| Mississippi | 2,054 | 515 | 25.0 |
| Missouri | 6,332 | 2,047 | 32.3 |
| Montana | 417 | 219 | 52.5 |
| Nebraska | 1,776 | 738 | 41.5 |
| Nevada | 177 | 75 | 42.3 |
| New Hampshire | 679 | 288 | 42.4 |
| New Jersey | 2,455 | 977 | 39.7 |
| New Mexico | 367 | 172 | 46.8 |
| New York | 14,117 | 4,858 | 34.4 |
| North Carolina | 1,761 | 586 | 33.2 |
| North Dakota | 552 | 341 | 61.7 |
| Ohio | 7,838 | 2,807 | 35.8 |
| Oklahoma | 2,703 | 672 | 24.8 |
| Oregon | 782 | 349 | 44.6 |
| Pennsylvania | 11,056 | 4,686 | 42.3 |
| Rhode Island | 720 | 317 | 44.0 |
| South Carolina | 1,141 | 415 | 36.3 |
| South Dakota | 607 | 328 | 54.0 |
| Tennessee | 3.303 | 779 | 23.5 |
| Texas | 5,789 | 1,527 | 26.3 |
| Utah | 359 | 213 | 59.3 |
| Vermont | 663 | 211 | 31.8 |
| Virginia | 2,215 | 843 | 38.0 |
| Washington | 1,404 | 700 | 49.8 |
| West Virginia | 1,608 | 568 | 35.3 |
| Wisconsin | 2,518 | 1,360 | 54.0 |
| Wyoming | 202 | 86 | 42.5 |

The following table shows the number of members and of subscribers for each year for the past ten years:

| | Members. | Subscribers. |
|---|---|---|
| January 1, 1900 | 8,445 | 4.633 |
| January 1, 1901 | 9,841 | 8,339 |
| January 1, 1902 | 11,107 | 10,795 |
| January 1, 1903 | 12,553 | 12,378 |
| January 1, 1904 | 13,899 | 14,674 |
| January 1, 1905 | 17,570 | 15,698 |
| January 1, 1906 | 20,826 | 17,669 |
| January 1, 1907 | 26.255 | 20,166 |
| January 1, 1908 | 29,382 | 20,880 |
| January 1, 1909 | 31,999 | 18,983 |
| January 1, 1910 | 33,032 | 19,832 |

The above table shows that there was an increase of 1,033 in the membership list taking The Journal, and an increase of 849 in the subscriber's list, or a total net increase of 1,882.

The above do not include *ex-officio* members, exchanges, complimentary copies to libraries, agents, etc.

During the year 1909, 2,706 subscribers were transferred to the membership list.

The actual increase in our mailing list during 1909 was 1,970. During this period, however, there were added to the list 11,504 names. The difference—9,534—represents the discontinuation by death, by ineligibility to membership, by resignation, by non-payment of dues and subscriptions; also a large number were temporarily dropped and restored.

The deaths alone amount to quite a large number. We are not able to give the exact figure. A goodly portion of the members of the Association are elderly men, and the grim reaper each year makes no small inroad on the mailing list. The ratio of deaths among physicians last year was a little over 16 per thousand. The proportion would certainly be this large among our members.

## Treasurer's Report

REPORT OF THE TREASURER OF THE AMERICAN MEDICAL ASSOCIATION FOR THE YEAR ENDING DEC. 31, 1909

| 1909. RECEIPTS | |
|---|---|
| Jan. 1—Cash balance in First National Bank | $ 3,880.46 |
| Jan. 30—Cash received from Editor of JOURNAL | 25,000.00 |
| March 31—Cash received from Editor of JOURNAL | 10,000.00 |
| Sept. 14—Interest at 3 per cent. on certificates of deposit in First Trust and Savings Bank | 2,244.57 |
| Interest at 2 per cent. on checking account in First National Bank from August to December, 1909, inc. (when balance was over $5,000) | 55.69 |
| Interest coupons, 54 $1,000 bonds at 4 per cent | 2,160.00 |
| | $ 43,340.72 |

| 1909. DISBURSEMENTS | |
|---|---|
| Jan. 30—By order of Trustees, bought certificate of deposit at 3 per cent. in First Trust and Savings Bank | $ 25,000.00 |
| March 31—By order of Trustees, bought certificate of deposit at 3 per cent. in First Trust and Savings Bank | 10,000.00 |
| Dec. 31—Cash balance in checking account First National Bank | 8,340.72 |
| | $ 43,340.72 |

JAN. 1, 1910, PROPERTY OF AMERICAN MEDICAL ASSOCIATION IN HANDS OF TREASURER

| | Cost. | Par Value. | |
|---|---|---|---|
| Cash balance in checking account First National Bank | | | $ 8,340.72 |
| Certificates of deposit at 3 per cent. in First Trust and Savings Bank | | | 100,000.00 |
| 35/1000 bonds U. P. Ry., 1st 4s | $ 5,207.50 | $ 5,000.00 | |
| 5/1000 bonds Erie Ry., 1st 4s | 4,932.50 | 5,000.00 | |
| 10/1000 bonds Reading Gen. 1st 4s | 9,602.50 | 10,000.00 | |
| 14/1000 bonds Chicago Sch. 1st 4s | 15,168.13 | 14,000.00 | |
| 10/1000 bonds A. T. & S. Fe 1st 4s | 9,521.25 | 10,000.00 | |
| 10/1000 bonds B. & O. Ry. 1st 4s | 9,800.00 | 10,000.00 | |
| | $54,231.88 | $54.000.00 | 54,000.00 |
| | | | $162,340.72 |

Respectfully submitted,

FRANK BILLINGS, *Treasurer.*

## Auditor's Report

MARWICK, MITCHELL & CO., CHARTERED ACCOUNTANTS

CHICAGO, Feb. 2, 1910.

*To the Board of Trustees of the*
*American Medical Association, Chicago, Ill.*

*Dear Sirs:*

In accordance with your instructions, we have audited the accounts of your Association for the year ended December 31, 1909. We now submit our report thereon, together with the statements detailed in the index appended hereto.

Our examination was conducted along the lines of previous audits and included an inspection of the bonds, which are detailed in Schedule "6," and the certificates of deposit. The cash on hand and in bank was verified by actual count and certification respectively. The vouchers for disbursements were all in order and properly authorized by responsible officers. We made test checks on the voluminous sources of the Association's revenue.

The balance sheet, recorded in Exhibit "A," is in accordance with the books of the Association and presents, in our opinion, a full and fair statement of its financial position on December 31, 1909, as revealed by the books subject, however, to the consideration of the omission of the accrued liability in respect of taxes, and of that in respect of subscriptions and memberships paid in advance. This latter liability is offset in a measure by subscriptions and memberships earned but outstanding, of which no account is taken in the balance sheet. There has also to be considered the probable loss on doubtful accounts receivable.

The following comparative, summarized statement of the assets and liabilities of the Association, as at December 31, 1909 and 1908, is of interest:

| | DECEMBER 31 | | | |
|---|---|---|---|---|
| | 1909 | 1908 | INCREASE | DECREASE |
| Assets: | | | | |
| Property and Plant | $173,081.86 | $183,737.15 | ........ | $10,655.29 |
| Investments | 154,231.88 | 119,231.88 | $35,000.00 | ........ |
| Current Assets | 72,148.42 | 52,844.97 | 19,303.45 | ........ |
| Total Assets | $399,462.16 | $355,814.00 | $43,648.16 | ........ |
| Liabilities | 2,926.95 | 1,146.18 | ........ | 1,780.77 |
| Surplus Assets | $396,535.21 | $354,667.82 | $41,867.39 | |

The increase in surplus assets, namely, $41,867.39, arises from the net surplus income of the Association for the year under review. Details of the income account, bringing out this surplus, are shown in Exhibit "B" and supplementary schedules.

A perusal of the foregoing statement will show the disposition of the year's surplus income. It has been invested principally in $35,000.00 of certificates of deposit.

The work of the office force is conducted in an intelligent and accurate manner.

We take pleasure in recording our appreciation of the courtesies extended to our representatives and shall be pleased to furnish any information desired on the accounts. Yours truly,

MARWICK, MITCHELL & CO., Chartered Accountants.

### INDEX TO STATEMENTS

EXHIBITS
"A" Balance Sheet as at Dec. 31, 1909.
"B" Income Account for the year ended Dec. 31, 1909.
SCHEDULES
"1" Publication Expenses for the year ended Dec. 31, 1909.
"2" General Expenses for the year ended Dec. 31, 1909.
"3" Atlantic City Session Expenses for the year ended Dec. 31, 1909.
"4" Depreciation Reserved for the year ended Dec. 31, 1909.
"5" Association Expenditures for the year ended Dec. 31, 1909.
"6" Bonds as at Dec. 31, 1909.

### EXHIBIT "A"

BALANCE SHEET AS AT DEC. 31, 1909

| ASSETS | | |
|---|---|---|
| Property and Plant: | | |
| Real Estate and Buildings | | $108,880.82 |
| Machinery | | 41,456.97 |
| Metal and Type | | 10,941.87 |
| Furniture and Fixtures | | 8,955.19 |
| Stereotype Plant | | 1,661.40 |
| Library | | 1,185.61 |
| Total Property and Plant | | $173,081.86 |
| Investments: | | |
| Bonds at Cost, Schedule "6" | | $ 54,231.88 |
| Certificates of Deposit | | 100,000.00 |
| Total Investments | | $154,231.88 |
| Current Assets: | | |
| Cash: | | |
| Commercial National Bank of Chicago | $23,030.51 | |
| First National Bank of Chicago | 8,340.72 | |
| Office Fund | 50.00 | |
| | | 31,421.23 |
| Accounts Receivable: | | |
| Advertising | $15,759.92 | |
| Directory | 10,393.20 | |
| Reprints | 1,273.25 | |
| Jobbing and Miscellaneous | 1,730.83 | |
| | | 29,157.20 |
| Inventory—Materials and Supplies | | 10,899.88 |
| Insurance Prepaid | | 460.11 |
| Bills Receivable | | 210.00 |
| Total Current Assets | | 72,148.42 |
| Total | | $399,462.16 |

| LIABILITIES | | |
|---|---|---|
| Accounts Payable | | $ 268.58 |
| Advance Payments on Archives of Internal Medicine | | 1,587.37 |
| Directory Suspense Account | | 921.48 |
| Directory Information Account | | 149.52 |
| Surplus: | | |
| Amount thereof at Dec. 31, 1908 | $354,667.82 | |
| Net Surplus Income for the year ended Dec. 31, 1909 | 41,867.39 | |
| | | 396,535.21 |
| Total | | $399,462.16 |

### EXHIBIT "B"

INCOME ACCOUNT FOR THE YEAR ENDED DEC. 31, 1909

| | | |
|---|---|---|
| Revenue: | | |
| Memberships | | $147,543.50 |
| JOURNAL Advertising | | 146,151.19 |
| JOURNAL Subscriptions | | 97,413.52 |
| Jobbing | | 29,110.54 |
| Directory | | 40,533.46 |
| Atlantic City Session | | 9,037.44 |
| Reprints | | 7,526.70 |
| Archives of Internal Medicine | | 5,782.02 |
| Book Account | | 3,216.58 |
| Physicians' Manual | | 1,517.94 |
| New and Nonofficial Remedies | | 559.50 |
| Buttons | | 361.20 |
| Gross Revenue | | $488,753.59 |
| Expenses: | | |
| Publication (Schedule "1") | $266,006.89 | |
| General (Schedule "2") | 125,117.99 | |
| Atlantic City Session (Schedule "3") | 8,368.10 | |
| Depreciation (Schedule "4") | 9,241.82 | |
| | | 408,734.80 |
| Net Revenue | | $ 80,018.79 |
| Other Income: | | |
| Interest on Bonds | $ 2,160.00 | |
| Interest on Treasurer's Account | 2,756.65 | |
| House Rental—Less Expenses | 2,315.88 | |
| | $ 7,232.53 | |
| Deduct: | | |
| Loss by bad accounts and notes—less recoveries | 923.17 | |
| | | 6,309.36 |
| Gross Income | | $ 86,328.15 |
| Deductions from Income: | | |
| Cost of additions to building about to be torn down, previously charged to capital | $ 6,158.03 | |
| Association Expenditures (Schedule "5") | 38,302.63 | |
| | | 44,460.66 |
| Net Income | | $ 41,867.49 |

## SCHEDULE “1”

PUBLICATION EXPENSES FOR THE YEAR ENDED DEC. 31, 1909

| | | |
|---|---|---|
| JOURNAL: | | |
| Materials and Supplies: | | |
| Paper Purchases | $100,800.23 | |
| Paper—Inventory—Decrease | 2,096.71 | |
| Ink | 3,798.38 | |
| Electros | 3,775.93 | |
| Miscellaneous Supplies | 2,206.37 | |
| | $112,677.62 | |
| Deduct: Waste Paper Sold | 3,879.41 | |
| | | $108,798.21 |
| Labor | | 89,461.60 |
| Binding | | 2,078.61 |
| Editorials, News and Reporting | | 8,198.26 |
| Total JOURNAL Publication Expenses | | $208,536.68 |
| SECOND EDITION OF DIRECTORY: | | |
| Materials and Supplies | $ 2,749.26 | |
| Salaries | 34,113.08 | |
| Information | 7,982.86 | |
| Jobbing | 4,481.10 | |
| Binding | 2,168.50 | |
| Indexing | 824.30 | |
| | $ 52,319.10 | |
| Deduct: Directories on hand at Dec. 31, 1909 | 1,980.00 | |
| Total Directory Publication Expenses | | 50,339.10 |
| Archives of Internal Medicine | | 5,390.22 |
| Physicians Manual | | 947.91 |
| New and Nonofficial Remedies | | 792.98 |
| Total Publication Expenses | | $266,006.89 |

## SCHEDULE “2”

GENERAL EXPENSES FOR THE YEAR ENDED DEC. 31, 1909

| | | |
|---|---|---|
| Salaries | | $ 37,975.29 |
| Postage: | | |
| JOURNAL—Second Class | $21,025.61 | |
| Directory | 3,356.33 | |
| Archives of Internal Medicine | 333.98 | |
| General | 11,056.70 | |
| | | 35,772.62 |
| Commissions: | | |
| JOURNAL | 10,434.09 | |
| Directory | 3,030.04 | |
| Archives of Internal Medicine | 1,644.91 | |
| Buttons | 364.94 | |
| | | 15,473.98 |
| Plant: | | |
| Repairs and Renewals | $ 2,513.84 | |
| Power | 2,435.54 | |
| Light | 2,200.32 | |
| Fuel | 1,221.06 | |
| Building Maintenance | 385.41 | |
| | | 8,756.17 |
| Insurance and Taxes | | 2,906.41 |
| Office Jobbing | | 2,663.08 |
| Discount | | 2,307.78 |
| Collection Commissions | | 2,337.94 |
| Express and Cartage: | | |
| On Second Edition Directories | $ 3,517.79 | |
| General | 2,102.09 | |
| | | 5,619.88 |
| Agents' Salaries | | 1,830.00 |
| Advertising: | | |
| Directory | 367.45 | |
| Archives of Internal Medicine | 161.60 | |
| | | 529.05 |
| Exchange | | 1,443.76 |
| Legal | | 944.90 |
| Office Supplies | | 603.71 |
| Traveling Expense | | 584.05 |
| Telephone and Telegraph | | 380.61 |
| JOURNALS Returned | | 75.11 |
| Book Account | | 2,697.59 |
| Buttons | | 200.53 |
| Miscellaneous Expense | | 2,015.53 |
| Total General Expenses | | $125,117.99 |

## SCHEDULE “3”

ATLANTIC CITY SESSION EXPENSES FOR THE YEAR ENDED DEC. 31, 1909

| | |
|---|---|
| President's Reception | $2,222,25 |
| Rentals | 1,675.00 |
| Transportation and Board | 726.30 |
| Jobbing | 640.72 |
| Registration | 632.89 |
| Commercial Exhibit | 572.30 |
| Badges and Buttons | 522.20 |
| Daily Bulletin | 450.00 |
| Repairs to Exhibit Hall | 425.00 |
| Information Bureau and Post-Office | 102.50 |
| Freight and Express | 52.33 |
| Dr. Marvel | 28.94 |
| Supplies | 27.50 |
| Miscellaneous | 290.17 |
| Total | $8,368.10 |

## SCHEDULE “4”

DEPRECIATION RESERVED FOR THE YEAR ENDED DEC. 31, 1909

| | |
|---|---|
| Machinery | $4,606.33 |
| Buildings | 2,698.78 |
| Furniture and Fixtures | 817.70 |
| Type | 458.44 |
| Metal | 358.73 |
| Stereotype Plant | 184.60 |
| Laboratory Equipment | 117.24 |
| Total | $9,241.82 |

## SCHEDULE “5”

ASSOCIATION EXPENSES FOR THE YEAR ENDED DEC. 31, 1909

| | | |
|---|---|---|
| Pharmacy and Chemistry: | | |
| Salaries | $6,893.08 | |
| Meetings | 515.50 | |
| Drugs | 221.48 | |
| Postage | 189.78 | |
| Supplies | 186.21 | |
| Jobbing | 165.15 | |
| Analyses | 30.00 | |
| Express | 22.72 | |
| | | $8,223.92 |
| Medical Education: | | |
| Salaries | $3,314.40 | |
| College Inspection | 1,052.40 | |
| Meetings | 1,273.45 | |
| Postage | 172.50 | |
| Jobbing | 132.50 | |
| Information | 90.75 | |
| Supplies, etc. | 33.63 | |
| | | 6,069.63 |
| Medical Legislation: | | |
| Salaries | $1,404.55 | |
| Expenses—Dr. C. A. L. Reed | 793.93 | |
| Meetings | 399.84 | |
| Postage | 126.00 | |
| Jobbing | 87.32 | |
| Information | 24.15 | |
| | | 2,835.79 |
| Board of Public Instructions | | 598.65 |
| Defense of Medical Research | | 144.02 |
| Public Education | | 635.46 |
| Organization: | | |
| Dr. J. N. McCormack—Salary | $6,000.00 | |
| Dr. J. N. McCormack—Expenses | 2,113.05 | |
| Dr. J. H. Blackburn—Salary | 600.00 | |
| Dr. J. H. Blackburn—Expenses | 300.00 | |
| Lectures | 442.10 | |
| Jobbing | 689.85 | |
| Traveling Expense—Dr. Green | 132.70 | |
| Bulletin Postage | 51.90 | |
| Express and Telegrams | 31.86 | |
| | | 10,361. 6 |
| Association Account: | | |
| Trustees' Meetings | $3,508.17 | |
| Reporting Sections | 1,579.54 | |
| Scientific Research | 850.00 | |
| Scientific Exhibit | 585.50 | |
| Salary—Assistant to General Secretary | 999.99 | |
| Section Secretaries | 600.00 | |
| Honorariums | 400.00 | |
| Reporting Sections | 320.70 | |
| Jobbing | 195.78 | |
| Miscellaneous | 394.02 | |
| | | 9,433.70 |
| Total | | $38,302.63 |

## SCHEDULE “6”

BONDS AS AT DEC. 31, 1909

| PARTICULARS | PAR VALUE | COST |
|---|---|---|
| 5 Atchison, Topeka & Sante Fe Ry. Co. 4 per cent. 100-year gold bonds | $ 5,000.00 | $ 4,988.75 |
| 5 Erie Railroad Co. 4 per cent. gold bonds. | 5,000.00 | 4,932.50 |
| 5 Baltimore & Ohio Railroad first mortgage 4 per cent. bonds | 5,000.00 | 5,032.50 |
| 5 Reading Company general mortgage 4 per cent. bonds | 5,000.00 | 4,870.00 |
| 5 Union Pacific Railroad Co. first mortgage 4 per cent. bonds | 5,000.00 | 5,207.50 |
| 14 City of Chicago 4 per cent school bonds. | 14,000.00 | 15,168.13 |
| 5 Reading Company and the Philadelphia & Reading Coal & Iron Co. general mortgage 4 per cent., payable January and July, Nos. 29366, 29367, 24483, 24482, 66964, par value of $1,000.00 each at 94½ | 5,000.00 | 4,732.50 |
| 5 Atchison, Topeka & Santa Fe Ry. Co. first mortgage 4 per cent bonds payable April and October. Principal due 1995, Nos. 32785, 35162, 40517, 40516, 40515. Par value of $1,000.00 each at 90½ | 5,000.00 | 4,532.50 |
| 5 Baltimore & Ohio Railroad Co first mortgage 4 per cent. bonds payable April and October. Principal due 1948, Nos. 53591, 53594, 53593, 34986, 34987. Par value of $1,000.00 each at 95 | 5.000.00 | 4,767.50 |
| Total | $54,000.00 | $54,231.88 |

## Report of Board of Trustees

Dr. M. L. Harris, Chairman, read the report of the Board of Trustees, which was referred to the Reference Committee on Reports of Officers.

## Reference Committees Appointed

### REFERENCE COMMITTEE ON REPORTS OF OFFICERS

George W. Guthrie, Pennsylvania, Chairman.
W. B. Russ, Texas.
C. R. P. Fisher, New Jersey.
D. S. Fairchild, Iowa.
Victor H. Stickney, No. Dakota.

### REFERENCE COMMITTEE ON LEGISLATION AND POLITICAL ACTION

J. W. Clemmer, Ohio, Chairman.
Oscar Dowling, Louisiana.
M. W. Ireland, U. S. Army.
G. B. Young, U. S. P. H. & M.-H. S.
I. C. Chase, Texas.
(Committee on Medical Legislation, ex officio.)

### REFERENCE COMMITTEE ON MEDICAL EDUCATION

A. Work, Colorado, Chairman.
Horace D. Arnold, Massachusetts.
T. D. Tuttle, Montana.
J. B. Bullit, Mississippi.
Joseph Capps, Section on Practice of Medicine.
(Council on Medical Education, ex-officio.)

### REFERENCE COMMITTEE ON SECTIONS AND SECTION WORK

J. E. Weeks, New York, Chairman.
E. Carson Hay, Arkansas.
Alfred D. Sawyer, Maine.
C. J. Smith, Oregon.
O. J. Brown, Massachusetts.

### REFERENCE COMMITTEE ON RULES AND ORDER OF BUSINESS

A. L. Wright, Iowa, Chairman.
D. D. Bosworth, Tennessee.
J. Riddle Goffe, New York.
F. W. Robbins, Michigan.
J. N. Jenne, Vermont.

### REFERENCE COMMITTEE ON HYGIENE AND PUBLIC HEALTH

W. N. Wishard, Indiana, Chairman.
J. H. White, Section on Preventive Medicine and Public Health.
William Brumby, Texas.
R. D. Alway, South Dakota.
C. S. Sheldon, Wisconsin.

### REFERENCE COMMITTEE ON CONSTITUTION AND BY-LAWS

Alexander R. Craig, Pennsylvania, Chairman.
W. H. Sanders, Alabama.
E. W. Weis, Illinois.
A. T. McCormack, Kentucky.
Arthur Sweeney, Minnesota.

### REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS.

T. A. Woodruff, Section on Ophthalmology, Chairman.
Edwin Walker, Indiana.
Ridgely B. Warfield, Maryland.
E. A. Hines, South Carolina.
E. J. Goodwin, Missouri.

### COMMITTEE ON CREDENTIALS

H. Bert Ellis, California, Chairman.
J. H. J. Upham, Ohio.
D. C. Brown, Connecticut.
W. W. Richmond, Kentucky.
W. E. Anderson, Virginia.

### JUDICIAL COUNCIL

William C. Woodward, District of Columbia, Chairman.
L. M. Shaw, Nebraska.
L. A. Hahn, Oklahoma.
C. S. Huffman, West Virginia.
G. K. Angle, New Mexico.

The President: We will now listen to the reports of Standing Committees.

## Report of the Judicial Council

Dr. C. E. Cantrell, Texas: As chairman of the Judicial Council, I wish to say that the Council has no report to make inasmuch as nothing has come before us on account of the perfect working of the law settling all ethical matters in the county medical societies and the state associations.

## Report of the Committee on Medical Legislation

Dr. Charles A. L. Reed, Ohio, Chairman, read this report.

*To the House of Delegates of the American Medical Asssociation:*

Your Committee on Medical Legislation submits herewith its annual report and as a part thereof submits copies of the American Medical Association Bulletin for March 15 and May 15, 1910, containing the record of the Joint Conference on a Model Medical Practice Act and the Annual Session of the Legislative Conference held at Chicago, March 1 and 2, 1910.

### NATIONAL LEGISLATION

The energies of your committee have been largely devoted to the promotion of national legislation calculated to protect the health interests of the people. The first bill relating to this subject was presented to the Senate Feb. 1, 1910, by Hon. Robt. L. Owen, Senator for Oklahoma, and was entitled "A Bill Establishing a Department of Public Health and for Other Purposes." It stands on the calendar as S. 6049. The same bill was introduced in the House by Mr. Creager, April 15, 1910, and is on the calendar as H. R. 24549. It provides, as the title implies, for the establishment of a Department with a Secretary of Public Health in the Cabinet and for the transfer of existing public health agencies to such department. These provisions, irrespective of details, comprise the principle involved in the bill, a principle so distinctly in consonance with the traditional attitude of the American Medical Association that your representatives, in conference with others interested in the subject, early in March, did not feel at liberty to consider any alternative measure.

As a matter of fact no alternative measure had at that time been presented to the Congress, although since then, on April 22, 1910, Mr. Simmons introduced a bill (H. R. 24827) "Establishing a Department of Public Health and for Other Purposes," the essential difference between it and the Owen bill being that it does not provide for representation in the Cabinet, but places the proposed Department in charge of a "Commissioner of Public Health." Another measure has been introduced by Mr. Mann, which provides for dropping the words "and Marine Hospital" from the "Public Health and Marine-Hospital Service" but without otherwise modifying the status of the bureau under that name now occupying a subordinate relation in the Treasury Department. Another bill has been introduced to create a "National Bureau of Health."

The Owen bill has been and is under consideration by the Senate Commitee on Public Health and National Quarantine and several hearings have been had on the subject. These hearings have been largely attended by representatives of distinctly lay interests as well as your Committee, all of whom have urged the passage of a measure embodying the principle of the Owen bill. The details of the measure, as desired and expected by its author, are to be elaborated in Committee. In the meantime, the general proposition based on all the bills now before Congress, has been under consideration by the Committee on Interstate and Foreign Commerce of the House.

Whether any bill will be reported out of either Committee at the present session of Congress cannot be determined at the date that this report is written. Your Committee, however, lays before you with satisfaction the fact that the whole proposition is now pending in Congress; that advanced national legislation along public health lines has been urged by President Taft in his measure to Congress; that he stands ready at the proper time to give the movement further support by a special message; that the people are aroused to the importance of the subject as never before in the history of the country; and, finally, that the character of the opposition is such as to impress the people that they must support this movement for their own protection against dangerous and remediable conditions as well as against the rapacity of ignorant, selfish and venal interests.

### LEGISLATION IN THE STATES

During the past winter the legislature has been in session in the following states—Georgia, Kentucky, Virginia, Maryland, Massachusetts, Mississippi, New Jersey, New York, Ohio, Rhode Island, South Carolina and Louisiana. It is impossible to enumerate all of the bills introduced into the legislatures of the various states but a few of them deserve comment.

### MASSACHUSETTS

As is the custom in this state a large number of bills of interest to the medical profession have been introduced to the legislature this year calling for much time and labor in their defense or in opposition. With one exception the results of our labors have been fairly satisfactory. The exception alluded to was the bill giving the courts the common law power, already in force in the Federal courts and in those of some of the states, to charge juries upon the expert medical evidence. The bill was reported favorably by the Joint Judiciary Committee, but was rejected in the House.

Among the numerous bills presented, the following were enacted: The creation of a detention hospital for the temporary reception of persons with mental disturbances, who were formerly sent to police stations, etc.; a state board of registration for nurses. Requiring the use of a prophylactic for ophthalmia neonatorum. Regulating the sale of morphin, cocain, etc. Restriction of the use of public drinking cups. Providing for medical inspection of working children. A commission to investigate the increase or otherwise of criminals, mental defectives, epileptics, etc. A bill permitting cities and towns to maintain sanatoria for the care of tuberculosis patients. (The state now has four large hospitals for the care of these people in all stages of the disease.) A bill establishing small school traveling exhibits of tuberculosis.

The following bills failed of enactment: Optometry, 162 to 58. Anti-vaccination. Privileged communications between physician and patient. Healing by unregistered physicians. Bill requiring "Eddyites," hypnotists, etc., to be registered as physicians are. A bill prohibiting the reappointment of members of the state board of registration in medicine. Bill requiring a diploma before taking examination for license to practice medicine. A bill requiring medical instruction in the public schools was given leave to withdraw. The bill making the state Food and Drug law conform to the Federal law was rejected, as in the opinion of the state board of health, it would lower the standard of our state law. A bill allowing appeals from decisions of boards of health and one placing medical schools under the supervision of the Board of Education were rejected.

### KENTUCKY

The following bills became laws: an abortion-bill, making the woman a competent witness against the physician or the person inducing the abortion and relieving her of responsibility in case she testified; a vital statistic bill, providing for the registration of births and deaths; an appropriation bill providing $30,000 for the state board of health and $10,000 for a hospital for incurables. The optometry bill and the bill appropriating $150,000 for a medical department of the state university, were defeated.

### MARYLAND

A pure food bill and midwifery bill, a lunacy law and sanitary bill were passed by the legislature and signed by the governor. The optometry bill passed both houses but was vetoed by the governor. A bill providing for Pasteur treatment of all persons exposed to hydrophobia passed the legislature but was vetoed. A bill reorganizing the board of health became a law. Anti-vaccination and expert testimony bills failed to pass.

### NEW JERSEY

In New Jersey, a new medical practice act, known as the Ramsey bill, providing for a board composed of five regulars, three homeopaths, one eclectic and one osteopath, passed both houses but was vetoed by Governor Fort. An anti-vivisection bill failed to become a law.

### NEW YORK

The principal fight in New York was centered around the anti-vivisection bill, a determined effort to pass which was made by the advocates of state restriction of animal experimentation. So far the bill has failed of passage.

### OHIO

A large number of bills of interest to the medical profession were introduced of which the following were passed: bill creating the office of state inspector of plumbing; bill restricting the sale of cocain; a criminal abortion bill granting immunity to women and accepting dying declarations; a bill providing for elementary schools for tubercular children. The following bills were introduced but failed to pass: bill authorizing the state board of health to establish a bureau of infectious diseases; bill providing for medical inspection of school children; bill regulating itinerant vending of medicines and nostrums; a medical advertising bill; a Christian Science bill; a bill providing for the sterilization of criminal and defective classes. The legislature passed a bill creating a state board of optometry but it was promptly vetoed by the Governor in one of the strongest presentations of the subject that has yet appeared.

### MISSISSIPPI

The following measures, endorsed by the state medical association were introduced into the state legislature: amendment to the medical practice act; a vital statistics bill; midwifery bill and a bill restricting the sale of cocain.

### WASHINGTON

A new medical practice act was adopted in this state. An expert testimony bill failed to pass.

### VIRGINIA

A bill providing a state board of examiners for chiropractice failed to pass.

### LOUISIANA

The Louisiana legislature did not convene until May. The only measure reported so far is a bill for the collection of vital statistics which, it is hoped, will become a law.

### BUREAU OF MEDICAL LEGISLATION

The work of the Bureau of Medical Legislation has been continued as outlined in last year's report. There is a decided and gratifying increase in the use being made of this bureau by state boards of health, medical examining boards, officers of state societies and members of the profession in general. In accordance with the instructions of the Committee, the secretary has secured copies of public health laws of the various states. These were collected with a view to the publication of a handbook on medical legislation. Complete copies of all laws have been received from all of the states except Arkansas, Oregon, South Dakota, Idaho, New Mexico and South Carolina. The two latter states are at present preparing the material for the bureau but it has not yet been received. There are at present on file in the bureau over 300 complete laws, referring to various public health matters and covering 43 states. It was found that the publication of the text of the laws complete would involve the preparation of a volume of over 2,000 pages and that the demand for such a book was too limited to justify the expense involved, furthermore, the present crowded condition of the mechanical department of the American Medical Association has made it impossible up to the present to issue such a volume. When the Association has completed its new building it may be possible to issue a volume containing abstracts of these public health laws.

The collection and classification of supreme court decisions regarding medical practice acts has been practically completed. We now have on hand about 200 supreme court decisions, classified and indexed, as well as reference to court reports. But little additional matter is needed to prepare this matter for publication and it will probably be issued in book form as soon as possible. The same work is also being carried on regarding decisions of supreme courts interpreting public health laws.

### COMMITTEE FOR THE RELIEF OF MAJOR CARROLL'S WIDOW

At the Washington Conference in 1909, a committee composed of one member from each of the three government services, one member from the District of Columbia and one member at large was appointed to raise by subscription the money necessary to pay off the mortgage on the home purchased by Major James Carroll for his family just previous to his death. This committee consisted of Major M. W. Ireland, chairman, U. S. A., Surgeon W. H. Bell, U. S. N., Surgeon John F. Anderson, U. S. P. H. & M.-H. S., Dr. John D. Thomas, District of Columbia, and Dr. A. S. von Mansfelde of Nebraska. It rendered a partial report at the Atlantic City Session in 1909. At the Chicago Conference on March 2, the committee reported that the entire indebtedness against the property had been wiped out and that the committee now held the property in trust for Mrs. Carroll and that it had in its possession $627.57 over and above all requirements which it was ordered to expend for the benefit of Mrs. Carroll and her family. The total amount raised by the committee, as shown by its final report, was $8,431.55. The committee wishes to call attention to the admirable and expeditious manner in which this money was raised as well as the generous response to requests for contributions. Members of the Association will remember the long delays and difficulties involved in collecting subscriptions for the various memorials which the Association has from time to time undertaken to establish. Most of them have required years of effort. The committee for the relief of Major Carroll's widow not only was able to subscribe and collect the entire amount needed in a very few weeks but actually collected more than was needed and finally found it necessary to publish several requests to the profession to cease sending in contributions.

### CONFERENCE ON A MODEL MEDICAL PRACTICE ACT

In accordance with the instructions of the House of Delegates, issued to the Committee at the Atlantic City Session in 1909, a joint conference with the Council on Medical Education was arranged for February 28 to March 2, 1910, in Chicago. The full proceedings of the Conference appear in the *American Medical Association Bulletin* for January, March and May, the January number being held until after the conference in order to include the proceedings. The three days' session was largely attended, as shown by the registration of 167. The proceedings constitute probably the most exhaustive and careful consideration of the question of medical practice ever secured. The discussion held Tuesday morning and evening and the four papers presented at the afternoon session on Tuesday, cover practically every phase of the question. The proceedings show clearly that we have by no means as yet secured unanimity among our own members as to the fundamental principles underlying the regulation of the practice of medicine and that much study and careful discussion will be necessary before uniformity can be secured, even on essential points. By instructions of the conference the work of formulating a model act was assigned to a committee appointed by the chair and consisting of Dr. C. S. Bacon, chairman, Chicago, Dr. S. D. Van Meter, Colorado, Dr. W. H. Sawyer, Michigan, Dr. F. J. Lutz, Missouri, and Dr. A.

R. Craig, Pennsylvania. To this committee was referred all the material on this subject in order that they might draft a bill for submission and further consideration. Dr. S. D. Van Meter of Colorado has submitted a bill as a basis for discussion and criticism, which has not yet been acted on by the committee. We submit it herewith for the consideration and criticism of the House of Delegates.

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## A BILL FOR AN ACT TO PROTECT THE PUBLIC HEALTH AND REGULATE THE PRACTICE OF MEDICINE

Be it enacted, etc.

Section 1. A board is hereby established to be known by the name and style of the State Board of Medical Examiners. Said board shall be composed of nine practicing physicians of integrity and ability, who shall be residents of, and have been duly licensed to practice medicine in this State, and who shall have been graduated from medical schools of high educational requirements and standing, and who shall have been engaged in the active practice of their profession within this State for a period of at least five years. Said board shall perform such duties, and possess and exercise such powers, relative to the protection of the public health and the control and regulation of the practice of medicine in this State as shall by law be prescribed.

Sec. 2. The Governor shall appoint nine physicians, who shall possess the qualification specified in Section 1 of this act, to constitute the members of said board. Said members shall be so classified by the Governor that the term of office of three shall expire in two, three in four and three in six years from the date of appointment. Biennially thereafter the Governor shall appoint three members, who shall posess the qualifications as specified in section 1 of this act, each to serve for the term of six years; and he shall fill vacancies in the membership of said board for unexpired terms as soon as practicable. Said board shall biennially elect a president, a vice-president and a secretary-treasurer from their membership, and shall adopt a seal, which they shall affix to all licenses issued by them. They shall, from time to time, adopt such rules and regulations as they may deem necessary for the performance of their duties, and a schedule of minimum educational requirements, which shall be without prejudice, partiality or discrimination as to schools of systems of practice of medicine. When an applicant for a license offers to the board satisfactory proof that he has complied with such educational requirements as are specified in said schedule, the board shall accept such proof as sufficient evidence of the educational qualifications of the applicant to entitle him to a license without examination. Said board shall meet in the city of ...................., on the first Tuesday of January, April, July and October of each calendar year, and at such other times and places as may be designated by them as necessary for the performance of their duties.

Sec. 3. Said board shall have authority to administer oaths, to summon witnesses and to take testimony in all matters relating to their duties. When the board in the transaction of any of their business, or in the conduct of any hearing, or when any person interested in any such business or hearing, shall desire to secure the presence or testimony of any person before said board, said board, or such person, may procure subpoenas from the clerk of the ........... Court of the county wherein such business or hearing is to be transacted or conducted before said board, and the clerk of such court is hereby directed to issue such subpoenas, in the name of the people of the State, commanding the persons whose names shall be given to such clerk by said board, or by such person so interested in such business or hearing, to appear before said board at a certain time and place fixed by said board for the transaction of such business or conduct of such hearing and then and there to testify in the matter of such business or in such hearing. If any person so commanded to appear and testify shall fail or refuse to obey such subpoena, he shall be dealt with by said ................ Court in the same manner and to the same effect as though such subpoena had commanded such person to appear and testify in a cause on trial in said court. Fees, or other charges or payments, which may be demanded by any person so commanded to appear and testify shall be only those which may be demanded by witnesses in causes in the .......... Court and only under the same circumstances. Such subpoenas shall be served in the same manner as are subpoenas for trials in the .......... Court, and they shall be in substantially the same form. Said board shall issue licenses to practice medicine to all persons who shall furnish satisfactory evidence of qualifications to do so under the provisions of this act and the rules and regulations of the board. Such licenses shall be signed by the president and attested by the secretary-treasurer of the board under their seal. It shall be the duty of the secretary-treasurer under the direction of the board personally or by a deputy duly authorized thereunto by said board to aid the several district attorneys of the State in the enforcement of this act and in the prosecution of all persons who have violated any of its provisions.

Sec. 4. No person shall practice medicine in this State unless he shall have made application to said State Board of Medical Examiners, through the secretary-treasurer thereof, upon such form and in such manner as shall be adopted and prescribed by said board, for a license so to do, and shall have obtained from said board and shall possess in full force and virtue a valid license so to do; and any person who shall practice medicine in this State without having made such application and having received and without still possessing such a license shall be deemed to have thereby violated the provisions of this act. All applicants for a license to practice medicine or for a restoration of any such license which have been revoked shall furnish the board with satisfactory evidence of good moral character.

Sec. 5. The manner of determining the qualifications of any person to practice medicine shall be such as shall be adopted by the State Board of Medical Examiners. Examinations of applicants for licenses to practice medicine shall be made by said board according to the methods deemed by them to be the most practicable and expeditious to test an applicant's qualifications. Each applicant shall be designated by a number instead of his name, so that his identity shall not be disclosed to the members of the board, until the examinations shall be graded. The subjects of written, oral or clinical examinations for applicants shall be as follows: Anatomy, physiology, chemistry, symptomatology, toxicology, pathology, surgery and obstetrics; but there shall be no examination on materia medica and therapeutics. An applicant's credentials relating to his general reputation, his preliminary education and the courses of study he has pursued; the degrees he has received; the number of years he has been engaged in the lawful practice of medicine; his experience in hospitals, medical departments of the army, navy and public health and marine-hospital service; licenses granted to him by other states and countries; and his experience as a teacher of medicine, shall be given due consideration by the board in determining his qualifications to practice medicine. When convinced by an investigation of an applicant's credentials that he is qualified to practice medicine the board may grant him a licence thereon without examination.

Sec. 6. Every person who shall receive a license from the State Board of Medical Examiners shall have it recorded immediately in the office of the recorder of deeds of the county in which he shall maintain an office for the practice of medicine, and shall likewise have it recorded in any county in which he shall practice medicine regularly. The recorder of deeds of each county in this State shall keep for public inspection, in a book provided for that purpose, a complete list and description of the licenses recorded by him. When any such license shall be presented to him for record he shall stamp or write upon the back thereof his signed memorandum of the date when such license was presented for record. If the name of any person shall not so appear in such book in any particular county in this State in connection with a description of such license provided for in this act, such fact shall be prima facie evidence in any civil or criminal action involving the practice of medicine by such person in such county that such person does not possess in full force or virtue a license to practice medicine in this State.

Sec. 7. The term practice medicine, as used in this act, is hereby defined to mean holding one's self out to the public as being engaged within this State in the diagnosis or treatment of diseases or injuries of human beings; or the suggestion, recommendation or prescribing of any form of treatment for the intended palliation, relief or cure of any physical or mental ailment of any person, with the intention of receiving therefor, either directly or indirectly, any fee, gift or compensation whatsoever; or the maintenance of an office for the examination or treatment of persons afflicted with disease or injury of body or mind; or attaching the title of M.D., surgeon, doctor, or any word or abbreviation to his name, indicative that he is engaged in the treatment or diagnosis of the diseases or injuries of human beings. If any person shall hold himself out to the public as being engaged within this State in the diagnosis or treatment of diseases or injuries of human beings; or shall suggest, recommend or prescribe any form of treatment for the intended palliation, relief or cure of any physical or mental ailment of any person with the intention of receiving therefor, either directly or indirectly, any fee, gift or compensation whatsoever; or shall maintain an office for the examination or treatment of persons afflicted with disease or injury of body or mind; or shall attach the title of M.D., surgeon, doctor or any word or abbreviation to his name indicative that he is engaged in this state in the treatment or diagnosis of diseases or injuries of human beings, and shall not then possess, in full force and virtue, a valid license to practice medicine without complying with the provisions of this act and in violation hereof. Nothing in this act shall be construed to prohibit gratuitous service in case of emergency, nor a lawfully practicing physician of another state or territory from attending a particular case in this state.

"[nor the practice of religious tenets or religious rites or ceremonies as a form of religious worship or devotion without charge or compensation for the administration thereof."

The foregoing has no just place in a Model Medical Act, but is recommended as the best manner of meeting church opposition. When it becomes necessary insert this clause in Section 7.

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"Nor to prohibit commissioned surgeons of the United States Army, Navy or Public Health and Marine-Hospital Service from performing their lawful duties in this state as such."

The foregoing is unnecessary, but it does no harm.

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"Nor to prohibit any person from engaging in the administration of massage or similar manual treatment, when not representing himself as a doctor, physician or surgeon."

The foregoing has no just place in a Model Medical Act, but is recommended as the best manner of meeting opposition from the so-called "non-drug" doctors, such as osteopaths, chiropractics, neuropaths, etc. When it becomes necessary insert this clause in Section 7.]

Sec. 8. The State Board of Medical Examiners may refuse to grant, or may revoke, a license to practice medicine in this state, and may cause a licentiate's name to be removed from the record in the office of any recorder of deeds, upon any of the following grounds, to-wit: The employment of fraud or deception in applying for or securing a license, or in passing the examination provided for in this act; the practice of medicine under a false or assumed name, or in personation of another physician of this state or of any state, territory or foreign country, of a like or different name; the conviction of a felony or of a crime involving moral turpitude; habitual intemperance in the use of ardent spirits, narcotics or stimulants to such an extent as to incapacitate for performance of professional duties; the procuring or aiding or abetting in procuring, or attempting to procure a criminal abortion; negligent or ignorant malpractice resulting in the permanent injury or the death of the patient; the obtaining of a fee, either directly or indirectly, either in money or in the form of anything of value, or in the form of a financial profit, either as personal compensation, or as compensation, charge, profit or gain for an employer, or any other person or persons, on the representation that a manifestly incurable, sick, diseased or injured condition of any person can be permanently cured; causing the publication, circulation, exhibition or display publicly of an advertisement, notice or information of any medicine or means whereby the monthly periods of women can be regulated, or the menses, if suppressed, can be reestablished, or whereby an abortion can be accomplished; causing the publication, circulation, exhibition or display publicly of any advertisement relative to any disease of the sexual organs, or relative to the treatment, alleviation, palliation, cure or prevention of any disease, weakness or condition of the sexual organs.

Sec. 9. Said board in determining whether any applicant for a license to practice medicine is morally, educationally and otherwise qualified to receive such a license shall upon their own initiative make diligent inquiry and investigation whether such an applicant has at any time done any of the acts constituting any of the foregoing grounds; and they may refuse to grant a license to practice medicine to any person whom after such inquiry and investigation they shall find guilty beyond a reasonable doubt of having done any of such acts. But said board shall not refuse to grant such a license under such circumstances before such applicant has had reasonable opportunity, and at least thirty days' notice, to appear before the board in person and by counsel and present in his behalf such statements, testimony, evidence and argument as he may desire to call to the attention of the board. For the purpose of considering the revocation of any license to practice medicine said board shall have the power upon their own initiative to take notice of the commission by any person holding such a license of any of the acts constituting any of the foregoing grounds, and may make an investigation to determine the probability of the commission of any such act by any such person, and, if they find such probability great, they shall notify such person of such finding, and they shall fix and give thirty days' notice to him of the time and place and the particular grounds when, where and upon which they will conduct a hearing for the presentation of evidence as to whether he has committed any of said acts constituting any of such grounds. At such hearing such person shall be accorded a reasonable opportunity to present to the board in his defense in person and by counsel, such statements, testimony, evidence and argument as he may desire to call to the attention of the board. Any person may file a complaint before the State Board of Medical Examiners against any person who holds a license to practice medicine under the laws of this state, or who is an applicant for such a license, with a view of having the board revoke or refuse to grant such a license, on any of the foregoing grounds. In case any such complaint is filed against any such person, he shall be given a hearing thereon by the board. A copy of such complaint, together with a notice of at least thirty days of the time and place when said board will conduct a hearing thereon, shall be given each person against whom such complaint has been made and he shall be accorded a reasonable opportunity to present to the board in his defense in person and by counsel, such statements, testimony, evidence and argument as he may desire to call to the attention of the board. The State Board of Medical Examiners may at any time after the refusal or revocation of a license as aforesaid, grant or restore, such a license to the person affected. Any person to whom such a license is so restored shall pay to the secretary-treasurer a fee of ten dollars upon the restoration thereof. The action of the State Board of Medical Examiners in refusing to grant or in revoking a license to practice medicine may be reviewed by the ........ Court under the common law writ of certiorari.

Sec. 10. Any person who shall practice medicine in this state without complying with the provisions of this act, or any person who shall violate any of the provisions of this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be punished by a fine of not less than fifty dollars nor more than three hundred dollars, or by imprisonment in the county jail for not less than ten days nor more than thirty days, or by both, in the discretion of the court. Any person who shall present or attempt to file as his own the diploma or certificate or credentials of another, or who shall give false evidence or present any altered or forged instrument or writing of any kind to the State Board of Medical Examiners, or any member thereof, in connection with an application for a license to practice medicine, or in any hearing before said board, or who shall practice medicine under a false or assumed name, or who shall falsely personate another practitioner of a like or different name, shall be deemed guilty of a felony, and upon conviction thereof shall be punished by imprisonment in the State Penitentiary for a term of not less than one year, nor more than ten years, at hard labor.

Sec. 11. Each applicant for a license to practice medicine shall pay to the secretary-treasurer of the State Board of Medical Examiners a fee of twenty-five dollars, which shall accompany the application.

Sec. 12. All fees received by the State Board of Medical Examiners and all fines collected by any officer of the law under this act, shall be paid to the secretary-treasurer of said board, who shall, at the end of each and every month, deposit the same with the State Treasurer, and the said State Treasurer shall place said money so received in a special fund to be known as the fund of the State Board of Medical Examiners, and shall pay the same out on warrants drawn by the Auditor of the State therefor, upon vouchers issued and signed by the president and secretary-treasurer of said board. Said moneys so received and placed in said fund may be used by the State Board of Medical Examiners in defraying their expenses in carrying out the provisions of this act. The secretary-treasurer of said board shall keep a true and accurate account of all funds received and all vouchers issued by the board; and on the first day of ........ of each year he shall file with the governor of the state a report of all receipts and disbursements for said board for the preceding fiscal year. Members of said board shall receive a per diem for the time during which they shall be actually engaged in the discharge of their duties; and the secretary-treasurer shall receive a salary; said per diem and salary shall be fixed by the board, and, together with other expenses, shall be paid out of said fund of the State Board of Medical Examiners.

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### COOPERATION IN THE CONFERENCE ON UNIFORM STATE LAWS CALLED BY THE NATIONAL CIVIC FEDERATION

Two members of the National Legislative Committee and the General Secretary of the American Medical Association represented the American Medical Association in this conference which was composed of members of the various state commissions of uniform laws, representatives of most of the important commercial and civic clubs and other organizations of the country, including the insurance companies and labor organizations. Dr. Simmons was made secretary of the committee on resolution, and succeeded in getting incorporated into the resolutions which were adopted by the conference, one favoring uniform state laws on Foods and Drugs, one on Uniform Vital Statistics and one favoring a uniform medical practice act. The Civic Federation has since undertaken to establish branches in each of the states as state councils on uniformity in laws and it is hoped that through these agencies the efficiency of the work of the state commissions on uniform state laws will be greatly increased. It is also expected that the cooperation of the Civic Federation and its branches and that of the commissions on uniform laws will help greatly in securing the passage of uniform laws on vital statistics, pure foods and drugs, medical practice and other subjects in which the medical profession is vitally interested.

### PROSPECTIVE STATE LEGISLATION

During the winter of 1910-11 the legislatures will meet in thirty-six states. The indications are that there will be a flood of objectionable bills introduced, especially osteopathy, optometry, anti-vivisection, anti-vaccination, Christian Science, drugless healer, etc. Only by the most untiring efforts and ceaseless vigilance can the passage of these pernicious measures be prevented. The Committee and the Bureau therefore ask for the heartiest cooperation of state associations and legislative committees as well as the support of all members of the organization in their efforts to prevent the breaking down of laws for the protection of the public health in the various states.

### BUREAU OF PUBLICITY

The Committee has learned from the experience of past years, both in national and state legislative campaigns, that any effort to secure the adoption of desirable laws for the protection of the public health, either in state legislatures or in Congress, must, if successful, be preceded by a campaign of publicity and public education in order that the people and their representatives in legislative assemblies may understand the necessity of such laws. Education not only of the general public but of the medical profession as well is also a necessary part of any campaign for better conditions. For many years the use of newspapers, magazines and other means of influencing public sentiment has been practically monopolized by commercial interests who had personal and in many cases mercenary reasons for desiring the support of the public. The medical profession in past years has been far too negligent in this particular. In order to accomplish anything of permanent value we must have the support and cooperation of public sentiment. This can only be secured through public enlightenment of our aims and motives. Public education must necessarily precede legislation and the only rational plan is for such instruction to be in the hands of the same body as that charged with the oversight of legislative matters. Both for financial reasons and because the committee did not desire to conflict with any other committees or boards of the Association, the organization of a Department of Publicity has been deferred although the necessity for it has been apparent. The Committee, therefore, strongly urges that it be authorized to establish a press bureau for the education of public opinion both on general health topics and as a precedent measure for any legislative campaign. The time has passed when any fears as to the danger of such a course being regarded as undignified and unprofessional should deter us. If the American public is not informed and enlightened by the reputable medical profession it will be biased and influenced by the quack, the charlatan, the manufacturer of impure and adulterated foods and drugs and by all the other selfish interests which have so long preyed on the people.

Respectfully submitted,

Charles A. L. Reed, Chairman,
Charles S. Bacon,
George W. Gay,
Frederick R. Green, Secretary.

### DR. REED TENDERS RESIGNATION

*To the President and House of Delegates:*—I beg leave herewith to present my resignation as a member of the Committee on Medical Legislation, to become effective on the selection of my successor at the present session of the Association.

In taking this step at this time I deem it important to explain that I tendered my resignation to the President in October of last year, but that I subsequently withdrew the same on the representation that it was impracticable to fill the vacancy, *ad interim*, and I knew that the pressure of duties on the Committee made it of the highest importance that it should be in working condition during the legislative and congressional period embraced by the last eight months. Now, however, that that period has practically passed, or at least will conclude with the adjournment of the Congress within a few weeks, and in view of the fact that the House of Delegates now in session can fill the vacancy thus created, I renew my resignation for the reasons that actuated me in the first instance.

### EXPANSION OF LEGISLATIVE ORGANIZATION

I desire that these reasons shall be distinctly understood. In the first place I have been honored with this position for the last eight years, which I look upon as a longer period than should be occupied by any one man in the chairmanship of any one committee in an organization of this representative character. In the next place, in view of the imperative demands of my practice, the tax in point of time, money and energy thus imposed is more than should be expected of any one person for so long a time. And, finally, the responsibilities in behalf of all the people, responsibilities that naturally rest on this Association, responsibilities that it cannot and ought not evade, but responsibilities that must be discharged through your legislative organization, make it imperative that that legislative organization, while retaining its present essential features, must be placed upon a different basis. I urge this view in full recognition of the high efficiency that has been displayed by your National Legislative Council and by the National Auxiliary Legislative Committee, the continuance of both of which, in their present forms, I urge as vital to the perpetuity of our influence in determining affairs in this country. The central Legislative Committee ought, however, to be brought into association and correlation with every other committee of whatever character, the object of which is to disseminate knowledge for the safe guidance of the people. This can only be done by a strong cohesive organization in which here must be the largest liberty of individual opinion but in which the wisdom of the majority shall control and from which mere obstructionists must be eliminated with as little ceremony as may be compatible with good manners and established orms.

The whole legislative and educational organization must furthermore be given status as a Council which, in this Associaion has come to imply the maximum of dignity and force. But even if all these changes were made, this propaganda in behalf of the people must still fall short of a full measure of success unless it is organized on what, for a better designation, must be called business principles. By this I mean that the Bureau of Legislation at Chicago, efficient as it is, must be strengthened and its scope widened. The Chairmanship of the Council of Legislation must command all the time of a capable member who should be adequately paid for his labors. The time has assed when any organization, however altruistic its purposes, an throw the whole burden of its duties on a single person nd expect to pay the obligation by the honor thus conferred. Then let every person take his turn and do his duty in a desigated place but refrain from participation in sporadic movements for personal conspicuity to be attained by the usurpaion of functions already provided for in the more broadly rganized propaganda.

### COOPERATION IN STATE LEGISLATION

And now that I have said this much I feel that, in justice to he House of Delegates, to my successors, and to myself, I canot permit my resignation to go forward without mentioning ertain other impressions that have been forced on me by my ight years' experience but, which, being personal to myself, may not with propriety be embraced in the formal report of he Committee. These impressions relate to legislative work n, respectively, the states and the Nation. With respect to he states, I may observe that the measures pending before the arious legislatures have been kept under the cognizance only hrough the instrumentality of the Bureau of Legislation. This ught to be kept up and the Bureau ought to be in position, herever occasion requires, to furnish state legislative committees with literature for their information and guidance. It s, however, to my mind extremely doubtful whether the ational organization should ever take a hand in either the romotion or defeat of proposed legislation in any of the states, ven when state committees, from a probably mistaken sense of eakness, should request such cooperation.

For any member of the National organization, not a resident f a given state, to appear before the legislature of that state ther for or against a given measure, would, under ordinary rcumstances, tend to prejudice the cause at issue before the gislators.

### UNIFORMITY, LICENSURE AND RECIPROCITY

Model acts or standard forms of legislation for the promoon of the general welfare, but coming under the purview of he police powers of the respective states may, however, be rmulated with propriety by a central organization and sent o the different state organizations for presentation to their espective legislatures. In this connection, however, it is to be emembered that the variations in the constitutions of different ates necessitate corresponding variations in the statutes enacted in pursuance and by authority of such constitutions. This fact of itself must defeat the absolute uniformity of state legislation along certain lines however much the principles of such legislation may be in unison.

The principle of uniformity in state legislation governing the practice of medicine has been urged with respect to reciprocity in state licensure. At present no two states have identical laws, yet reciprocity in licensure obtains to some extent between a majority of states. From this it would seem that absolute uniformity of statutes is not essential to the object in view. Most states extend reciprocity only to those who have procured license by examination and decline to extend the same privilege to members of the profession, whether graduates or not—whether lowly or honored, humble or distinguished—who obtained license by registration at the time the respective acts went into effect. Every state that maintains this restriction perpetrates not only an injustice but an insult not only to the majority of the reputable physicians within its own borders, but to those within the borders of every other state in the Union. The pretention that the so-called "legal practitioners"—those to whom license was given on years-of-practice qualification—are any less qualified intellectually or morally, in any one state than in another, or that they are any more disposed to migrate to or from one state than to or from some other state, would probably be exploded in the light of the real facts were they once authoritatively ascertained. That there is any essential inequality between the qualifications of the examiners themselves when selected by political methods in the different states is, likewise, probably far from the facts. That these selections are generally, but not always made on a political basis, is a matter of common knowledge. "Who shall examine the examiners?" has therefore come to be something more than a derisive pleasantry. It is indeed probably true that the majority of state examiners selected by these political methods and vested with the duty of judging the work of our ablest universities, could not to-day pass the matriculation examination, let alone the examination for licensure prescribed by themselves and by their respective boards.

The proscriptive clause in many of the state laws, or in the regulations passed in pursuance of such laws, whereby medical teachers are excluded from membership in examining boards, not only deprives these bodies of the ability represented by the leaders of the profession in their respective states, but is an obvious invasion of personal rights that would not stand the test if carried to the courts. But these conditions are so nearly uniform in the respective states that they to-day, under the comity of states and with but slight adjustment of differences, demand the very general adoption of a policy of wide open reciprocity. At any rate these and other matters demand most careful consideration before anything like a standard act is promulgated under the auspices and with the approval of the American Medical Association.

### EXISTING STATE MEDICAL LAWS AND THE PROPAGATION OF CULTS

One of the other matters to which I invoke your attention is the fact, as I see it and believe it to exist, that existing state medical laws are directly responsible for the propagation of sectarianism in medicine and that they have failed properly to protect the people against ignorant, unscrupulous, rapacious and otherwise dangerous cults. This conclusion, forced on me by several years' study of legislative, professional and social tendencies, is to-day confirmed by conditions as they actually exist, with only a few honorable exceptions, in every state in the Union. These conditions call for very careful study of cause and effect—too comprehensive to be treated in detail at this time—but I feel that I may take opportunity only to say that these laws, while originally seeking to do away with sectarianism based on half knowledge or no knowledge, did so by legitimatizing the better educated sects in existence at the time the laws were passed. But the sects were recognizd either by separate boards, or in the personnel of so-called mixed boards, the latter arrangement being effected in some instances by agreement with the appointing power. In each instance "systems" or "methods of cure" were recognized in some way in the preliminary registrations or by special questions on therapeutics in the later examinations for licensure.

Now if these sects were recognized why should not other sects be recognized? And if these particular sects may prescribe the knowledge, both general and special, by which they shall become legitimatized, why may not other sects prescribe the knowledge, both general and special, by which they in turn shall be legitimatized? The error was in the beginning when there was, as there is now, practical agreement between these better educated sects on what shall comprise the general fundamental knowledge that ought to be possessed by everybody who professionally assumes the care of disease or injury. But this was at a time when the special knowledge that characterized such other educated sects was more insisted on than it is to-day. In other words each such sect then went just as far as the others would let it in getting its peculiar pills and potions into the statute books. Varnish it as you may, that was the fact then, and it remains a fact to-day.

But a law differs from a statute in that the law is a regulation and only such regulation of society as the people will support. It is important to bear this distinction in mind because, whatever my be the provisions of the statutes, the people never have, never will, and, in my opinion, never ought to give the force of law to any statute that, even inferentially or constructively, seeks to give monopoly of cure to either men, methods, cults or systems. I am convinced that, whatever may be placed in the statutes, the most that the law will ever do will be to prescribe and enforce a common, safe and rational foundation for all persons or plans of cure—all cults, systems or denominations of medicine—that have for their object the professional care and conduct of disease or injury of the human family.

This foundation must consist of a knowledge not only of the fundamental studies for everybody, but of human anatomy, physiology, bacteriology, pathology, diagnosis, hygiene, sanitation, obstetrics and surgery, and such allied branches as may be essential to a comprehension of these complex topics. The always more or less speculative question of remedies and cure in their broadest sense ought to be and must be left to the intelligence of one thus otherwise equipped. All cults standing on such a foundation may be considered safe. The attempt to do more will defeat the object in view as that object is to-day being defeated. The attempt to do less will be to fail to give society the protection to which it is entitled. To defer the adoption of this rational basis for our medical legislation will be to await development and multiplication of ignorant cults and isms until by their strength and establishment the necessary reform will be rendered either difficult of accomplishment or impossible. These, too, are considerations to be taken into account before a model practice act is promulgated in the name of the American Medical Association.

### THE GUARDIANSHIP OF VICTORY

A victory is not worth gaining unless its fruits are safeguarded against reprisals. This is as true in the matter of progressive medical legislation as it is in warfare between nations. It is, for example, hardly worth while to work seventeen years for a food and drugs act if its power to protect the people is destroyed by executive interpretation in the short space of seventeen months. It is not worth the time and money to establish a national quarantine if by virtue of its uninfluential status it can be browbeaten into ineffectiveness by rapacious commercial interests at infected ports. It is not worth while to create laboratories for hygienic investigation if we are to permit them to ignore the investigation of unknown causes underlying diseases that threaten to decimate the people. We must stand by every vantage point gained in this great movement for the promotion of the general welfare. This can be done only by still further perfecting our already splendid organization and by still further and persistently disseminating its influence throughout society.

To-day, in the movement for a National Department of Health, the isssue is fairly joined between the enlightened element of society under the leadership of the medical profession on the one hand and the ignorant and credulous element of society under the leadership of sinister cults on the other hand. The side will win whose cause best subserves the welfare of the people and that makes the people understand that fact. By this criterion alone shall the contestants be measured and weighed in the final arbitrament. And let it be remembered that this final arbitrament must come at the hands of the plain people whose interests are always first to be considered and without whose support all movements must stop short of progress. This being true, it devolves on every person conversant with the merits of this great movement for the conservation of public health, and on which is predicted our public wealth, to recognize in this question the paramount political issue of the present and succeeding campaign.

### THE IMPORTANCE OF POLITICAL ACTION

An issue becomes an issue when it acquires a vote-determining power and not until then. The sooner this particular question thus becomes an issue to be discussed on the hustings and determined at the polls the better for the American people. I am utterly opposed to those who protest against permitting this question to go into politics. The sooner and further we put it into politics and the harder we drive it home with effective organization and courageous leadership the sooner will the voice of science and humanity become effective in the promotion of the general welfare. In that campaign I hope always to be found at my place in the ranks.

I desire to thank the House of Delegates and the members of the American Medical Association for their prolonged manifestations of favor and confidence.

Very respectfully, Charles A. L. Reed.

Cincinnati, Ohio, May 20, 1910.

Dr. Everett J. McKnight, Connecticut, called attention to the omission from the report of the Committee on Medical Legislation of what had been accomplished in Connecticut, although he had sent a report of this work to the Assistant Secretary.

It was moved and seconded that the report of Dr. McKnight be included as a part of the report of the Committee on Medical Legislation.

The motion was carried.

The report was then referred to the Reference Committee on Legislation and Political Action.

The President: We will now hear the report of the Council on Medical Education, Dr. Arthur D. Bevan, Illinois, Chairman.

Dr. Bevan then read the report, which was referred to the Reference Committee on Medical Education.

## Report of the Council on Medical Education

*To the Members of the House of Delegates of the American Medical Association:*

During the past year the second tour of inspection of the medical colleges of the United States has been completed and much additional data collected. From the fact that the medical colleges of Canada furnish so many medical practitioners to the various states and requests for reliable information regarding them has been lacking, these colleges were included in the second tour of inspection so that now the Council has first hand information regarding all the medical schools of the United States and Canada. Since the completion of the actual inspection work the reports regarding the various colleges have been carefully reviewed and compared department by department with a view of finding the average condition. Incidentally, a mass of other data received from reliable sources was found to corroborate the data obtained by the inspections. From this careful study of the conditions actually existing and with a view of the immediate needs of medical education, the following outline of the "Essentials of an Acceptable Medical College" was prepared. Omitting from consideration a number of the utterly worthless medical colleges this outline represents in the majority of points a line considerably below the average of conditions existing in all the colleges of the United States and Canada. The outline is as follows:

1. Strict enforcement of all standards and requirements, the college itself to be held responsible for any instances where they are not enforced.
2. A requirement for admission of at least a four-year high-school education superimposed on eight years of grammar school work, or the actual equivalent education, this to consist of 14 units as defined by the College Entrance Examining Board and required by the Carnegie Foundation for the Advancement of Teaching.
3. As soon as conditions warrant, the minimum requirement for admission should be enlarged to include at least one year's college work each in physics, chemistry and biology and a reading knowledge of at least one modern language, preferably German or French.
4. A requirement that students be in actual attendance in the college within the first week of each annual session and thereafter.
5. That actual attendance at classes be insisted on except for good cause, such as for sickness, and that no credit be given under any circumstances for less than 80 per cent. of attendance on each course.
6. That advanced standing be granted only to students of other acceptable colleges and that in granting advanced standing there shall be no discrimination against the college's full-course students.
7. Careful and intelligent supervision of the entire school by a dean or other executive officer who holds, and has sufficient authority to carry out, fair ideals of medical education as interpreted by modern demands.
8. A good system of records showing conveniently the credentials, attendance, grades and accounts of the students.
9. A fully graded course covering four years of at least 30 weeks each, exclusive of holidays, and at least 30 hours per

week of actual work; this course should be clearly set forth in a carefully prepared and printed schedule of lectures and classes.

10. Two years of work consisting largely of laboratory work in thoroughly equipped laboratories in anatomy, histology, embryology, physiology, chemistry (inorganic, organic and physiologic), bacteriology, pathology, pharmacology, therapeutics and clinical diagnosis.

11. Two years of clinical work largely in hospitals and dispensaries, with thorough courses in internal medicine (including physical diagnosis, pediatrics, nervous and mental diseases), surgery (including surgical anatomy and operative surgery on the cadaver), obstetrics, gynecology, laryngology, rhinology, ophthalmology, otology, dermatology, hygiene and medical jurisprudence.

12. At least six expert, thoroughly trained instructors in the laboratory branches, salaried so they may devote their entire time to instruction and to that research without which they cannot well keep up with the rapid progress being made in ieir subjects. These instructors should rank sufficiently high ) have some voice in the conduct of the college. There should lso be a sufficient number of assistants in each department to ook after the less important details.

13. The medical teaching should be of at least the same egree of excellence as obtains in our recognized liberal arts olleges and technical schools.

14. The members of the faculty, with a few allowable exceptons, should be graduates of institutions recognized as medical olleges and should have had a training in all departments of edicine. They should be appointed because of their ability s teachers and not because they happen to be on the attendg staff of some hospital or for other like reasons.

15. The college should own or entirely control a hospital in der that students may come into close and extended contact ith patients under the supervision of the attending staff. The ospital should have a sufficiently large number of patients to ermit the student to see and study the common varieties of urgical and medical cases as well as a fair number in each of e so-called specialties.

16. The college should have easily accessible hospital facil- ies of not less than 200 patients which can be utilized for clinical teaching (for senior classes of 100 students or less), these patients to represent in fair proportion all departments of medicine.

17. The college should have additional hospital facilities for children's diseases, contagious diseases and nervous and mental diseases.

18. Facilities for at least five maternity cases for each senior student, who should have actual charge of these cases under the supervision of the attending physician.

19. Facilities for at least 30 autopsies during each college session (for senior classes of 100 students or less).

20. A dispensary, or out-patient department, under the control of the college, the attendance to be a daily average of 60 cases (for senior classes of 100 students or less), the patients to be carefully classified, good histories and records of the patients to be kept and the material to be well used.

21. The college should have a working medical library to include the more modern text and reference books and 10 or more leading medical periodicals; the library room to be easily accessible to students during all or the greater part of the day; to have suitable tables and chairs and to have an attendant in charge.

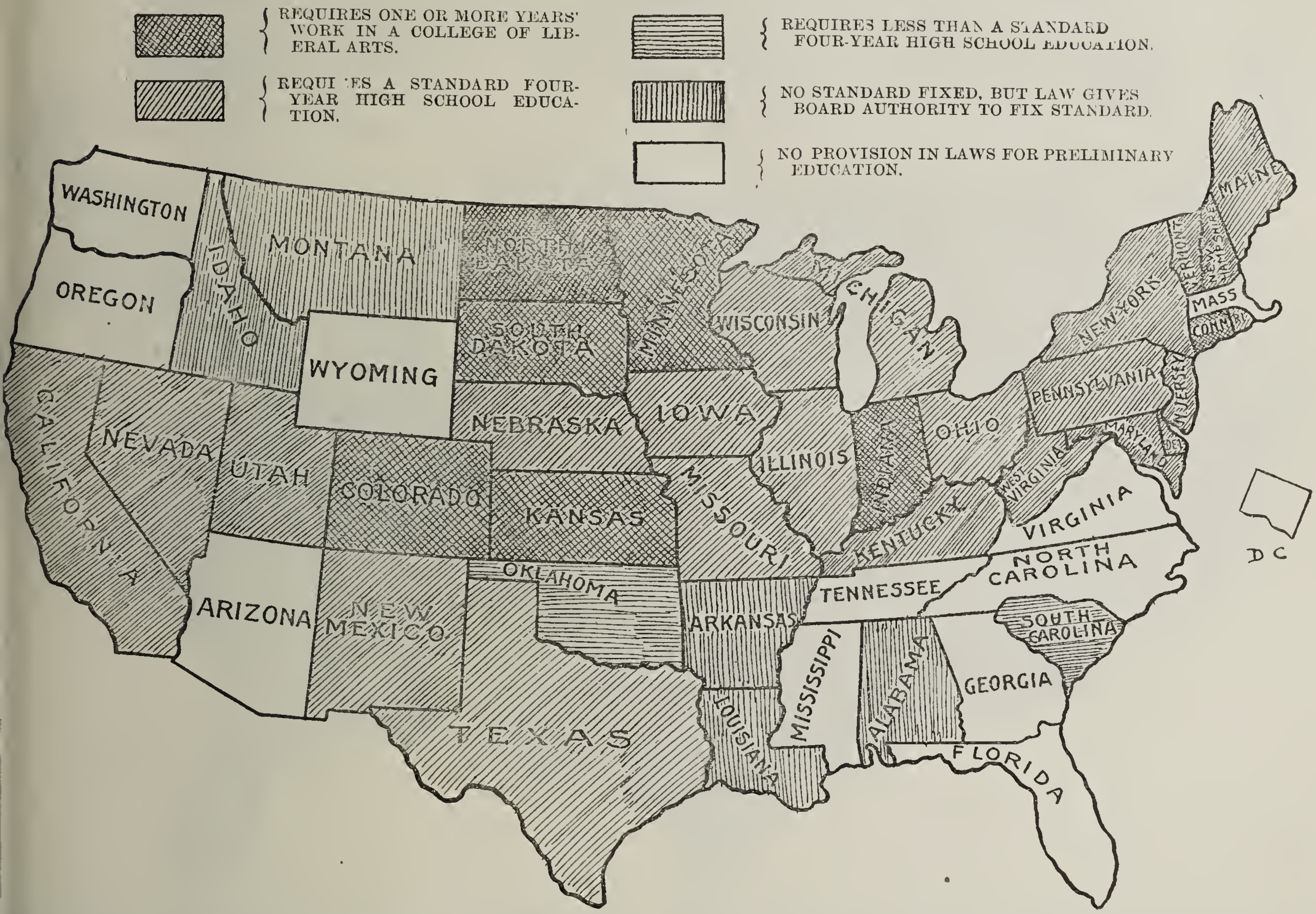
22. A working medical museum having its various anatomic, embryologic, pathologic and other specimens carefully prepared, labeled and indexed so that any specimen may be easily found and employed for teaching purposes.

23. A supply of such useful auxiliary apparatus as a stereopticon, a reflectoscope, carefully prepared charts, embryologic or other models, manikins, dummies for use in bandaging, a Roentgen ray or other apparatus now so generally used in medical teaching.

24. The college should show evidences of reasonably modern methods in all departments and evidences that the equipment and facilities are being intelligently used in the training of medical students.

25. A statement in which the college's requirements for admission, tuition, time of attendance on the classes, sessions and graduation are clearly set forth should be given, together with complete lists of its matriculants and latest graduating class in regular annual catalogues or announcements.

CHART 1.—STATE BOARD REQUIREMENTS OF PRELIMINARY EDUCATION



DEFINITIONS OF A MEDICAL COLLEGE* AND A MEDICAL SCHOOL†

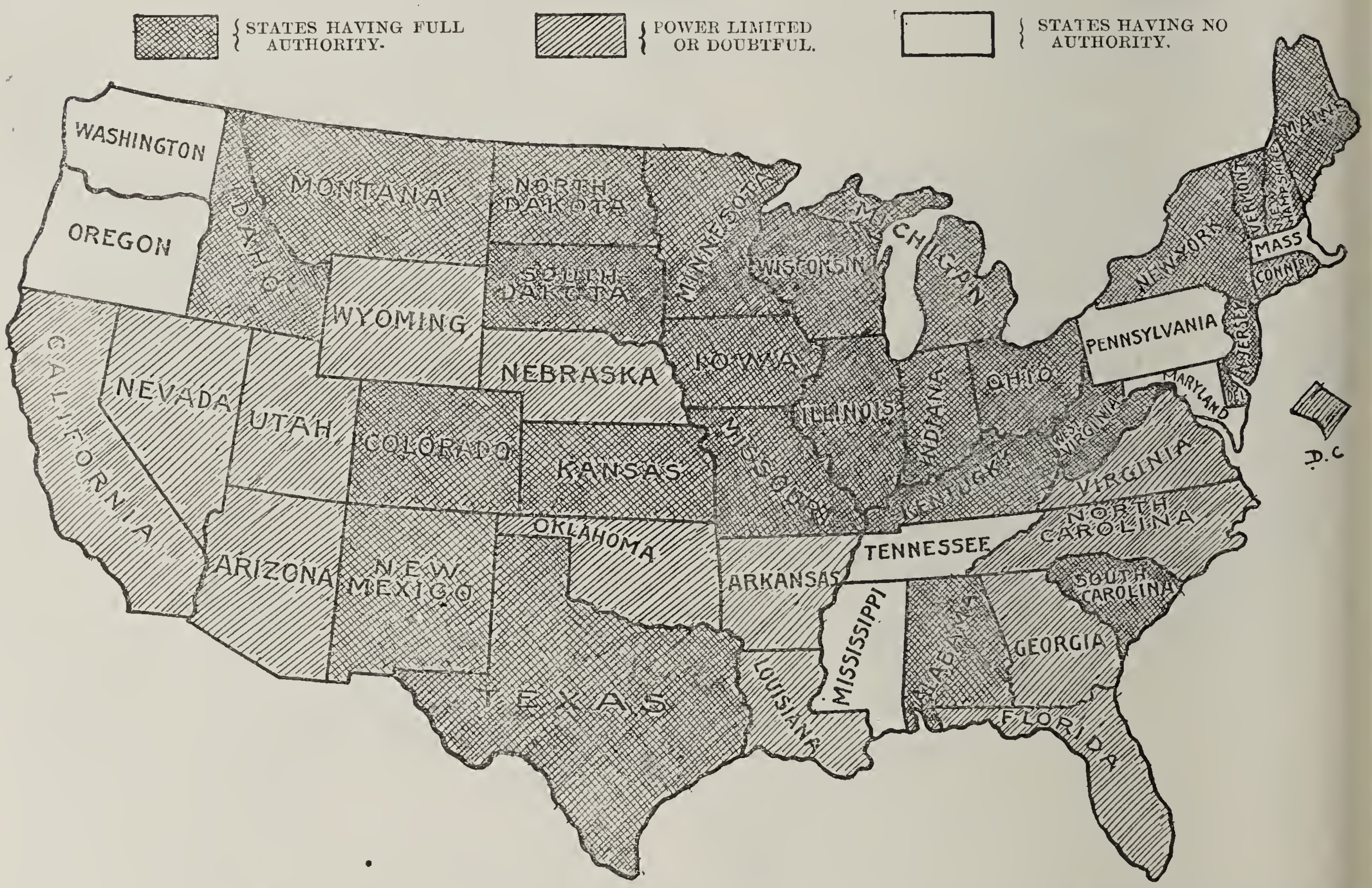
"An institution to be ranked as a medical college must have at least six (6) professors giving their entire time to medical work, a graded course of four full years of college grade in medicine, and must require for admission not less than the usual four years of academic or high-school preparation, or its equivalent, in addition to the preacademic or grammar school studies."

By a medical school as differentiated from a medical college is meant a part of a university requiring for admission the equivalent of two years of collegiate work and which offers instruction of not less than two years' duration, leading to the degree of Doctor of Medicine.

Taking the above outline as a standard, although, as already stated, it represents in most particulars a very low average of the conditions actually existing, the colleges were rated on a civil service basis on the scale of 100. The data relating to each college were grouped under ten general heads in such manner that the groups would have as nearly equal weight as possible, each group allowing a possible 100 points (10 per cent.) and the ten groups aggregating, therefore, a possible 1,000 points (100 per cent.). The ten heads under which the data were arranged are as follows:

1. Showing of graduates before state boards.
2. Requirements and enforcement of satisfactory preliminary education and the granting of advanced standing.
3. Character of curriculum.
4. Medical school buildings.
5. Laboratory facilities and instruction.
6. Dispensary facilities and instruction.
7. Hospital facilities and instruction.
8. Faculty, number of trained teachers, all time instructors, especially of the laboratory branches and extent of research work.
9. Extent to which the school is conducted for properly teaching the science of medicine rather than for the profit of the faculty directly or indirectly.
10. Libraries, museums, charts, etc.

Chart 2.—State Boards Having Authority to Determine the Reputability of Medical Colleges



Those colleges receiving a rating of 70 per cent. or above are listed in Class A, those receiving a rating of from 50 to 70 per cent. in Class B, and those rated below 50 per cent. in Class C. Class A colleges may be considered, therefore, as acceptable colleges, those of Class B as colleges which require certain definite improvements to make them acceptable and those of Class C as colleges in which complete reorganization would be required to make them acceptable.

Following the first tour of inspection, the Council was criticized in certain quarters for not publishing outright its classification of medical colleges. That classification was not published, however, because the Council desired to give a number of colleges which were contemplating improvements the opportunity to make good. The delay has been more than justified. Many colleges have secured additional facilities, numerous mergers have been brought about and, on the whole, the situation has greatly improved. The general conditions as revealed by the first inspection, however, were given the widest possible publicity so that at the present time any plea of ignorance of the demands of modern medicine is unworthy of consideration and further delay in the presentation of a classified list would not be justified and would unnecessarily prolong the existence of low standards.

With the knowledge that only about half of our medical schools are teaching medicine in an acceptable way and with the power possessed by the majority of the state boards to determine what constitutes a medical school in good standing, it would seem easily possible for the state boards, acting either independently or conjointly, to bring about a rapid improvement.

The teaching of modern medicine is an important function. The turning out of ignorant and ill-qualified physicians is too great a menace to the community to be permitted. The only legal barrier which can protect the public from such incompetent practitioners is the state medical licensing board. There are, however, many factors which are causing confusion in standards and a serious division of responsibility. Medical licensing boards often have to contend with the inconsistency of legislatures, which, after adopting strong medical practice acts providing for fair educational standards, proceed to seriously limit the board's power by granting special legislation for various medical sects with educational standards invariably lower than those required of medical practitioners. Such special legislation has caused much confusion in standards, is unfair to medical practitioners and is a wrong to the sick and afflicted who have reason to expect that only thoroughly qualified men will have the legal right to call themselves "doctors" or "physicians."

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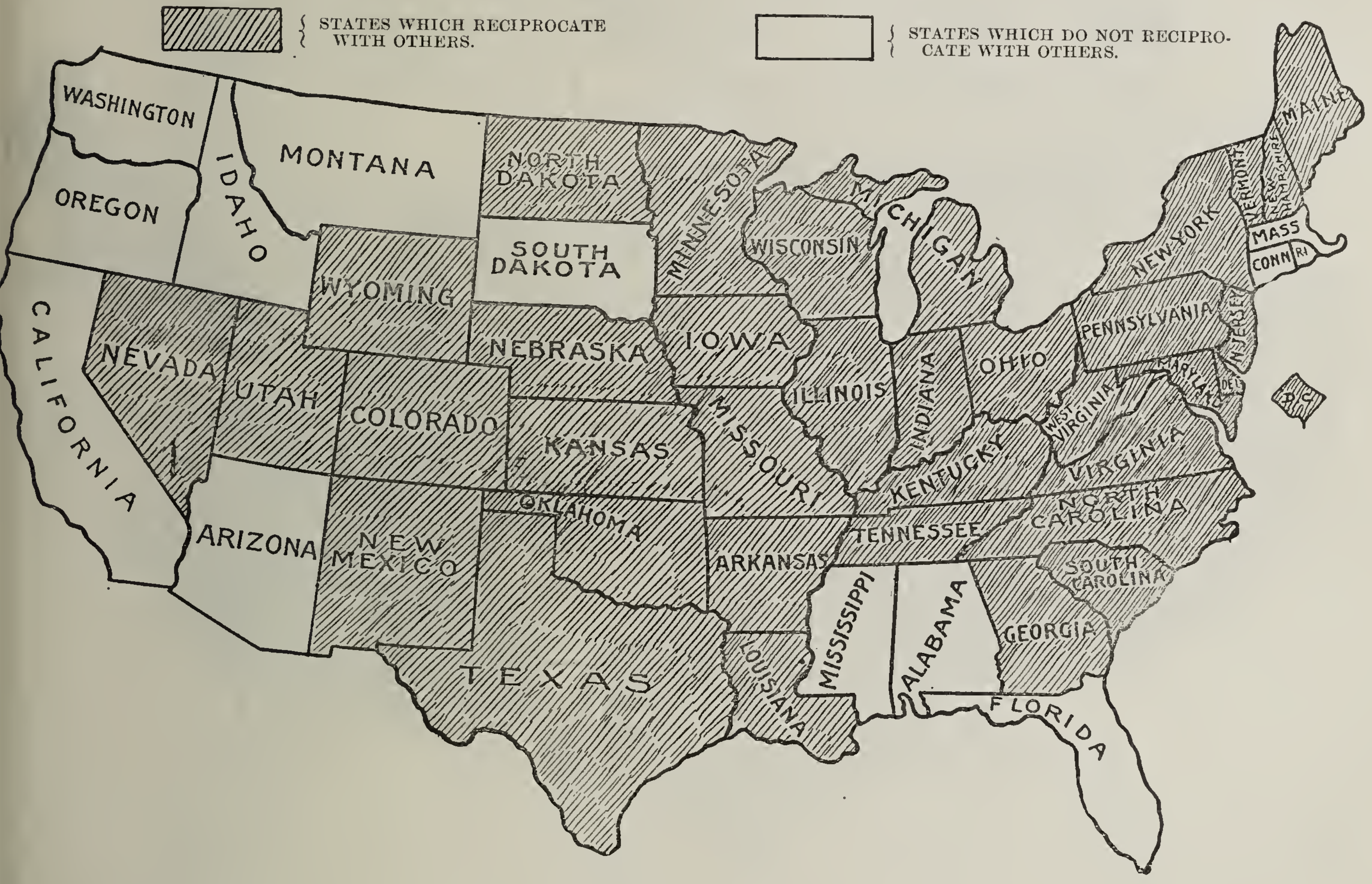
* This definition of a college is based on that given in the revised ordinances of the State of New York, and which also was adopted by the Carnegie Foundation for the Advancement of Teaching as their standard.

† Based on the definition of the term "school," adopted in 1909 by the Association of American Universities.

It is of extreme importance, therefore, that each state should have a single licensing board, that its members should be selected because of their special fitness for the work involved, and that this board should be given full authority in the premises. Instead of that we now have in our 49 states and territories 82 different boards of medical examiners including the sectarian boards. In some states the responsibility for defending the public against ignorance, incompetence and fraud, is divided among as many as four separate boards.

It is also of great importance that in each state there should be but one portal of entry to the practice of medicine. Instead of that we have in some states one portal for those with ample qualifications but special gateways by which ignorant and incompetent practitioners, professing to adhere to special methods of treatment, can also get in. In the majority of states after the representatives of these cults are licensed, even vith the lower standards, they are granted or allowed to have rivileges of unrestricted practice. This one portal of entry, lready adopted in some states, should be a fixed educational tandard to which all schools professing to train medical practitioners should have to comply. Graduation from a medical ollege holding to that standard should be required as well as he state license examination. The certificate of graduation vould be a guarantee from a reputable medical college that he applicant has had a thorough training, since that college ranted him a diploma. The license examination would furnish an added guarantee that the applicant has a knowledge of he fundamental medical sciences and the ability to recognize iseases. In testing the candidate's ability to this extent there hould be no division of responsibility, no special standards. or ther makeshifts. When it comes to testing the applicant's ystem of treatment there are numerous methods which would e effective and at the same time be fair to the applicant. For xample, some boards have the authority to call in a regularly icensed practitioner of any particular school of medicine to xamine in materia medica or in the applicant's special method f treatment.

CHART 3.—INTERSTATE RECIPROCITY IN MEDICAL LICENSURE



State licensing boards are fighting the people's battle against gnorance and incompetence, sometimes without the support either of the public or of the medical profession and they are often seriously handicapped. The charts herewith presented will give some idea of the conditions existing in the various states against which the licensing boards have to contend and show how necessary it is that the boards receive the undivided support of the medical profession and of the public in the important and difficult work they have to do. That some states have not already been overrun with incompetents is due entirely to the fact that examining boards have found methods by which the unfit could be excluded even with the limited authority parcelled out to them by their legislatures. The time has come, however, when the medical profession and the people of each state should see to it that a single board of competent medical examiners shall control the licensing of all practitioners of medicine and that this board be given full authority. This one barrier between the sick and afflicted and the crowds of ill-trained, incompetent practitioners should be made effective.

Very rapid and very great improvements have been made in medical education in this country in the last few years and it is now clear that with the present rate of progress, within a comparatively short time the standards of American medical education and of the American medical schools will compare favorably with those of any country in the world.

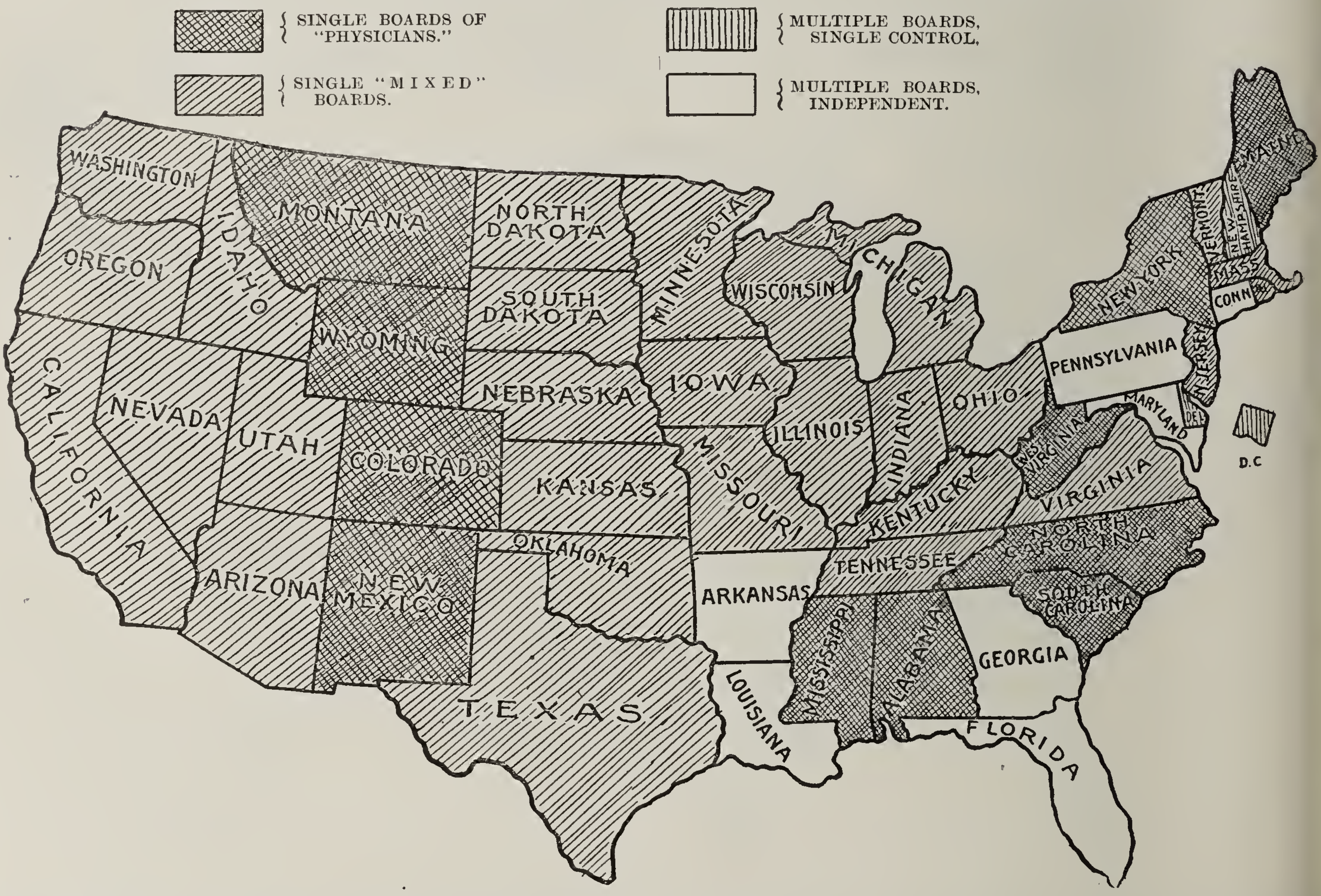
The Council believes that the coming American standard will be: A four-year high-school education; a year or two in the university laboratories of chemistry, physics and biology; four years in the medical school and a clinical year as an intern in a hospital.

About two-thirds of the acceptable schools of the country have either already put into force the requirement of college physics, chemistry and biology or will put this requirement into force this fall. This requirement, as you all know, is the one adopted by Germany, Great Britain, France and all of the advanced countries of the world. Medical educators agree that a thorough training in these branches is practically necessary to the student beginning the study of modern medicine.

The adoption of this requirement in some parts of the South may be somewhat delayed owing to the backward state of general education. North of the Ohio River, however, and west of the Mississippi it has already been adopted by almost all of the better schools. The members of the Council are unanimous in the belief that a degree requirement for admission to the study of medicine is too extreme to be considered in the drawing up of an American standard of medical education.

The second great advance—the addition of a clinical year—as an intern in a hospital after the completion of the work in the medical school is quite as important and in some ways more important than the requirement of the preliminary sciences for admission. This clinical year, however, is largely taking care of itself, as the modern medical student soon learns that a hospital appointment is an essential part of his medical training and makes every effort to secure it. The time will soon arrive, however, when this clinical year will be recognized as a part of the required medical course, and the whole medical curriculum will be arranged and planned with this hospital year in view.

CHART 4.—CHARACTER OF THE STATE LICENSING BOARDS



Sixteen medical schools are now requiring as a minimum for entrance two or more years of work in a college of liberal arts in addition to a four year high school education. These colleges and the years when the requirement became effective are as follows:

| College. | Begins. |
|---|---|
| Johns Hopkins University Medical Department | 1893 |
| Harvard Medical School | 1900 |
| Western Reserve University Medical Department | 1901 |
| University of Chicago, Rush Medical College | 1904 |
| University of California, Medical Department | 1905 |
| University of Minnesota, College of Medicine and Surgery | 1907 |
| University of North Dakota, College of Medicine | 1907 |
| University of Wisconsin, College of Medicine | 1907 |
| Cornell University Medical College | 1908 |
| Wake Forest College, School of Medicine | 1908 |
| Leland Stanford Junior University, Department of Medicine | 1909 |
| Yale Medical School | 1909 |
| University of Kansas, School of Medicine | 1909 |
| University of Michigan, College of Medicine | 1909 |
| University of Nebraska, College of Medicine | 1909 |
| University of South Dakota, College of Medicine | 1909 |

Ten other colleges in their printed announcements have clearly stated their intention to require two years of liberal arts' college work as their minimum standard of preliminary education for the session of 1910-11 and thereafter. These colleges are as follows:

| College. | Begins. |
|---|---|
| University of Colorado, School of Medicine | 1910 |
| Indiana University School of Medicine* | 1910 |
| State University of Iowa, College of Medicine* | 1910 |
| Drake University College of Medicine‡ | 1910 |
| University of Missouri, Department of Medicine† | 1910 |
| Dartmouth Medical School | 1910 |
| Columbia University College of Physicians and Surgeons | 1910 |
| Syracuse University College of Medicine* | 1910 |
| University of Pennsylvania, Medical Department* | 1910 |
| University of Utah, Medical Department* | 1910 |

* One year required for the session of 1909-10.
† One year has been required since 1906.
‡ The printed announcement for 1909-10 contains no mention of the advance in entrance requirements but an official letter states that two years of collegiate work will be required for admission beginning September, 1910.

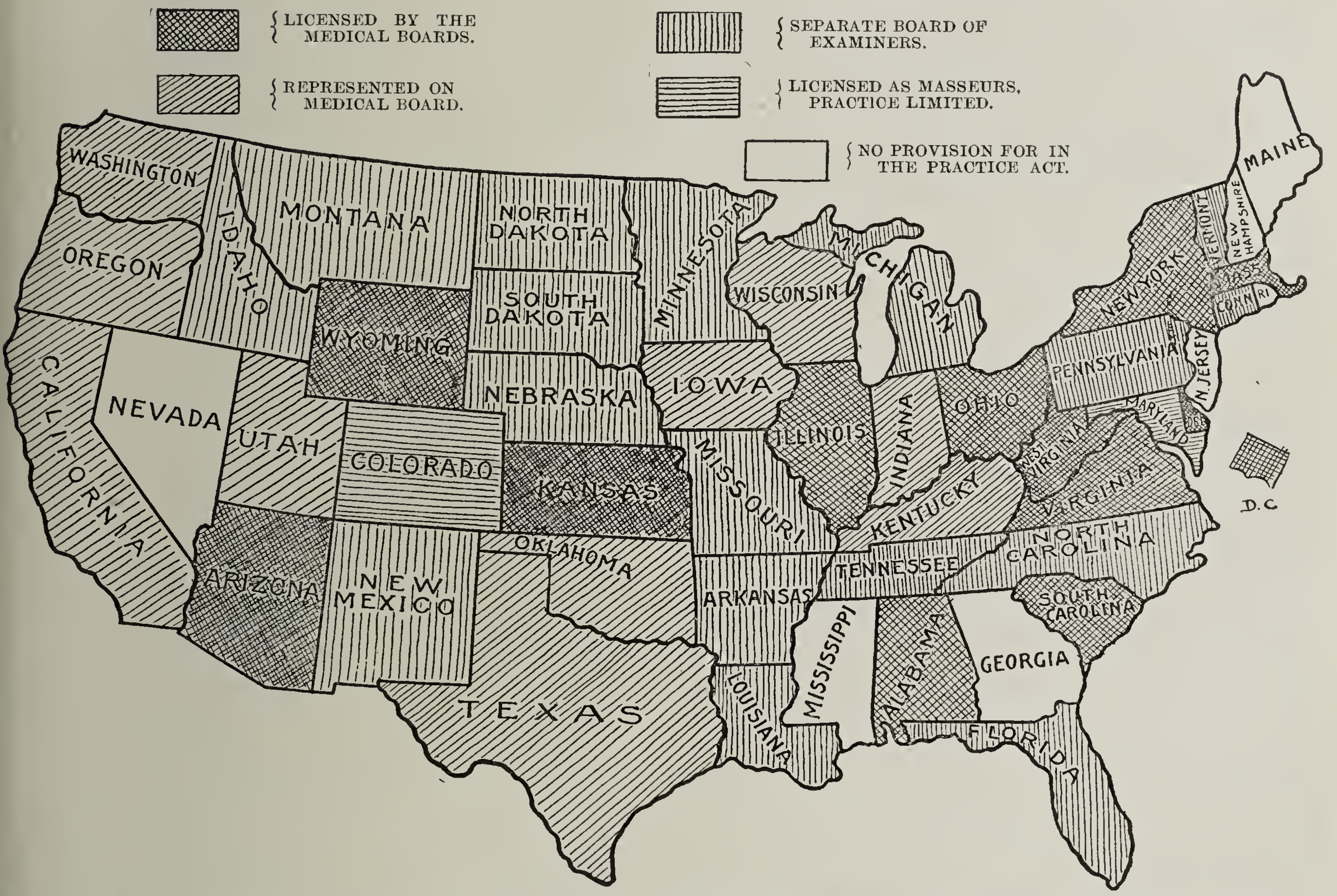
The twenty-one following colleges either already require in addition to a four-year high school course one year of work in a college of liberal arts, including courses in physics, chemistry and biology, or have made definite statements in their printed announcements or otherwise, that they will require that standard of preliminary education in and after the year given:

| College. | In Force. |
|---|---|
| Northwestern University Medical School | 1908 |
| Fordham University School of Medicine | 1908 |
| Hahnemann Medical College of the Pacific | 1910 |
| Denver and Gross College of Medicine | 1910 |
| Howard University School of Medicine | 1910 |
| Kansas Medical College | 1910 |
| Tulane University, Medical Department | 1910 |
| St. Louis University, School of Medicine | 1910 |
| University Medical College, Kansas City | 1910 |
| Washington University Medical Department | 1910 |
| Ohio-Miami Medical College, University of Cincinnati | 1910 |
| College of Physicians and Surgeons, Cleveland | 1910 |
| University of Oregon, Medical Department | 1910 |
| University of Texas, Medical Department | 1910 |
| University of Virginia, Department of Medicine | 1910 |
| West Virginia University, College of Medicine | 1910 |
| Marquette University, Medical Department | 1910 |
| Wisconsin College of Physicians and Surgeons | 1910 |
| Medical School of Maine | 1912 |
| Boston University, School of Medicine | 1912 |
| University of Vermont, College of Medicine | 1912 |

Twelve other colleges sent official notices to the Council that an increase in requirements would be made. Six of these have since rescinded their action, two have been advised by the Council not to make the requirement at the present time and four others have not made clear statements of the proposed increase in their printed announcements.

For a time this elevation of standards by the better class of colleges will probably be taken advantage of by commercial, low grade colleges which will continue their lack or non-enforcement of standards in order to profit from the influx of students who are turned away from the good schools. This advantage can only be temporary, however, since, in the first place, medical students and their advisors are rapidly learning that it does not pay to spend four or five years in a college of low requirements and with standards so lax that a large percentage of their graduates fail at state license examinations, and, secondly, because state boards are coming to the support of the better colleges by adopting similar standards of preliminary education and by making their examinations of such character that they cannot be passed by applicants who have not had a training in laboratories and clinics. Such action by a considerable number of state boards will make it impossible for low-grade, inefficient medical schools to continue. Even a rigid enforcement of the four-year high school preliminary equirement would force several of these commercial schools to he wall.

## CHART 5.—THE OSTEOPATHIC SITUATION



At least six medical colleges have provided an optional fifth ear of hospital work for which the degree of M.D. *cum laude* s granted. These colleges are:

Boston University School of Medicine.
Indiana University School of Medicine.
Rush Medical College.
St. Louis University School of Medicine.
University of Nebraska College of Medicine.
University and Bellevue Hospital Medical College.

The deans of at least 25 medical colleges have stated that hey have more internships each year than they can fill. For hese schools, therefore, the final requirement of the American Medical Association's "Ideal Standard," namely, "A sixth year s an intern in a hospital," could be easily enforced.

From the fact that 47 medical colleges have adopted higher ntrance requirements it is interesting to note that seven state xamining boards have also adopted preliminary requirements n advance of a four-year high school education. These are as ollows:

| State Examining Board of | No. of Years Required. | Affects Students Matriculating. | Affects all Applicants. |
|---|---|---|---|
| North Dakota.......... | 2 | 1907-08 | 1911 |
| South Dakota.......... | 1 | 1907-08 | 1911 |
| Minnesota ............ | 2 | 1908-09 | 1912 |
| Colorado ............. | 1 | 1908-09 | 1912 |
| Connecticut .......... | 1 | 1910-11 | 1914 |
| Kansas ............... | 1 | 1910-11 | 1914 |
| Indiana .............. | 2 | 1910-11 | 1914 |

There are several other states which are contemplating similar increases in their requirements in the near future.

### IN CONCLUSION

In conclusion it should be said that although there is still much to be done splendid progress is being made and we can all look forward to the future confident that within a few years medical education and medical licensure in this country will be on a satisfactory basis. Respectfully submitted,

Arthur Dean Bevan, Chairman.
N. P. Colwell, Secretary.

On motion of Dr. C. E. Cantrell, Texas, which was seconded by several, the House of Delegates then adjourned until 2 p. m.

## *Second Meeting — Monday Afternoon, June 6*

The House of Delegates convened at 2 p. m., and was called to order by the Third Vice-President, Dr. Alexander Lambert, New York.

The minutes of the previous meeting were read and approved.

Dr. H. Bert Ellis, Chairman, made a supplementary report of the Committee on Credentials.

Dr. John G. Clark, Pennsylvania, Chairman, read the report of the Board of Public Instruction on Medical Subjects.[1]

On motion of Dr. C. S. Bacon, Illinois, it was referred to the Reference Committee on Legislation and Political Action.

The report of the Committee on Organization was called for, but by request deferred until Tuesday afternoon.

Dr. John H. Blackburn, Kentucky, presented his report as Director of Post-Graduate Work.

On motion, the report was referred to the Reference Committee on Medical Education.

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[1] All committee reports referred to reference committees, will be published in The Journal, June 18.

## Report of Committee on Ophthalmia Neonatorum

Dr. F. Parke Lewis, New York, Chairman, read the report.

*To the Members of the House of Delegates of the American Medical Association:*

Your committee beg leave to present the following report of legislation enacted together with a summary of the official communications received, indicating the further progress of the movement for the control of ophthalmia neonatorum throughout the United States.

### ALABAMA

Ophthalmologist, Samuel L. Ledbetter; Obstetrician, W. H. Sanders; Sanitarian, W. H. Sanders.

Dr. Ledbetter introduced the subject at the meeting of the county medical society and the subject was discussed at some length but no action was taken by the society as a body. He also discussed the matter with the Senior Censor and State Health Officer who was rather opposed to taking it up with the State Medical Association, as he thought that the condition was rarely found in the country districts and small towns and that physicians and midwives in the cities seemed to understand the handling of those conditions fairly well. Besides he was, for other reasons, opposed to introducing any further medical legislation in the legislature just at the present time. Dr. Ledbetter had no suggestions to offer but will continue to agitate the matter occasionally.

### ARIZONA

Ophthalmologist, Ancil Martiu; Obstetrician, W. I. Simpson; Sanitarian, Gov. J. K. Kibbey.

Dr. Aucil Martin reports that nothing has been accomplished along these lines and no papers read on this subject.

### ARKANSAS

Ophthalmologist, J. W. Scales; Obstetrician, Edward Peutley; Sanitarian, J. P. Runyan.

Dr. T. Vinsonhaler: No laws pertaining to the subject of ophthalmia neonatorum were passed by our last assembly, none were introduced, no papers of any kind relating to this subject were read at our last state society meeting and none have been published in our state journal.

Dr. J. W. Scales: There has been nothing except a resolution introduced in our society looking forward to a law to prevent blindness. Last year I attempted to get our Senator to pass such a bill.

### CALIFORNIA

Ophthalmologist, H. Bert Ellis; Obstetrician, F. T. Andrews; Sanitarian, M. Regensberger.

Dr. H. B. Ellis: Our state legislature does not meet until next winter, so we have been unable to do anything in regard to laws on the subject.

### COLORADO

Ophthalmologist, Edward Jackson; Obstetrician, E. A. Jayne; Sanitarian, W. H. Davis.

No report.

### CONNECTICUT

Ophthalmologist, H. S. Miles; Obstetrician, H. J. Ballard; Sanitarian, Joseph H. Townsend.

Dr. Joseph H. Townsend: Nothing has been done in the state during the past year for the prevention of blindness from ophthalmia neonatorum. We had an agitation on this subject a few years ago which resulted in a law being passed by the Legislature requiring all cases to be reported by the attending physician or midwife to the local health officer. This, with our medical practice act, which is developing better educated physicians and midwives in the state, is doing all that can be done in this matter, so it seems to me. The Connecticut Board of Education of the Blind tells me that there are about ten cases of infantile blindness each year which come to their attention and about thirty per cent. of these are due to ophthalmia neonatorum. There ought not to be even this number, but I do not see that any special campaign of education would do any good or is necessary at this time. The medical profession I think, are doing all that can be done to prevent this disease as well as other puerperal infections. The conditions in this state are somewhat different from what they are in congested centers like New York and Chicago.

### DELAWARE

Ophthalmologist, J. A. Ellegood; Obstetrician, F. Belleville; Sanitarian, E. W. Cooper.

J. A. Ellegood: Nothing has been accomplished in this state during the past year for the prevention of blindness from ophthalmia neonatorum. Our people are pre-occupied with the anti-tuberculosis crusade, and the medical inspection of schools. Shall hope to get some attention paid to the prevention of blindness at an early date.

### DISTRICT OF COLUMBIA

Ophthalmologist, Robert Scott Lamb; Obstetrician, J. T. Johnson; Sanitarian, W. C. Woodward.

W. C. Woodward: Careful inquiry is being made into all cases of ophthalmia of infants coming to the attention of the Instructive Visiting Nurses, in order to determine whether they are of gonorrheal origin or not, and in order to determine the outcome of such cases. At the request of the health officer, the Washington Obstetrical and Gynecological Society appointed a committee, consisting of Drs. John F. Moran and W. M. Sprigg, to investigate the status of the preventive treatment of ophthalmia neonatorum, which committee submitted a lengthy report. This report was published in the February issue of the *American Journal of Obstetrics*. It was hoped, when the cooperation of the Washington Obstetrical and Gynecological Society was asked, that in event of the presentation of a report by that body recommending action by the health department, looking toward the prevention of ophthalmia neonatorum, it would be possible to adopt preventive measures. So far, however, the funds at the command of the health officer have been insufficient to permit him to do so.

Washington Obstetrical and Gynecological Society: The committee appointed by the president of the Washington Obstetrical and Gynecological Society to investigate the status of the preventive treatment of ophthalmia neonatorum begs leave to submit the following report: A circular letter was sent with the following questions to a number of maternities and obstetricians in the United States and Europe. 1. What is the routine treatment in your hospital for the prevention of ophthalmia neonatorum? 2. Would you recommend the treatment to be carried out by midwives? 3. Do you think the remedy should be dispensed by the health department?

Forty replies were received and are tabulated below. All employ prophylactic measures, but differ in the choice and strength of the solution, technic, regulation of midwives, and the advisability of the health department dispensing the drugs.

Twenty-three used silver nitrate: one, ½ per cent.; ten, 1 per cent.; two, 1½ per cent.; nine, 2 per cent.; and in one the per cent. is not given. Fifteen use argyrol; one, 5 per cent.; one, 6 per cent.; one, 16 per cent.; one 10 to 20 per cent.; four, 20 per cent.; five, 25 per cent.; one, 25 to 50 per cent.; one, 50 per cent.; and in one the per cent. is not mentioned. Five employ sophol; all, 5 per cent. One prefers silver acetate, one per cent; another, hydrarg. bichlor., 1-2000. Protargol is used by four, but supplementary to nitrate of silver in three, hydrarg. bichlor. in one.

The questions 2 and 3 were only submitted to hospitals in the United States, and there were thirty-one replies; twenty-five favored the use of prophylactics by midwives, but several advise that the midwives be taught the proper methods of application, while others recommend that only the substitutes for silver nitrate be employed by them. It is observed that those quoted in this report who oppose the treatment by midwives all use silver nitrate and one of the objectors states that the drug is too powerful and dangerous to be entrusted to the uninitiated.

In reply to question 3, twenty recommend that the prophylactic be dispensed by the health department, while eleven object, one regarding it as another socialistic measure.

It is worthy of note that only 60 per cent. of the institutions quoted use silver nitrate exclusively. These figures were received from widely separated sources and may reasonably be taken as a fair index of the trend of the prophylaxis of ophthalmia in the new-born.

A review of the literature shows that in this country silver nitrate, argyrol, and protargol are the remedies generally employed as prophylactics; while abroad, in addition to these, argonin, collargol, albargin, itrol, sophol, largin, silver acetate, etc., have been employed and recommended. Stephenson says that some of these have already sunk into well-merited oblivion, but others are calculated to replace silver nitrate at no distant day.

Argyrol is rapidly growing in favor, is largely used in private practice, and has been introduced into many hospitals. According to Cragin a 25 per cent. solution is equally as effective as one of 2 per cent. silver nitrate in gonorrheal ophthalmia, does not cause pain or produce irritation, and has the important advantage that it can be applied by the nurse, midwife, or layman without danger. He says, however, it is of comparatively little value in staphylococcus and streptococcus infections. In his service at the Sloane Maternity, in 8,000 births, covering a period of seven years, he used as a prophylactic measure five methods of treatment, with a view of selecting a solution that would give the greatest amount of disinfection with the least irritation. The results were as follows:

Series 1—In 1,000 confinements, 2 per cent. silver nitrate solution; cases of ophthalmia, thirty-four; eyes lost, one; opacities, none.

Series 2.—In 1,000 confinements, 1 per cent. silver nitrate solution; cases of ophthalmia, thirty-four; eyes lost, one; opacities, none.

Series 3.—In 2,000 confinements, 5 per cent. protargol solution; cases of ophthalmia, thirty-four; eyes lost, one; opacities, two.

Series 4.—In 2,000 confinements, 10 per cent. argyrol solution; cases of ophthalmia, thirty-four; eyes lost, one; opacities, two.

Series 5.—In 2,000 confinements, 20 per cent. argyrol solution; cases of ophthalmia, thirty-nine; eyes lost, none; opacities, none.

This series covered a period when there was an epidemic of "pink eye" in the city, and as no gonococci were present in the eyes during the month of its prevalence it was thought by the ophthalmologist who saw the cases in consultation that they were cases of pink eye.

Cragin says that while with the use of 1 per cent. silver nitrate solution and 5 per cent. protargol solution there was less irritation, it looked as if it was gained at the expense of protection, and their use was therefore abandoned. With the 10 per cent. argyrol solution there was a complete absence of irritation, but it was found upon clinical and bacteriological investigation to be of insufficient strength, and therefore did not afford complete immunity.

The 2 per cent. silver nitrate solution and the 20 per cent. argyrol solution were proven to be absolutely bactericidal, and the latter is to be preferred because of its freedom from irritation and it can be applied at frequent intervals, if necessary, with safety.

We have collected from the records of Columbia Hospital, Washington, D. C., from 1882 to June, 1909, 205 cases of ophthalmia, occurring in 7,236 confinements; 176 cases were reported as cured and twenty-seven were improved at the time of leaving the hospital, so the final result of the latter is not known. There were two cases of blindness; one, total; in the other one eye was lost. There were five cases with opacities of one cornea and one with opacities of both corneas. The earlier records are wanting in microscopical examination, but clinically a large percentage of primary ophthalmia were diagnosed as gonorrheal, with the infections occurring some days after birth generally ascribed to other pathogenic organisms. In 1904, argyrol was introduced, first using a 10 per cent. solution, but as this did not prevent ophthalmia, it was increased to 25 per cent. There had been no cases of blindness or opacities since its introduction.

Professor Zweifel speaks enthusiastically of the acetate of silver in the prevention of ophthalmia neonatorum. In a letter recently received from him, he says that in fourteen years' experience with the drug, blenuorrhea occurred in only about 0.02 per cent. of the cases. Irritation is not more frequent or greater than with 1 per cent. of nitrate of silver, as was demonstrated by using the silver nitrate in one eye and the silver acetate in the other. Seitz has obtained a like favorable result in 1,000 births in the Numchen Frauenklinik and Scipiades in the Traufferschen Klinik, Budapest.

Darier and his pupil, Valencon, are warm advocates of protargol. They employ it in 15 to 20 per cent. solution and find it to be less painful and irritating than silver nitrate.

Englemaun, using protargol, in the Bonner Frauenklinik, observed 20 per cent. of the infection, usually of mild character, in 1,000 births.

Piotrowsky, in the Hebammenlehranstalt, Krakau, noted 10 per cent. reaction in the treatment of 1,030 cases after the use of a 10 per cent. solution of protargol.

V. Herff, in the Frauenspitale, Basel-Stadt, in 3,009 births, with the use of protargol, had only two late infections but there was 30 per cent. primary reaction.

V. Herff, in endeavoring to find a substitute for silver nitrate possessing equal germicidal power but free from its objectionable properties, first tried protargol. While, as just stated, there were no primary infections, he discarded it because of the large percentage of inflammatory reactions. He next tried argyrol, in 520 births, but not being entirely satisfied, he experimented with sophol. It is a combination of formaldehyd nucleinic acid, and 22 per cent. silver. Sophol is a yellowish-white powder, easily soluble in water. The solution must be prepared with cold water, as a warm solution dissociates the loose combination of the formaldehyd in the preparation. In over 6,000 births, V. Herff says there were one primary and one late infection. The early case of infection was due to inoculation in a known gonorrheal case during labor, in which a prolapse cord was replaced. The late infection occurred on the ninth day in an infant whose mother was suffering with condylomata of the vulva. There was 10 per cent. primary reaction, usually of a mild character..

In 1,436 births in which sophol was used, in the Munchener Frauenklinik, there were one primary infection (0.07 per cent.) one late infection (0.07 per cent.) and three cases of inflammatory reaction of mild intensity.

Beginning in January, 1909, Menge has employed sophol in the Universitats-Frauenklinik, Heidelberg. The sophol solution has been instilled into the left eye of the infant, and a 1 per cent. silver nitrate solution into the right eye. He finds that irritation occurs less frequently with sophol. Two cases of true blennorrhea, both late infections, have occurred this year, both in the second week. The left eye was infected in one infant and the right eye in the other.

Callatia reports the use of sophol as a prophylactic in 280 births in the Landenspitales, Laibach. There was no early infection, notwithstanding that two of the mothers were suffering with gonorrheal vaginitis at the time of delivery.

Bock and Kraus have also used sophol in inflammatory diseases of the eyes with excellent results. Bock finds it to be particularly effective in recent cases; but in those of long standing, while it rapidly diminishes the discharge, in many instances it is necessary to resort to the use of silver nitrate to effect a cure.

The committee being much impressed with the excellent results obtained with sophol by V. Herff and others was anxious to give it a trial. Through the courtesy of Dr. Cabell, of the visiting staff of Columbus Hospital, and Dr. Lawson, of the visiting staff of Freedman's Hospital, the remedy was used in these institutions during the past summer. A 5 per cent. solution was employed, and it was freshly prepared every two weeks. Altogether the solution was instilled into the eyes of 153 infants, ninety-three in Columbia Hospital, and sixty in Freedman's Hospital. Of those treated at Columbia Hospital, there were thirteen with primary irritation, lasting from a few hours to several days, all yielding to boric acid irrigation. There was no primary infection, although one mother had been under treatment in the hospital for more than a week prior to the delivery for a severe case of gonorrheal vulvovaginitis. The infant's eyes were wide open immediately after birth and had a dull glazed appearance, with clouded cornea. Prompt instillation was made and no infection followed.

There were eight late infections, occurring from the third to the fourteenth day after birth. Six yielded to the sophol and boric acid applications in from a few hours to eight days. One case in which the lanceolatus was found left the hospital on the eleventh day of treatment, improved; and another in which the microscopical examination was negative left also on the eleventh day of treatment improved.

Dr. Lawson reports that sixty infants received the 5 per cent. sophol solution at birth in Freedman's Hospital, and the results were very satisfactory. In but one case was there anything more than a slight inflammatory reaction observed. One baby developed a purulent conjunctivitis, which was slight and cleared up within five days, during which time the sophol solution was instilled three times daily. The mother in this case had a marked vaginal discharge at the time of confinement.

Our personal experience with the use of sophol is in accord with that of other investigators and we regard it as a safe and effective measure for the prevention of ophthalmia neonatorum.

In conclusion, the committee recommends: 1. That immediately following the birth of the infant the eyes should be carefully wiped with sterile gauze, dipped in a saturated solution of boric acid and then a 5 per cent. sophol, 25 to 50 per cent. argyrol, or 10 to 20 per cent. protargol solution used as a prophylactic against ophthalmia neonatorum.

Since late infections comprise one-fourth of the cases of ophthalmia neonatorum and may be due to the faulty application of the prophylactic, or latent gonorrhea, but is more often the result of contamination from the vaginal secretion because of lack of vigilance, or ignorance on the part of attendant or mother; therefore the nurse should be instructed to thoroughly scrub her hands with soap and water and disinfect them before washing the infant's eyes, dressing the navel, and bathing the mother. The mother's hands should be cleansed several times daily, particular attention being given to the nails, and she should be repeatedly warned as to the danger of the lochia. By careful attention to these precautions the morbidity from ophthalmia can be greatly reduced it not entirely controlled.

2. That the solution be dispensed in amber-colored sterile tubes sealed with paraffin for use by midwives; a small quantity of sterile gauze be placed in the prophylactic package.

3. That suitable instructions as to technic be printed on the birth certificates.

4. That legislation be enacted for the control of midwives.

5. That midwives be compelled to make report of births within 24 hours following delivery.

6. That the health department furnish the drugs gratuitously to indigent cases.

7. That in cases of ophthalmia occurring in patients under the charge of midwives they be required to summon a physician immediately or notify the health department promptly.

Finally what is need to control this scourge is a hearty cooperation of the medical profession with the health authorities.

## FLORIDA

Ophthalmologist, Columbus Drew; Obstetrician, E. N. Liell; Sanitarian, Joseph Y. Porter.

Dr. C. Drew: At the annual meeting of the Florida State Medical Association, held April 6, resolutions were adopted endorsing the work of the American Medical Association in its efforts to prevent blindness from ophthalmia neonatorum, requesting the state board of health to cooperate with the American Medical Association in this work, requesting the local societies also to cooperate, and appointing a committee of three (Dr. C. Drew, Jacksonville, Dr. E. N. Liell, Jacksonville, Dr. Dewitt Webb, St. Augustine) to facilitate the work during the year and to report at the annual meeting of the state association in 1911.

Joseph Y. Porter: The state board of health of Florida has not as yet undertaken any work in this direction. The importance of the subject as a public health problem is recognized, however, and it is not unlikely that an effort will be made to distribute literature to midwives and advice to practitioners upon early medication of the eyes of the new-born to prevent that frightful menace to sight—ophthalmia neonatorum—especially when of that character which may be virulently infectious.

## GEORGIA

Ophthalmologist, H. H. Martin; Obstetrician, F. C. Hodgson; Sanitarian, H. F. Harris.

H. H. Martin proposed a law which provides for the compulsory use of a prophylactic by midwives and others and an addition to the birth certificate stating whether or not a prophylactic had been used, the character of the prophylactic being left to the physician. The legislature was asked to secure the enactment of such a law.

## IDAHO

Ophthalmologist, Charles R. Hugel.
No report.

## ILLINOIS

Ophthalmologist, W. H. Wilder; Obstetrician, C. S. Bacon; Sanitarian, Geo. W. Webster.

Report of Illinois Commission to Inquire into the Condition of the Blind: At a meeting of the State Board of Charities, held July 16, last, a commission was appointed to inquire into the condition of the blind in Illinois, with a view to formulating plans for the employment of the adult blind and for improving the efficiency of the state care in other particulars. The following were appointed: Clara P. Bourland, of Peoria, chairman, and Dr. John T. McAnally, of Carbondale, representing the State Board of Charities; Geo. W. Jones, superintendent Illinois State School for the Blind, Jacksonville; C. D. Babb, of Homer, trustee of the State School at Jacksonville; Joseph F. Otis and E. J. Nolan, of Chicago, trustees of the Illinois Industrial Home for the Blind at Chicago; Mr. Nolan, representing the blind people in Illinois; Mrs. Alice E. Bates, representing the Chicago Woman's Club; Dr. Wm. M. Wilder, of Chicago, representing the Illinois Charitable Eye and Ear Infirmary, at Chicago; Chester M. Dawes, representing the Chicago Board of Education, and Dr. Elmer E. Hagler, of Springfield, representing the Illinois State Medical Society.

The first meeting of the commission was held in Jacksonville, September 17, at the school for the blind, Mrs. Bourland presiding; Dr. E. E. Haglor was elected secretary. Professor Wilder addressed the commission, and, from statistics presented, demonstrated that from 40 to 45 per cent. of all cases of blindness were absolutely preventable; and notwithstanding that fact, blindness is increasing in all civilized countries. The largest amount of blindness, he said, comes from ophthalmia neonatorum, or blindness of the new-born. This disease, which is easily preventable, causes from 25 to 30 per cent. of all cases of blindness. Dr. Wilder also called attention to the prevalence of trachoma in the southern part of the state. Following his lecture, Dr. Wilder held an informal clinic, exhibiting chiefly children in the school who were suffering from the results of ophthalmia neonatorum and trachoma.

A sub-committee of three was appointed, to report at the next meeting, consisting of Dr. Wilder, who is to report suggestions for the prevention of blindness and to recommend the enactment of needed laws; Mr. Jones, to report of the needs of his school and to recommend more efficient legislation; and Mr. Nolan, to make recommendations and suggest such laws as will improve the conditions surrounding the employment of the adult blind.

The second meeting was held in Chicago at the Industrial Home for the Blind, Saturday, December 5.

The sub-committee, consisting of Messrs. Nolan, Jones, and Wilder, made their reports. Dr. Wilder, in his report, stated, that as the state has assumed the responsibility of custodian of the blind poor and may, because of unfavorable circumstances, have more of such afflicted persons thrown on its charge, it should endeavor to study the causes of blindness and if possible seek out means for its prevention. To this end, it is important to collect statistics as to the prevalence and degree of blindness, and so far as possible the exact cause of it in each case.

Dr. Wilder, Dr. McAnally, and Dr. Babb were made a committee to prepare specific recommendations on the prevention of ophthalmia neonatorum. Their report follows:

It is well known that ophthalmia neonatorum is the cause of a large proportion of blindness in this as well as other countries, and that in the specific schools for the blind as many as 25 per cent. to 35 per cent are there because of this disease. It is also a well established fact that by proper and comparatively simple means it may be prevented in a vast majority of cases.

The state should enact a law having for its object the adoption of measures for the prevention of this disease at least in the practice of midwives and in public institutions where obstetric cases are treated..

The state board of health seems to be the proper authority for establishing the necessary rules, regulations and ordinances and enforcing their observance, and for publishing and distributing appropriate information and instruction on the subject.

It is probably best that the specific method to be used for the prevention of ophthalmia neonatorum should not be left to the intelligence and judgment of the state board of health, believing that it will act in accordance with the most advanced existing knowledge. The following form of law is suggested in accordance with the ideas suggested above.

"An act to prevent inflammation of the eyes of the new-born babe, or so-called ophthalmia neonatorum.

Section 1.—The board of health of the state of Illinois is hereby vested with power and authority to publish and distribute such information and instruction, to furnish such remedies and to make such rules, regulations and ordinances as it may deem expedient to prevent the development of inflammation of the eyes of the new-born babe, so-called ophthalmia neonatorum, in public hospitals or institutions in which midwifery is practiced, either wholly or in part, and in connection with the practice of midwives.

Section 2.—Said board of health is authorized to enforce its rules, regulations, and ordinances on this subject at the expense of the state.

Section 3.—Any person violating any rule, regulation or ordinance of said board of health regarding the prevention of ophthalmia neonatorum shall be guilty of a misdemeanor, and shall be punishable by a fine not to exceed $100, or imprisonment not to exceed six months, or both.

The above suggestions are in substance embodied in the report of the Committee of the American Academy of Ophthalmology and Oto-Laryngology cooperating with the committee of the American Medical Association on legislative measures to prevent ophthalmia neonatorum, presented to the house of delegates of the American Medical Association, June, 1908.

The central feature of giving the state board of health direction of the whole matter and power to act is, in our judgment, a good one. A law similar in purposes to the one proposed would be more effective than the one now on the statute books (Chap. 38. Sec. 510. Revised Statutes of Illinois) relating to the same object, which by the new enactment could be repealed.

According to the present law, which, so far as I am aware, is not enforced, the nurse or midwife who notices a discharge from the eyes of an infant within two weeks after its birth must report the same to a health officer of the town, or some legally qualified practitioner, within six hours of the discovery, under penalty for failure to do so. The proposed new law contemplates that the midwife shall be instructed by the state board of health in the method of prophylaxis, which she will be compelled to use in every case, and in addition that she will report auy cases of the disease that may arise in her practice, to the proper authorities.

## INDIANA

Ophthalmologist, Albert E. Bulson; Obstetrician, T. B. Eastman; Sanitarian, J. N. Hurty.

The legislature has not been in session this year, so nothing in a legal way has been accomplished. The subject is being given wide publicity, however. The state board of health has been very progressive in its efforts to further the cause of preventive medicine, including the prevention of ophthalmia neonatorum, although they are not, at the present time distributing silver of nitrate solution. The Tippecanoe county medical society has taken up the matter and are sending out the following circular letter to the various medical societies in Indiana. The next birth certificates will have upon them the recommendations of the committee of the American Medical Association.

Circular sent out by the Medical Society. Because institutions for the instruction of the blind (which keep accurate data, concerning the cause of the blindness of their pupils) report about thirty-five per cent. of their pupils to be blind as the result of ophthalmia neonatorum, the Tippecanoe County Medical Society, by its committee on ophthalmia neonatorum, asks the cooperation of the profession, by county and district society action and otherwise, in a propaganda looking to the abolition of the disease in this state.

We recommend that the widest publicity be given the Credé method, which consists in dropping into each eye of the new-born babe, by the physician, one drop of a 1 per cent. solution of silver nitrate, as soon as possible after the birth of the baby's head and the cleansing thereof.

We recommend cooperation of all societies to secure of the next legislature the passage of a law as will best stamp out this preventable disease, and save eyes otherwise doomed to destruction.

We recommend that each county and district society appoint a committee on ophthalmia neonatorum in order that it may in its own county use its influence with the profession and public in eradicating this disease.

We recommend that each county and district society take action, endorsing this propaganda, and that such action be reported to the undersigned committee not later than May 15, that the Committee of the American Medical Association on ophthalmia neonatorum may be informed as to the progress made in this state as to the above actions. Said committee will report its progress to the next meeting of the American Medical Association, the first week in June.

Fraternally submitted,

Geo. E. Keiper, Chairman;
Earl Van Reed,
President, Tippecanoe Co. Society;
W. N. Reser, Secretary;
Prof. Severance Burrage.

……

The ——— County Medical Society hereby endorses the propaganda of the Tippecanoe County Medical Society, looking to the abolition of ophthalmia neonatorum in Indiana.

President,..........................
Secretary,..........................
Date..........................

## IOWA

Ophthalmologist, E. R. Lewis; Obstetrician, W. B. LaForce; Sanitarian, F. W. Powers.

E. R. Lewis, Symposium; Ophthalmia Neonatorum in Iowa, with a consideration of State Prophylaxis: Last year the Iowa State Medical Society, in common with most other state medical societies, appointed a committee to take up the matter of the prevention of ophthalmia neonatorum in the state. It has seemed advisable to this committee to recommend taking steps to secure accurate and complete data in regard to this disease in Iowa, for the obvious reason that up to the present we have had no means of ascertaining anything definite concerning it. If state prophylaxis is adopted and the taxpayer pays the bills, even though they be small ones, he should also be provided with a means of comparing results and of knowing whether or not the disease is being stamped out. Should future agitation bring into question the advisability of giving up state prophylaxis of this disease the data concerning the disease would at once furnish accurate proof of the failure or success of the preventive measures. The means of securing this data is already in our hands, in the birth certificate. It is necessary only to add a few lines to the birth certificate already in use. The requiring of attendants to record such data on the birth certificate would not only be the means of assembling statistics concerning the disease, it would also be a very practical means of enforcing attention on the part of the attendants to prophylactic measures. The fear of consequences, should failure to use prophylaxis be followed by the disease, would do much to prevent neglect of proper care of the eyes at birth.

Revocation of license to practice should be the penalty for repeated neglect to use prophylaxis or for false entries on the birth certificate.

Very effective work has been accomplished in the state of Iowa.

## KANSAS

Ophthalmologist, Robert L. Alkire; Obstetrician, F. Harper; Sanitarian, L. A. Godeon.

No report.

## KENTUCKY

Ophthalmologist, F. Manning Brown; Obstetrician, L. S. McMurtry; Sanitarian, Jos. M. Mathews.

No. report.

## LOUISIANA

Ophthalmologist, H. Dickson Bruns; Obstetrician, S. M. D. Clark; Sanitarian, C. H. Irion.

Symposium on ophthalmia neonatorum was read by Dr. E. A. Robin, Dr. N. Feingold, Dr. Robert Salter and Dr. Dickson, before the County Medical Association. The papers were amplified and read at the meeting of the Louisiana State Medical Society and were to be published among the transactions of the society in the New Orleans *Medical and Surgical Journal,* after which they will be acted upon by the state and city boards of health.

## MAINE

Ophthalmologist, E. E. Holt; Obstetrician, Fred W. Mann; Sanitarian, A. G. Young.

No new action has been taken during the past year for the preventation of blindness. However, the following act appears upon the statute books: Chapter 18. Prevention of Blindness. Section 90. If one or both eyes of an infant become reddened or inflamed at any time within four weeks after birth, the midwife, nurse or person having charge of said infant shall report the condition of the eyes at once to some legally qualified practitioner of medicine of the ctiy, town or district in which the parents of the infant reside. Any failure to comply with the provisions of this section shall be punishable by a fine of not to exceed one hundred dollars, or imprisonment not to exceed six months.

## MARYLAND

Ophthalmologist, Hiram Wood, M.D.; Obstetrician, W. A. B. Sellman; Sanitarian, Wm. H. Welsh.

Nothing of importance has been accomplished. Several public addresses have been delivered by Dr. Hiram Woods on the general subject of prevention of blindness and especially ophthalmia neonatorum. He advised changes providing for educating midwives and licensing them. 2. Better birth registration. 3. Systematic instruction, by the society for prevention of blindness of present midwives who are exempt under the new law. 4. Compulsory prophylaxis for Baltimore later.

An excellent midwifery bill has been adopted by the legislature of the state of Maryland. It provides for the issuing of a license without examination to those actually practicing on the first of July, 1910, before the passage of the law, for all others an examination is required before a license shall be issued. It is required that the applicant shall, at least, know how to read and write and make out a birth certificate correctly, as required by law. The state board of health has charge of the details of the examination. It is also required that the candidate shall have attended at least five cases of child birth and is competent to attend ordinary cases of labor. The former law providing a penalty for the failure to report the existence of the symptoms of ophthalmia neonatorum remains unchanged. It is the first step toward the elimination of the midwife evil.

## MASSACHUSETTS

Ophthalmologist, Myles Standish; Obstetrician, D. H. Craig; Sanitarian, Henry P. Walcot.

A most valuable paper by Dr. Mark Richardson, entitled Ophthalmia Neonatorum; Facts Concerning the Disease and its Preveution as Affecting the State of Massachusetts was read before the associated boards of health of Massachusetts and later published in the *American Journal of Public Hygiene.* The effect of these official actions are best studied in the following table kindly furnished by Dr. S. H. Durgin, chairman of the Boston board of health.

Reported Cases of Ophthalmia Neonatorum in Boston

| Year | Cases reported | Treated in hospitals | Brought from other cities |
|---|---|---|---|
| 1905 (from Sept. 5) ...... | 16 | 3 | .. |
| 1906 .................... | 34 | 13 | 1 |
| 1907 .................... | 17 | 7 | .. |
| 1908 .................... | 39 | 31 | 2 |
| 1909 .................... | 171 | 115 | 30 |

All cases of ophthalmia neonatorum reported and not already under treatment in hospitals are seen by a medical inspector and if proper care cannot be secured in the home the case is sent to the hospital.

The records of the state board of health show no cases reported in 1905, 1906, or 1907; 20 cases in 1908 and 100 cases in 1909. There can be no doubt that the large increase in reported cases in 1909 was due to the action of the state board of health in putting the disease on the notifiable list, in sending to each practitioner a communication calling his attention to the law and in giving him detailed information concerning treatment. It is, of course, too early to estimate the effect upon the aggregate blindness of the state. The state board of health of Massachusetts has under consideration, the free distribution of the prophylactic.

The couclusions at which Dr. Richardson arrives are:

1. The cause of ophthalmia neonatorum and the manner of its spread are known.
2. Reliable methods of preventing the disease are known.
3. The law in Massachusetts is such that the disease, if promptly reported may still be deprived of many of its destructive effects through energetic cooperation of local and state health authorities.
4. Improvement in conditions is, undoubtedly, going on, but it is slow. Rapid change for the better can be obtained only through a sharp appeal to the self-interest of the practitioner. There can be little doubt that vigorous enforcement of the law concerning

notification, with or without resulting convictions, would, through the publicity alone, impress the importance of this matter upon the profession to an extent possible in no other way.

5. The practice of midwives in Massachusetts is extensive and without supervision. They should be regulated or suppressed.

In July of 1909 an important circular was issued by the Board of health in which attention was called to the revised laws. The following paragraphs are italicized: "Should one or both eyes of an infant become inflamed, swollen and red, and show an unnatural discharge at any time within two weeks after birth, it shall be the duty of the nurse, relative or other attendant having charge of such infant to report in writing within six hours thereafter, to the board of health of a city or town in which the parents of the infant reside, the fact that such inflammation, swelling and redness of the eyes and unnatural discharge exist. On receipt of such report, or of notice of the same symptoms given by a physician as provided by the following section, the board of health shall take such immediate action as it may deem necessary in order that blindness may be prevented. Whoever violates the provisions of this section shall be punishable by a fine of not more than one hundred dollars.

"If one or both eyes of an infant whom or whose mother he is called to visit become inflamed, swollen and red, and show an unnatural discharge within two weeks after the birth of such infant, he shall immediately give notice thereof in writing over his own signature to the selectmen or board of health of the town; and if he refuses or neglects to give such notice he shall forfeit not less than fifty nor more than two hundred dollars for each offense."

It also includes suggestions for the prevention and treatment of ophthalmia neonatorum as prepared by the Massachusetts Medical Society. This is of such importance as to be given in full as follows:

"Ophthalmia neonatorum is an inflammation of the eyes of the new-born, which is usually due to infection by a specific organism. If not properly treated, blindness is a very common result. A large proportion of the blind babies owe their loss of sight to this cause. Blindness rarely occurs if the disease is properly treated from the beginning. The possibility of any baby becoming infected at the time of confinement should be constantly borne in mind, and it is desirable to carry out a routine treatment in every case.

### PREVENTIVE TREATMENT

1. After washing the lids and adjacent tissues, drop into the eye of every new-born babe a few drops of a 25 per cent. solution of argyrol or a 5 per cent. solution of protargol.

2. It is not necessary to wash the solution from the eyes, as it is practically non-irritating.

3. Care should be taken that the end of the dropper does not touch the eye-ball, and that the finger-nails do not come in contact with the cornea.

4. The solution of argyrol or protargol should be freshly prepared for each confinement case.

### SUGGESTIONS

Before leaving a confinement case, the physician should instruct the nurse, of, if a nurse is not employed, the most intelligent member of the family, to notify the doctor at once if the eyes become inflammed and discharge matter. He should also call attention to section 49 of chapter 75 of the Revised Massachusetts Laws.

2. When possible these cases should be placed in the hands of an occulist. It is extremely desirable that all cases met with among the poorer classes be transferred at once to the Massachusetts Eye and Ear Infirmary, or some similar institution in the city where they occur. This is advisable, not only for the good of the child, but for the safety of other members of the family as well. For the fact must not be lost sight of that the disease is very contagious, and that, if the eyes of an adult or older child become infected, it means an inflammation of even greater seriousness than when present in the eye of the new-born babe.

3. If circumstances make it necessary that the child be treated at home, the serious and infectious nature of the disease should be impressed upon the family. The baby should be separated from the other children. Caution should be given to those having the care of the child that their hands should be frequently washed and not brought in contact with their own eyes. All bits of cotton used about the eyes should be carefully separated and thoroughly boiled.

4. The following treatment should be begun at once. Wash the eyes every forty minutes with a 3 per cent. boric acid solution. This requires the services of two intelligent persons, preferably nurses, one for day and the other for night duty. They should be carefully instructed that in cleansing the eyes the inner angle and edges of the lids, which are usually tight shut, should be freed from discharge by means of a bit of absorbent cotton wet with the solution. It the lids are then separated most of the retained secretion will escape and what remains can easily be dislodged by taking another bit of cotton, thoroughly saturated with the solution, holding it an inch or two above the eyes, and then by pressure causing a stream to flow gently into the conjunctival sac. The lids should be dried after each washing, and four or five times a day, it is well to apply a little simple ointment to their edges. Nurses or attendants doing this work should have their finger-nails trimmed as short as possible, for if a slight abrasion of the cornea be made in the process of washing the eyes or separating the lids, it will be quickly followed by infection and ulceration. The danger of the baby scratching the cornea with its finger-nails should also be prevented by confining the hands.

Next in importance to cleanliness is the use of some silver salt. A 25 per cent. solution of argyrol or a 5 per cent. solution of protargol may be used freely every four hours, the eyes to be first freed from secretion. In applying the remedy, the child should be placed flat on the back, and the head so held that the solution will not quickly escape from the eyes. The lids being separated with the thumb and finger, a few drops should be instilled with an eye-dropper. Careful instructions should be given, however, that the end of the dropper be not brought in contact with the cornea, or the instillation made with too great force. This treatment, frequently cleansing the eyes and the use of argyrol, or protargol, if it can be thoroughly and systematically carried out, will, with rare exceptions, ensure a perfect recovery.

## MICHIGAN

Opthalmologist, W. R. Parker; Obstetrician, J. H. Carstens; Sanitarian, Angus McLean.

Dr. J. H. Carstens: I can find no papers on the subject of ophthalmia neonatorum. I personally, have had a number of talks with our health officer. The trouble with enforcing the law is the ignorance of midwives and we now have a proposition before the aldermen to put them under the control of the health board. We will gradually get this under control.

Dr. Walter R. Parker: For various reasons it has not seemed advisable to make a frontal attack just at present. I have not missed an opportunity to bring the matter up. Have a talk in Ann Arbor to-morrow night before the Young Men's Christian Association. I believe a little more educational work is necessary before the professional men will take it up in earnest. I think, however, that next year the whole matter can be brought up before the society in a way that would be more effective and produce better results than to attempt anything at the present time.

## MINNESOTA

Ophthalmologist, Frank C. Todd; Obstetrician, A. B. Cates.

An important symposium was presented at the forty-first annual meeting of the Minnesota Medical Association, held at Winona, October 14 and 15, 1909. A comprehensive and valuable paper was read by Frank C. Todd, entitled Unnecessary Blindness, and one on Etiology and Prophylaxis of Ophthalmia Neonatorum, by Jennings C. Litzenburg, of University of Minnesota. Resolutions to accomplish the ends sought were passed by the association and at the proper time an effort will be made to obtain legislation upon the subject.

## MONTANA

Ophthalmologist, John A. Donovan; Obstetrician, D. Campbell; Sanitarian, Wm. Tracy.

Dr. T. D. Tuttle: Year before last the question occupied the greater portion of the time of the public health meeting. Resolutions were adopted relative to the nature of laws on this subject and were sent to the legislature of our state. A bill was introduced in the hope of securing some legislation on this line, but same was killed.

Dr. Donald Campbell: Nothing has been done in our state the past year. Our state society meets in May and we hope to get some resolutions passed, then, if nothing else.

## MISSISSIPPI

Ophthalmologist, Jas. B. Bullitt; Obstetrician, J. C. Blackstrom; Sanitarian, B. F. Ward.

Dr. James B. Bullitt: The past year has shown some progress in Mississippi in this fight, but not nearly so much as might be desired. No papers have been read before any large gatherings but there have been a number of papers and a good many talks made before the various county medical societies. The committee on legislation of the State Medical Association, in cooperation with the state board of health, has made a strong effort to pass a bill this winter, looking toward the accurate collection of vital statistics, including ophthalmia. The bill failed to pass but some progress was made toward educating some of the legislature along this line, and we hope will bring some results at the next meeting.

## MISSOURI

Ophthalmologist, P. I. Leonard; Obstetrician, T J. Beattie; Sanitarian, E. S. Ballard.

A paper entitled The Prevention of Ophthalmia Neonatorum was read in May, 1909, and published in the August number of the *Journal of the Missouri State Medical Association*. The following law is now upon the Missouri statute, but is not enforced.

Section 7530.—Midwife to report case of sore eyes to physician. Should one or both of the lids of either or of both eyes of an infant become red or swollen, or should there be any discharge from either or from both eyes, at any time within three weeks after its birth, it shall be the duty of the midwife, nurse or other person having charge of said infant at once, unless for good cause shown, to report the condition of said eyes to a legally qualified practitioner of medicine (Laws, 1895, p. 153).

Section 7531.—Health officer to furnish copy of law to midwife—secretary of state to print same. Every health officer shall furnish a copy of this article to each and every person who is known to him to act as midwife or nurse in the city or town for which such health officer is appointed, and the secretary of state shall cause a sufficient number of copies of this article to be printed, and shall supply the same to such health officers on application (Laws, 1895).

Section 7532.—Violation of the law a misdemeanor-punishment. Any failure to comply with the provisions of this article shall be a misdemeanor, and shall be punishable by a fine of not less than ten or not more than one hundred dollars, or by imprisonment not to exceed six months, or by both such fine and imprisonment (Laws, 1895, p. 153).

Missouri now has an act to provide for the immediate registration of all births and deaths under the supervision of the state board of health, and is in a position to have this law enforced.

## NEBRASKA

Ophthalmologist, Harold Gifford; Obstetrician, W. C. Henry; Sanitarian, W. T. Johnson.

Dr. H. Gifford: About seventeen years ago I had a bill introduced into the Nebraska legislature placing ophthalmia neonatorum on the contagious disease list, and making it obligatory for midwives to report all cases to the nearest board of health, which was then to be instructed to advise parents of the danger of the disease and of the necessity of medical treatment. This bill, although recommended unanimously by the state society, was killed in the committee of the state legislature. Since then nothing has been done, although I propose to bring up a similar bill at the next meeting of the state legislature.

## NEVADA

Obstetrician, S. K. Morrison.

Dr. S. K. Morrison writes: While the state association or its county branches have done nothing in an official way toward the enactment of laws, nor any other actions as a body, I personally have communicated with every doctor practicing in the state of Nevada, I could reach, asking them the number of cases they have had of ophthalmia neonatorum, the routine practice concerning the care of the eyes of the new-born and results of cases they have had, and I find that there were but five cases reported to me in the whole state of Nevada for the last twenty years, and only one of these resulted in complete blindness. The majority of the men are using an instillation of silver nitrate solution immediately after birth, the balance are using boric acid and silver nitrate wherever there is any suspicion that the mother is infected.

## NEW HAMPSHIRE

Ophthalmologist, C. B. Hammond; Obstetrician, W. B. Garland; Sanitarian, Irving A. Watson.

Dr. Charles Hammond: During the last session of the New Hampshire legislature, there was a bill regulating the treatment of the eyes of the new-born, presented to it asking for its enactment, but it was turned down. There never has been a law on this subject, and no papers have been read in any organization of any kind relative to it. We are to try organization another year and hope for better results. There have been so few cases of ophthalmia neonatorum throughout the state that the physicians are a little apathetic regarding it. The only suggestion I have to make is to "Stick to the work if it takes years" to do it. We are on the right road, I am convinced.

## NEW JERSEY

Ophthalmologist, C. J. Kipp; Obstetrician, Charles L. Ill; Sanitarian, B. S. Keator.

At the annual meeting of the Medical Society of New Jersey, held at Cape May, N. J., June 23, 1909, Dr. Charles J. Kipp introduced the following resolution:

*Resolved*, That this society appoint a committee which shall put itself in communication with the state board of health and with each component society to adopt a method to put a stop to ophthalmia neonatorum.

That it be recommended that the state shall make a sufficient appropriation to the state board of health to put the necessary enactments into force and to prosecute their violation.

That the new law now existing with regard to reporting cases of this disease, be so amended as to make it enforceable.

That ophthalmia neonatorum be placed on the list of communicable diseases by the state board of health and by all local boards of health.

That a law be passed compelling midwives to use such prophylactics as may be recommended by the state board of health.

A motion was made, seconded and carried that the resolution be referred to a committee to put the matter in shape for action by the society.

At the same meeting a paper on the prevention and treatment of ophthalmia neonatorum was read by Dr. T. R. Paganelli, of Hoboken, N. J.

With a view of bringing this subject again to the attention of the members of this society, the Committee on Prize Essays has selected as the subject of the essay, "The Causation, Prevention and Treatment of Ophthalmia Neonatorum, with Special Reference to Methods of Prevention Applicable in Private Practice." To the best essay will be awarded the prize of one hundred dollars, to the second a gold medal, of the value of fifty dollars.

The committee on ophthalmia neonatorum, with the aid of the attorney general of the state, has prepared an amendment to the law of 1895, an act for the prevention of blindness in the state of New Jersey, of which a copy is enclosed. We have no reason to doubt that the amendment will be passed. As soon as this is done the state board of health will distribute to all known practitioners of medicine and midwives, a copy of the law as amended, together with circular containing directions as to approved methods of prevention and treatment of ophthalmia.

A supplement to an act entitled "An act to regulate the practice of midwifery in the state of New Jersey" has been introduced in the legislature and will probably be passed.

In the hospitals with maternity wards where Credé's method is used, no cases of ophthalmia developed in the children born there during the year.

In the Newark Charitable Eye and Ear Infirmary, the average percentage of cases of ophthalmia neonatorum during the twenty-four years was 0.8 per cent. of all eye diseases. During the last four years it has been a little above 0.35 per cent. Most of the cases were in children born with the assistance of midwives. We rarely see a case in general practice.

For the substance of the law of 1895 see the report of the committee for last year.

## NEW YORK

Ophthalmologist, Charles S. Bull; Obstetrician, H. J. Bolt; Sanitarian, Eugene H. Porter.

In his report to the Governor, Dr. Eugene H. Porter states: This (ophthalmia neonatorum) has been placed in the list of diseases of which Health Officers are required to make report; forty cases have been reported, no report on it from New York City being included.

This is the first entire year of work in this direction. It has been taken up for the purpose of saving new-born children from a disease which is almost certain to result in blindness. The disease is not common; it is infrequent enough to occur but few times or possibly not at all in the experience of the average physician. A suitable prophylactic applied to the eyes at birth will prevent its development. Securing its report is only a step towards effecting its control. The chief work on it this year by the department has been to induce physicians and midwives to habitually and uniformly use preventive measures on the eyes of every new-born child with which they have to do. Pledge cards to do this have during the year been sent to every practicing physician in the state outside of New York city, and every midwife whose name could be secured. Return postals to this end have been sent to 6,353 physicians and to 157 midwives; 3,702 of the former and 56 of the latter have thus far signed this pledge. This work has received general commendation from the medical profession in whatever comment is made in connection with the return of the pledge cards.

There has also been placed on the certificates of birth a question as to whether ophthalmia prophylaxis has been used in the eyes of the child whose birth is reported. The purpose of this is to keep constantly before the obstetrician this measure. Physicians will not misinterpret this as an official demand or as an interference with individual judgment as to treatment, when they reflect on the importance of the uniform and routine use of the procedure which will prevent a grave disease. During the year a prophylactic outfit consisting of a solution of nitrate of silver with apparatus and directions for its use, has been prepared and a large number sent to health officers for gratuitous distribution to every obstetrician.

## NORTH CAROLINA

Ophthalmologist, H. H. Briggs; Obstetrician, J. F. Highsmith; Sanitarian, George G. Thomas.

Dr. R. H. Lewis reports that nothing has been done during the last legislature. Dr. Rankin, the new secretary of the board has promised his support during the next legislature. He is in favor of trying the New York plan of getting the physicians to sign a pledge to use Credé's method in all cases.

## NORTH DAKOTA

Ophthalmologist, Henry Beaudoux; Obstetrician, F. J. Campbell; Sanitarian, J. Grassick.

J. Grassick reports: No laws have been passed during the year of 1909 bearing on ophthalmia neonatorum. We have been doing education work which should count for something.

## OHIO

Ophthalmologist, Mark D. Stevenson; Obstetrician, C. L. Bonnifield; Sanitarian, C. O. Probst.

Early in the present year, an extensive campaign for the education of the people for the propaganda in the interest of prevention of blindness was carried on under the direction of the Ohio State Commission for the Blind. Mr. M. C. C. F. Campbell, of Boston, spent six weeks in going from town to town delivering lectures with lantern slides and other illustrations. An enormous amount of literature was distributed. It was estimated that 17,000 columns on this subject appeared in the various local papers. Much important statistical work has been done by the commission.

## OKLAHOMA

Ophthalmologist, J. E. Fowler; Sanitarian, B. F. Hamilton.

No report.

## OREGON

Ophthalmologist, J. F. Dickson; Obstetrician, W. E. Lewis.

Dr. J. F. Dickson reports: There is not much to report except in preliminary work. Papers have been read before the State and County societies, the actions of the American Medical Association heartily endorsed, and at the last meeting of our State Board of Health, held on the 25th, ophthalmia neonatorum was placed on the list of diseases to be reported and a bulletin containing full directions for treatment, etc. (similar to that issued by the New Board) is to be sent to every physician and midwife in the state. The State Board of Health bulletin, which will be issued about the end of April, will also contain a chapter on the diagnosis, prophylaxis and treatment of this disease. Our State Medical Society meets next June, at which time definite plans will be made and a committee appointed to draft, or adopt, a suitable law covering all the points urged by your committee, and, with the aid of the City and County Medical Societies, a determined effort will be made to have it passed at our next legislature, which meets in January, 1911.

## PENNSYLVANIA

Ophthalmologist, G. E. deSchweinitz; Obstetrician, Joseph Price; Sanitarian, Samuel G. Dixon.

Dr. Samuel G. Dixon: The Department of Health of this commonwealth has not been able to compile statistics on the prevalence of ophthalmia neonatorum, for the reason that the only law on our statute books referring to this disease requires that a report be made to medical men. This department did have copies of the Act, together with a circular letter, mailed to every physician in the commonwealth about one year ago. Copies with suitable letters were sent to all of the Department of Health Officers in the field, to the secretaries of the Boards of Health in all cities, towns and boroughs, and to every practicing midwife. No one connected with the department has published any papers on the subject but I did give wide newspaper publicity to the necessity for making reports at the time copies of the Act were distributed. This department is in full sympathy with the work and will be glad to co-operate with you in advancing the work.

## RHODE ISLAND

Ophthalmologist, C. W. Van Benschoten; Obstetrician, D. F. Gray; Sanitarian, A. C. Sprague.

Dr. Gardner T. Swarts: As chairman of the Committee on Ophthalmia Neonatorum, I have to report to the Conference of State and Provincial Boards of Health of North America at its next meeting in Washington, April 28. I am receiving inquiries from the different state, either boards of health or ophthalmological societies, in reference to the nitrate of silver outfit. The supply which we sent out last year was fully appreciated by the physicians and we are sending out another supply this year. As the result of reading a very exhaustive report made by the Ophthalmological Society of the District of Columbia, I am looking up the question of utilizing sophol in place of the nitrate of silver. New York has sent out about 25,000 of the outfits, and Dr. Porter informs me that they had forty cases in 1909. I am about to write to the various secretaries of boards of health to ascertain which, if any others, have taken the matter up and how far they have gone.

## SOUTH CAROLINA

Ophthalmologist, E. D. Parker; Obstetrician, E. S. Cathcart; Sanitarian, T. Grange Simon.

Dr. Kollock reports that in the latter part of the nineties, he presented the necessity of securing legislation for the prevention of the increase of blindness before the South Carolina Medical Association and finally succeeded in getting a law which was better than none. The law only applies to towns and cities of 1,000 inhabitants and over and the punishment for not reporting such cases was only a fine of twenty dollars or imprisonment for one month, or both. Dr. Kollock has devoted much time to this subject in his lecture to nurses of the Roper Hospital.

## SOUTH DAKOTA

Ophthalmologist, E. O. Miller; Sanitarian, H. A. Peabody.

No report.

## TENNESSEE

Ophthalmologist, G. C. Savage; Obstetrician, R. E. Fort; Sanitarian, J. A. Albright.

Dr. G. C. Savage: From time to time during the past quarter of a century the profession of our state have heard much of ophthalmia neonatorum and how to manage it. We have, up to the present, no law on our statute books touching this disease, and our legislature will not meet again until January, 1911.

## TEXAS

Ophthalmologist, J. C. McReynolds; Obstetrician, C. E. Cantrell; Sanitarian, William Brumby.

C. E. Cantrell: A paper was read at the last meeting of the State Association at which it was suggested that a paper be read at the open meeting which is held annually in the county societies. This suggestion was adopted. From the Rules and Regulations of the Texas State Board of Health and made operative Feb. 1, 1910. Rule 22, "Nurses and Midwives shall report redness of eyelids or inflammation to Health Officer. Whenever any nurse, midwife or other person not a legally qualified practitioner of medicine shall notice inflammation of the eyes or redness of the lids in a new-born child under his or her care, it shall be the duty of such person to report the same to the local health authority, or in the absence, any reputable physician, within twelve hours of the time the disease is first noticed.

### UTAH

Ophthalmologist, Fred Stauffer; Obstetrician, F. S. Bascom; Sanitarian, F. S. Bascom.

No new laws have been enacted during the past year regarding the prevention of blindness from ophthalmia neonatorum. No papers have been read before the medical societies or other organizations with reference to this subject. It is reported that there ophthalmia neonatorum is rare. There are some old laws on the statute books of the state which require a prevention treatment (Credé's method) and any physician not taking the precaution is rendered liable.

### VERMONT

Ophthalmologist, F. J. Arnold; Obstetrician, C. W. Bartlett.

Charles S. Caverly: Nothing has been accomplished in this state during the past year toward the prevention of ophthalmia neonatorum and no papers have been read before any medical or popular organizations on this subject.

### VIRGINIA

Ophthalmologist, J. A. White; Obstetrician, R. C. Kight; Sanitarian, R. W. Martin.

Joseph A. White: Nothing has been done in Virginia in regard to ophthalmia neonatorum. No papers that I am aware of have been read before the medical association, or any popular organizations. No laws in reference to the matter have been enacted. I have tried to interest our Board of Health in the matter, but so far without success, and it is a difficult matter to interest any of our legislature in laws regarding the public health, as there are no politics in it.

### WASHINGTON

Ophthalmologist, David deBeck; Obstetrician, William H. Hall; Sanitarian, J. M. Semple.

Eugene R. Keeley: This state has no laws on the subject. I do not believe that any papers have been read on this subject before any of the medical societies.

### WEST VIRGINIA

Ophthalmologist, T. W. Moore; Obstetrician, J. Cannady; Sanitarian, J. E. Robins.

No report.

### WISCONSIN

Ophthalmologist, Nelson M. Black; Obstetrician, C. H. Mason; Sanitarian, C. A. Harper.

L. W. Hutchcroft: At the 1909 session of the legislature, this board succeeded in having enacted into law a provision very similar to the uniform law recommended by the association. This law together with instructions for the proper treatment of the disease, is printed in the "Powers and Duties," issued by our board and is also given on the covers of all birth booklets which are distributed to physicians, midwives and others persons required to report births.

### WYOMING

Sanitarian, Fred Horton.

No report.

### CONCLUSIONS

In a paper published in THE JOURNAL of the American Medical Association just prior to the meeting of 1906 and which resulted in the appointment of the committee on ophthalmia neonatorum, it was urged that the perfect organization of the physicians of the country in this great national body through its state and county constituents would make it possible and practicable to carry into effect a reform movement like the prevention of the unnecessary blindness of babies.

By the adoption of some uniform method of procedure which could be taken up in each of the states and in these through the district and county organizations, it would be possible in a comparatively short time to reach the ultimate unit and the entire profession acting together would exercise an influence that would be irresistible. Such a movement in a less coherent organization would be impossible and the exceedingly gratifying results which have so far been obtained have been due to the cordial effective and untiring support which has been given to the efforts of the central committee from one end of the nation to the other.

It became evident as the work opened up that a relatively uniform method of procedure was essential to success. Most physicians do not need to be told what to do to prevent or cure a gonococcic birth infection, but because of the infrequency of these cases in the daily work of the average general practitioner and the disastrous consequences which follow the neglect of early treatment, the danger in the occasional case is overlooked in a great number of cases and the aggregated blindness is, therefore, by no means inconsiderable. The only way in which the careless or indifferent individual can be reached is by making general the adoption of a plan which with him, as with others, will become a routine method of procedure. In some instances, a seeming indifference has been shown because of the expressed belief that in that particular section of the world, ophthalmia neonatorum is non-existent. In almost every such instance, further investigation has shown that the cases simply had not been brought to public notice. One exceedingly efficient health officer wrote that the disease was practically unknown in his little state, but a subsequent letter reported that he had found four cases in his own town. He has become a most enthusiastic propagandist for prophylaxis. Gonococcic birth infections occur wherever gonorrhea is found and this disease, alas, is ubiquitous.

If we would wipe out this pestilence, it can only be done through the coordinated efforts of the organized medical profession. So your committee urges once more and with added emphasis, its recommendations of one year ago: Make renewed efforts through the state and county societies to have births reported to the health officer promptly; secure adequate midwife laws or give such improved obstetric teaching as will drive the midwife out of business, as has practically been done in Boston; ask on every birth certificate, whether or not a prophylactic has been used, and if not, why not—not as has already been shown by the New York State Board of Health in its monthly Bulletin, as an infringement of personal liberty (for every obstetrician may of course do as he will)—but as a reminder, to the indifferent and careless, of the necessity of protecting the babe from possible disaster almost worse than death. Distribute the chosen and inexpensive prophylactic through the state Department of Health generously and gratuitously. Every time the accoucheur sees the little package with its warning literature, it is an impressive object lesson and if one child is thereby saved from blindness, it is worth more than the cost of the distribution of the preparation throughout an entire state. Secure in the cities adequate provision in the hospitals for children in whom infective inflammation has occurred; special nurses for continuous day and night duty are expensive and increase the *per capita* cost of maintenance. They are not always provided for pauper babies, but there is no hospital management so devoid of human feeling as to permit even a beggar's child to become blind when the danger is pointed out. Moreover, a blind person saddled for life on a community is an expensive luxury. Prophylaxis and early treatment are prudent economic measures on the part of any commonwealth.

It early became apparent to your committee that any preventive propaganda to be successful must have the support of the general public. When the patient reaches the physician, the disease is an accomplished fact. In order that it may be anticipated and prevented, measures must be initiated and carried into effect by the people themselves. Our efforts for the prevention of tuberculosis never gave any hope of success until they took the form of a popular movement. Your committee was exceedingly fortunate, therefore, as already reported, in securing the cooperation of the committee on prevention of the New York Association for the Blind with the most generous financial support of the Russell Sage Foundation. Six valuable publications have been issued by this latter organization for general gratuitous distribution. An extensive practical exhibit on ophthalmia neonatorum with stereopticon slides and the skeleton of a lecture has been provided and will be loaned to our committees for demonstrations before state or other societies, or for popular lectures on any occasion when not otherwise in use. Associations have also been formed in others of the states, and in several of them commissions for the blind, that of Massachusetts having an annual appropriation of forty thousand dollars, and each is making the prevention of blindness one of its chief ends and reasons for being.

It became apparent with this multiplication of agencies working along similar lines and with like ends in view that there would soon be an overlapping of effort and waste of energy unless all of this work could in some way be coordinated. This possibility was emphasized by a letter which came in January last to Miss Louisa Lee Schuyler, chairman of the committee on prevention, and also a member of the Sage Foundation Trust, the woman to whom the success of this movement is largely due. Actively occupied as she is in the wise direction of a number of important charities, she still finds time for personal service in this one, the prevention of unnecessary blindness. This letter came from Mr. James P. Monroe, chairman of the Massachusetts Commission for the Blind. A portion of it reads as follows:

> "In view of the fact that this work is still in the experimental stage, that there is possible danger of its taking wrong directions, and that there is certain danger of unnecessary duplication of effort, it would seem to me very desirable to hold, at a comparatively early date, an informal conference, to which should be invited representatives from New York, Massachusetts, Ohio, Pennsylvania, Maryland, New Jersey and perhaps one or two other states. Such a round table conference would help, generously supported by the Sage Foundation, along lines that would be most effective and least liable to needless duplication. We fear, unless this movement for

prevention is kept in the controlling hands of those who have had experience, there is danger that it may be carried forward in an unwise way by amateurs."

The conference suggested was held in New York on February 16, and all of the states mentioned were represented except New Jersey. The presiding officer was Mr. John N. Glenn, director of the Russell Sage Foundation. A simple form of organization was effected and a committee appointed with authority to call other meetings as occasion might require.

The general sentiment expressed by representatives from all of the states was that success in the prevention of blindness was contingent on one word, cooperation, and the representatives from each of these states gave their hearty assurances of willingness to aid in a general movement on these lines.

It will be readily seen that the rapid development of this movement with its important lay associations soon made it evident that it could not be adequately managed by any ordinary medical committee. The effective work accomplished in one state may be utilized with great advantage in another; medical and lay committees can be brought together and a plan of campaign determined on. The literature used in one state can often serve as a basis for like publications in another. But such work to be successful would require the entire time of a capable trained man. Our necessities were, therefore, again presented with the certainty of a sympathetic hearing to the trustees of the Russell Sage Foundation and again an appropriation was made which made the appointment of such a man possible. The trustees have chosen for this work, Mr. Samuel E. Eliot, a graduate of Oxford and Columbia universities, a man especially endorsed and excellently trained for this important work. His services are offered to our committees wherever they may with advantage be employed.

So general and widespread has this movement become and so ready has been the recognition of the need of cooperation that the prevention of blindness has been chosen as one of the topics to be considered at the National Conference of Charities and Corrections to be held in this same city (St. Louis) in May, under the able chairmanship of Dr. Charles Emerson, now of Clifton Springs, formerly of Johns Hopkins University, Baltimore, and whose work in hospital social service in that city is so well and widely known. The paper will be read by Miss Carolyn C. Van Blarcom, the able secretary of the committee on prevention of the New York Association for the Blind. The theme will again be coordinated work and the appointment of a committee from this great organization will be requested.

Still further, with the broadening of the subject, the necessity of the interest and the influence of the educators of the country is evident. To lay the foundation for the development of this greater preventive work an address will be delivered before the National Educational Association at the meeting in Boston in July, on the Conservation of Vision and the Prevention of Blindness, and the aid of a special committee will be invited from that organization.

One of the most efficient agencies for the promulgation of this propaganda has been the Federation of Woman's Clubs and the Public Health Education Committee of this Association. This again affords an organization so complete that the entire country may be effectively and quickly covered.

It is evident from the foregoing that just now the conditions of time and circumstance present extraordinary opportunities for preventive work on ophthalmic lines with an all but universal readiness to aid in this movement. To be successful, however, it is essential that it be guided and directed by medical men.

The committee on ophthalmia neonatorum in each state makes an excellent nucleus for the development of this larger work which might be augmented by committees from the National Association of Charities and Corrections, the National Educational Association, the Committee on Public Education of this Association, the Confederation of Woman's Clubs and other allied organizations. These could accomplish ends which for any one of them alone would be impossible.

Your committee therefore recommends that this work be continued with its scope broadened and enlarged to comprehend in its largest sense the prevention of blindness.

Most respectfully submitted.

F. Park Lewis, Chairman.
J. Clifton Edgar.
F. F. Wesbrook.

On motion, the report was adopted and the committee continued.

The Chairman stated that he would be glad to consider a motion to limit the time of the reading of the reports.

Dr. C. R. Woodson, Missouri, moved that the reports be read by title or not exceed five minutes.

Seconded.

Dr. C. E. Cantrell, Texas, said 5 minutes is not sufficient time for making such reports.

Dr. Alexander R. Craig, Pennsylvania, moved to amend that the time limit be 10 minutes.

The amendment was seconded, accepted, and the original motion as amended was carried.

Dr. Henry O. Marcy, Massachusetts, Chairman, presented the report of the Committee on Davis Memorial.

On motion of Dr. A. P. McCormack, Kentucky, the report was referred to the Board of Trustees.

The report of the Committee on Nomenclature and Classification of Diseases, Dr. Frank P. Foster, New York, Chairman, was called for, and in the absence of Dr. Foster, Dr. Alexander R. Craig, Pennsylvania, moved that the report be read by title and referred to the Reference Committee on Miscellaneous Business.

In the absence of Dr. Walter B. Cannon, Massachusetts, Chairman, the report of the Council on Defense of Medical Research, on motion of Dr. A. P. McCormack, was referred to the Reference Committee on Legislation and Political Action.

Dr. Charles S. Bacon, Illinois, Chairman, read the report of the Committee on Patents and Trademarks.

Dr. Alexander R. Craig, Pennsylvania, moved the adoption of the report with its recommendations, and that the committee be discharged.

Seconded.

The report was discussed by Dr. C. S. N. Hallberg, Illinois, who moved that the report be referred back to the same committee for the purpose of considering the question of aspirin, to which reference was not made in the report of the committee.

Seconded.

Dr. E. J. Goodwin, Missouri, moved as a substitute that the report be referred to the Reference Committee on Legislation and Political Action.

Seconded.

The motions of Drs. Hallberg and Craig having been withdrawn, the President put the motion of Dr. Goodwin, which was carried, and the report was so referred.

Dr. Thomas McDavitt, Minnesota, Chairman, read the report of the Committee on Uniform Regulation of Membership.

It was moved and seconded that the report be referred to the Reference Committee on Amendments to the Constitution and By-laws.

Dr. W. H. Sanders, Alabama, stated that for a long time he has entertained and maintained some definite views with regard to the thorough and radical reconstruction of the Constitution of this Association, and not seeing any prospects of carrying out those views by participating in the work of this committee, he declined to serve on it, and now asked that his name be stricken from the committee. He has always believed that this Association ought to be an association of state organizations and not an association of individual physicians of the different states, and therefore if it is an association of state organizations, it should have no control over the affairs of county medical societies; that these matters should belong entirely to the state.

Dr. Alexander R. Craig, Pennsylvania, moved that Dr. Sanders be permitted to withdraw his name from the report of the committee.

This motion was seconded and carried, and the report of the committee was then referred to the Reference Committee on Amendments to the Constitution and By-Laws.

In reference to the report of the Committee on Elaboration of Principles of Ethics, the General Secretary read the following letter from the Chairman of this committee, Dr. Frederick C. Shattuck, Massachusetts:

Boston, Jan. 13, 1910.

Dr. George H. Simmons.

*Dear Doctor:*—After preliminary correspondence and some interchange of views, the Committee on the Elaboration of the Principles of Ethics of the American Medical Association met in Atlantic City, June 9, 1909.

After full discussion, it was unanimously voted that it is not expedient to take any action at present. The Principles of Ethics are fairly well set forth by the Society now. This country is so large, and custom, as well as the conditions of life, vary so widely with the character of the communities, states and groups of states which comprise the country, that the committee believe it to be an impossible task for the American Medical Association to cover the whole ground and provide for anything like the variety of questions which arise and are bound to arise. The Association sets forth the general principles of ethics, and it seems to your committee far better to allow the individual state societies to provide for details in such way and as far as they may deem wise.

On motion of Dr. Edward Jackson, Colorado, the report was received and the committee discharged.

The report of the Committee on Revision of Pharmacopeia, Dr. Reid Hunt, District of Columbia, Chairman, was, on motion, referred to the Reference Committee on Miscellaneous Business without being read.

The report of the Committee on Anesthesia was read by the Chairman, Dr. James G. Mumford, Massachusetts.

### Report of the Committee on Anesthesia

*To the Members of the House of Delegates of the American Medical Association:*

Your Committee on Anesthesia has the honor to submit the following report of progress:

This committee, appointed at the annual session in June, 1909, is properly the successor of the Anesthesia Commission of the Surgical Section, a Commission which existed during the years 1907, 1908 and 1909, and has now ceased its functions.

The present Committee on Anesthesia met in New York for organization on Oct. 29, 1909. Dr. J. G. Mumford of Boston, was elected chairman; Dr. Alexander Lambert of New York, vice-chairman, and Dr. H. A. Fowler of Washington, secretary.

Inasmuch as the committee had received no instructions from the Association regarding its purpose or method, the committee thought best to pursue its work somewhat after the fashion of the previously existing Commission of the Surgical Section. Accordingly, it has followed certain lines of research on anesthesia and anesthetics, devoting itself especially to four topics.

1. Research on the best anesthetic to use under varying morbid conditions.
2. Further investigation on the value of the various ethyl compounds as anesthetics.
3. Further investigation on the value of nitrous oxid as an anesthetic.
4. An investigation of the use of anesthetics in traumatic surgery, including military surgery.

Your committee met again on March 20, 1910, in New York, and again on June 6, 1910, in St. Louis. It reports in general terms progress, though it finds itself unable as yet to submit full and final reports for publication.

1. The research on the best anesthetic to use under varying morbid conditions has been confided to the direction of Dr. George W. Crile, of Cleveland, who, with his associates, has kindly consented to pursue the investigation, and has already made gratifying progress, some of which has been reported in current medical journals. Dr. Crile's work has been largely on the use of nitrous oxid, combined or not combined with morphin and scopolamin.

This investigator now informs the committee that he has employed nitrous oxid, combined with oxygen, in 1130 cases; that of these cases 1000 represent major operations; of these 1,000, 139 had nausea (9 severe nausea, and 4 of the 9 nausea lasting two or three days); in all the other 861 cases there was practically no nausea. When scopolamin and morphin were employed before the nitrous oxid and oxygen (759 cases) there was often a slight feeling of nausea during the recovery, and sometimes immediate vomiting.

Dr. Crile employed these forms of anesthetics (nitrous oxid and oxygen, with or without scopolamin and morphin) in his general routine work, and was satisfied that in the hands of highly skilled anesthetists the method is the best yet devised. This statement of Dr. Crile's is a supplement to a statement made by him in the *Southern Medical Journal* for January, 1910, in which he discusses the effects of ether on the vital forces and concludes (a) that it contributes to postanesthetic depression and (b) that it impairs immunity. These matters will be treated by the committee at length in its completed report, to be published later.

In connection with the subject of ether and immunity your committee will publish a paper also by Dr. Evarts A. Graham, of Chicago, whose important contribution reaches the committee through the courtesy of that investigator.

2. Further investigation on the value of the various ethyl compounds as anesthetics strengthens the conviction that these compounds are associated with a relatively high death rate; while the compounds themselves are not serviceable for prolonged anesthesia.

3. Further conclusions on the value of nitrous oxid as an anesthetic are summed up in a paper prepared by Dr. W. D. Haggard. His conclusions are essentially those already enumerated in Dr. Crile's contribution, the upshot of the investigation being that as a routine anesthetic nitrous oxid has a peculiar value, but that it must always and inevitably be administered by a highly trained specialist in anesthesia. Your committee cannot too strongly deprecate the routine use of nitrous oxid by general practitioners.

4. The committee has planned an extensive investigation of the uses of various anesthetics in military and traumatic surgery. This investigation is in the hands of Dr. H. A. Fowler, of Washington, who is assisted by Col. LaGarde, of the army, by Dr. Robert T. Miller, of Pittsburg, and by Dr. Gaston Torrance, of Birmingham, Ala. The committee thinks it unlikely that a satisfactory statement of the matters under this heading can be made before one, and possibly two, years to come.

In concluding this extremely brief statement of progress, the committee insists again on the wide distinction between anesthetics proper for use by general practitioners and anesthetics which may be employed by experts. As time goes on and wider knowledge accumulates, your committee feels more and more convinced that the distinction between these two classes of anesthetists is vital, and it repeats the statement in the report of the Commission on Anesthesia for the Surgical Section in 1908:

> 1. "That for the general practitioner, and for all anesthetists not specially skilled, ether must be the anesthetic of choice—ether administered by the open or the drop method.
> 2. "That the use of chloroform, particularly for the operations of minor surgery, be discouraged, unless it be given by an expert."

And your committee now adds the further recommendation, as already stated, that the use of nitrous oxid, whether combined with air or oxygen, and whether or not preceded by scopolamin and morphin, be confided invariably to the care of an expert.

J. G. Mumford, Chairman.
Alexander Lambert.
W. D. Haggard.
H. A. Fowler.
H. C. Wood, Jr.

On motion of Dr. Alexander R. Craig, Pennsylvania, the report was accepted, the committee continued, and referred to the Reference Committee on Miscellaneous Business.

Major M. W. Ireland, U. S. A., Chairman, read the report of the Committee on Selection of Insignia for A. M. A.

On motion, the report was referred to the Reference Committee on Miscellaneous Business.

Dr. Edward Jackson, Colorado, Chairman, presented the report of the Committee on Establishment of Physicians' Sanitarium.

Dr. A. T. McCormack, Kentucky, moved that, inasmuch as this report involves the appropriation of money, it be referred to the Board of Trustees.

The General Secretary read the report of the Committee on Monument to Civil War Surgeons.

### Report of the Committee on Memorial to Medical Officers Who Died in the Civil War

*To the Members of the House of Delegates of the American Medical Association:*

By reference to the official minutes of the sixtieth annual session held at Atlantic City, N. J. (The Journal, June 19, 1909, p. 2077), it will be observed that the house adopted the favorable report of the Reference Committee on Reports of Officers in reference to the erection, in the national capital, of a memorial to the medical officers who gave up their lives during the Civil War.

Of the central committee of five authorized by the House of Delegates to be appointed by the president at that time, Drs. S. Weir Mitchell of Philadelphia, and G. Lane Taneyhill of Baltimore, have accepted appointment. These members, desiring to have a representative from the medical corps of the regular army on said committee, insisted on the appointment, by himself, of Col. William C. Gorgas as a suitable member. It has also been suggested that the two remaining positions be filled by the appointment of an available volunteer surgeon of the Union Army and a similar one from the Confederate Army. This step is now in progress of being consummated. By this method the central committee of five will be the better enabled to complete the general committee of one from each state, etc., as authorized by the House of Delegates.

Your committee confidently believes that the meritoriousness of the object contemplated strongly appeals to the sense of justice of this intelligent House, especially when we consider that it is "to commemorate men who fell in the service of our common humanity and who belonged to that great guild which no war can tear asunder."

Your committee respectfully recommends that it be continued, with the same privileges, instructions and appropriation authorized by the House at the Atlantic City meeting.

Respectfully submitted.
WILLIAM C. GORGAS.
S. WEIR MITCHELL.
G. LANE TANEYHILL.

On motion of Dr. Alexander R. Craig, Pennsylvania, the report was adopted with the recommendations contained therein approved, and the committee continued.

Under the head of "New Business," Dr. Alexander R. Craig presented a petition to the House of Delegates which contemplates the formation of a new section, to be known as Section on Physical Forces in Medicine, and moved that the petition be referred to the Reference Committee on Section and Section Work.

Dr. E. Carson Hay, Hot Springs, Ark., presented a petition for the creation of a new section on Urology and Venereal Diseases, saying that 130 or 140 names were appended to the petition.

Dr. Hugh Young, Maryland, moved that it be referred to the Reference Committee on Sections and Section Work.

Seconded and carried.

Dr. W. H. Sanders, Alabama, presented the following resolutions, adopted by the Medical Association of the State of Alabama at its meeting, held in Mobile, April 19-22, 1910:

> WHEREAS, Efforts are now being made to provide by Congressional enactment for the establishment of a National Public Health Organization; therefore, be it
>
> 1. *Resolved*, By the Medical Association of the State of Alabama, that in providing for such an organization, it is the sense of this body that the principles of the Constitution involving the exercise of the police power, as announced in a long line of decisions of the Supreme Court of the United States, should be rigidly adhered to.
>
> 2. That any organization for the exercise of Public Health Functions that may be established should be widely and effectually divorced from politics, to the end that all persons who may occupy official positions therein should be selected on the basis of their qualifications as sanitarians and their administrative ability, and not on party affiliation.
>
> 3. That the proposed organization should sustain some direct and organic relation to the medical profession of the several states as organized and chartered for public health purposes.
>
> 4. That a copy of these resolutions be transmitted to the Senators and Representatives in Congress from this state, and to the American Medical Association at its next meeting.

The President stated that unless there was some objection, these resolutions would be referred to the Reference Committee on Legislation and Political Action, and as there was none, the resolutions were so referred.

Dr. Sanders also presented another set of resolutions which were adopted by the Medical Association of the State of Alabama at its meeting, held in Mobile, April 19-22, 1910:

> WHEREAS, A committee was appointed at the last meeting of the American Medical Association to reconstruct and rewrite the Constitution and by-laws of that body, and to investigate and report on other matters connected with the organization of said body; and
>
> WHEREAS, It is expected that said committee will report the results of its work at the forthcoming meeting of the American Medical Association; therefore, be it
>
> *Resolved*, By the Medical Association of the State of Alabama, that the delegates of this Association to the next meeting of the American Medical Association be, and they are hereby, instructed to insist on the incorporation into any new constitution that may be adopted by the American Medical Association of the following principles:
>
> 1. That the fundamental and important principles of organization be embodied in the constitution, and that the principles of secondary importance and the details of organization be embodied in the by-laws, the reverse being largely the rule in the present constitution and by-laws of the American Medical Association.
>
> 2. That in providing for the offices of the Association, the principles should be laid down that no person should at the same time fill two official positions.
>
> 3. That a charter for the American Medical Association be obtained from the United States Government, should it be acertained that the right to grant such a charter resides in the Congress of the United States.
>
> 4. That whether a charter for the American Medical Association be obtained from the United States Government, or from a state government, it should incorporate the American Medical Association as a body and not the Trustees thereof, as is the case under the existing charter.

On motion, these resolutions were referred to the Reference Committee on Amendments to the Constitution and By-Laws.

Dr. Samuel Wolfe, Pennsylvania, presented the following resolutions:

> *Resolved*, That the House of Delegates hereby specially endorses and approves the statistical and editorial work of THE JOURNAL of the American Medical Association in reference to the fatalities and casualties resulting from the present methods of celebrating the Fourth of July, now carried on over a period of more than seven years, and recognizes in it the main factor in the crystallization of sentiment and the chief incentive to the activity so apparent within the last few years.
>
> *Resolved, further*, That we urge the continued and additional cooperation in this important field of the newspaper and magazine press of the country, of all municipalities, of civic, religious and social organizations, of all public-spirited men and women, and especially in an organized way of all state and county medical societies.

On motion, the resolutions were referred to the Reference Committee on Hygiene and Public Health.

Dr. Joseph A. Capps, Illinois, presented the following resolution, which was referred to the Reference Committee on Sections and Section Work:

> WHEREAS, By reason of the vast strides that are being made in Pathology, Bacteriology, Urinology, Serum and Vaccine Therapy, and the development of the various scientific aids to diagnosis, and because the facilities for making use of these many agencies in the cure of disease are costly and complicated; and further, because they demand skill and education of a highly technical order for their successful use, hospitals in which these scientific instruments can be concentrated and employed are becoming more and more a necessity for the treatment of the poor, but for every class of society. It is not necessary in this modern day that hospitals shall nurse and feed the sick; they must at the same time take scientific care of patients under the modern practitioner's directions. To do this, it is necessary to have scientific men, specially trained, in charge of modern hospitals; and that these hospital administrators shall study the problems of the medical profession in conjunction with the practitioners whom they must aid. Recognizing these necessities, the House of Delegates of the American Medical Association therefore
>
> *Resolved*, That there is hereby created a section of the Association to be known as the hospital section.

Dr. Luther M. Halsey, New Jersey, stated that at the last session of the House of Delegates of the American Medical Association, held at Atlantic City, N. J., a resolution was introduced asking that the Committee on Scientific Exhibit be published in THE JOURNAL along with the other committees. This was done at the request of Dr. Wynn. A great deal of confusion had arisen because the Committee on Scientific Exhibit was not published in THE JOURNAL, and Dr. Wynn had received many letters from different parts of the country asking the name of the chairman on Scientific Exhibit. He therefore moved that this matter be referred to the proper committee. He would suggest, further, that the whole matter of arranging for the Scientific Exhibit be placed in the hands of Dr. Wynn, with power to act, rather than be entrusted to the local committee.

The President stated that unless there was objection, this matter would be referred to the Board of Trustees, and as there was none, it was so referred.

On motion, the House of Delegates adjourned until 2 p. m. Tuesday.

(*To be continued*)

## Opening General Meeting

### *Tuesday, June 7, 10:30 A. M.*

The general opening meeting of the Sixty-First Annual Session of the American Medical Association was held at the Odeon Theater, Tuesday, June 7, 1910, at 10:30 a. m. The meeting was called to order by President William C. Gorgas, of Panama.

Prayer was offered by the Rev. Charles S. Mills, D.D., St. Louis.

### Address of Welcome

The President introduced Dr. Henry Schwartz, President of the St. Louis Medical Society, who delivered the address of welcome:

*Mr. President, Ladies and Gentlemen:* On behalf of the St. Louis Medical Society I extend to the officers and members of the American Medical Association, to their families and to their guests, a most hearty welcome. The St. Louis Medical Society appreciates the honor you have conferred on it by convening in St. Louis. It likewise appreciates the help and the encouragement which your coming here gives to the work of the organized medical profession of this city. Your influence has already helped us in our efforts to unite all reputable practitioners in one harmonious fellowship. We expect still greater benefit from this convention because our fellow citizens will learn that the St. Louis medical profession is an integral part of the great American Medical Association. They will learn what a mighty factor that Association is in promoting the science and art of medicine, in elevating the standard of medical education, in securing and enforcing just medical laws, and in enlightening and directing public opinion in regard to the broad problems of hygiene. Such information will cause the citizens of this great commonwealth to rally around its medical profession and to assist it by every effort to do its full share of this great and patriotic work.

Your program for this convention shows what an immense amount of work will be done in the next few days, and we sincerely trust you will be able to mix your work with recreation in such a way as to live up to that part of the constitution which pledges us to promote friendly intercourse among

American physicians. We have lived in joyful expectancy of your visit, and now you are with us, every member of the St. Louis Medical Society stands ready to grasp you by both hands and shout from the bottom of his heart, welcome! welcome! welcome!

### Address of Welcome on Behalf of the Medical Profession of Missouri

Dr. Herman E. Pearse, Kansas City, president of the Missouri State Medical Society, was then introduced and delivered an address of welcome:

*Mr. President, Ladies and Gentlemen:* We are a great and growing state here in Missouri; we have a great and growing profession, and we recognize you as the greatest and strongest body that we have in this country; we welcome you here for the good that you can do to the people that we have been working for. If you work as hard in the next five days as we have here in the last ten years, this speech of welcome will be followed by a speech of gratitude which will require a better talker than I to do it justice.

We welcome you here to-day, to help us in the battle that is being fought in the United States for the freedom of its people. We see you come with every influence in the United States that is opposed to the public health movements skulking at your heels and flanks and proclaiming its attacks in every daily paper. The "pure food law" is making unprofitable the business of every quack doctor, and every one who has fattened on the misfortunes of the poor and on the credulity of the ignorant, and we welcome you to the four or five days' battle here. In this connection I am reminded of what one of our famous generals said, who when little reenforcements came to him for duty: "Wade right in, gentlemen, you will find elegant fighting all along the line."

### Address of Welcome on Behalf of the Medical Profession of St. Louis

Dr. W. G. Moore, St. Louis: *Mr. President, Ladies and Gentlemen:* I am aware that five minutes has been allowed for what we have to say. I wish it were longer for myself, but for your sake I am glad it is no longer. I realize that no pleasanter duty could have been given me than to welcome you to this city.

I believe that this Association has in its present and in its incoming President two of the greatest and most useful men within the borders of the United States. Their usefulness goes out like the sunshine on the just and the unjust. And the Governor is here honoring himself in honoring you. He is ready o extend a full and free pardon for any sins of omission or commission that may be committed within the borders of Missouri during the next four days. The Mayor is likewise here to present to you not only the key to the great outer gate, which admits you to our warmest hospitality, but also a bunch of keys which unlocks every door and admits to the treasures or pleasures under his control. I am here, gentlemen, to speak o you a word for the great militant body of the St. Louis profession—a body of men than whom you will not find more noble, efficient or loyal, the maledictions of the Carnegie articles to the contrary notwithstanding. You will find among hem royal companions. You will find among them also men apable of filling the highest offices in your gift with credit to hemselves and to you.

Many long years have passed since you were our guests, entirely too long for our hospitality, which fact we hope to prove to you before our deliberations come to a close. The North, East, South and West are equidistant from this onvention city. I recognize before me the greatest body of men that can be gathered together in America, and I mean that s fully as I am capable of meaning anything. Judged from he standpoint of pure philanthropy and the possibilities of the greatest good to the greatest number of our fellow citizens, here comes from the city of New York the cheery information that you are a trust—the informer is one B. O. Flower, he president of the "National League for Medical Freedom" nd the editor of the *Twentieth Century Magazine.* Flower as caused to be printed in our daily papers the following questions in "scare" headlines:

"Do you want government by political doctors?"

And I answer: "We do!"

"Do you want health and hygiene to be represented by an rmy of United States Inspectors under the direction of a Medical Bureau?"

And I answer, that this is a consummation devoutly to be ished.

He asks if we know that William H. Welch, president of the merican Medical Association, told the Senate Committee on Public Health and National Quarantine, that physicians wanted such a National Department of Public Health for the purpose of influencing state and municipal boards of health, and that he felt the Constitution could be so interpreted as to give the national board the power to regulate health affairs, nationally. We did not know this, but if it is true, it affords us another opportunity to hurrah for Welch and to applaud him.

If the American Medical Association be a trust, it furnishes a part of what our political brethren have sometimes said—that there is such a thing as a good trust—a statement which I never believed before.

This is a trust concerning which we may say that about 20 or 40 per cent. of its earned increment goes to sweet charity; a trust whose every discovery or invention is for the benefit of the sufferers of our race and becomes the property of prince and pauper alike; a trust whose efforts redound to the uplift of mankind and which constantly limits its own sources of income, by diminishing the ills that flesh is heir to.

If it be a sin to decry such a trust, then I glory in the companionship of such sinners. The medical profession has never asked for a law that was not beneficent in its intent, and if it is true and loyal to its traditions, it never will. Let us differ as we may and will about different questions, when it comes to the enactment of laws for the benefit of the people, we band ourselves together and throw our whole strength on righteousness and weary not in well-doing. All hail, then, to the honorable Senator Owen of Oklahoma, who has become the advocate of the creation of a national Department of Public Health, and of a position in the Cabinet of the President, at Washington, which we should have had from the beginning of the Government. Let us see to it in the future that all positions of this character are held by medical men in municipal, state and national governments, who are fully qualified to fulfil their duties without regard for politics, and so long as they continue to discharge those duties successfully, they should not be removed for mere political expediency. It is not fair that men who are willing to devote their lives to the sick in body and mind should be treated in such a manner.

There are no strangers within our gates; not even those brave men who have journeyed to us from across the seas, to mingle their efforts with our own that the suffering of humanity may be lessened and that the world as an abiding-place may be made better.

### Address by Governor Hadley

Hon. Herbert S. Hadley, Governor of Missouri: *Mr. President, Ladies and Gentlemen:* I am very glad indeed, as the chief executive of the great State of Missouri, to extend to the members of the American Medical Association a cordial welcome within the confines of this state. I not only welcome you here to our soil, but I welcome you to our splendid Italian—or Siberian—climate. It is a distinct pleasure, this morning, to be with so many learned members of the medical profession. It is so often that we lawyers have the medical profession with us, that it is a privilege for us to turn the tables, and we enjoy not only the sense of pleasure, but a sense of security on an occasion such as this, when we laymen realize that there is no danger of anybody dying without medical assistance.

I do not know whether I am in the right place, or not. The remarks of the last speaker seem to indicate that there is some question as to whether the American Medical Association is a trust, or not. I consider myself sufficiently expert on the subject of trusts, however, to say that this trust is welcome and thrice welcome within the confines of the State of Missouri. I only hope that this trust, which I here now diagnose with complete confidence, as a good one, at the able direction of its incoming president, Dr. Welch, can assist in doing for the United States of America, what the medical profession, under its outgoing President, Dr. Gorgas, with the assistance of the United States Army, has done for the Canal Zone.

I am glad to know that you members of the medical profession not only believe in something besides making money and keeping out of jail, but that you are also willing to fight for your belief; and if the other professions of this country—particularly my own—are to continue to rank among yours in respectability and public confidence, it must enjoy the distinguished pleasure of imitating your example.

I trust that the sessions and deliberations of this Association will be of benefit to the people of this state. As has been well said, there can be gathered together no body of men whose deliberations would excite more general interest than the members of this profession. Your work has to do not only with the problem of human weakness and human disease, but it has to do with the overpowering problem of human existence itself. Twice in the life of each of us we require the services of a physician, and your capacity for usefulness is not limited to the relief of human weakness and disease. Your work has not only contributed to the advancement of civilization, but it has increased the duration of life and added to the capacity of man for healthful and proper enjoyment.

Sometimes, in your efforts to make progress and to acknowledge error, doubt is aroused and suspicion raised in the minds of the layman as to the science of your profession itself; when we find one year a certain method of treatment of disease is abandoned and a radically different method adopted, the cry is apt to be raised, that, after all, the practice of medicine is but an intelligent system of empiricism, and that we are taking long chances when we summon a medical man to help us in distress. To my mind, that is one of the most hopeful indications of progress that unfortunately is not imitated by all of the learned professions. The advancement of the medical profession along scientific lines constitutes one of the great achievements and triumphs of this wonderfully progressive age.

It may be, however, that we are moving in cycles, because it is unquestionably true, that much that you do to-day has been done in the past and then has been forgotten. I find that many of the instruments with which you surgeons perform your most delicate and scientific operations have been discovered in the ruins of antiquity—indicating that these operations were unquestionably known to, and performed by, the ancients. But, however that may be, it is a far cry from the herbs and incantations of the medicine-man of the savages to the asepsis of the operating-room and the antitoxins of the scientific medical man of to-day. And the work you have accomplished along that line, although it may seem at times to cause public distrust or lack of confidence, is simply, in my judgment an indication of the feverish anxiety that you have to move faster to the consummation, which I am confident, you will eventually reach when you find an antitoxin for every disease that is known to the human system.

I have heard a story from one of the leading medical men of this country, told with anguish of spirit, as to how he lost a splendid boy from diphtheria, because physicians, although they had discovered the antitoxin of that disease, had not yet learned the science of its administration. But no one can stand by the bedside of a child, watching it clutch its mouth and throat in its fight for air, and see the wonderful effects of the administration of antitoxin against diphtheria, without taking off his hat in gratitude and respect to the scientific medical man for this wonderful contribution to the development of medical science.

Truth never seems so simple as when it has been scientifically ascertained and announced; and after many of these things you medical men discover and tell us about, we wonder that you did not discover them and tell us about them many years ago. Nobody of intelligence to-day questions the germ theory of disease, and yet that theory was scientifically ascertained and definitely announced within my own lifetime. To-day the medical profession knows accurately the habits and all the characteristics of the germ of tuberculosis. We are simply grateful to you for having done so much, and that you have taught the individual how he may substitute himself in the manufacture of vaccines from his own person and prosecute this work of segregation for himself.

But your activities as a profession, fortunately, have not been confined to these professional investigations and discoveries that have to do with the treatment of special diseases. I undertake to say that your work along the lines of preventive medicine and of movements for the improvement of the public health are, more than any others, the reasons why the medical profession holds—as it does hold to-day—its deservedly high rank in public estimation and esteem, and the work and the future usefulness and development of the medical profession, in my judgment, will lie not so much in curing or in making sick people well, as it will in preventing well people from becoming sick. Along the line of correction of those conditions which result in the impairment of public health, medical men and the public official have come in contact and the public official who is performing his duties with the sense of proper obligations has found in the medical man not only a willing, but an effective coadjutor for the accomplishment of proper results. And I undertake to say that the time is not far distant when the American people will recognize the inconsistency—if not absurdity—of spending millions of dollars each year for the protection of our cattle and our sheep and our hogs from the ravages of disease, and spending but a few paltry dollars for the protection of our women and men and children.

I am glad to welcome you to the confines of this splendid commonwealth this morning, because public sentiment of this state has been in accord with the work of the advanced and progressive members of your profession. Up to the last session of the state legislature we had only a State Board of Health, with limited powers for the accomplishment of those measures of possibility that always lie within the work of such a board. By that legislature there was enacted a law establishing in this state a Bureau of Vital Statistics and giving new powers to the State Board of Health for the accomplishment of the proper measures of usefulness.

That Bureau of Vital Statistics has been in operation for three months or more, and during that time statistics have been kept and recorded, and I am glad to say this is an indication of the effectiveness of the medical profession in a certain class of cases, namely, the births numbered 16,000, while the deaths were only a little over 12,000. So, you see, here in Missouri we are both the opponents of race suicide and believe in the principle of the "full baby-buggy."

Further than this, I have taken the position that the State Board of Health should be composed of men who are interested in one of two lines of medical work. As I have the appointment of that board, I have a right to be discriminating, and that board must be composed of physicians who have been interested either in the improvement of medical education or in the protection of the public health. I have appointed, and I intend to appoint, on that board only members who receive the endorsement or recommendation of the State Medical Association.

I do not disregard or hold in light esteem the work of those investigators and, perhaps, I might say reformers, who are undertaking to improve the conditions of our public charities and our penal and reformatory institutions, when standing before this audience of medical men; and I feel it would not be improper for me to repeat what I said, when standing before a convention composed of workers along these lines of public charities, that I have received from no department of government so much sane, practical and effective assistance in the correction of conditions in our eleemosynary and penal institutions as I have received since I have been Governor of Missouri from the inspections and recommendations of the State Board of Health. In the work of improving the Missouri penitentiary we have succeeded in changing it from one of the worst penitentiaries in the country to one of the best, and in so doing I have received valuable aid from the inspections and the suggestions for improvement that have been given me by the members of the State Board of Health.

I understand, Mr. President, that the time of these speeches is limited to five minutes. I have some time yet allotted to me, and there is one other thought I must give expression to before my time is expired, and that is this: You, as a profession, are able to put your own houses in order. You have cleaned up your own Augean stables by driving from your ranks the quacks and abortionists and the charlatans and the impostors. I want to say to you that the State Board of Health in the State of Missouri has been actively on the firing-line, fighting a battle for a clean profession against the elements which foster disgrace and dishonor. In that regard I can say again, to the other profession, the legal profession, if it is to continue in public confidence and approval, it must follow your example, because we have in our ranks quacks and abortionists and charlatans and impostors in our pettifoggers and shysters and ambulance-chasers, and a certain class of lawyers who are all the more disreputable because, with greater capacity for injury in our legislative and judicial lobbyists, in eminent lawyers who, in order to screen rich clients, violate the law and bring the legal profession into disrepute, securing for them immunity.

I trust that in the general beneficial influence that will come from the deliberations of this convention there may percolate down or gravitate up to the legal profession something of that spirit of modern medicine which demands that the learned professions shall also be kept clean.

In conclusion, we welcome you here with interest and enthusiasm. I welcome you not only as the Governor of this State, but also as the Mayor of St. Louis. They go through the ceremony, every four years, of electing a Mayor here [laughter], but I happen to appoint the police power, and therefore I want to say to you, in conclusion, that the immunity that has already been extended to you by Dr. Moore was not a sounding brass or tinkling cymbal. We welcome you with pleasure, not only to our city, but also to our homes and to our hearts.

### Address of Mayor Kreisman

Hon. H. Kreisman, Mayor of St. Louis: *Mr. President, Ladies and Gentlemen:* There remains but little for the Mayor of St. Louis to say in extending to you a welcome this bright spring morning. Governor Hadley has truthfully said that he confers by his authority and high office every immunity on you while in St. Louis. We hope that you may have a pleasant stay with us, as our hearts and our homes are open to you, and, my friends, may we have you with us more frequently than during the years that have passed since your last coming. I thank you.

### Report of the Local Committee of Arrangements

Dr. W. B. Dorsett, the Chairman, made a brief report of the local committee of arrangements. He announced the places of meeting of the various Sections, the entertainments, the alumni dinners, etc.

The retiring President, Dr. Gorgas, introduced the President-elect, Dr. William H. Welch, who delivered his presidential address, which will appear in The Journal of June 18.

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# Society Proceedings

## COMING MEETINGS

Maine Medical Association, Bar Harbor, June 29-30.
New Jersey Medical Society, Atlantic City, June 28-30.
North Carolina, Med. Soc. of State of, Wrightsville Beach, June 21.
Wisconsin, State Medical Soc. of, Milwaukee, June 22-24.

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## ARKANSAS MEDICAL SOCIETY

*Thirty-fourth Annual Session, held at Little Rock, May 3-6, 1910*

The President, Dr. J. H. Lenow, Little Rock, in the Chair

### Officers Elected

The following officers were elected for the ensuing year: President, Dr. R. C. Dorr, Batesville; vice-presidents, L. F. Magee, Frostville; J. B. Grammar, Swarcy; and Thad Cothran, Walcott; secretary, Morgan Smith, Little Rock (reelected); treasurer, J. S. Wood, Hot Springs, Pine Bluff (reelected); editor, C. P. Meriwether, Little Rock (reelected); delegates to American Medical Association, J. T. Clegg, Siloam Springs; E. C. Hay, Hot Springs; alternates, B. Hatchett, Fort Smith; L. H. Barry, Hot Springs; councilors, H. R. McCarroll, Walnut Ridge; J. H. Kennerley, Batesville; S. A. Southall, Lonoke; A. D. Knott, Wilmot; H. H. Niehuss, Wesson; L. J. Kosminsky, Texarkana; J. C. Wallis, Arkadelphia; A. H. McKinzie, Dardanelle; C. T. Cannaday, Marshall; and M. S. Dibrell, Van Buren.

The next place of meeting will be Fort Smith, May, 1911.

### President's Address: The Progress of Medicine

Dr. J. H. Lenow, Little Rock, spoke of the flourishing condition of the society; referred to the early history of the organization, the difficulties met in its early life, and praised the indefatigable, unselfish labors of the pioneers. Their unity of purpose was the highest exemplification of professional ideals; they laid the solid foundation on which present component societies securely rest. He predicted that ere long public health in all the states would be under control and direction of non-political health commissions, selected for skill and executive ability. Closer relations between laity and the profession are foreshadowed by trend of times; together they would make common cause of promotion of measures to combat ravages of disease, and inauguration of a militant plan of leading the public out of sanitary and hygienic ignorance. He predicted a great and glorious future for preventive medicine.

The future honor and dignity of medicine, he said, rested on the thorough training of its votaries, higher standards of medical education and an elastic curriculum. The great need of a thoroughly equipped Board of Health and Bureau of Vital Statistics was referred to with the hope that the near future would bring about its consummation.

The triumphs of medicine are the result of laboratory investigations, and the antivivisectionists are cruelly ignorant of the benefactions conferred on humanity by the discoveries of Pasteur, Lister, Koch, Behring, Flexner, Stiles and Carrel.

It is the duty of the profession to take the public into its confidence and meet the false statements with the unvarnished truths, to open up bureaus of official information available to the public and to educate them in advance of any attempt to limit the freedom of scientific research with legislative restrictions.

### Tuberculosis Campaign

A fund of $500 was appropriated as a contribution to the campaign against tuberculosis, to aid in establishing a traveling display and competent instruction from time to time.

### Dysentery in Infants

Dr. F. T. Isbell cited as fruitful sources of infection, water, milk, raw fruits and vegetables—malnutrition resulting from improper feeding. Treatment: diet, hygiene, medication, rectal irrigation with bismuth in mucilage of acacia; high and low irrigation with hot normal salt solution.

### Infant Mortality

Dr. J. T. Clegg, Siloam Springs: Deaths in infancy up to five years of age exceed the combined mortality from tuberculosis, typhoid and other epidemics; 5,000 infants die to one adult alcoholic mortality. I believe this to be due to heredity, accidents and injuries, improper feeding and lack of hygienic care. The laity should be admonished as to general sanitation and urgent need of wholesome feeding. Nine-tenths of babies are bottle fed. There should be rigid inhibition of fruits, cakes, candies, pastries, and especially strawberries and vegetables grown in contact with soil. Malted milk, infant foods and other so-called substitutes for mother's milk should be condemned. Most satisfactory results are obtained from modified cow's milk.

### Acute Otitis Media and Mastoid Abscesses

Dr. Robert Caldwell, Little Rock: Predisposing causes are adenoids and hypertrophied tonsils, colds, fevers, diphtheria and other infections. Early paracentesis, irrigation and mastoid operation, if indicated, are the treatment. Extraordinary care is to be exercised in its execution.

### Empyema

Dr. D. E. Broderick, Kansas City: Many children succumb to undiscovered empyemata; more frequently primary than is generally believed. Empyema of newborn is generally due to streptococci; frequently it is a sequel to pneumonia. The onset may be acute or insidious; it is often mistaken for abdominal disease; all hectic temperatures should excite suspicion; sweating and diarrhea may be present. Percussion is a most valuable asset in examination. Forcible percussion is useless; dulness is stationary and not due to position; auscultation is often fallacious. The coin sound is corroborative only; vocal resonance is often ambiguous. Diagnostic difficulties are often very great. Basic diseases are often most puzzling of interpretation by physical methods. Exploratory thoracotomy should be done to clear up the massive signs in chest. Fibrotic lung is often revealed; pneumatic cabinets aid materially. Empyemata of nurslings are often revealed at postmortem. Goodhart's classification is helpful. Prognosis is good in pneumococcal form. Blood picture and *x*-ray and exploratory thoracotomy are paramount in differentiating empyema and pneumonia; strict attention should be given to apical displacements.

### Infantile Scorbutus

Dr. H. N. Street, Argenta, condemned canned goods, artificial baby foods and boiled milk. Treatment, he said, consists of administration of orange juice, raw meat juice, unboiled milk, fresh air and sunshine.

### Wassermann Reaction

Dr. M. F. Mount, Hot Springs, gave the diagnostic value in 150 cases of suspected syphilis; 40 positive and 110 negative. Technic employed was the same as originally published by Wassermann, with the exception that he used guinea-pig heart antigen instead of syphilitic liver extract. Tests were made in each case with known positive control and known negative control; clinical history of patients unknown. Positive Wassermann reaction means syphilis; active mercurial treatment indicated. Negative means that for the time being treatment is not needed. Patient having had clinical syphilis should have test made frequently over long period of time.

### Intramuscular Injections of Mercury

Dr. Eugene C. Hay, Hot Springs: This is a very effective and very popular method. I use grey oil, a modification of Lang's formula (mercury and non-sterilized wool fat), beechwood creosote, camphoric acid and glycerin). Results are most gratifying. The bad results of various clinicians are due to faulty technic. I prefer inunctions as a regular routine and use grey oil only when inunction method fails; in some very stubborn cases I use injections supplemental to inunction with excellent results.

### Brain Syphilis

Dr. James H. Chesnutt, Hot Springs: Predisposing causes are trauma, violent strain, mental excitement and alcohol. Symptoms—headache, nausea, vomiting, convulsions, gradual dementia, forgetfulness, complete loss of memory, apathy, delirium, coma and violent insanity; ocular palsy; ptosis; double vision, optic neuritis, blindness. Prognosis is hopeful, and response to treatment may be expected so long as specific changes are present and narrowing of the vessels and atrophy of the brain tissue lacking. However, if one cranial nerve is paralyzed for a year, there is very little hope of recovery from paralysis.

### Erythromelalgia

Dr. James H. Chesnutt, Hot Springs, has secured some favorable results from treatment by hydrotherapy, acetosalicylic acid, iron, quinin and strychnin and thyroid extract.

### Postanesthetic Acidosis

Dr. J. G. Eberle, Fort Smith: Starving before and underfeeding after anesthesia are exciting causes. I give large amounts of glucose by proctoclysis and hypodermoclysis, and resort to purgation, diaphoresis, enemata of normal salt solution and sodium bicarbonate.

### Quinin Anesthesia

Dr. Henry Thibault, Scott: All soluble salts of quinin possess anesthetic properties, but I prefer quinin bisulphate. For inflamed tissues I use quinin and urea bihydrochlorid, as described in The Journal A. M. A., Aug. 8, 1908, April 23, 1910, Oct. 23, 1909.

### Preventable Blindness

Dr. John G. Watkins, Little Rock: Out of 193 patients at a state institution, 131 had slight vision, 62 were totally blind, 3 from ophthalmia neonatorum, 36 from trachoma, 23 from various causes. Treatment: Atropin, with insufflations of calomel, nitrate of silver, copper sulphate; hot fomentations for pannus.

### Health Conditions in the Delta of the Mississippi Valley

Dr. Vernon MacCammon, Arkansas City: Artesian wells cause great improvement in health conditions. Pure water may be found at a depth of 550 feet. Pernicious malaria is now very rare. Fatal cases are usually due to home treatment with chill tonics. Typhoid fever is rare and generally mild. Drainage and general sanitation and inhibition of use of surface water contribute to general welfare. Pneumonia is rare and hookworm unknown. Soil is black loam, which is unfavorable to the development of uncinariasis.

### Severe Prolapse of Uterus, Modern Methods of Treatment

Dr. H. S. Crossen, St. Louis: The old-style hysterectomy should be condemned. The inter-position method is indicated, a modification of the vagino-fixation method of Mackenrodt. For non-operative cases I prefer Gehrung's pessary; second choice is Menge's.

### Treatment of Pelvic Cellulitis in the Female

Dr. R. C. Dorr, Batesville: I favor the semilunar incision per vaginam in posterior cul-de-sac under local anesthesia, with insertion of gauze drainage. Palliative treatment comprises administration of salines, hot douches, and either hot or cold applications over abdomen, which ever contributes most to the patient's comfort.

### Management of Hookworm

Dr. A. E. Cox, Helena, treated a family of five two years for anemia, using iron, arsenic, nux vomica, etc., without improvement. Condition was relieved by beta-naphthol and castor oil.

### Proceedings of House of Delegates

Among the actions taken by the House of Delegates were the following:

Endorsement was given to the Owen bill for a department of health; to the establishment of a Pasteur institute in Arkansas; and to Dr. Wiley's opposition to benzoate of soda as a food preservative.

The delegates to the American Medical Association were instructed to endeavor to secure a new section on the subject of genitourinary diseases and syphilis.

Laws were advocated to require the registration of births and deaths, and better care of insane persons; and to exempt from prosecution a woman testifying against the physician who induced an abortion on her.

The committee on consolidation of medical schools in Little Rock reported favorable progress and stated that the outlook was hopeful for consummation during the present year. The House of Delegates endorsed the proposition of the Medical Department of the University of Arkansas to turn over to the state its grounds, buildings, outfit, money, etc., in order that it might be made a state institution and managed by a non-partisan board.

## AMERICAN GYNECOLOGICAL SOCIETY

*Thirty-fifth Annual Meeting, held in Washington, D. C., May 3-5, 1910*

*(Continued from page 1814)*

### The Use of Vaccines in Septic and Inflammatory Conditions

Dr. E. W. Cushing, Boston: Vaccines, or killed cultures, act by increasing the resistance of the patient. The opsonic index practically is not of much use in acute conditions. Autogenous vaccines are preferable to stock vaccines, except in certain cases of staphylococcus infection. The best results are obtained in the following order: infection from colon bacillus, pneumococcus, staphylococcus. The results are not satisfactory with streptococcus in rapid virulent infections. In chronic infections and in cases of little virulence streptococcus vaccines give satisfactory results, especially in moderate puerperal cases. Vaccines are not successful in acute gonorrheal infections, but are of much service in gonorrheal arthritis. Vaccines are useful in the following conditions: puerperal infections, abortions, infections of bladder and kidneys, appendicitis, abdominal operations, post-operative pneumonia, and abdominal fistula.

### Surgical Treatment of Puerperal Septic Infection

Dr. E. E. Montgomery, Philadelphia: The most effective safeguard against the baneful influences of sepsis is the practice of such measures during the parturition and puerperium as will lessen the opportunities for its production. The suspicion of sepsis confirmed, the course of the surgeon must very often still be a tentative one and largely dependent on the period at which the patient comes under observation. Rarely after the diagnosis is definitely determined is it worth while to resort to the use of the curette. The infective germs rapidly pass beyond the superficial structures, so that curetting is ineffective to limit the progress. The removal of the uterus would not always be adequate, so operative procedure should be delayed until it is evident that there exists such a localization as shall make operation effectual in arresting further baneful progress. The results of serotherapy are not always so satisfactory, as not infrequently its employment has been begun too late, or the virulence of the infection is so marked that the best result to be obtained will be a local manifestation of the poison which will still require resort to the knife for the safety of the patient. Extensive peritoneal exudate entirely surrounding the uterus and fixing it and the appendages may be entirely absorbed and the patient restored with functionating organs by rest, regulation of the diet, moderate depletion, and the judicious use of improvised carbonic-acid baths. The constant course of the surgeon should be one of watchfulness, utilizing every force at his command, to conserve the functions of the patient, yet to proceed unhesitatingly to the most radical measures when such seem necessary to the preservation of life.

### When Shall We Operate in Puerperal Sepsis?

Dr. John Osborn Polak, Brooklyn, N. Y. read a paper with this title, based on a study of 200 consecutive cases, in which he drew the following conclusions:

1. Each case of post-partum or post-abortal infection must be studied individually, and an accurate diagnosis must be made on the clinical, bacteriologic and blood findings, before any treatment is instituted.

2. Nature is competent in the majority of instances to localize and circumscribe the infection.

3. Curettage, douches and examinations during the acute stage break down barriers and open avenues for the further dissemination of sepsis to the myometrium, parametrium and adjacent tissues, and the danger from curettage increases with each month of pregnancy.

4. Enormous pelvic and abdominal exudates may disappear without operation, and that in time enlarged ovaries, tubes, etc., may assume their proper size and function; and further, that so long as the patient's general condition improves, no surgery is advisable.

5. All operations are attended with less risk after the acute stage of the infection has subsided, and that an exact diagnosis is more easily made at this time.

6. After the uterus is thoroughly emptied, the pelvis should be left absolutely alone, and that we should make every effort to support the patient and increase her natural blood resistance.

7. Extraperitoneal drainage of local foci should be elected when possible, either by incision just above Poupart's ligament, or by posterior vaginal section, and when this is impossible, because of an inability to determine the exact anatomic relations of the local foci, an exploratory laparotomy is justifiable in order to make an exact diagnosis and determine on the safest route for drainage.

8. Operative interference in the acute stage of sepsis is only indicated in general purulent peritonitis, post-abortal pelvic peritonitis, infected tumors in or near the genital tract and uterine rupture, when the rupture has occurred in the course of labor and has been handled outside of a well-managed maternity.

9. Thrombophlebitis is a conservative process on the part of Nature to limit the infection, and any form of pelvic manipulation only tends to break down and separate parts of these thrombi, extending the infection to the more remote parts, thus jeopardizing the patient's life.

### Surgical Treatment of Puerperal Septic Infection

Dr. H. N. Vineberg, New York: Surgical intervention, if curettage be not included, comes into consideration in only a small percentage of cases of puerperal sepsis. The selection of these is difficult for want of reliable guides, bacteriologic or clinical, as to the course and prognosis of a given case. Hysterectomy is indicated (a) when the uterus contains putrid placental remains that cannot be removed with the finger or curette; (b) when the uterus contains a sloughing fibroid; (c) when the uterus is studded with abscesses; (d) when the uterus has been subjected to severe traumatism and gives evidence of infection. The status of ligation of the pelvic veins in puerperal septic thrombophlebitis is still *sub judice*. The results thus far warrant a further trial with the procedure. In acute puerperal septic peritonitis good results have been obtained by the Germans with multiple incisions and drainage. Perimetric and parametric abscesses should be approached without entering the general peritoneal cavity. In unilateral pyosalpinx or ovarian abscess, the usual median laparotomy incision should be avoided, and instead of it, one should be made over Poupart's ligament or at the outer edge of the rectus, so as to avoid entering the general peritoneal cavity. Although I am an advocate of major surgical intervention in suitable cases, I have had occasion during the past seven years to extirpate the uterus in only six cases. From this it can be inferred that it is only rarely that major surgical intervention is indicated in acute puerperal septic infection. The vast majority of the patients recover under appropriate general treatment and such minor surgery as the exigencies of the given case may call for.

### Is Pubiotomy a Justifiable Operation?

Dr. J. Whitridge Williams, Baltimore, based his paper on a series of twenty-five successful cases and drew the following conclusions:

1. In 25 pubiotomies performed at the Johns Hopkins Hospital there were no maternal and 3 fetal deaths, only one of which is attributable to the operation.

2. All patients were delivered by forceps or version immediately after pubiotomy. There were no injuries to the bladder; there were 6 perineal and 5 deep communicating vaginal tears, notwithstanding the fact that 12 of the patients were primiparæ.

3. The relative infrequency of injury to the soft parts is attributed to restricting the operation to suitable grades of pelvic contraction, and to the employment of Doederlein's technic, but particularly to the extensive manual dilatation of the vagina and perineum prior to operating. The occurrence of such injuries may be still further decreased by making horizontal instead of upward traction when delivering the head through the vulva.

4. The after-treatment is not so onerous as is generally stated, and most of the patients suffer but little. Immobilization of the pelvis is not necessary, a four-inch adhesive strip around the trochanters being sufficient. The patients usually move spontaneously in bed between the second and fourth days, get up between the fifteenth and twentieth, and are discharged on the thirtieth day with satisfactory locomotion. Healing generally occurs by fibrous union, so that there is definite motility between the ends of the bone in at least two-thirds of the cases.

5. The maternal mortality should not exceed 2 per cent., provided the operation is performed by competent operators on uninfected women, who have not been exhausted by previous attempts at delivery.

6. It is indicated in contracted pelves when the conjugata vera exceeds 7 centimeters, and after a test of several hours in the second stage of labor has shown that the disproportion cannot be overcome, as well as in certain funnel-shaped pelves.

7. Prophylactic placing of the saw is indicated prior to breech extractions or versions from transverse presentations when it appears problematical whether the head can pass through the pelvis and the bone sawed through immediately after discovering the disproportion.

8. In multiparæ with a history of repeated difficult labors, or in primiparæ presenting excessive disproportion, pubiotomy is inferior to Cesarean section performed at the end of pregnancy or at the onset of labor; otherwise it does not enter into competition with it, as the former is the operation of choice in border-line pelves after the patient has been subjected to the test of labor, and at that time it is many times less dangerous than the classical Cesarean section.

9. In uninfected women it should replace high forceps, prophylactic version, induction of premature labor and craniotomy on the living child. In how far it may compete with suprasymphyseal Cesarean section must be shown by future observations.

10. It should not be employed in infected patients or after failure to deliver by other means. It should be regarded as a primary operation whose dangers are infection, deep tears and hemorrhage.

11. When the separation between the cut ends of the bone does not exceed 4 or 5 centimeters, the patients recover perfectly and are able to walk and work as well as previously.

12. In view of the fact that the bone section usually heals by fibrous union, a certain degree of permanent enlargement of the pelvis may follow, particularly in the transverse diameter of the outlet, and less so in the conjugata vera. Under the influence of the hyperemia incident to a subsequent pregnancy, this may occasionally become markedly exaggerated and be sufficient to permit spontaneous labor. Should this not occur, a second pubiotomy may be performed; while Cesarean section should be limited to those cases in which the pelvic contraction is marked and the child large.

### Fibromyomata of the Uterus

Dr. I. S. Stone, Washington, D. C., gave his views on the various practical points in connection with the general subject, such as the age of patients, the complications frequently encountered in performing hysterectomy, and the pathologic changes found in the tumors themselves. He reported 160 abdominal hysterectomies; 30 were complete hysterectomies, but the ovaries were not always removed. He thinks the operation at present is nearly as safe as ovariotomy, so far as life-saving goes, but the morbidity is not so low as in the latter operation. The complications resulting from the degenerative changes in the tumor, the danger of sepsis from the proximity to the vagina, and the greater exposure of pelvic connective tissue in hysterectomy will always be considered more productive of mischief than the conditions which follow in the wake of ovariotomy. He gave the question of mortality much attention and quoted from the reports of operations in various hospitals to show marked improvement in results during the last decade. The average mortality, he said, is now about 4 per cent., but many operators have obtained a much lower rate.

### Total Absence of the Vagina and Uterus; Right Pelvic Kidney; Absence of Left Kidney; Tubes and Ovaries on Both Sides in the Inguinal Canal

Dr. Thomas S. Cullen, Baltimore: The patient, aged 17, white, came complaining that she had never had menstrual periods. On examination I found total absence of the vagina, but by rectal examination was able to detect a mass filling the right half of the pelvis, which I thought might be the uterus which retained menstrual flow. An incision was made between the bladder and rectum until the mass was reached. It was, however, found to be hard. The abdomen was at once opened and a somewhat irregular mass was found filling the right half of the pelvis. This on its inner aspect had a definite cleft which suggested the pelvis of a kidney. A hand was carried up into the right renal pocket, but no kidney was present at that point. Examination of the left side failed to reveal any left kidney. The mass was evidently a right pelvic kidney. There was no uterus. Half of the right tube emerged from the inguinal canal. The remaining portion of the tube and the corresponding ovary lay in the inguinal canal. A small loop of round ligament was seen emerging from the inguinal canal. On the left side the tube and ovary could not be seen, but could be felt in the inguinal ring. A small portion of the round ligament was discernible.

Dr. Cullen demonstrated a specimen of adenocarcinoma of the Fallopian tube coming from a patient, forty-six years of age. The chief interest in this tube lay in its immense size. It formed a tumor 14x12x10 cm. Near the uterus the tube was normal in size. After it had passed out 5 centimeters, it was 5 centimeters in diameter, and its outer and occluded end was 10 centimeters in diameter. The great distention of the outer end of the tube was in part due to an accompanying hydrosalpinx. The growth was limited almost entirely to the inner surface of the tube. It was of a distinct papillary variety. The left tube was also involved in the carcinomatous process. This was one of the largest carcinomas of the tube on record.

### Repair of Inaccessible Vesicovaginal Fistulas Following Hysterectomy

Dr. George Gray Ward, Jr., New York: The important steps which lead to a successful result in the method employed are: (1) The differentiation from a urethral fistula by distention of the bladder with an anilin solution; (2) the employment of deep paravaginal incisions as described by Schuchardt; (3) a longitudinal incision on the anterior vaginal wall from the urethra to the vaginal vault through the fistula and extending into the posterior vaginal wall, and a lateral incision extending the full width of the vaginal vault; (4) the thorough separation of the base of the bladder from the entire anterior vagina and vaginal vault, being careful to commence the dissection in the lower vagina where there is an absence of scar tissue to establish the line of cleavage; (5) evisceration of the bladder into the vagina by means of a sound or similar instrument passed through the urethra; (6) the closure of the opening in the bladder separately from the vaginal incision.

### Influence of the Trendelenburg Position on the Quantity of Urine Excreted During Anesthesia

Dr. J. Wesley Bovée, Washington, D. C.: Having recently studied 8 cases of ether anesthesia and 8 of chloroform, I believe that the results demonstrate that almost no urine is received in the bladder while the Trendelenburg position is being employed. If it can be concluded that the renal function is greatly lessened while the patient is in the Trendelenburg position, then the dangers of that position are at once appreciated. In renal inefficiency, and in cardiac and arterial lesions, it would seem the use of the Trendelenburg position would introduce a special element of danger and this would be more marked when ether was used than when chloroform was employed as an anesthetic.

### Postoperative Treatment of Abdominal Section for Pelvic Disease

Dr. Brooks H. Wells, New York: Getting the patient out of bed early after operation encourages her, lessens nausea, promotes an earlier return of appetite, increases peristalsis, makes the use of the catheter seldom necessary, makes the bowel movements easier so that there is less necessity for purgatives, improves the respiration, lessens the tendency to pulmonary complications, prevents loss of muscle tone, and greatly facilitates a rapid convalescence. The contraindications are: 1. Shock or general weakness, as expressed in a rapid and weak heart, so that we might fear cardiac failure from the upright position. 2. Cases in which, with a long median incision there has been much tension required in bringing together the fascial edges. 3. In patients who develop septic temperatures or deep wound infections. Of the patients whose cases form the basis of the paper, over 100 have been operated on through a transverse incision, and of these none has developed hernia. Two patients in whom median incisions were used are known to have developed hernia, but neither was allowed out of bed early.

### Report of the Committee of the American Gynecological Society on the Present Status of Obstetrical Education in Europe and America

This committee, consisting of Drs. E. B. Cragin, J. C. Edgar, C. M. Green, E. P. Davis, J. W. Williams, J. C. Webster and B. C. Hirst, chairman, recommends that the teaching of obstetrics should occupy at least two years of the medical course, and that those expecting to practice obstetrics should be urged to avail themselves of elective opportunities, and that the number of labor cases personally attended by each undergraduate student should be at least six, under supervision and instruction.

The committee recommends all the known methods of teaching this branch of instruction, namely, didactic lectures, clinical lectures, clinical conferences, ward classes and touch courses, hospital and out-patient instruction, manikin practice in operative obstetrics, and recitations. Of the first three methods the committee recommends specially clinical lectures and conferences. It recommends that ample facilities should be afforded students to make antepartum examinations including inspection, abdominal palpation, pelvimetry, fetometry, vaginal examinations, etc. The committee recommends that a two weeks' hospital residence should be required before the out-patient practice. It is recommended that as obstetrics at present includes pregnancy and parturition, their complications and consequences and the complete recovery of the woman after labor, that obstetric instruction should include the medical and surgical treatment of these conditions. The tendency of obstetrics to become more surgical in practice and to require a surgical training, is evidenced by the fact that in the medical schools of Europe, and in more than one-third of the first fourteen medical colleges of this country, the chairs of obstetrics and gynecology are combined under one head.

On motion, the report of the committee, with its recommendations was adopted.

### Cesarean Section for Impassable Contraction Ring

Dr. Robert L. Dickinson, Brooklyn, N. Y.: Apart from a consideration of contracted pelvis, or relative disproportion between the passage and passenger, or blockade by scars or tumors, section for impassable contraction ring is warranted when the following conditions are present: (1) Child living and not definitely enfeebled or endangered by the length of labor or by unskilled attempts at extraction; (2) the ring refusing the relax under morphia or complete anesthesia, and to yield to patient manual dilatation by a skilled obstetrician; (3) mother in fair condition for a laparotomy and not infected; (4) request by patient and husband that a somewhat increased risk to the mother be assumed for the sake of obtaining a living child in lieu of embryotomy. These indications are perfected if at a previous labor in expert hands, this same condition of the contraction ring has caused the loss of a child not unduly large. This holds good whether the ring is in advance of the head or about the neck. The association of a rigid ring with other reasons for section is frequently present.

(*To be continued*)

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## AMERICAN ORTHOPEDIC ASSOCIATION

*Annual Meeting held in Washington, D. C., May 3-5, 1910*

The President, Dr. Augustus Thorndike, Boston, in the Chair

### President's Address: Our Relations with the Community, Especially with Medical Men

**Dr. Augustus Thorndike**, Boston, urged orthopedic surgeons to take greater interest in the work of other members of the medical profession, and to try by every means in their power to interest other physicians in the work of the orthopedic surgeon.

## SYMPOSIUM ON POTT'S DISEASE

### Pott's Disease: Causes of Paraplegia and Their Bearing on Treatment

**Drs. Charles F. Painter and George C. Moore**, Boston, discussed the various causes for the paralysis occurring in the course of Pott's disease, both in theory and as the result of actual observation; the clinical phenomena and the behavior of the cases with and without treatment, including the rationale of treatment. The following conclusions were reached:

Scoliosis occurring in Pott's disease should be regarded, not as a regrettable incident in the course of the disease, but as an evidence of the activity of a tuberculous process. This fact should cause redoubled efforts on the part of the physician to control the underlying disease. So long as this exists, one should be cautious in giving a prognosis as to the cure of the condition. In seeking to relieve this condition, one should be guided by the character of the symptoms and be loath to permit operative interference until further and more convincing evidence has been obtained that surgery can play any part in the cure of these conditions.

### Advantages of Braces over Plaster Jackets in Pott's Disease

**Dr. Henry O. Feiss**, Cleveland: A brace will do all that a jacket can do. Braces can be readjusted to suit changes in size; and they are lighter than the plaster jackets. The parts are accessible, when braces are worn, so that the patient may be bathed. The jacket can be removed by the mother almost as easily as a brace, and the temptation to remove it is greater. The mother should be thoroughly instructed how to adjust the brace, which meets all the mechanical requirements, and is lighter, cleaner, cooler and more scientific than the plaster jacket.

### Support for the Spondylitic Spine Obtained by Healing in Steel Bars Attached to the Vertebræ

**Prof. Fritz Lange**, Munich: The kind of metal used is of much importance. In this minor operation, designed to immobilize four or more of the vertebræ, I use steel wires, 5 mm. thick and 10 mm. long, which have been carefully plated with tin. The operation is applicable only in the early stages of the disease, before the appearance of deformity or when the deformity is slight. The wires employed have tin knobs at their upper and lower ends; and a thread is tied under the knobs, to prevent sinking. Provision is also made to fasten the apparatus to the spine. This new operation, I believe, gives the best chance for spondylitis to heal quickly and without great pain.

### Discussion on Pott's Disease

**Dr. Newton M. Shaffer**, New York: In Pott's disease in the dorsal area, if we can eliminate the trauma of respiration, we are taking a long step in the right direction. Pott's disease below the respiratory region requires very simple support. The movement of the respiratory area is controlled by Nature and by the patient himself, who makes an effort to limit respiration in the affected area.

**Dr. S. J. Hunkin**, San Francisco: In a majority of cases, the steel braces can be applied with more efficiency than can the plaster jackets; but a plaster-of-Paris jacket is not heavier than a steel brace, if properly made.

**Dr. Charlton Wallace**, New York: In selecting the treatment for Pott's disease, we must divide the cases according to the stage of the disease. The gist of the whole position is that all orthopedic surgeons are aiming to give the patient the benefit of the best treatment, the main object of which is relief from the superincumbent weight. The non-ambulatory treatment seems to me ideal; but we hate to see children put to bed for several years, so the surgeon tries to get something that will yield proper ambulatory treatment. It is foolish to say that we can absolutely immobilize the spine; therefore, our aim is to get as near to absolute fixation as possible. In the early stages of the disease, when the patients have been taken from bed, nothing can be more advantageous than the plaster jacket, which can be made to weigh no more than a pound or a pound and three-quarters. In patients who are moving around, I do not believe that we can beat plaster-of-Paris. For the convalescent cases, most of us use a brace. Dr. Lange has brought before us a method of treatment which is hazardous, but admirable in the hands of an expert. I should, however, be afraid to try it.

**Dr. David Silver**, Pittsburg, Pa.: Regarding plaster jackets as opposed to braces, it is merely a question of which we can handle best. The deformity should be corrected during recumbency, and not with the jacket or brace. At the Children's Hospital in Pittsburg, we change the braces ourselves, and do not allow the parents to touch them.

**Dr. Ansel G. Cook**, Hartford, Conn.: The orthopedist has in these cases a disease to treat and a human being to manage. Sometimes the patient needs the bed; sometimes, fresh air. There are times when the jacket is better, and there are other times when the brace is very much better. The question is, what advantage has either method over other methods.

**Dr. H. Augustus Wilson**, Philadelphia: No case of Pott's disease has ever been cured by braces or by plaster jackets. Relief from the superincumbent weight is simply one of many means to the end. If recumbency in bed does not interfere too greatly with circulatory activity, then it is essential for a period of time. In many cases, I have seen cure without resort to apparatus. The form of apparatus is of minor importance, but constitutional treatment is of great importance. Whether Dr. Lange's method of getting support of the spinal column without restraint of the respiratory organs or of the body is to be of much use to the ordinary orthopedic surgeon, is questionable.

**Dr. Robert S. Lovett**, Boston: Neither a brace nor a jacket is thoroughly efficient mechanically, although it takes off some of the superincumbent weight. Great as are the objections to the treatment of Pott's disease by recumbency, it is the only efficient surgical treatment for tuberculosis of the spine. In comparing braces and plaster jackets, we are comparing two relatively inefficient methods of treatment.

**Dr. Reginald H. Sayre**, New York: I believe that, rather more frequently than Dr. Painter seems to think, the superincumbent weight and bending forward of the spine are factors in the production of these hemiplegias. I do not think that treatment with recumbency, unless supplemented by longitudinal traction or hyperextension, gives adequate support. A jacket without a jury-mast is often a very inefficient means of support. The mast must have a chin support and exert pressure against the anterior part of the neck, to keep the upper part of the body well bent backward. The difficulties in keeping the bones at rest are insuperable. Dr. Lange's method should not be used by anyone who has not very skilful technic. In suitable cases I believe it would be useful; but in the badly kyphosed cases, I do not know that we should get the support needed.

Dr. B. K. McKenzie: I think that all these patients, so far as possible, should be treated by recumbency during the active stage of the disease; but if the recumbency has to be in a house, I am not sure that I should choose it in preference to efficient mechanical support with a brace or a jacket. The patient should live out of doors, day and night; and when the sun shines, he should be directly exposed to the sun's rays.

Dr. G. G. Davis, Buffalo: I have felt for a number of years that our aim should be to progress in the way of shortening the treatment. The main drawback of orthopedic surgery is that the patients are too long under treatment. Dr. Lange has submitted his method as one of the means by which the period of treatment can probably be shortened, and it behooves us to give it a fair trial.

Dr. James K. Young, Philadelphia: I think that there is a field for laminectomy in these cases, when the paralysis has existed a year or eighteen months. After that period, if there is no improvement in the symptoms, or if symptoms of abscess can be verified by the *x*-ray, operation should be performed.

Dr. Albert H. Freiberg, Cincinnati: Treatment by recumbency is one of the oldest methods in Pott's disease. For some reason, we went away from it; and for some other reason, we seem to be coming back to it. It was observed that, as the first result of putting the patients to bed, they made great improvement. Then, after recumbency had been continued beyond three months, the patients retrograded. We have now learned that something more must be done for the general condition; and we have added to the recumbent treatment, the open-air treatment and the care of the patients' regenerative processes. It is only by a combination of these that such remarkable results have been accomplished. I think that Dr. Lange's method offers great promise for a certain class of patients—those who have Pott's disease in its incipiency. If we delay the application of the splints until the later stages, we shall be applying them when the spine is no longer able to respond by the production of the new bone-tissue in the place of that destroyed by the disease, and shall be depending entirely on the mere splinting for the ultimate result.

Dr. Emil S. Geist, Minneapolis: What does Dr. Lange do regarding the future growth of the patient? It has struck me that in these incipient cases, which are usually in children, we ought to consider this point, if the steel is to remain attached to the vertebræ.

Dr. Charles F. Painter: Sclerosis is the keynote of the treatment of Pott's disease by laminectomy. It depends on proliferation of connective tissue; if this is inside the pia, it cannot be touched by laminectomy. In cases in which the granulation process has produced the changes outside the dura only, laminectomy will relieve the paralysis. It must not, however, be performed until the process of shrinking of the scar tissue has sufficiently progressed. The paraplegic condition that we cannot touch for two years are not the class of cases that can be relieved at the termination of the two years. The cases that get well do so because the process is outside the dura.

Dr. H. O. Feiss: I agree thoroughly with Dr. Lovett that recumbency is the ideal treatment, when it can be carried out. I did not say that the principles of the plaster jackets were wrong, but that they could be carried out more accurately and scientifically by means of braces.

Dr. Fritz Lange: The operation which I recommend should be carried out as early as possible, since the object is to secure the healing of the process before much destruction of tissue has occurred. I should not, however, hesitate to employ this method in cases in which the disease has progressed farther. In the case in which the longest time, two years, has elapsed since I performed the operation, I have not been able to observe, by means of the *x*-ray that the vertebræ in the part of the spine spanned by the wires are smaller than those immediately above and below the point operated on. Should I observe any interference with the growth of the spine, I should not hesitate to remove the steel wires after the disease has healed.

(*To be continued*)

## AMERICAN PEDIATRIC SOCIETY

*Annual Meeting, held in Washington, D. C., May 3-5, 1910*

*(Concluded from page 1890)*

(Concluded from page 1890)

### The Use of Bacterial Vaccines in Children's Diseases

Dr. John M. Howland, New York, and Dr. B. R. Hoobler, New York: This paper is based on cases occurring in the Bellevue Hospital during the last ten months. The infections were the usual ones found in children's hospitals. Unless marked specific results are obtained, conclusions are difficult to draw. There were 31 cases of localized infection with the *Staphylococcus aureus*. They yielded to four or five inoculations of the autogenous vaccine. Of general systemic infections with the staphylococcus there were 3 cases, all of which recovered. The experience with localized infections treated with autogenous vaccines has been very satisfactory. Of streptococcus infection, localized, there were 13 cases, which yielded much less to vaccine treatment than those due to staphylococcus. Of general streptococcus infection, 5 were cases treated. In fifty pneumococcus infections treated with stock pneumococcic vaccine used, we are not able to report any beneficial results nor any unfavorable ones. We are not impressed with the effects of the treatment in vulvovaginitis.

DISCUSSION

Dr. F. S. Churchill, Chicago, reported a case of meningitis due to staphylococcus infections, in which an autogenous vaccine was used, followed by speedy recovery.

Dr. Henry Koplik, New York, said that in the staphylococcus infection his results agreed with those of Dr. Howland; with the streptococcus infections results had been discouraging.

### A Case of Thymic Asthma

Dr. A. D. Blackader, Montreal: I wish to report a case occurring in a child ten months old, suffering from severe dyspnea. The child was nursed for six and one-half months, then weaned because of the mother having German measles. It had a severe attack of bronchitis, but with no cyanosis; respirations at that time were of a croupy character; no dulness then over area of thymus. Some symptoms of rachitis developed. Then the child apparently caught a fresh cold; breathing was rapid and difficult, but without cyanosis. This condition increased and there was a distinct area of dulness. Operation was proposed to raise the thymus, but the surgeon declined. The child died the following morning. I have been unable to find the report of a similar case. There was a large cystic mass between the trachea and the esophagus. It is believed that it developed from a bronchial cyst.

### The First Sound of the Heart in Children

Dr. F. Forchheimer, Cincinnati: If one were inclined to believe after so long a time in which the normal heart sounds have been studied there is a concensus of opinion among authors in regard to their production, a review of the literature would be disappointing. The statements of different authors are so much at variance as to seem almost incredible. In connection with the normal first sound of the heart there still exists much difference of opinion, but certain modes of its production are accepted by the majority, many of whom differ as to details. In children the pitch is high, depending on the age and size of the child, from *g* or *a*, soprano, below the staff, gradually becoming lower until it reaches double *b*, soprano, below the staff. The dominant factor in the production of the first sound is the systolic contraction of the myocardium; next to this in importance is the tense auriculoventricular valves; then those vibrations occurring in the large vessels; and lastly, the vibration of the semilunar valves. Instead of only two factors for each side of the heart, four in all, we are forced to accept four for each side, that is, eight as the number of component parts of the first heart sound. In the child heart the conditions are still more complicated; as the organ is slowly developing from the condition immediately after birth to that of adult life, there must be transitional phases, depending on the periods of development; the size of the myocardium as expressed by the ratio of the weight of the heart to the weight of the body is the most important factor; elasticity of the myocardium must also be considered. Whoever undertakes to make a diagnosis of a heart lesion in a child in an offhand manner immediately stamps himself as a dilettante in heart diseases. The manner of differentiating organic from other valvular bruits in children under three as given by Hochsinger, that under 3 years all bruits in the heart are organic is to be deprecated, although this statement has been widely accepted. In children under 3, functional and accidental bruits are found very commonly. They depend on myocardial conditions. Systolic bruits are found in forms of acute myocarditis due to diphtheria, typhoid, rheumatic fever, variola, gonorrhea and septic pyemia. In chorea the bruit is produced by acute endocarditis. The development of the elastic tissue must be taken into consideration in explaining this bruit; if there is a disparity between the strength of the myocardium and the resistance of the elastic fibers there will result more or less of an inequality in the conus arteriosus, which acts as an obstacle; when the blood passes over this a bruit is produced. That the anemic bruit is produced directly by anemia is a matter of some doubt. In many cases of anemia there is no bruit, and many bruits are attributed to anemia which are due to other causes. It is impossible to diagnosticate anemia by listening to the heart.

DISCUSSION

Dr. W. P. Northrup, New York: I wish to emphasize the fact that many murmurs from unexplained causes in children under three do disappear.

Dr. S. McC. Hamill, Philadelphia: I think the explanation offered by Dr. Forchheimer is a valuable one. I have been convinced that there must be more than one etiologic factor for these murmurs, and I am glad to hear Dr. Forchheimer express the view that Hochsinger's statement is incorrect.

Dr. F. S. Churchill, Chicago: I once had a case of a child with nephritis who developed an acute arthritis of the knee joint, when a systolic murmur was heard, which gradually disappeared. Blood cultures in this case were negative.

### The Value and Limitations of Cold Air in Acute Respiratory Conditions

Dr. J. P. Crozer Griffith, Philadelphia: There should be a clear idea of what really constitutes cold-air treatment. It might be used in three ways: first, exposure of the body to cold air; that is not what any of us are doing, because the children are thoroughly wrapped up and the body kept warm; second, breathing of cold air; but the cold air does not enter the lungs as cold air; third, the action of cold air on the face. There is question about the benefit of fresh air, but we must not forget that it is not a new thing by any means. Whooping-cough had been treated that way for many years and also phthisis in adults. The employment of cold air in the treatment of acute respiratory conditions had its limitations, and not every case of such disease is to be exposed to cold air.

DISCUSSION

Dr. L. E. LaFetra, New York: At the Baby's Hospital, in which they have instituted a "cold ward," in which the temperature is kept at about 50 F. from November to April; next to this is a regular ward where the temperature is 70 F.; and in connection with this a steam room for administering vapor inhalations. From the cases that have been treated in the cold ward and in the adjacent warm ward, the following conclusions may be drawn: 1. In the acute congestive stages of inflammations of the upper respiratory tract (rhinitis, laryngitis, bronchitis, especially of the small tubes, with or without bronchial pneumonia) warm, moist air is of greater help than cold dry air. 2. In lobar pneumonia, with high temperature and little or no bronchitis, cold dry air is of great advantage. The same is true of pulmonary tuberculosis and of empyema. 3. After the acute stage has passed, and when there is no inflammatory spasm of the larynx or bronchi, the cold-air treatment is of advantage in cases of rhinitis, laryngitis, bronchitis and bronchial pneumonia.

Dr. W. P. Northrup, New York: The essential of the fresh cold-air treatment is partly that it should be circulating, moving air.

Dr. E. E. Graham, Philadelphia: From the standpoint of private practice one is soon convinced that unless you get cold air in the sick room you do not get fresh air; the room that is not cold is apt to contain vitiated air.

Dr. John Howland, New York: It is almost the invariable experience that children with acute infections do better in cold air than in warm air, and with pneumonia they do better out of doors in winter than in summer. The rise in blood pressure accomplished by putting the patient out doors can only result in benefit in these cases in which fall of blood pressure is a prominent symptom.

Dr. A. D. Blackader, Montreal: I agree as to the value of increasing blood pressure in the latter stages, but think that in the earlier stages lowering of blood pressure is indicated. I advocate fresh cold air because I feel that the child is getting more oxygen and a certain amount of stimulation to the respiratory center, rather than because of increased blood pressure.

Dr. T. S. Southworth, New York: I wish to emphasize particularly the advantage of cold fresh air in the prevention of acute respiratory diseases. In our wards the temperature is now kept so low that the faces and hands of the children often looked rather blue and chapped, but acute respiratory infections among them are now very rare.

### Retained Intubation Tube; Abductor Paralysis (Diphtheria); Recovery

Dr. W. P. Northrup, New York: I wish to present the following unique case: A fifteen months' old boy had been suffering with diphtheritic laryngeal stenosis and wearing intubation tube two weeks; had had whooping-cough 4 months before contracting diphtheria. He came to the hospital with urgent dyspnea and immediate intubation was attempted by the ambulance surgeon. Intubation was unsuccessful, but efforts resulted in relief. When I tried intubation the tube met with obstinate resistance. The smallest tube was gently forced past the obstruction and relief followed. Artificial respiration was immediately necessary. The first diagnosis was catarrhal laryngitis in a larynx recently injured by diphtheria and intubation, a marked nervous element being added from the recent whooping-cough. There was pseudomembrane visible, tonsils very large, coarse râles everywhere over both lungs. Two days after admission respiration was free, but signs of consolidation appeared at one apex. After three days tube was taken out; after brief sleep child choked up and ceased to breathe; with great difficulty tube was reinserted and artificial respiration again used. Quick emergency relief was required a half dozen times in the first few days. He coughed out all the tubes put in; and required intubation 40 times during stay in hospital; increased sizes used. Patient was discharged, but again returned with dyspneic symptoms and is still in the hospital. The secondary dyspnea would seem to have been due to diphtheritic laryngeal paralysis, plus subglottic swelling, complicated with marked nervous spasm.

### Bacteriology of the Blood in Early Life

Dr. F. S. Churchill, Chicago: Medical literature is replete with reports of the study of the bacteriology of the blood in adults, but few reports have been made of such study in infants and children. In scarlet fever alone has such work been done. Together with Dr. Clarke, I have studied the series of cases reported. The study consisted of 50 examinations on 44 infants and children and the study of 16 cases post-mortem. As blood cultures in adults have yielded information of such scientific interest and value, that there is need of more of this kind of work in the study of diseases of infants and children, as it is reasonable to suppose that blood cultures in early life may be of even more value than in later life.

DISCUSSION

Dr. L. Emmett Holt, New York: The taking of cultures in the infections of infants has not appealed to me much as a practical procedure, because the difficulties are great and the results not commensurate with the risks.

Dr. Henry Koplik, New York: With very young infants I have had the same difficulty as Dr. Holt; it is difficult to get enough blood to make a satisfactory culture, and in these cases the results have not been as satisfactory as with older children. However, there are some cases in which the results are excellent.

Dr. Isaac A. Abt, Chicago: In the hospitals cultures should be made. I found that they throw a very important light on many conditions. The efficacy of the work depends much on the expertness of the man making the blood culture.

Dr. David Bovaird, New York: I wish to advocate the taking of blood cultures in children, and as the technic is perfected the same sort of accuracy as now obtained in adults will be gotten in the study of the diseases of children.

Dr. David L. Edsall, Philadelphia: I have come to rely on blood cultures as the most valuable means of diagnosis in obscure conditions of older children. I think it a method of great value.

Dr. F. S. Churchill, Chicago: While we do not know a great deal about the subject of the bacteriology of the blood in infants at present, and cannot draw any very definite conclusions, it is important to go ahead with this study and any accurate method that may add to the knowledge of these conditions should be given a thorough trial.

### Acute Pericarditis in Children

Dr. David Bovaird, Jr., New York: [This paper consisted largely of charts showing in detail the studies carried out on a series of cases, the first one comprising a series of 14 cases of acute pericarditis in children under the age of 5, at the New York Foundling Hospital, during 8 years.] Acute pericarditis occurs at practically all ages. There is an astonishing prevalence of boys in the list. It is in most cases a secondary affection; secondary particularly to affections of the lung, pleurisy or pneumonia. It complicates bronchopneumonia or lumbar pneumonia without distinction. Of the 14 cases, 11 were purulent. The second chart comprises a series of 17 cases of pericarditis, acute. Twelve out of the 17 were cases of rheumatic fever, and in almost all the type of inflammation was fibrinous or serofibrinous. It is important to recognize pericardial dulness in the fifth right interspace, and especially the progressive increase of this dulness; if the right and left limits of cardiac dulness are outlined, within 12 to 24 hours it is possible to demonstrate any increase of this dulness. Its differentiation from acute dilatation of the heart is of importance. The *x*-ray as now employed is of great value in the diagnosis of these conditions, and it is now possible to make out pericardial effusions with great accuracy by this means, so that the aspirating needle can be used with greater safety. Aspiration at the fifth interspace should be done.

#### DISCUSSION

Dr. Henry Koplik, New York: There is great difficulty making a diagnosis of pericarditis in young infants because of the fact that the heart lies in such a way that the effusion first begins in the posterior superior angle, and unless the fluid approaches 200 c.c. a diagnosis cannot be made. There is danger in aspiration, as the exudate is apt to become encapsulated and partitioned off and one may get into the main sac and pierce the ventricle.

Dr. Isaac A. Abt, Chicago: The great danger of puncture in all these cases is that it is very difficult to differentiate between a serous and a purulent effusion and the so-called acute adhesive pericarditis.

### Chylous Ascites in Infants

Dr. D. M. Cowie, Ann Arbor: A case was seen a little over a year ago with the following history: Delayed birth; difficulty in labor due to the large abdomen; the abdomen greatly increased in size after birth. *X*-ray showed no tumor; scrotal sac was tense, but gentle taxis could push fluid up into abdominal cavity. Child recovered, though it still has attacks of occasional blueness. It was at first thought that there was a heart lesion of some kind. Orthodiagraph showed the right part of the heart further to the right than normal in a child of that age and size. The right heart was very much enlarged. The case was probably due to some form of congenital heart disease. Analyses of the fluid showed that all the elements of chyle were contained in the fluid.

## Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

### Organization in Texas

The following address by Dr. W. B. Russ of San Antonio, Texas, President of the State Medical Association of Texas, was delivered at the forty-second annual session held at Dallas on May 10, 1910. Dr. Russ' address is particularly notable and commendable as a review of conditions previous to reorganization and the changes wrought in the last ten years. With the exception of a few paragraphs regarding purely local conditions, the address is published entire.

Ten years ago the state medical association had enrolled 296 members. Many parts of the state were not represented at all. The association business was transacted by the mass-meeting plan, which meant that many parts of the state had no representation, and that the city in which a meeting happened to be held always had control of affairs. The organization had, after thirty years of existence, failed to secure the enactment of any public health legislation except a practice act, which in some respects was worse than no law at all. The press was antagonistic and the public out of sympathy with the profession. The endorsement of any measure before the legislature by the physicians of the state was a solar-plexus blow to that measure. All public health laws proposed by the association were treated with derision and contempt.

Texas was a land of promise and of profit to magnetic healers, hoodoo doctors, itinerant fakers, universal specialists and fraud doctors of every persuasion. No medical cult was so absurd in its claims, no fraternity of grafters were so brazen in their methods but that their unworthy sons could find a haven of rest in Texas. Many of these, fortified with the legal standing gained in those golden days for quackery and ignorance, remain with us still as unpleasant reminders of the time when the medical ignoramus and the fraud doctor enjoyed a better standing with the press and the public, the politicians and the courts, than did the reputable members of the medical profession.

The enterprising nostrum manufacturer was unhampered by any check. The doctor was the middle-man through whom the manufacturer reached the public with his products, and yet the doctor himself did not and could not, have any information concerning the true nature of the medicines he was assisting in placing before the public, except such information as the proprietor and his agent with the sample-case saw fit to impart. Subsequent developments have shown that in those days many of our most respected manufacturing chemists, in addition to the reputable products offered through the doctor to his patients, also supplied the public, either directly through dummy concerns or indirectly, with the nostrums flagrantly advertised in the lay press, on bill-boards and through the medium of the street faker. The great mass of the medical profession knew nothing about organized medicine and its possibilities, and in many parts of the state were engaged in bitter and senseless feuds, which were a disgrace to the profession and ruinous to the men so engaged.

To-day what a contrast! Our 155 county societies, with a combined enrollment of about 3,100 members, as if by magic, have accomplished wonders. The old mass-meeting has given place to a truly representative plan of government by which every county society has a voice in managing the affairs of the association through a trained delegate of its own selection. The senseless and disastrous bickerings and quarreling of the old days have given place to an era of better understanding between the members of the profession. The great campaign of education carried on by the county and district societies and by our state journal has enabled us to win the confidence and friendship of the press and of the public. The law-makers now are beginning to understand that the State Medical Association of Texas does not ask for class legislation, that it seeks to secure the enactment of only such laws as are clearly in the interest of the public health. The records of the last two legislatures clearly demonstrate this, as the enactment of the following legislation will show:

The medical practice act.
The anatomical act.
The board of health act.
The tuberculosis sanatorium act.
The leprosarium act.
The pure food and drug act.

Not a single one of these laws could be made to serve a narrow or selfish person. They are clearly worthy of our great profession and are in the interest of the people of Texas. Our present practice act forces medical schools to adopt high standards; broadly defines the practice of medicine so as to include every one who treats, or offers to treat, the sick; provides for proper registration; fixes heavy penalties for grossly unprofessional conduct of a character likely to deceive or defraud the public, and has already been hailed as a model law by not less than a dozen other states. Contrast this with the practice act under the old régime, which discriminated in favor of all practitioners, except the members of the regular profession, which placed no restriction on the doctors and healers who did not prescribe drugs and allowed those who happened to hold peculiar views about the administration of drugs to set up their own standards. Yet this law was the only law passed in the old days, and even it was not passed until it had been given the reverse English. Not a single law asked for since our reorganization has failed to pass. . . .

The many activities in which the association is engaged in the great work of carrying out the purposes for which it was organized and for which it exists are well known to you. That its progress and growth are due largely to the influence of our state journal, I am sure you will agree. Under the able and efficient management of our secretary-editor, the *Journal* has, since its organization in 1905, made a determined and successful fight for the elevation of medical school standards for perfection and final passage of all the medical laws we now have on our statute books. It has unified the profession as no other agency could, and without its influence it is doubtful if any of the many reforms for which we take credit could have been accomplished. Our editor is regarded everywhere, in Texas and outside of Texas, as the ablest state journal editor in the country, and the *Journal* is without doubt the best publication of its kind. During the first years of its existence, Dr. Chase donated the use of his private office to the association to be used as journal headquarters, and he has for several years, in quarters entirely inadequate to the needs of his office and at great personal sacrifice, labored day in and day out for the upbuilding of the association. He has steadfastly refused to use the *Journal's* pages to defend himself against villainous attacks of his detractors and has with as much patience as I have ever known a man to display, allowed himself to be misrepresented and hounded by the influences opposed to the policies of the association and to the very existence of its journal. What this work has cost him in dollars and cents alone few men in the profession would have been willing to sacrifice. His path has been a thorny one, but, under every circumstance, he has shown himself to be a man worthy of the love and respect of the profession and deserving well at the hands of the public. Had it not been for the willingness of the secretary, of the trustees, of some of the councilors and others in the profession, to sacrifice both time and money in the service of the association, our finances would have been wrecked long before this and the reforms which we have accomplished would not have been accomplished. This fact is understood and appreciated by most of you. The small pittance that is collected in dues would never have been sufficient to meet the extraordinary expenses incurred in making all the fights we have had to make. No ordinary man would have been willing to make the sacrifices that the trustees and the editor have made. These considerations have no doubt influenced many of the friends of the association to refrain from making complaints, when in their judgment mistakes have been made, and from offering suggestions for possible changes in the methods employed by the men on whom has been placed the responsibility of managing the association's affairs. That criticisms and suggestion, having for their object the upbuilding and improvement of the association, have been needed, and will be needed in the future, every one will admit.

### THE OPPOSITION

This, then, brings us to the consideration of a matter to which I desire particularly to direct your attention—a matter which is at present engaging the attention of every state association in the country, and which should interest the members of every county society. A clear understanding of what I am about to lay before you is of vital importance, for, without that understanding, you cannot appreciate the importance of active and hearty cooperation with the men you see fit to place in control of your affairs. If you will but give attention to the facts that I am about to recite, it will not be long before we can meet and thrash out honest differences of opinion fully and freely, and each one of us can fight for what seems to him to be in the interest of the association without the fear of giving comfort to the association's enemies. I refer to the skilfully planned warfare conducted by the stealthy foes of organized medicine, in which are employed the best efforts of many shrewd and experienced business men with unlimited financial backing, into which have been drawn, by one means or another, some through interested motives, some through honest misunderstanding, many of the most brilliant minds in the profession. An understanding of the nature of this campaign waged against the very existence of the Texas State Association and all other state associations will serve the double purpose of explaining why our friends are unwilling to engage in a fight to bring about changes and reforms that seem to them desirable, while confronted with the fear that their names and influences may be used by our foes to assist in poisoning the minds of the public against organized medicine, and, at the same time, will make plain and easy to understand the animus back of the ceaseless tirade of abuse to which every state journal editor, every trustee, officer and committeeman of every association and every house of delegates is treated. You will, then, understand why the Post-Office Department is besieged with demands that second-class mailing privileges be denied the state journals.

To begin with, you no doubt already know that all of the officers of all the state associations are treated to the same kind of abuse month in and month out, and that when the tactics of the enemy change in one state they soon change in other states. You know that the ammunition used against the profession in one state is used all over again in the other states.

You must know, then, that for all this there is a reason. The reason, my friends, is not far to seek:

1. Organized medicine is responsible for the Council on Pharmacy and Chemistry of the American Medical Association, with the resulting exposures of fraud and deceit, not only on the part of the low nostrums advertised in the cheap part of the lay press, but on the part of many, if not most, of our so-called manufacturing chemists, who, unhampered by any check and considering only the dollars to be earned, have for years been exploiting the profession and through the profession the public. The owners of the millions of dollars invested in the proprietary and "patent-medicine" business could not be expected to submit tamely to exposures which place in jeopardy their enormous business interests. They have not submitted tamely; on the contrary, they have by every means known to the shrewd commercial interests sought to destroy the system of organization which makes possible a continuance of these exposures. With this thought in mind, read the bitter attacks on your state association, other state associations and on the American Medical Association.

2. Dozens of medical journals which depend for their support and often their very existence on the protection of the interests that supply the medical profession with antikamnia, and the long list of less conspicuous proprietaries carrying space in medical publications, are assisting in the campaign against the profession to which their owners belong. The editors and proprietors of many of these journals are men of ability, men of standing in the profession, who under ordinary circumstances do not hesitate to wage war against fraud and deceit. According to ordinary business standards, they are not in any sense dishonorable men; journalism with them is a business just as selling groceries is a business. They do not pretend to endorse the claims of the proprietaries advertised in their pages. Their advertising space is for rent; they take the position that their space is for rent just as a room in a hotel is for rent and that they are no more compelled to vouch for the honesty of the claims made by advertisers than are hotel proprietors compelled to vouch for the uprightness of their guests. We do not complain of their use of advertising space in any manner they may see fit, but that they insist on regarding the official organ of the state association, which is used for the purpose of an interchange of ideas between our members and for conducting the association business, in the light of a rival engaged in a private enterprise who adopts unfair methods of competition. The fight is between the private journal interests, which are business enterprises on the one hand, and the association on the other, because this body finds it necessary to publish a journal as a part of a scheme for carrying on its benevolent purposes, and which representing organized medicine finds it necessary to wage war on the commercial interests that are imposing on the medical profession, and through the profession on the public.

It is unfortunate that the association cannot conduct a campaign of education which happens to affect the manufacturer of proprietary medicines without treading on the toes of our friends who are engaged in medical journalism as a private business.

3. The influence of organized medicine is responsible for the campaign of education which resulted in the enactment of the national pure food and drug law and has assisted in its enforcement. Here again great wealth is forced into a fight against the medical profession. The enemies of the pure food and drug law find it expedient to join our other enemies.

4. Low-grade medical schools, and all the many powerful interests linked with their interests, are fighting organized medicine because of the successful fight that the profession is making to elevate medical college standards. This, of course, means the ultimate elimination of low-grade schools and such a policy is naturally very objectionable to the doctors who run medical schools for their own interests rather than in the interest of the public and the profession.

5. All of the "isms" and "pathies" in medicine, and all of the freak cults, are slowly but surely being eliminated by the adoption of uniform standards for all who seek license to practice medicine, and by laws which so broadly define medicine as to include all who treat the sick for a consideration. As long as freak schools and sectarians are allowed to assume the rôle of martyrs, persecuted by the medical profession for righteousness' sake, and can secure laws under which they may legally define the practice of medicine to suit themselves and can set up their own standards, they will continue to multiply and prosper and new "treatments" with coin enticing names will rise up for the benefit of the crank, the bunco man, and the doctor who cannot make a living at legitimate practice.

6. Organized medicine in Texas is responsible for a law which not only makes it a crime for an ignorant person to assume the responsibility of treating the sick for any ailment, mental or physical, by any method or system whatever, but also makes it a crime to be guilty of "grossly unprofessional or dishonorable conduct of a character likely to deceive or defraud the public," and the penalty is a fine, a jail sentence, and a loss of license. This clause of the practice act was recently invoked in the case of a notorious advertising quack who was tried at San Antonio and had his license revoked. Ever since then he has devoted most of his time in denouncing the medical "trust" and has declared war to the death of the octopus. He delivers a free lecture from every convenient platform and offers his services to all who would kill the great trust dragon which has seen fit to interfere with his right to rob the thin purses of the poor and the ignorant. This recent addition to the anti-organizing crusaders has amassed a snug fortune by taking large fees, often more than $100 at a time, from unfortunates whom he has been able to attract to his lair with the assistance of the press by causing them to pass, with the aid of an olive oil mixture, soap concretions, which his victims are made to believe are gall-stones.

7. Add to these, the usual complement of disgruntled brethren who for one reason or another are always "agin the government" on general principles, the man who thinks that all the reforms in the world are not worth the two dollars a year he is required to pay for membership fee; also the man who does not want to belong to the association and who is against it because it is not what it used to be when he was a boy.

With such an army arrayed against the profession, and in the face of the fact that the men who are elected to manage the association affairs do so at great personal sacrifice without any hope of personal reward, the well-wisher of the association is, as a rule, loath even to suggest reforms which, in his judgment, are needed, for fear of discouraging the men in control of the association affairs and giving comfort to the enemy. The allies are ever on the lookout for recruits. At the earliest signs of dissatisfaction with any of the association officers, or of its policies, the mind-poisoning squad begins to spread the glad tidings that something has gone wrong with the association; that a big split is about to take place; that the sore-head is about to come into his own; that perhaps somebody has been grafting from that two dollars collected for dues. Then the independent journal begins to beat the tom-tom, the proprietary medicine interests commence to delve into the past of the men who have been exposing their frauds. The magnetic healer begins to work on his dynamo and the man who does not like the editor anyhow takes down his snickersnee, and the whole army marches out to engage in the battle.

The profession as a whole understands the nature of this warfare. Never before has the profession been so united as it is to-day. Never have the parasites which feed on the doctor and make him the middle man for reaching the public with dishonest and misbranded proprietary medicines been at so great a disadvantage as now. Never before have the doctors so clearly understood the Dr. Jekyll and Mr. Hyde part played by our large manufacturing concerns. Never have the public been so willing to assist in the enactment and enforcement of laws in the interest of public health. Never have the "schools" of medicine, the quacks and the medical bunco-steerers had so many things to worry about.

The end of this great fight against the medical profession is in sight. The great interests whose business it is to manufacture medicines are adjusting their affairs so as to meet the honest requirements of the Council on Pharmacy and Chemistry and in a short time they will have no reason to continue a fight against honesty in the scale of proprietaries. Hight standards of requirements are eliminating the low-grade medical schools and putting out of business the "isms" and "pathies" in medicine. The public is being rapidly educated and assisting in this great work. The independent medical journals that are worthy to live because of real merit will continue to prosper. Those that cannot live without the support of dishonest advertising houses must go out of business or else improve themselves so that they will be worthy to live.

Your understanding of the nature of the fight that has been waged against the profession will forever put an end to that fight, and your active interest in association affairs will make possible the accomplishment to the fullest extent of the purposes for which the organization exists.

## Societies Endorse Owen Bill

The following organizations have passed resolutions endorsing the principles of the Owen bill: Santa Clara (Cal.) County Medical Society, Humboldt County (Cal.) Medical Society, Woodbury County (Ia.) Medical Society, Buncombe County (N. C.) Medical Society, State Medical Association of Texas, Oklahoma State Medical Association, Lamar County (Tex.) Medical Society, Georgia State Medical Association, St. Joseph-Buchanan-Andrew Counties (Mo.) Medical Society, Portland City and County (Ore.) Medical Society, Medical and Chirurgical Faculty of Maryland, Denison County (Tex.) Medical Society, Cincinnati Civic League, Chamber of Commerce, Tacoma, Wash., Board of Trade, Tacoma, Wash., Tacoma Commercial Club, Tacoma, Wash., Mississippi State Department of Health, Madison County (Wis.) Medical Society, Missouri Association for the Relief and Control of Tuberculosis, Rock Island (Ill.) County Medical Society, Essex North District (Mass.) Medical Society, Southwestern Kentucky Medical Association, Wright County (Ia.) Medical Society, Washington County (Pa.) Medical Society, Medical Society of the County of Kings (N. Y.), Sheridan, Mont., Board of Trade, Robertson County (Tenn.) Medical Society, Lorain, O., Chamber of Commerce and Board of Health, Lorain (O.) Medical Society, Huntingdon County (Pa.) Medical Society, Medical Society of the County of Cortland (N. Y.), Cortland Board of Trade, Southeastern New Mexico Medical Association, Missouri State Medical Association, School Improvement Association of Helena, Ark., Houston-Fillmore Counties (Minn.) Medical Society, Marquette County (Mich.) Medical Society, Stevens County (Minn.) Medical Society, Harrison County (Ia.) Medical Society, Clarkesville, Tex., Citizens' Meeting, Barbour-Randolph-Tucker Counties (W. Va.) Medical Association, Labette County (Kans.) Medical Society, Conference of the Methodist Episcopal Church of the State, held at Asheville, N. C., Burleson County (Tex.) Medical Society, Somerset County (Pa.) Medical Society, Martin County (N. C.) Medical Society, Louisiana State Medical Society, Franklin County (O.) Medical Society, Association of the Officers of the County Medical Societies of Washington, Ottawa County (Mich.) Medical Society, Green Lake County (Wis.) Medical Society, Central Kentucky Medical Society, Anderson County (Tenn.) Medical Society, Aiken County (S. C.) Medical Society, Edwards County (Ill.) Medical Society, the Associated Chambers of Commerce of Orange County, Cal., Orange County (Cal.) Medical Society, Franklin County (Vt.) Medical Society.

# Medicolegal

## Rights Between Carrier and Person Requiring Medical Attention

The Supreme Judicial Court of Massachusetts says that the case of Connors vs. Cunard Steamship Company (90 N. E. R. 601) presented an important question not directly decided in any case which has come to the court's attention. The suit was brought by Alice Connors, as administratrix of Margaret Connors, deceased. The two sisters had embarked on the Ivernia, having a ticket entitling them to a second cabin passage from Boston to Queenstown (or Liverpool). But Margaret undressed and went to bed before the vessel cast off from the wharf, which was reported to the ship's surgeon, who went to her room, felt her pulse, looked at her tongue and asked what was the matter. Thereupon Alice handed him a letter from a physician, addressed to the ship surgeon, saying: "May I explain to you a most sad case which will be under your care during this crossing? The patient herself has no idea of the nature of her trouble, so will you kindly make light of anything ocurring and give us your aid in concealing facts? This note will be handed to you by her sister, who knows all. She has endothelioma of uterus too advanced for more than curetting and cautery, which I did February 13 [letter dated 27th]. Unfortunately this is her week to expect menstruation, but I trust it will give you no special trouble. She will be supplied with creolin for douches and codelia suppos. (ov grs. 1ss) for pain if needed. May I suggest an early vaginal pack should the loss of blood pass the normal that strength may be saved until she reaches home?" After reading the letter, the surgeon left the room and gave directions that the woman should not be allowed to proceed on the voyage. The court is of the opinion that this was justifiable, under the circumstances.

The general rule that a common carrier is bound to accept anybody and everybody who presents himself for transportation and pays the regular fare, the court says, has its limitations. A common carrier is bound to care for all who have become its passengers. For that reason not only is it not bound to accept, but it is under obligation to refuse to accept as a passenger an insane person without a proper attendant or attendants, or one who has smallpox. It was held in cases cited that the justification was made out if the carrier had reasonable cause to suppose, and did suppose, that the safety or convenience of other passengers would be endangered by the person in question, and that it was not necessary to wait to see if the person believed, and with reason, to be afflicted with an infectious disease or so insane, drunk, or sick as to be likely to interfere with the safety or the convenience or both of other passengers, was or was not in fact in the condition he appeared to be in.

This doctrine was admitted by council in this case, but with the contention that the right of the carrier to exclude a person who wishes to become a passenger is confined to those cases where the safety or convenience of other passengers is endangered, or thought to be so, and that the mere fact that a person is afflicted with an internal disease will not justify a carrier in refusing to accept him as a passenger if he offers to pay his regular fare. However, the court thinks it plain that the right to exclude is not confined to cases where the safety or convenience of other passengers is endangered, or thought to be endangered.

The question of accepting as a passenger a person in need of medical attention is a more serious one in case of a carrier by water than in case the proposed transportation is on land. Hospitals abound on shore, and even where there are no hospitals physicians and surgeons can be found at different stopping places to whose care the traveler in need of medical attendance can be confided. But in case a person in need of medical attendance is taken as a passenger on a sea voyage she must be cared for until the voyage is at an end, and if she is not accompanied by her own physician it might well be held that the responsibility of caring for her had been assumed by the carrier.

The court is of opinion that a common carrier is bound to take as passengers all who offer themselves, ill or well, provided the carrier can furnish the necessary accommodations and the passenger is willing to pay for what he demands. But where a person who is ill presents herself to a common carrier for transportation by water it is her duty to state the fact that she is ill and make special arrangements for her transportation as a person in need of medical attention.

The case of a person requiring medical attendance does not come within the same class as the cases (put in some of the opinions) where a very old or a very young person is alighting from a car and for that or any other reason requires more time than a person in good health and not under a disability. Those persons and persons laboring under other difficulties are included in persons fit to travel. What was to be considered here was the case of one not fit to travel without medical attention. Had notice been given to the defendant corporation of the condition of this woman when her ticket was bought for her the question of what care her physical condition was likely to demand and how and by whom it was to be provided could have been taken up with deliberation and some special arrangement made for the necessary extra care and the amount to be paid to the company if it was arranged that the extra care was to be furnished by it.

The court is of the opinion that the presentation of the letter was a representation by the woman that she needed medical attention during the voyage and looked to the company to supply it. If after the visit which the ship's surgeon paid to her while she was lying in bed in her rooms she had not been put ashore there would have been a serious question whether the company had not assumed the responsibility of giving her proper medical care during the voyage.

A ship's surgeon seems to have been aboard the Ivernia in compliance with the English statute which requires every passenger ship to carry a duly qualified medical practitioner whenever the number of persons on board exceeds 300. It may be assumed that a passenger who falls ill during the voyage can call on the "medical practitioner" for medical attention. But neither the statute, nor the presence on the Ivernia of a "medical practitioner" in compliance with that act, changes the right of a common carrier by water not to receive as an ordinary passenger a person in need of medical atention. In the court's opinion a carrier has that right.

## Points from Decision in Favor of Physician Charged with Assault with Intent to Commit Rape

The Supreme Court of Iowa says, among other things, in its decision in the case of State vs. Sells, which it characterizes as unusual in many of its features, that, under the statutes of that state, to sustain a verdict of guilty the testimony of the prosecuting witness must be corroborated by other evidence from some other and independent source, tending to connect the defendant with the commission of the offense. But when the offense was charged to have been committed in his own home or office where he had an undoubted right to be, and in a room or place where he was accustomed to meet visitors or transact business with patrons on one of whom the assault was charged to have been made, no possible sinister significance could be given to the mere fact of his presence there, and the corroboration which would satisfy the requirement of the law in such case ought to be more direct and satisfactory than would be held sufficient were he a trespasser or an intruder.

Taking the tendency of the evidence on both sides to show that, at the time of the visit when the commission of the offense was charged, the prosecutrix became for a time unconscious or delirious, with other circumstances, it seems not an unreasonable theory that she was the victim of an hallucination by which the vagaries of an abnormal and distorted imagination had been impressed on her mind as the memory of an actual experience.

It is unfortunately true that such an accusation, however false, especially when made against a professional man whose business calls him into frequent dealing and association with women, is always injurious and often ruinous to him against whom it is directed. So true is this that physicians of the very highest character have sometimes been led to submit to imposition and to compromise with their accusers rather than take the chances of irretrievable injury from public attack on their personal or professional reputation. That the defendant showed signs of anxiety over the story imperiling his good name and should seek the young woman and her friends, and, while asserting his innocence, ask if there were not some way in which the matter could be fixed and the scandal suppressed, might not argue very well for his judgment, but it was just as consistent with the theory of innocence as with that of guilt.

It should also be said in this defendant's behalf that, so far at least as appeared from the surface, he had taken reasonable precaution to protect both himself and his female patients from liability to scandal of this nature. His profession is an honorable one, and one which brings its votaries into the closest and most intimate relations with their clientage. That he had established a hospital in which to receive and treat patients was certainly not to his discredit. He had employed a woman nurse as an attendant in the hospital who had access to its various rooms and departments, and assisted him in the care and treatment of those coming to employ his services. More than this could hardly be expected of a physician practicing in a small country town. Whether both he and the nurse were present at the visits of the prosecutrix was a disputed question, but the arrangement of the building, the employment of the nurse therein, her general duties about the premises, the coming every day of from ten to twenty or more patients who had entrance to the building and were treated therein reduced the probability that rape or assault with such intent could have been committed therein in the manner claimed by the state.

Ordinarily where a case is to be remanded for a second trial this court does not express any opinion on the testimony, but it suggests in this case that, if the state finds itself unable to offer other or additional or further proof in support of the indictment, it will be advisable for the prosecution to enter a dismissal.

# *Current Medical Literature*

## AMERICAN

Titles marked with an asterisk (*) are abstracted below.

### Medical Record, New York

*May 28*

1 Acute, Subacute and Chronic Infection of the Kidneys and of Other Organs by the Bacillus Coli. W. H. Thomson, New York.
2 Limitations of Caloric Method of Infant Feeding. H. D. Chapin, New York.
3 The Economics of State Care of the Insane. A. W. Ferris, New York.
4 Some Facts the General Practitioner Should Know Regarding the Treatment and Care of the Insane. W. Mabon, New York.
5 Non-detention an All-important Factor in the Treatment of the Drink Habit. C. A. Rosenwasser, New York.
6 Strychnin in Pneumonia of the Aged. W. F. Waugh, Chicago.
7 Cerebellar Ataxia. C. Rosenheck, New York.
8 Therapeutic Possibilities of the Juice of the Fresh Pineapple. B. G. R. Williams, Paris, Ill.

### Boston Medical and Surgical Journal

*May 26*

9 *The Cause of Gastroptosis and Enteroptosis, with Their Possible Importance as a Causative Factor in the Rheumatoid Diseases. J. E. Goldthwait and L. T. Brown, Boston.
10 Present Status of the Antituberculosis Campaign in Massachusetts. J. B. Hawes, Boston.
11 Cesarean Section in Placenta Prævia and Puerperal Eclampsia. R. H. Gilpatrick, Boston.
12 Nuclear Classification of the Neutrophile Leucocytes and its Relation to Disease. S. H. Kagan, Boston.

9. **Cause of Gastroptosis and Enteroptosis.**—This is a preliminary report of the work that has been carried on by Goldthwait and Brown in the hope of finding the real cause of the chronic joint diseases commonly designated as rheumatoid arthritis, osteoarthritis, arthritis deformans, chronic rheumatism, etc.

### New York Medical Journal

*May 28*

13 Comets and Plague—Galileo and his Sphygmograph. J. Knott, Dublin, Ireland.
14 The Influence of Alcohol on Trauma. F. S. Dennis, New York.
15 Some Anomalies of the Sigmoid. L. L. McArthur, Chicago.
16 Modern Methods in Pancreatic Diagnosis. W. G. Lyle, New York.
17 Selenium. A. Rose, New York.
18 Fibromyomata Uteri. A. Samuels, Baltimore.
19 Ministering Women. C. E. Nammack, New York.
20 The Animal Parasites Found in the Intestines of Native Children in the Philippines. I. W. Brewer, Samar, P. I.
21 Serodiagnosis of Syphilis (continued.) V. C. Pedersen, New York.

### Lancet-Clinic, Cincinnati

*May 14*

22 Practical Points on the Anatomy and Physiology of the Nose; Special Reference to Acute Affections of the Nasal Accessory Sinuses. D. T. Vail, Cincinnati.
23 The Therapeutic Application of the Low Protein Ration. J. H. Kellogg, Battle Creek, Mich.
24 *Teaching Ophthalmology. A. R. Baker, Cleveland.
25 The Choice of a Microscope. C. Goosman, Cincinnati.

24. Abstracted in The Journal, April 16, 1910, p. 1333.

### Northwestern Lancet, Minneapolis

*May 15*

26 Management of the Third Stage of Labor. F. L. Adair, Minneapolis.
27 *The Metabolism and Modern Treatment of Diabetes. F. S. Bissell, Minneapolis.
28 How Not to Request the Examination of a Public Water Supply. H. A. Whittaker, Minneapolis.
29 Sewerage and Water Supply. J. C. Boehm, St. Cloud, Minn.

27. **Metabolism and Modern Treatment of Diabetes.**—Bissell emphasizes that a patient with diabetes requires exactly the same amount of food that is required by a normal individual under the same conditions, usually about 35 to 40 calories per kilogram. In no case should a sudden and radical change be made from one diet to another, but, on the contrary, one should proceed carefully and determine as nearly as possible the tolerance of the patient for carbohydrates. This not only makes it possible to properly classify each case, but in great measure, makes the prognosis. The procedure followed by Bissell is to add to the standard diet 100 gm. of wheat bread and see what happens. He says that if less than 50 gm. of sugar appears in the urine, withdraw carbohydrates and see if sugar disappears. If more than 50 gm. appears, do not withdraw carbohydrates from the diet, but give on the second day 75.0 wheat bread, on the third day 50.0, and on the fourth 25.0. Then if no diacetic acid or acetone has appeared, withdraw entirely. If sugar disappears from the urine we know we are dealing with a mild form of diabetes. If, on the other hand, sugar persists in the urine on a carbohydrate-free diet but disappears when albumen is given in as large a quantity as 600 grams per day, the case is one of medium severity. The severest type of case is manifested by the persistence of sugar even under starvation treatment.

Doubtless an inheritance from an earlier conception of this disease, the practice still prevails in many quarters of placing every diabetic on the standard carbohydrate-free diet regardless of his power of sugar combustion or tissue requirement. The patient either frankly rebels, surreptitiously resorts to the food which his tissues crave, commits suicide, or develops acidosis.

It is the essential object of Bissell's paper to emphasize the necessity of determining the boundary of sugar assimilation in each case before beginning treatment. Having determined the point and the caloric requirement of the individual the selection of a diet is quite simple, if certain changes are borne in mind.

### Medical Fortnightly, St. Louis

*May 10*

30 Touring the Lands where Medical Science Evolved. R. G. Eccles, Brooklyn.
31 Action of the Ions Produced by Radium. H. Robarts, St. Louis.

### Ophthalmic Record, Chicago

*May*

32 A One Degree Astigmatism Scale. J. N. Rhoads, Philadelphia.
33 Cataract Absorption. A. M. MacWhinnie, Seattle.
34 A New Forceps for the Removal of the Anterior Lens Capsule. F. Tooke, Montreal.

## American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

*May*

35 Is Pubiotomy a Justifiable Operation? J. W. Williams, Baltimore.
36 *Dysmenorrhea in Nulliparous Women without Gross Local Pathologic Lesions. C. C. Norris and E. P. Barnard, Philadelphia.
37 Effect of Animal Extracts on Uterine Contractions. I. Ott and J. C. Scott, Philadelphia.
38 Functional Disorders of the Bladder in the Female Simulating Cystitis. A. Stein, New York.
39 The Rectum and Bowel in their Relation to Pelvic Diseases. J. Brettauer, New York.
40 Thirty-five Pound Uterine Fibroid Complicated by Umbilical Hernia. H. A. Royster, Raleigh, N. C.
41 Three Unusual Cases of Meningitis. E. V. Davis, Chicago.
42 Acute Otitis Media from Pediatric Viewpoint. J. P. Pendleton, Brooklyn.
43 Heart Disease in Infancy and Childhood. D. R. Reilly and A. D. Smith, Brooklyn, N. Y.
44 Vaccine Treatment of Gonococcus Vulvovaginitis in Out-Patient Children. B. W. Hamilton, New York.

36. **Dysmenorrhea in Nulliparous Women.**—The statistics for this paper have been drawn from 73 cases operated on during the last eleven years. Of these 73 cases Norris and Barnard have been able to trace 40. Cured, 18, or 45 per cent.; improved or temporarily cured, 11, or 27.5 per cent.; not improved, 11, or 27.5 per cent. The results of the various operations are as follows: Dilatation and curettage performed 28 times: Cured, 11, or 39.28 per cent.; improved or temporarily cured, 11, or 39.28 per cent.; not improved, 6, or 21.42 per cent. Dilatation and curettage and Wylie's drain performed nine times: Cured, 6, or 66.66 per cent.; improved or temporarily cured, 1, or 11.11 per cent.; not improved, 2, or 22.22 per cent. Dudley's operation performed once: cured, none; improved or temporarily cured, none; not improved, 1, or 100 per cent. Dudley's operation combined with Wylie's drain performed four times: Cured, 2, or 50 per cent. In two of the 40 cases no record as to the character of the dysmenorrhea was obtainable. The remaining 38 cases, arranged according to the character of the dysmenorrhea, without regard to the operation performed, give the following results:

Ten cases of digestive dysmenorrhea: cured, none; improved or temporarily cured, 2, or 20 per cent.; not improved, 8, or 80 per cent. Eleven cases of spasmatic or expulsive dysmenorrhea: cured, 9, or 81.81 per cent.; improved or temporarily cured, 2, or 18.18 per cent.; not improved, none. Seven cases in which the symptoms were a combination of the spasmatic and congestive types: cured, 3, or 42.85 per cent.; improved or temporarily cured, 1, or 14.28 per cent.; not improved, 3, or 42.85 per cent.

These tables are most striking. When we find that in one type of dysmenorrhea we can cure by operation 81 per cent., while in another we can obtain no absolute cure, and only 20 per cent. of improvements, the necessity of recognizing the character of the dysmenorrhea becomes apparent. Careful diagnosis as to the etiologic factor producing the dysmenorrhea is, in the authors' opinion, the key to the success in the treatment of this condition. Of the above 40 cases 20 were married, 14 had been married for two years without issue. Of these 14 previously sterile cases, 5, or 35.71 per cent., became pregnant within one year following the operation. Two cases of dilatation and curettage had the operation repeated and both were temporarily improved; one patient had a hysterectomy performed and was cured; one had a bilateral oöphorectomy performed and was cured; one case of an unmarried girl who had a dilatation and curettage performed without any relief, about a year after the operation married and became pregnant. The dysmenorrhea was cured by labor. One case was temporarily improved by dilatation and curettage; the menopause appeared four months after operation.

## New Orleans Medical and Surgical Journal

*May*

45 Shortening of Umbilical Cord from Coiling Around Fetal Neck. J. P. Elmore, Edgard, La.
46 Laryngeal Tuberculosis: Some Points of Interest to the Family Physician. A. I. Weil, New Orleans.
47 Ophthalmia Neonatorum: Etiology, Pathology and Processes Causing Blindness. R. W. Salter, New Orleans.
48 The Occurrence of Several Cases of Juvenile Cataract in One Family. E. A. Robin, New Orleans.
49 Prevalence of Ophthalmia Neonatorum. M. Feingold, New Orleans.
50 Treatment of Ophthalmia Neonatorum. E. A. Robin, New Orleans.
51 Ophthalmia Neonatorum: Prophylaxis. H. D. Bruns, New Orleans.

## University of Pennsylvania Medical Bulletin, Philadelphia

*May*

52 *Pancreatic Cyst. B. C. Hirst and B. S. Veeder, Philadelphia.
53 Preventive Measures Against Infectious Disease. A. J. Smith, Philadelphia.
54 Chronic Intestinal Indigestion in Children. M. Ostheimer, Philadelphia.
55 Primary Dysmenorrhea: Its Etiology and Treatment by Forcible Dilatation of the Cervical Canal and Application of the Wylie Drain. H. D. Beyea, Philadelphia.
56 The Medical Side of Benjamin Franklin. W. Pepper, Philadelphia.

52. **Pancreatic Cyst.**—The patient had noticed a lump in the abdomen, which did not give rise to any symptoms until five days before admission, when she was seized with a sudden sharp colicky pain in the abdomen, in the region of the mass. This lasted a short time, then subsided, and returned after a day and a half. Examination showed a large slightly movable, spherical tumor, situated high in the abdominal cavity and not involving the uterus. Urine and blood examinations negative. The tumor was supposed to be an ovarian cyst on a long pedicle, which had twisted, causing the pain. On opening the abdomen, the tumor was found to be in the lesser peritoneal cavity, and proved to be a large cyst about the size of a grape fruit, free from adhesions except at its pedicle, which consisted of the head of the pancreas. The cyst was dissected out, it being necessary to cut through the pancreatic tissue of the pedicle. Every possible bleeding point was ligated with catgut, the opening into the lesser peritoneal cavity was closed with catgut and the abdomen closed with drainage. Convalescence was rapid, afebrile, and uncomplicated, patient leaving the hospital two and a half weeks after operation. There were no digestive disturbances or abnormalities in bowel action at any time.

The noteworthy features in this case are the extremely successful result following the uncommon operation of total extirpation; the proof of its being true pancreatic cyst by the presence of pancreatic tissue in the wall of the cyst; and the presence of large quantities of mucin and two enzymes—diastatic and emulsifying—in the cystic contents.

## Journal Missouri State Medical Association, St. Louis

*May*

57 Late Observations on Fecal Examination. J. W. Ousley, Kansas City.
58 Placenta Prævia. R. T. Henderson, Jackson.
59 The Prophylaxis of Typhoid. A. F. Willie, Springfield.
60 The Regular Profession and the Isms. H. J. Rowe, Willard Springs.
61 The Gynecologist of To-Day. W. B. Dorsett, St. Louis.
62 Appendicitis, Diagnosis and Treatment. G. A. Dalamatar, Rich Hill.
63 Lobar Pneumonia. W. S. Love, Bertrand.
64 Our County Society. G. W. Hawkins, Salisbury.
65 Thyroid Instability. A. L. Cambre, Atlanta.

## Annals of Surgery, Philadelphia

*May*

66 *The Relation of Trauma to Cancer Formation. C. Phelps, New York.
67 *Skeletal Carcinomatosis. G. W. Hawley, Bridgeport, Conn.
68 A Tourniquet for the Control of Hemorrhage from the Scalp During Osteoplastic Resection of the Skull. A. C. Wood, Philadelphia.
69 *The Pathology of the Gall-Bladder and Some Associated Lesions. W. C. MacCarty, Rochester, Minn.
70 Pancreatic Hemorrhage and Acute Pancreatitis. J. Ransohoff, Cincinnati.
71 Retroperitoneal Hernia of the Pericecal Type. A. C. Matthews, Poughkeepsie, N. Y.
72 *An Operation for Umbilical Hernia. H. A. Kelly, Baltimore.
73 The Diagnosis of Typhoid Perforation. A. D. Whiting, Philadelphia.
74 Treatment of Chronic Tuberculous Sinuses by Beck's Bismuth-Vaselin Paste Injections. J. S. Shober, Philadelphia.

66. **Relation of Trauma to Cancer.**—From a general observation of cases and from a comparative study of discordant statistics Phelps concludes that cancer is primarily dependent on a cause which is congenital, is hereditary in a certain proportion of cases, and is as inexplicable as the force which determines *ab avo* the future sex and peculiarities of the individual. Its development is favored by various indeterminate and nonessential conditions and is not due to trauma unless oft repeated. Its proximate cause is as yet entirely unknown, and

its future determination will depend on the possible verification of a parasitic infection. These propositions are supported by the frequent occurrence of the disease in persons who are still in early or middle life, without hereditary predisposition, and in absolutely normal and mental equilibrium; and this in the absence of any of the accepted favoring condition.

67. **Skeletal Carcinomatosis.**—In Hawley's case an accident (spontaneous fracture), not frequently occurring in carcinoma of bone, led to the discovery of bone disease, and the history of breast cancer gave a clue to its probable nature. About one year after amputation for cancer, the patient's left leg gave way in the right thigh. Swelling about the hip followed the injury to both legs. Further skeletal examination revealed a moderate total lateral curvature of the spine to the right; tenderness over the third and fourth lumbar vertebræ, and over the seventh and eighth ribs on left side, and under the pressure of the examining finger the seventh rib caved in with the feeling of crepitus. Radiographs showed a fracture of the left femur about 4 inches below the trochanter, with considerable callus formation, overriding and angulation, also irregular areas of osteoporosis in the shaft and neck. The radiograph of the right hip showed a fracture just below the trochanter with the fragments united at a right angle; also honeycombing of the shaft, neck and trochanter. Other exposures made revealed similar areas of softening in both fibulæ and two ribs.

69. **Pathology of the Gall-Bladder.**—As the result of clinical and pathologic study of 365 cases of cholecystectomy, MacCarty concludes that the lesions in the gall-bladder are not definite entities, but degrees in a process of reaction to irritants. He divides these lesions into eight groups as follows: (1) *Cholecystitis catarrhalis acuta:* 65 uncomplicated cases and 90 cases complicated by other stages. Forty-five (69 per cent.) of the uncomplicated cases were associated with gall-stones; (2) *cholecystitis catarrhalis chronica:* 39 uncomplicated cases and 39 cases associated with other types of inflammatory reaction, 30 (76 per cent.) of the uncomplicated cases contained stones; (3) *cholecystitis catarrhalis papillomatosa:* In this group there was only one specimen. One of the villi was enlarged and appeared as a papilloma. The condition was associated with stones and an acute catarrhal reaction in the mucosa; (4) *cholecystitis papillomatosa malignum:* This type does not occur in this series because the cases seen were studied at exploration of inoperable cases; (5) *cholecystitis catarrhalis carcinomatosa:* Three cases of *cholecystitis catarrhalis chronica* were complicated by carcinoma; (6) *cholecystitis chronica:* 78 uncomplicated and 64 complicated cases; of the uncomplicated, 73 (93 per cent.) were associated with stones; (7) *cholecystitis chronica cystica:* 76 cases; (8) *cholecystitis purulenta necrotica:* 33 cases. Pericholecystitis acuta or chronica is considered a sequel of any of the above mentioned degrees of inflammation.

Two hundred and fifty-two, or 67 per cent. of the 365 cases were associated with gall-stones, which varied in shape, size and composition, all of which properties bore no apparent relation to the character of the lesion in the gall-bladder. Of the chronic catarrhal gall-bladders, 76 per cent. were associated with stones. In the more advanced cases of chronic inflammation, in the cases in which practically all of the mucosa was destroyed, the percentage was 93. From these figures it would seem that the occurrence of gall-stones bore a marked relation to the extent of the lesion and that the early acute catarrhal conditions do not necessarily occur associated with stones. MacCarty urges that the gall-bladder, liver, duodenum, pancreas and stomach are embryologically, anatomically, physiologically and pathologically closely related and should be considered a gastro-duodeno-hepatico-pancreatic physiologic system.

72. **Operation for Umbilical Hernia.**—On account of the accumulated fat in the abdomen the tension in these cases is sometimes considerable, and favors return of the hernia. To overcome this Kelly makes an incision from the right and left margins of the hernial opening all the way across and through the strong fibrous sheaths of the recti, then detaching and raising the sheaths from the recti above and below for 2 or 3 cm. The hernial sac is then freed from the rest of the tissue. It is opened and any adherent omentum present is removed. If the intestines are adherent they are carefully dissected free, and replaced in the abdominal cavity. The peritoneum is next sewn together with catgut. Next sew the free margin of the lower under the upper flap from side to side with four to six interrupted silk sutures, using if needs be, catgut between them. If the transrectal incision is angled a little upward and the overlapping of the recti is well done, there may be little tension; there is always a greatly diminished tension in the overlapping at the ring itself. The free overhanging margin of the upper flap is now sewed by a continuous catgut suture to the fibrous tissues and the supporting part of the operation is completed.

### California State Journal of Medicine

*May*

75 Leprosy in San Francisco Previously Undiscovered. W. F. Cheney, San Francisco.
76 Lawsuit for Alleged Malpractice. H. J. Kreutzmann, San Francisco.
77 Prosecution of Illegal Practitioners. J. A. Crawshaw, Hanford.
78 Tumor of the Medulla Oblongata. L. Newmark and M. B. Lennon, San Francisco.
79 Traumatic Injuries of the Head. O. D. Hamlin, Oakland.
80 Remarks Under Head of Geographical Distribution of Leprosy. A. A. O'Neill, San Francisco.
81 The Psychoneuroses: Present Status of Hysteria and Neurasthenia. C. L. Allen, Los Angeles.

### Journal of Infectious Diseases, Chicago

*May*

82 *Relation of Pseudodiphtheria and the Diphtheria Bacillus. P. F. Clark, Providence, R. I.
83 *Plague Infection in a Brush-Rat (Neoatoma Fuscipes). G. W. McCoy, U. S. P. H. and M.-H. S.
84 Susceptibility to Plague of the Prairie Dog, the Desert Wood Rat and the Rock Squirrel. G. W. McCoy and F. C. Smith, U. S. P. H. and M.-H. S.
85 *Distribution of Bacteria in Bottled Milk, and Certain Controlling Factors. J. C. Torrey and A. H. Rahe, New York.
86 *The Value of Opsonin Determinations in the Discovery of Typhoid Carriers. A. Hamilton, Chicago.
87 Pneumococci from Infectious Endocarditis. E. C. Rosenow, Chicago.
88 *Immunologic Studies in Chronic Pneumococcus Endocarditis. E. C. Rosenow, Chicago.
89 An Outfit for Sending Bile, Specimens of Blood, Feces and Urine, and Some Results of the Examination of Such Material. W. R. Stokes and H. W. Stoner, Baltimore, Md.
90 Bacillus Abortus of Bang, the Cause of Contagious Abortion in Cattle. W. J. MacNeal and J. E. Kerr, Urbana, Ill.
91 The Wassermann Reaction. L. T. Clark, Detroit.
92 *The Influence of Age and Temperature on the Potency of Antidiphtheritic Serum and Antitoxic Globulin Solution. J. F. Anderson, Washington, D. C.

82. **Pseudodiphtheria and Diphtheria Bacillus.**—From a careful study of the literature, and from an extended series of experiments, Clark believes himself justified in saying that the pseudodiphtheria bacillus or *B. hofmanni* belongs to a different species from the true Klebs-Löffler bacillus. Doubtless both organisms belong to the same groups and came from common ancestors, but the differences seem to be sufficiently constant to place them in separate species.

83. **Plague Infection in a Brush Rat.**—The fact is now established, says McCoy, that these animals may have plague, which adds another factor to the already perplexing problem of the transmission of plague among the rodents of the Pacific Coast. Fortunately, the brush-rat is not sought for its flesh, as is the ground squirrel, nor does it ordinarily build its nest near human habitations as do the domestic rats.

85. **Bacteria in Bottled Milk.**—Torrey and Rahe found that the upper two ounces of the cream of fresh bottled milk of fair quality contain on the average of 50 to 100 per cent. more bacteria than an equal amount of the lower cream. In older and more grossly contaminated milk the lower cream may embody as many as Hess has suggested; there generally results a reduction of from 30 to 50 per cent. in the bacterial count. The dominant controlling factor in the primary disposition of bacteria in a milk bottle is the upward "rafting" activity of the fat globules. A higher percentage of bacteria are brought to the surface layers in a milk rich in cream than one poor in that substance. At ice-box temperature the rate of increase of bacteria in the cream and that in the skim milk are practically identical. As the temperature is elevated the rate of multiplication in the skim milk outstrips that of the cream until at 30 C. it may be many times as rapid. In certain samples of rather highly contaminated milk the abrupt

change in the temperature of the environment from 5 C. to 30 C. caused a striking bacteriolysis in both the cream and the skim milk. This was probably an expression of bacterial antagonism. The sediment portion of the average bottle of fresh milk contains frequently fewer bacteria than any other region of the fluid. A marked excess of bacteria in the sediment indicates that the milk is old or that it has been kept in a warm place.

86. This paper covers similar ground to that of the same author published in The Journal, Feb. 26, 1910, p. 704.

88. **Chronic Pneumococcus Endocarditis.**—The points that in Rosenow's opinion seem to merit specific emphasis are the following: In chronic pneumococcus endocarditis the serum has no pneumococcidal power by itself. The phagocytic power of the patient's blood is usually a better index of the actual conditions than the opsonic power of the serum determined with normal leucocytes and even with patient's leucocytes. The destructive power of the patient's blood as compared with that of normal blood corresponds well with the clinical conditions. Hence less reliance should be placed on the results of the opsonin determinations in which no account is taken of the fate of the ingested cocci. The phagocytes in chronic infectious endocarditis show greater variation in their own serum than in normal serum. Variations in the opsonic power of the sternum sometimes occur independently of variations in the phagocytic and destructive power of the leucocytes, but the variations on the part of the leucocytes is always dependent on changes in the serum. While the chief action of serum in phagocytic mixtures is on the bacteria, there is no question, from the evidence at hand, but that the serum also exerts a definite and sometimes a striking influence on the leucocytes. Intraleucocytic destruction is dependent on a substance or property always present in normal serum and in normal leucocytes after treatment with normal serum, but frequently absent in the serum and leucocytes in chronic cases of endocarditis. At times the patient's serum is not only lacking in this substance, but contains another substance which seems to neutralize that in normal serum. This substance is not taken up by the bacteria but the opsonin or some other substance contained in washed sensitized pneumococci is necessary to activate it, because the cocci, which have undergone spontaneous phagocytosis fail to show digestion. Phagocytosis alone, even though marked, does not seem to injure the leucocytes in any way. The bacteria isolated from the cases shown appear to be modified pneumococci and prolonged cultivation in normal serum not only renders them largely resistant to phagocytosis, but makes them also resistant to intraleucocytic digestion. Both these properties are promptly lost in artificial media.

92. **Potency of Antidiphtheritic Serum.**—The average yearly loss in potency of diphtheria antitoxin is about 20 per cent.; at 15 C., about 10 per cent.; and 5 C., about 6 per cent., although in some instances these percentages may be much increased. As a result of this work, there appears to be but little difference in the keeping qualities of untreated sera and sera concentrated by the Gibson process. Diphtheria antitoxin to be placed on the market and there kept under unknown conditions as regards temperature should not be labeled with a return date longer than two years for decrease in potency; in addition, when the serum is sold in syringes with an absorbable piston an excess should be added for this loss. Dried diphtheria antitoxin kept in the dark at 5 C. retains its potency practically unimpaired for at least 5½ years. The lack of confidence in the therapeutic properties of old sera is without basis, as such sera, unit for unit, are as potent as new sera. The protective value of diphtheria antitoxin is in exact accord with its unit value, and is independent of the volume of the serum or other properties in the serum.

### Journal Delaware State Medical Society, Wilmington

*April*

93 Albuminuria in Acute and Chronic Nephritis. J. H. Wilson, Dover.
94 Medical Ethics. G. F. Campbell, Selbyville.

*May*

95 The Relation of Malaria to the Acute Inflammatory Catarrhal Affections of the Throat and Posterior Nares. C. J. Harbordt, Dover.

### Laryngoscope, St. Louis

*April*

96 Nystagmus Characterized by Rapid Head-Movements. Their Diagnostic Value and Theoretic Explanation. R. Barany, Vienna.
97 Stereoscopic Mastoid Radiograms. S. Lange, Cincinnati.
98 Laryngeal Neoplasms. J. L. Davis, Philadelphia.
99 Esophagoscopic Removal of Open Safety Pins by a New Method. C. Jackson, Pittsburg.
100 Cordectomy for Bilateral Abductor Paralysis, with Demonstration of Specimen. J. W. Gleitsmann, New York.
101 Eye Fixation Forceps Used in Submucous Resection of Nasal Septum. J. M. Foster, Denver.
102 The Diaphragm in Tone Production: A Fluoroscopic Study. J. W. Boyce and A. A. MacLachlan, Pittsburg.
103 The Laryngologic Work of the British Medical Association and the Sixteenth International Medical Congress in 1909. D. B. Delavan, New York.
104 A Gouge for the Removal of the Bony Maxillary Ridge in the Submucous Septal Operation. A. Braun, New York.

### Memphis Medical Monthly

*April*

105 Delirium Tremens: New Plan of Treatment. G. E. Pettey, Memphis.
106 Fatal Cases of Appendicitis. J. W. Barksdale, Vaiden, Miss.
107 The Causes of Continued Hoarseness in the Adult. R. McKinney, Memphis.
108 Arteriosclerosis, a Factor of Insanity. G. G. Buford, Memphis.
109 What and How Shall We Feed Our Fever Patients? D. A. Walker, Trenton.

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## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### British Medical Journal, London

*May 14*

1 Traumatic Tuberculosis, Traumatic Pneumonia and Traumatic Pleurisy. E. P. Weber.
2 *Von Pirquet's Tuberculin Reaction in the Surgical Diseases of Children. P. Mills.
3 *The Tuberculin Skin Reaction (Von Pirquet). J. W. Bride.
4 Points Relating to Therapeutic Immunization. J. C. MacWatters.
5 The Classification of the Symptoms of Lead Poisoning. W. D. Prendergast.
6 *Plumbism Treated by the Internal Administration of Calcium Permanganate. G. A. Stephens.
7 Causes of Absorption of Oxygen by the Lungs. C. C. Douglas and J. S. Haldane.
8 Auscultatory Friction. H. H. Brown.

2. **Von Pirquet's Tuberculin Reaction.**—The reaction was tried by Mills on 48 children who had been carefully examined without any evidence of tuberculous disease being detected. In every case the reaction was negative. Of cases known to be tuberculous there are 21 in Mills' series. Of these, 19 gave a positive reaction. Two cases gave no reaction; they were: tuberculous peritonitis, tuberculous hydrocele of the tunica vaginalis. Of cases clinically diagnosed as tuberculous there were 43. Thirty-four gave a positive reaction, 9 gave a negative reaction. Of these, 8 eventually proved to be almost certainly not tuberculous. The remaining case, one of spinal caries, is one of the 4 cases in his series in which the reaction was misleading. Of cases clinically doubtful there were 11. Three of these gave a positive reaction; 8 cases gave a negative reaction. Thus of a total of 123 cases the reaction was misleading in 4 only. Two of these were tuberculous peritonitis, one was spinal caries, and one was lymphadenoma, in which the reaction was positive. Mills also found that a previous injection of tuberculin will not produce a reaction in a healthy patient, while an initial injection of tuberculin modifies the type of the reaction in a tuberculous case. The type returns to normal in about a week. Bovine tuberculin behaves in an exactly similar manner to ordinary human tuberculin when used for the reaction. The reaction to bovine tuberculin was similarly modified in type by a subcutaneous injection of human tuberculin.

3. **The Tuberculin Skin Reaction.**—Bride applied the test in 92 cases. He came to the conclusion that the test is of great help in the early diagnosis of pulmonary tuberculosis and in its distinction from unresolved pneumonia and chronic bronchitis, in the differential diagnosis between enteric fever and abdominal tuberculosis, in the early diagnosis of abdominal tuberculosis, and also in the diagnosis of the cause of pleuritic effusions. It is not of much help in cases of tuberculous meningitis, tuberculosis where some acute infectious disease accompanies it, and in tuberculosis associated with much pyrexia.

6. **Calcium Permanganate in Plumbism.**—Stephens found calcium permanganate to be of value in the treatment of plumbism, giving ¼ grain (0.015 gm.) three times a day.

### Lancet, London

*May 14*

9 Some Embryologic Problems in Relation to Medicine. P. Thompson.
10 The Study of the Influences Determining the Prevalence of Bovine Tuberculous Mastitis. S. Delepine.
11 Blackwater Fever. D. G. Marshall.
12 Death from Perforation of the Aorta by a Halfpenny Impacted in the Esophagus. G. G. Turner.
13 Modern Statistical Methods. J. M. Troup and G. D. Maynard.
14 *Modern Methods of Delivery in Contracted Pelves. E. H. Tweedy.
15 The Occurrence of Acetonuria in Cases of Infectious Diseases. A. Harris.
16 Case of Lymphatism. L. P. Burt and J. R. Collins.

14. **Delivery in Contracted Pelves.**—Tweedy sums up his views on the treatment of contracted pelves as follows: 1. Induction of premature labor is never advisable. 2. Perforation is not permissible unless the child is dead. 3. Turning should never be employed as a treatment for contracted pelvis, but may still be performed for complications of labor, such as prolapse of the cord when associated with contractions of the first and second degree. 4. In the greater degrees of contraction time should not be wasted in an endeavor to obtain natural delivery. 5. On the other hand, in the lesser degrees ample time should be given the woman to enable her to deliver herself if possible. Eight or ten hours may be necessary for the molding of the head, and interference should not be considered until there are evidences of fetal or maternal distress. Once fetal symptoms of distress are manifested there should be no delay in delivery. Walcher's position should not be forgotten as an aid to fixation of the head; 6, high forceps should never be applied until all arrangements are perfected for an operation to enlarge the pelvis. It is, in his opinion, a pity to proceed to the latter expedient until forceps have been tried tentatively. It must be confessed they occasionally accomplish their purposes under the most unexpected circumstances. Finally, in these, as in all other obstetric operations, the best results cannot possibly be obtained if rubber gloves are not worn.

### British Journal of Children's Diseases, London

*April*

17 *X*-Ray Photographs from a Boy, aged Three Years, the Subject of Habitual Constipation. E. I. Spriggs and H. F. L. Hugo.
18 Some Thoughts on the Control of Zymotic Enteritis. J. Allan.

### Journal of Obstetrics and Gynecology of the British Empire, London

*April*

19 *After-Results of Abdominal Operations on the Pelvic Organs in 1,000 Consecutive Cases. A. E. Giles.
20 *The Ureter in Cancer of the Cervix Uteri. A. Leitch.
21 The Management of the Ureters in Abdominal Pelvic Operations. R. C. Buist.
22 Jonas' and Raynalde's "Byrth of Mankynde." W. J. Ballantyne.

19. **After-results of Abdominal Operations.**—According to Giles the removal of both ovaries and tubes has no marked effect on the subsequent health, for 78 per cent. of the patients were in very good health afterward, and a further 13 per cent., though suffering in different ways, were better than before the operation, making in all 91 per cent. who were quite well, or at least improved. The condition of the general health is even better than it is after unilateral salpingo-oöphorectomy. The likelihood of later trouble developing in connection with the uterus when the organ is left is relatively small, as such an occurrence took place in only 7 cases out of 105. It is therefore worth while leaving the uterus in all cases where it appears to be healthy. The removal of the uterus appears to increase the immediate risk of the operation in inflammatory cases. Menstruation continues after these operations in about 40 per cent. of the cases, the proportion being largest in cases where the operation was done for inflammatory disease. When menstruation persisted after ovariotomy for tumors, it was mostly in cases where the tumors were parovarian or intraligamentary. The inference is that some portion of ovarian tissue has remained behind in these cases.

20. **The Ureter in Cancer of the Cervix Uteri.**—Leitch found that involvement of the ureter is the commonest occurrence in post-mortem examinations of cancer of the uterus. It can be demonstrated also in operable cases. This involvement consists in the production of stricture frequently, (a), by contraction of growth in the surrounding parametrium; (b), by invasion of the ureter wall; and sometimes, (c), by fibrosis in the parametrium, due either to chronic inflammation or to the reaction to cancer cells which have disappeared locally. The ureteral wall may be invaded by cancer directly from the surroundings, the invasion being sometimes evident on naked eye examinations; at other times, even when extreme, demonstrable only by the microscope. Lymphatic permeation of the ureter does occur, and the lymphatic vessels of the ureter and parametrium probably communicate. The nature of the surrounding tissue in the parametrium, the open texture, the proximity of the principal lymphatic vessels from the uterus, the danger of invasion and the peculiarity of the blood supply render resection of the parametrial portion of the ureter advisable when the parametrium is invaded.

### Dublin Journal of Medical Science

*April*

23 Acute Leukemia. R. T. Smith and H. C. Earl.
24 The Physico-therapy of Sciatica. M. Orb.
25 Piroplasmosis and Experimental Piroplasmosis. A. E. Mettam.

### Indian Medical Gazette, Calcutta

*April*

26 The "Epidemic Dropsy" Type of Beri-beri at the Presidency General Hospital, Calcutta. J. W. D. Megaw.
27 Staphylococcal Cerebrospinal Meningitis Treated by Specific Vaccination. R. F. Standage and A. J. H. Russell.
28 Typhoid Fever in Baghdad, Turkish Arabia. H. B. Rosair.
29 Therapeutic Uses of Boerhaavia Diffusa (Linn). B. B. Basu.
30 Administration of Quinin in Cases of Fever During Pregnancy. J. E. Bocarro.

### Archives des Maladies du Cœur, etc., Paris

*May, III, No. 5, pp. 273-336*

31 *Anemia and Leucolytic Processes Following Roentgen-Ray Exposures in Leukemia. W. Oettinger, N. Fiessinger and Sauphar.
32 Reactions on Part of Elastic Tissue of the Arteries. L. Bory.
33 Functional Disturbances Dependent on the Specific Muscular Systems of the Heart. E. Hering.

31. **Anemia and Leucolytic Processes Following Roentgen-Ray Exposures in Leukemia.**—The authors consider that the two cases reported demonstrate that Roentgen-ray treatment of leukemia induces both direct and indirect leucolysis; the latter is the work of a leucolytic ferment which seems to be produced in some way under the influence of the rays, and which prolongs the leucolytic action. The red corpuscles also feel the effect of the rays to some extent, so that the blood picture comes to approximate that of pernicious anemia. There is thus always the possible peril with radiotherapy of leukemia that the chronic myelogenous leukemia may become transformed into an acute phase by the development of this corpuscle-disintegrating ferment. The cases further emphasize, they state, the necessity for cautious technic in radiotherapy, with long intervals, especially when the patient reacts promptly and energetically to the exposures.

### Bulletin de l'Académie de Médecine, Paris

*May 3, LXXIV, No. 17, pp. 371-383*

34 *Osteotomy in Treatment of Little's Disease. E. Kirmisson.
35 *Injuries of the Hand and Tincture of Iodin. (Les plaies de la main et la teinture d'iode.) P. Reclus.

34. **Osteotomy in Treatment of Little's Disease.**—Transverse subtrochanteric osteotomy remedied the inward rotation of the legs causing interference of the knees in the case described. This effectually supplemented two previous operations on the muscles. The patient was a girl of 17 and the gait now, ten months later, is apparently normal.

35. **Accidents of the Hand.**—See Paris Letter, page 1883.

### Lyon Chirurgical, Lyons

*May, III, No. 5, pp. 485-604*

36 McBurney's Point and Lanz' Point. A. Garau.
37 Appendicitis and Tuberculosis. G. Gayet and Croizier.
38 Leucocytosis in Appendicitis. P. Vignard and L. Arnaud.
39 *Tincture of Iodin for Sterilization of the Skin. (L'asepsie du chirurgien et de l'opéré par la teinture d'iode.) L. Bérard and J. Chattot.

39. **Iodin Method of Surgical Sterilization.**—Bérard and Chattot have tested tincture of iodin in treatment of accidental wounds and state that the results showed that it is fully able to sterilize the hands experimentally contaminated with ordinary accidental germs. In a number of emergency cases during the last 3 years, while the field of operation was being painted with the tincture, the surgeon poured the tincture pure or diluted with alcohol over his hands, letting them dry spontaneously before rubbing off the excess with an alcohol wad, omitting all preliminary scrubbing, but there were no infections complications. The only drawback is that the hands are liable to chap if it is done several times during the day. In order to avoid this, when time permits, they scrub first and thoroughly dry the hands, then pour the tincture of iodin on the fingers, spreading it thence over the forearm. The whole sterilization is complete in from 5 to 7 minutes and they have never had excoriation result with this latter technic. A number of aseptic operations can be performed in turn without renewing the sterilization, merely washing the hands between with soap, water and alcohol for a few minutes. But this loses the main advantage of the Grossich technic, which is that the tincture of iodin alone enables the surgeon to operate safely in regions otherwise prone to infection.

### Presse Médicale, Paris

*May 7, XVIII, No. 37, pp. 337-352*

40 *Acute Thyroiditis and Cardiovascular Complications. J. Parisot.
41 *Dwarf Growth as Result of Intoxications. (Le nanisme toxique.) M. Perrin and L. Richon.
42 *Dosage of Quinin in Malaria. (Mécanisme d'action physiologique de la quinine sur les accès palustres.) A. Tournade and G. Giraud.
43 General Pathology of Lymphadenia According to Recent Writers. A. Clerc.
44 *Improved Technic for Paraffin Treatment of Ozena. R. Leroux.

*May 11, No. 38, pp. 353-360*

45 Influence of High-Frequency Currents on the Temperature of Deep-Lying Tissues: Thermopenetration. (La diathermie.) A. Zimmern and S. Turchini.

40. **Acute Thyroiditis and Cardiovascular Complications.**—Parisot has encountered four cases of this kind. In the first, the thyroiditis followed the subsidence of puerperal fever; in the second it developed six weeks after the onset of typhoid fever; in the third it occurred during convalescence from mumps in a man of 28. In all these cases the thyroiditis subsided under medical measures but in the fourth case the thyroiditis came on 26 days after the onset of a sharp but brief pneumonia from which the patient had entirely recovered. In this case the process in the thyroid progressed to suppuration, and the pneumococcus was found in the pus. In all the cases there was marked tachycardia without any connection with the temperature. This lack of connection with the fever, which might be severe, mild or entirely absent, was a striking feature of the cases and, when encountered, Parisot says, should suggest thyroiditis and compel search for signs of disturbance in that region. The tachycardia was sometimes aggravated by physical exertion and sometimes was accompanied by paroxysmal palpitation of the heart. Various vasomotor reactions were also noticed. The blood pressure was also at times abnormally low. Study of the cases has demonstrated that these cardiovascular symptoms were always connected with the phase of congestion in the gland; the inflammatory congestion induces hyperfunctioning and this is responsible for the cardiovascular complications. In conclusion, he compares his cases with a few similar ones on record, emphasizing the fact that these cardiovascular complications of acute thyroiditis may become associated with other symptoms to form an incomplete and transient exophthalmic goiter or may merge into the typical and permanent form.

41. **Experimental Dwarf Growth Induced by Tobacco Poisoning.**—Perrin and Richon systematically injected 19 young rabbits from three litters with an infusion of tobacco and found that it seemed to arrest the growth of the animals to a certain extent, both weight and size being considerably less than in the controls from the same litters. There was no tendency to rachitis or malformations, merely a lesser growth of all the tissues. After cessation of the injections the animals grew normally but never attained the size and weight of the controls.

42. **Physiologic Action of Quinin in Malaria.**—A diagram and several clinical charts illustrate the points emphasized by Tournade and Giraud, namely, that the dose of quinin should be given at the hour when the malaria germs are in the most vulnerable phase of their development, and that the dose should be large enough to act thoroughly on them all. If the dose is given when the plasmodia are in the prime of their vitality or are sheltered inside the blood corpuscles it has comparatively little effect on them, and if the dose is too small it does not annihilate the germs but merely modifies the paroxysms into atypical forms. Experience has authoritatively confirmed the value of the rule to give the quinin at the onset of the febrile paroxysm, graduating the dose to the type of infection: 2.5 gm. (40 grains) for the quotidian; 2 gm. (30 grains) for tertian, and 0.5 gm. (8 grains) for the quartan form. The paroxysm in question is apparently not affected by the drug but those that would follow it otherwise are suppressed.

44. **Improved Technic for Paraffin Treatment of Ozena.**—Leroux combines the advantages and avoids the perils of the hot and cold methods of injecting paraffin in treatment of ozena. This he accomplishes by injecting the paraffin cold, and several days later he applies a jet of superheated air to the spot under the influence of which the paraffin softens as if it had just been injected hot, penetrates into the crevices and spreads out in a more even layer. At the same time the hyperemia thus induced stimulates the secretions and aids in the cure of the ozena. He asserts that the injection of paraffin under the nasal mucosa is the only means of actual cure of this disease, all other measures having merely a palliative effect. He uses paraffin with a melting point at 45 C. and injects it in the inferior turbinate and the upper part of the septum, aiming to retain so far as possible the natural shape and size of the passages and facilitate the flow of air through them. It is important, he says, to commence at the remotest part and to allow time for the lesion to heal before making another injection.

### Semaine Médicale, Paris

*May 11, XXX, No. 19, pp. 217-228*

46 Chronic Syphilitic Muscular Atrophy and Tabes. F. Rose and H. Rendu.

### Berliner klinische Wochenschrift

*April 25, XLVII, No. 17, pp. 757-812*

47 Physiology of the Brain According to Latest Research. (Neuere Ergebnisse der Hirnphysiologie.) M. Rothmann.
48 *Indications and Technic for Operative Treatment of Stenosis of Pylorus in Infants. (Operation bei der Pylorusstenose des Säuglings.) K. Ochsenius and W. Weber.
49 Chondrotomy for Emphysema from Rigid Thorax. (Zur Behandlung der auf starrer Ausdehnung des Brustkastens beruhenden Formen von Lungenblähung-Emphysem.) O. Rosenthal.
50 *Nature of the Mountain Sickness in the Andes. (Zum Wesen der andinen Bergkrankheit.) W. Knoche.
51 Physiologic Data from Observation Station at 16,000 Feet. (Einiger physiologischer Untersuchungen aus der Kordillere Bolivien.) W. Knoche.
52 Pathologic Anatomy of Stab Wounds of the Liver. (Stichverletzungen der Leber.) K. Wakasugi.
53 Enlargement of Liver in Rats with Experimental Cancer. (Ergebnisse eines Futterungsversuches bei Ratten, die überimpfte Tumoren trugen.) F. Medigreceanu.
54 Exhaustion of Agglutinins in Typhoid. (Untersuchungen über die Erschöpfung des Agglutinins bei typhoiden Erkrankungen.) W. Spät.
55 Cholera Not a Nitrite Intoxication. (Choleragift und Nitritvergiftung.) A. A. H. van den Bergh and A. Grutterink.
56 Hematuria from Varicose Veins in Bladder. (Ueber varicöse Blasenblutungen.) J. Vogel.
57 Blepharotomy for Eczematous Conjunctivitis. Schultz-Zehden.
58 Present Status of Testing Intestinal Functioning. (Moderne Darmdiagnostik.) J. Witte.

48. **Operative Treatment of Stenosis of the Pylorus in Infants.**—Ochsenius reports 14 cases observed during the last three years and discusses the indications for operative treatment, which was applied in 2 cases with good results. The technic was simplified to a mere longitudinal incision about 2 cm. long in the enlarged and thickened pylorus. The incision was carried down through the pylorus musculature to the mucosa but the latter was left intact. The lips of the wound were then spread and sutured transversely to the axis of the pylorus. This, he states, accomplished the desired

result without making an opening into the stomach and the rapid recovery of the children confirmed the advantages of this technic. He regards the decline in weight as the index for the necessity of operative treatment, a loss of 34 per cent. in body weight being inevitably fatal; even 30 per cent. for breast-fed children and 27 per cent. for others is beyond the danger limit. The weight at birth gives an approximate base for estimation of the weight if records have not been kept. The children were all under 5 weeks old, and 2 died under medical measures only. The fate of the child lies in the hands of the internist; if a week or two of careful internal treatment shows no tendency to improvement an operation should be suggested, and this technic deprives it of most of its dangers. The after-treatment by the pediatrist and attendants is almost as important as the operation itself, Weber (who performed the operation) remarks. He is convinced that in many cases on record the operation would have been successful if the children had received proper attention afterward.

50. **Nature of Mountain Sickness in the Andes.**—Knoche describes the mountain sickness in the Andes as experienced by himself and his party, and emphasizes the importance of the electric charge in the atmosphere as the predominant factor in the sudden attacks of mountain sickness, describing the features and mechanism of the disturbance. The symptoms due to the rarefaction of the air should be distinguished from those resulting from the electric and radioactive elements. The latter are not observed in aviation. The violent, brief attack passes over in a short time, leaving no trace, and it occurs mostly in sheltered valleys.

### Deutsche medizinische Wochenschrift, Berlin

*May 5, XXXVI, No. 18, pp. 825-872*

59 Aneurism of the Abdominal Aorta Perforating into Inferior Vena Cava. R. Elbe.
60 Hemianopsia. C. Behr.
61 Isolated Paralysis of the Musculocutaneous Nerve. (Zur Kenntnis der isolierten Lähmung des N. musculo-cutaneus.) E. Osann.
62 *Manifold Manifestations of Visceral Syphilis. J. Kretschmer.
63 Opsonins and Staphylococcus Immunity. A. Strubell.
64 Case of Acute Traumatic Insufficiency of the Kidneys. (Akuter traumatischer Niereninsuffizienz.) W. Beuster.
65 Rupture of Cicatricial Hernias. (Ruptur von Bauchnarbenhernien.) G. Maetzke.
66 *Treatment of Habitual Abortion. F. Turan.
67 Centennial of the Berlin Medical University Policlinic. (Rede zur Eröffnung des Sommersemesters 1910 im Medizinisch-Poliklinischen Institut der Friedrich Wilhelms Universität als Gedenkfeier zu dessen 100 jährigem Bestehen.) H. Senator.

62. **The Protean Manifestations of Visceral Syphilis.**—Kretschmer insists that the possibility of syphilis should always be borne in mind when confronted with any vague or atypical abdominal syndrome, especially when more than one of the viscera seem to be involved. In the first of the 6 cases of the kind reported, the participation in the syndrome of liver, spleen, intestines and kidneys and the absence of fever, jaundice and edema suggested a possible syphilitic origin, which was confirmed by a history of infection five years before and the gradual complete recovery under mercury and iodid. The only explanation possible is the assumption of multiple gummata in the abdominal organs and their entire retrogression. In two other cases the symptoms resembled those of a former patient explained at autopsy as congenital interstitial hepatitis; it was rebellious to all measures in both instances as also in a third case in which the diagnosis had been hypertrophic cirrhosis of the liver with compression of the bile ducts, but autopsy showed that they were patent. This patient was under observation for nearly 10 years; jaundice had recurred at intervals since childhood, but the patient bore a healthy child at the age of 23. In the fourth case a large tumor had developed in the abdomen three months after removal of an ovarian sarcoma. Some of the findings suggested pseudoleukemia, but a history of four abortions also suggested syphilis. Specific treatment for syphilis was combined with Roentgen-ray exposures and the tumor rapidly retrogressed while the general condition improved. The fifth patient presented a puzzling syndrome explained at autopsy as syphilitic iced liver and chronic adhesive peritonitis. The sixth case reported illustrates the evil of assuming a syphilitic affection when a harmless nervous or other disturbance is encountered in a patient with a history of syphilis in the past.

66. **Hyperemic Treatment of Habitual Abortion.**—Turan calls attention to two cases in which he was able to correct a tendency to habitual abortion by the systematic introduction into the uterus of a suction cannula. It not only induces hyperemia in the organ but stimulates it to muscular contractions, this exercise aiding in restoring normal conditions. In the first case he applied the cannula for half an hour at a time, at 20 sittings in the course of 7 weeks; in the second case the cannula was left for 10 hours at a time, the procedure being repeated 8 times in the course of one month. Both women have since borne healthy children, although there was a history of 5 and 3 abortions, respectively; the patients were 27 and 23 years old.

### Münchener medizinische Wochenschrift

*May 3, LVII, No. 18, pp. 945-992*

68 *Prophylaxis of Epidemic Poliomyelitis. (Zur Prophylaxe der epidemischen Kinderlähmung.) P. H. Römer and K. Joseph.
69 Production of Atypical Proliferation of Epithelium by Injection of Products of Putrefaction of Albumin. (Zur Erzeugung atypischer Epithelwucherungen mit Eiweissfäulnisprodukten.) H. Stoeber and L. Wacker.
70 Fluoroscopy in Research on the Circulation. (Kreislaufstudien am Röntgenschirm.) O. Franck and W. Alwens.
71 *The Specific Meiostagmin Reaction. H. M. Ascoli and G. Izar.
72 *Transmission of Typhoid by Infants. (Ueber Typhusverschleppung durch Säuglinge.) Rommeler.
73 Roentgen-Ray Treatment of Chronic Bronchitis and Bronchial Asthma. T. Schilling.
74 Rumination in Infants and Older Children. (Rumination im Säuglings- und späteren Kindesalter.) A. Wirtz.
75 *Rectal Gonorrhea in Children. (Ueber Rektalgonorrhöe im Kindesalter.) L. Kaumheimer.
76 Tincture of Iodin in Sterilization of the Skin. (Die Grossichsche Methode der Hautdesinfektion.) K. Knoke.
77 Permeability of the Kidney for Bacteria. (Zur Frage der Durchgängigkeit der Niere für Bakterien.) W. Wyssokowicz.
78 *International Institute for Medical Bibliography. (Grundzüge der Organisation der medizinischen Literatur.) E. Abderhalden.

68. **Prophylaxis of Epidemic Poliomyelitis.**—Römer and Joseph report experimental and clinical research which has confirmed the findings of Flexner, Lewis, Levaditi and Landsteiner. The extreme resistance of the virus is shown by persistence of full virulence for 28 days in a dried specimen in one of their tests on a monkey. Their research has further demonstrated, they state, that ordinary formaldehyd disinfection of apartments is sufficient to destroy the virus. The disease in monkeys confers immunity thereafter, suggesting the possibility of effectual clinical serovaccination. The domestic animals do not seem to convey the virus; transmission requires human contact, and healthy germ carriers are a formidable factor in the epidemic incidence of the disease.

71. Discussed editorially in The Journal, May 28, 1910, p. 1790.

72. **Transmission of Typhoid by Infants.**—Rommeler warns that when a nursing mother has typhoid and is sent to the hospital, the infant should accompany her as it is liable to have contracted the infection and, although apparently healthy, may yet serve as conveyor of typhoid bacilli. In the case reported, the infant was received into a friend's home when the mother was taken to the hospital. It was noticed that the child had a little diarrhea, but as it was being weaned, and seemed otherwise well, no attention was paid to this sign of trouble until one after the other six members of the family contracted typhoid and one died. The infant's serum responded positively to the agglutination test although the child kept comparatively well throughout.

75. **Rectal Gonorrhea in Children.**—Kaumheimer urges that greater attention should be paid to involvement of the rectum in case of gonorrhea, especially in children. This may be the cause of the unusual obstinacy of vulvovaginitis in little girls, the infection recurring again and again after the vulvar and vaginal lesions have been cured. The involvement of the rectum is seldom revealed by any clinical manifestations and thus it is liable to escape discovery. He warns in particular to refrain from taking the temperature in the rectum in patients with vulvovaginitis, unless extraordinary care to prevent conveyance of the infection is observed.

78. **Organization of Medical Literature.**—Abderhalden describes the principles on which is based this newly organized attempt in Germany to keep a comprehensive survey over the

entire field of medical literature in all countries. The aim is to publish a monthly index, something like the *Index Medicus*, absolutely complete, but in separate sections for each special field. This is to be supplemented by journals devoted to abstracts only, and each restricted to some special field. The system is completed by the year-books to compile and serve as a guide through the achievements of the past year, each in its restricted field. The centralblatts and year-books already in existence, three of which (biology, biochemistry and veterinary medicine) have already agreed to affiliate with the system, will enlarge their scope while restricting themselves more closely each to its special field. By intercommunication, distribution and exchange of material it is hoped thus to bring the medical literature of the world into a comprehensive and orderly arranged system whereby every article will be listed and important ones summarized and grouped for each reader in an accessible place. He adds that this has already been accomplished for stomatology and, in part, for chemistry.

### Wiener klinische Wochenschrift, Vienna

*May 5, XXIII, No. 18, pp. 651-684*

79 *Characteristics of Cerebrospinal Fluid and Differential Diagnosis from its Examination. E. Mayerhofer.
80 Determination of Tubercle Bacilli in the Placentas of Tuberculous Mothers. J. Novak and F. Ranzel.
81 Decline During Measles of Specific Susceptibility to Vaccine. (Ueber Abnahme der spezifischen Vakzineempfindlichkeit während der Masern.) F. Hamburger and O. Schey.
82 Technic of Wassermann Reaction. (Verhalten von verschiedenen Extrakten bei der Wassermannschen Reaktion mit Berücksichtigung ihrer antikomplementären und hämolytischen Wirkung.) G. Satta and A. Donati.
83 *Influence of Heredity on Incidence of Gastric Ulcer. (Einfluss der Heredität auf die Bildung des Magengeschwürs.) W. Czernecki.
84 Treatment of Chancroids and Buboes. (Zur Behandlung des Ulcus molle und der Bubonen.) L. v. Zumbusch.

79. **Differential Diagnosis from Cerebrospinal Fluid.**—Mayerhofer states that the cerebrospinal fluid always reduces a permanganate solution when boiled with it, and that the intensity of the reducing reaction is an index of different pathologic conditions. He gives the details of eighteen cases to show the valuable information to be derived by this simple test. It can be applied also to the urine, and he is now studying it as applied to infants' urine. An exudate, of course, contains more organic substances than a transudate, and the differentiation is done by heating 1 c.c. of the cerebrospinal fluid mixed with 50 c.c. of distilled water and 10 c.c. of a 25 per cent. solution of sulphuric acid. Just as it boils, 10 c.c. of a one-tenth normal solution of potassium permanganate is added and the whole kept simmering for 10 minutes, when 10 c.c. of a one-tenth normal solution of oxalic acid is added and the fluid becomes at once limpid as this amount of oxalic acid decolorizes this amount of the permanganate solution. Then more of the latter is added until the first drop leaves a distinct and permanent rose-colored trail. Within 15 or 20 minutes of the lumbar puncture the test is complete. The number of cubic centimeters of the permanganate solution required is the index. In meningitis the index is from 2 to 8 while with normal fluid it is very small. After intradural injection of Vienna antimeningitis serum the index dropped to half its previous figure but no change was apparent after injection of serum of French origin.

83. **Heredity and Gastric Ulcer.**—Czernecki recently encountered a family in which the mother and four adult sons and daughters all presented gastric symptoms, and three had well-defined ulcers with a tendency to recurring hemorrhage. All the members of the family were typical examples of Stiller's universal asthenia and tendency to visceral ptosis. Such cases emphasize the importance of a tendency to ptosis in the etiology of gastric ulcer, and the necessity for general treatment in this direction, never restricting treatment of a gastric ulcer to the stomach alone.

### Zentralblatt für Chirurgie, Leipsic

*April 23, XXXVII, No. 17, pp. 601-640*

85 Prevention of Bismuth Poisoning. (Zur Verhütung der Wismutvergiftung.) E. G. Beck.

*April 30, No. 18, pp. 641-672*

86 *Technic to Ensure Continence with Sacral Anus. (Ueber die Schlussfähigkeit des Anus sacralis.) V. Schmieden.

*May 7, No. 19, pp. 673-704*

87 *Intravenous General Ether Anesthesia. F. M. Pikin.
88 Intravenous General Hedonal Anesthesia. S. P. Fedoroff.

86. **Technic to Ensure Continence with Sacral Anus.**—Schmieden makes the new anus deep in the gluteal fold, with a small opening, and the peritoneum over the intestine is drawn together and sutured to form a comparatively narrow, long tube enclosing the intestine, and reaching as high up as possible. This is pushed back into the abdominal cavity. By this means the intestine opening at the artificial anus is enclosed in this long, narrow case for a considerable distance, and when stool approaches the anus its pressure in the peritoneal envelop early warns of its presence and thus muscular control can be brought into play. An illustration of the technic is given. In one case recent examination showed entire cure of the previous complete incontinence; there had been also a prolapse of the intestine in this case. The approach of fecal matter or gas gives warning and the patient is thus able with the help of the gluteal muscles to restrain it. Schmieden is convinced that this principle of high intraperitoneal reduction of the diameter of the gut represents progress in this line.

87. **Intravenous General Anesthesia.**—Pikin relates his experiences in fifteen cases with intravenous general anesthesia which were all favorable, but the sixteenth patient died in a few minutes after the commencement of the infusion of the ether solution. Burckhardt's technic was followed in every particular, but the method has been abandoned since this mishap. The communication issues from the surgical service at St. Petersburg in charge of Grekow.

### Zentralblatt für Gynäkologie, Leipsic

*April 23, XXXIV, No. 17, pp. 561-592*

89 Natural Devices for Closing up Vessels in the Female Genitals. (Ueber Gefässverschlussvorrichtungen im weiblichen Genitale). C. J. Bucura.
90 Bacteriologic Diagnosis of Puerperal Fever. K. Freytag.

*April 30, No. 18, pp. 593-624*

91 *Histologic Research on the Influence of Roentgen Rays on Human and Animal Ovaries. (Beeinflussung menschlicher und tierischer Ovarien durch Röntgenstrahlen.) K. Reifferscheid.
92 The Streptococcus Question. (Zur Streptokokkenfrage.) E. Sachs. (Ueber Virulenzbestimmung der Streptokokken.) J. T. Bürgers.

*May 7, No. 19, pp. 625-656*

93 Fatal Intraperitoneal Hemorrhage with Myoma. R. T. Jaschke.
94 Incision of Perineum. (Zur Episiotomie.) M. Stolz.

91. **Action of Roentgen Rays on the Ovaries.**—Reifferscheid reports extensive experimental research and six clinical cases in which the ovaries were removed after Roentgen exposures. In all degenerative changes were evident, providing a positive histologic basis for the numerous clinical successes in the therapeutic application of Roentgen rays. One patient was a woman of 37 with pulmonary phthisis on which account abortion was induced after seven Roentgen exposures. The ovaries were removed 18 days after the last exposure, 39 days after the first, and tubal sterilization was done at the same time. None of the follicles was normal in any of the ovaries; there were also signs of capillary hemorrhage.

### Gazzetta degli Ospedali e delle Cliniche, Milan

*April 26, XXXI, No. 50, pp. 529-536*

95 *Constriction Hyperemia in Treatment of Alcoholic Tremor. (L'iperemia alla Bier e la sua applicazione in un caso di tremore alcoolico.) R. Migliaccio.

*May 1, No. 52, pp. 545-560*

96 Non-Reliability of Hemolytic Test in Diagnosis of Gastric Carcinoma. S. Livierato.
97 Negative Results of Injections of Cerebrospinal Fluid in Epilepsy, etc. (La cura sottocutanea di liquido cefalorachideo nell' epilessia e in alcune psicosi ha qualche utilita?) A. Ziveri.

*May 3, No. 53, pp. 561-568*

98 *Treatment of Hydrocele. (Nuovo processo di cura radicale dell'idrocele.) .G. D'Alberto.

*May 5, No. 54, pp. 569-576*

99 Contagiousness of Scarlet Fever. (Contagiosita della scarlattina.) G. Appiani.

*May 8, No. 55, pp. 577-592*

100 Experimental Neoplasms in Animals. A. Lustig.
101 Bradycardia from Malarial Infection. G. Vitello.

*May 10, No. 56, pp. 593-600*

102 Successful Electrotherapy of Trigeminal Neuralgia. G. Vlana.

95. **Constriction Hyperemia in Treatment of Alcoholic Tremor.**—Migliaccio reports prompt improvement of chronic alcoholic tremor in the hand after application of a constricting

band above for an hour and a half a day, with complete cure by the end of the month. The benefit in this case confirms, he says, that realized in writer's cramp, neuralgia and neuroses. Maragliano commends constriction hyperemia as the best method of treating contusions and sprains, and Migliaccio says that his experience has confirmed this.

98. **Operative Treatment of Hydrocele.**—D'Alberto commends Mannino's technic as simple, easy and reliable, while free from the drawbacks of other methods. It aims to obliterate the cavity formed by the vaginal tunic and promote the formation of adhesions. He separates the vaginal tunic from the scrotum part way around, working through an incision 5 cm. long. He then makes a similar incision in the vaginal tunic and after wiping it dry turns in the cut edges and sutures them to hold them back. The lips of the incision, thus reinforced, are then sutured. By this technic the outside of the testicle is covered with the outer side of the vaginal tunic thus folded back, while the two layers of the inner aspect are brought into contact and soon develop adhesions. The result was most satisfactory in the case reported; there has been no recurrence of the effusion, which had previously resisted tapping and other measures, including Volkmann's method of treatment. The patient was a man of 57.

### Policlinico, Rome

*May 8, XVII, No. 19, pp. 579-610*

103 Source of Contagion in Epidemic of Typhoid. (Ancora l'epidemia di Albano Laziale.) D. De Blasi. Commenced in No. 18.

*April, Surgical Section, No. 4, pp. 145-192*

104 Comparative Study of Effect on the Blood of Extracts of Hypophysis and Suprarenal Gland. (Effetti delle iniezioni di estratto di ipofisi e di ghiandola surrenale sul sangue.) A. Austoni and A. Tedeschi.
105 Cysts of Thyreoglossal Origin in the Floor of the Mouth. (Contributo allo studio delle cisti congenite.) O. Cignozzi. Commenced in No. 3.

### Riforma Medica, Naples

*April 18, XXVI, No. 16, pp. 421-448*

106 *Bilateral Hydronephrosis. (L'idronefrosi da calcolosi renale a proposito di un caso di idronefrosi bilaterale.) F. Zuccari.
107 Non-Infectious Origin of Rachitis. (Teoria infettiva della rachitide.) T. Silvestri.
108 *Alimentary Levulosuria and Urobilinuria as Tests for Liver Functioning. (La levulosuria alimentare e l'urobilinuria quali metodi di indagine clinica della funzionalita epatica.) V. Brun.

*April 25, No. 17, pp. 449-476*

109 Opsonic Power Acquired, not Congenital. (Sulla genesi del potere opsonico.) R. Ciauri and G. Severino.
110 *Experimental Momburg-Belt Constriction. (Sull'emostasia alla Momburg. Ricerche sperimentali.) G. Carere.
111 Anatomic Study of Bundle of His. (La ricerca e l'esame anatomico del fascio di His: fascio atrio-ventricolare.) G. Roussy and Ameuille.
112 Cammidge Reaction in Normal Urine. U. Sorrentino.

*May 2, No. 18, pp. 477-504*

113 Kala-Azar in Children and Adults. U. Gabbi.
114 Progressive Facial Hemiatrophy. R. Ciauri.

106. **Bilateral Hydronephrosis.**—The patient succumbed to uremic poisoning shortly after an operation to remove the obstructing stones from the right kidney. The left was also found hydronephrotic, with numerous stones. Zuccari declares that in hydronephrosis from calculi the kidney should not be removed for fear of involvement of the other kidney in a similar process, as renal lithiasis is bilateral in a large proportion of cases.

108. **Alimentary Levulosuria and Urobilinuria as Tests for Liver Functioning.**—Brun gave from 1.4 to 1.7 gm. of levulose and states that the resulting levulosuria was an easy, simple, delicate, practical, accurate and harmless method of determining the functional capacity of the liver. The slightest impairment was revealed by this means, as also the progress toward recovery or aggravation. He applied the test to 400 sick children and about 100 healthy ones, all from one month to 12 years old. The effect was practically the same whether the levulose was taken before, during or after a meal. The levulose appears in the urine by the second hour and persists through the twelfth. The normal liver does not permit the levulose to pass unmodified. He also concludes from his research that urobilinuria is not pathologic unless the urobilin occurs in very large amounts.

110. **Experimental Momburg Belt Constriction.**—Carere's experiments on dogs showed that no permanent disturbances resulted from the constriction by the Momburg technic. At the same time there was invariably a tendency to paralysis in the legs feeling the effects of the constriction, but it always retrogressed sooner or later according to the technic applied. When the tubing was over 1½ inches in diameter, serious injury to the abdominal organs was occasionally observed, but when Momburg's technic was strictly followed the disturbances were only transient.

### Ugeskrift for Læger, Copenhagen

*April 28, LXXII, No. 17, pp. 484-518*

115 Technic for Plastic Operations on the Cornea. (Undersøgelser angaaende Keratoplastik.) C. F. Heerfordt.

*May 5, No. 18, pp. 519-532*

116 Objective Signs of Improvement and Cure of Pulmonary Tuberculosis. (Objektive Tegn paa Bedring og Helbredelse af Lungetuberkulose.) I. Petersen.

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## Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

Alcohol a Dangerous and Unnecessary Medicine. How and Why. What Medical Writers Say. By Mrs. Martha M. Allen, Superintendent of the Department of Medical Temperance for the National Woman's Christian Temperance Union. Cloth. Price, $1.25. Pp. 435. Marcellus, N. Y.: Department of Medical Temperance of the National Woman's Christian Temperance Union [1910].

Light Therapeutics. A Practical Manual of Phototherapy for the Student and the Practitioner. With Special Reference to the Incandescent Electric-Light Bath. By J. H: Kellogg, M.D., Author of Rational Hydrotherapy, the Art of Massage, etc. Cloth. Price, $2.50. Pp. 217, with 67 illustrations. Battle Creek, Mich.: The Good Health Publishing Co., 1910.

Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By Dr. Carl von Noorden, Professor of the First Medical Clinic, Vienna. Part VIII, Inanition and Fattening Cures. Part IX, Technic of Reduction Cures and Gout. Cloth. Price, $1.50 each. Pp. 103 and 112. New York: E. B. Treat & Company, 1910.

Kurzgefasstes Lehrbuch der Kinderheilkunde für Aerzte und Studierende. Von Dr. Carl Seitz, A. O. Universitätsprofessor und Vorstand der Kinderpoliklinik am Reisingerianum in München. Third Edition. Paper. Price, 13 marks. Pp. 558. Berlin: S. Karger, Karlstrasse 15, 1910.

Handbook of Physiology. By W. D. Halliburton, M.D., Professor of Physiology, King's College, London. Ninth Edition (Being the Twenty-second Edition of Kirkes' Physiology). Cloth. Price, $3 net. Pp. 923, with 592 illustrations. Philadelphia: P. Blakiston's Son & Co., 1910.

Leitfaden der experimentellen Psychopathologie. Vorlesungen, Gehalten an der Universität Leipzig. Von Privatdozent Dr. Adalbert Gregor, Oberarzt der Psychiatrisch-Neurologischen Klinik Leipzig. Paper. Price, 5 marks. Pp. 222. Berlin: S. Karger, Karlstrasse 15, 1910.

What You Ought to Know About Your Baby. By Leonard K. Hirshberg, M.D. A Text-Book for Mothers on the Care and Feeding of Babies, with Questions and Answers Especially Prepared by the Editor. Cloth. Price, 25 cents. Pp. 97. New York: The Butterick Publishing Co., 1910.

Jahresbericht über die Fortschritte der Inneren Medizin im In- und Auslande. Redaktion: Dr. Schreiber im Magdeburg and Dr. Rigler in Leipzig. Bericht über das Jahr 1908. Volume III. Paper. Price, 21.60 marks. Pp. 1506. Leipzig: Dr. W. Klinkhardt, 1910.

An Index of Symptoms with Diagnostic Methods. By Ralph W. Leftwich, M.D., Late Assistant-Physician to the East London Children's Hospital. Fourth Edition. Cloth. Price, $2.25 net. Pp. 451, with illustrations. New York: William Wood & Co., 1910.

The New International Year-Book. A Compendium of the World's Progress for the Year 1909. Editor, Frank M. Colby, M.A. Associate Editor, Allen L. Churchill. Cloth. Price, $7. Pp. 702. New York: Dodd, Mead & Co., 1910.

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# The Journal of the American Medical Association

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## FIELDS OF USEFULNESS OF THE AMERICAN MEDICAL ASSOCIATION*

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BALTIMORE

I wish to offer my hearty thanks for the signal honor of election to the presidency of this Association—an honor to which no member of our profession can be indifferent as a mark of the esteem and confidence of his colleagues and a high office of privilege and opportunity. The bestowal of this honor on one not engaged in the practice of medicine I interpret as a conspicuous recognition of the importance of those sciences on which this practice is founded.

In the recent death of Robert Koch the world mourns the loss of one of the greatest scientific investigators and benefactors of his race of all time—one who shares with Pasteur the immortal distinction of founding and developing the modern science of bacteriology, and establishing the germ theory of infectious diseases, which has had a revolutionary influence on practical and especially preventive medicine. To him we owe not only the introduction of the methods which have made possible the great discoveries in this field, but also the most fruitful exploration of the domain whose gates he had unlocked.

Since our last annual session there have passed away many eminent in our profession who have been identified with the work of this Association. Of those honored by the Association with high office, the especial tribute of our respect and grateful appreciation is due to the memories of Dr. Herbert L. Burrell, a recent president of the Association, distinguished surgeon and public-spirited citizen, to whom so much of the remarkable success of our sessions in Boston and Chicago was due, and of Dr. William Biddle Atkinson, the permanent secretary of this Association from 1864 to 1899—more than half the years of its existence—and for much of this time the editor of the *Transactions*.

To the honored roll of martyrs to medical science has been added recently the name of Dr. Howard Taylor Ricketts, who died in the City of Mexico from typhus fever, with which he was stricken while engaged in its investigation.

Aided partly by grants from the Committee on Scientific Research of this Association, Dr. Ricketts, by his important investigations, especially of Rocky Mountain fever and Mexican typhus, had acquired a place in the front rank of American pathologists. Scientific medicine in this country has suffered a serious loss by the untimely death of this brilliant young investigator.

### MONUMENT TO YELLOW-FEVER COMMISSION

As it has always been the endeavor of this Association to secure suitable recognition of our medical heroes, we welcome with keen satisfaction the action of Senator Owen in introducing a bill in Congress, in line with a previous recommendation of President Roosevelt, appropriating the sum of fifty thousand dollars for a monument in Washington in honor of the Yellow-Fever Commission, composed of Major Walter Reed, Dr. James Carroll, Dr. Jesse W. Lazear and Dr. Aristides Agramonte, and commemorating also the men who submitted voluntarily to the experimental inoculations which resulted in the discovery of the mode of conveyance of yellow fever. The President of the American Medical Association, the Secretary of War, Major-General Wood, the Surgeon-General of the Army and Colonel William C. Gorgas are named as the commission to select the site and supervise the erection of this monument. This effort to perpetuate by worthy national recognition the memory of high courage and beneficent achievement will doubtless receive the endorsement and active interest and support of this Association.

### MONUMENT TO MEDICAL OFFICERS OF WAR

In this connection, I may recall to your attention that, in accordance with the recommendation of my immediate predecessor, Dr. Gorgas, in favor of the suggestion of Dr. Weir Mitchell, the Association has already taken action looking to the erection in the national capital of a monument in memory of the medical officers on both sides who gave up their lives in the performance of their duties during the war between the states. This purpose to commemorate members of our guild whose services in a national crisis were for humanity should appeal strongly to the members of the profession throughout this country.

### THEME: ACTIVITIES OF THE ASSOCIATION

It is my purpose in this address to call your attention chiefly to certain subjects suggested by some of the activities of this Association, with the desire of indicating to some extent and in a general way their nature and what has been accomplished, especially in recent years. Within the limits of an address none of these topics can be treated exhaustively, and many of equal importance must be left untouched. As the president has the opportunity of offering directly to the House of Delegates whatever specific suggestions he may desire to make, I shall not use this occasion for that purpose.

### DEVELOPMENT OF SCIENTIFIC ASSOCIATIONS

The spirit of association is inherent in human nature. Although voluntary associations of those pursuing the same occupation and having common interests have existed from ancient times, it was not until the Renaissance that literary societies, nor until the rise of experimental science in the seventeenth century that scientific societies in the modern sense were formed. As is well known, these early societies, in which medicine was not separated from the natural and physical sciences, were powerful agencies in the advancement and diffusion of knowledge. The eighteenth century saw the development of separate local medical societies, both in Europe and in this country. Before the end of this century not less than seven of our state medical societies had been created, the first being that of New Jersey. The original charter of the Connecticut Medical Society, incorporated in 1792, is historically almost as interesting as the famous Connecticut constitution of 1639, for it embodied the essential federative feature of the present plan of organization of our state and national associations by constituting the county society as the unit with representation by delegates in the state society.

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* President's Address at the Sixty-first Annual Session of the American Medical Association at St. Louis, June 7, 1910.

A new type of scientific society, of national scope and characterized by periodical, migratory meetings, originated in 1822, chiefly through the efforts of von Humboldt, by the formation of the still flourishing *Gesellschaft Deutscher Naturforscher und Aerzte.* The occasion for the formation of this and later of many similar societies is to be sought mainly in the growth and organization of science, with the consequent greater need of intercourse, as well as in improved facilities of travel.

### ORIGIN OF AMERICAN MEDICAL ASSOCIATION

It is to this type of itinerant national society with annual meetings that the American Medical Association, started in 1846, belongs, and, although sixty-four years is a brief life in the history of institutions, still our Association not only is the first example of this pattern of society in this country, but it is one of the oldest of the kind in the world, being preceded by the German society mentioned, the British Association for the Advancement of Science in 1831 and the British Medical Association in 1832.

Although the origin of the American Medical Association is to be traced to a national convention of delegates from medical societies and colleges, called by the Medical Society of the State of New York, mainly through the efforts of Nathan Smith Davis, to elevate the standard of medical education, then in a most deplorable condition in this country, it may be recalled that the same society as early as 1839 adopted a resolution offered by Dr. John McCall with the following preamble: "A national medical convention would advance, in the apprehension of this society, the cause of the medical profession throughout our land, in thus affording an interchange of views and sentiments on the most interesting of all subjects—that involving men's health and the means of securing or recovering the same." Although the steps then taken to secure this end proved fruitless, it was more in accordance with the broad spirit of Dr. McCall's resolution than with the narrower, though important purpose determining the call of the convention of 1846 in New York that the organization of the American Medical Association was effected at the meeting in Philadelphia in 1847, when the purposes were declared in the preamble to the constitution to be "for cultivating and advancing medical knowledge; for elevating the standard of medical education; for promoting the usefulness, honor and interests of the medical profession; for enlightening and directing public opinion in regard to the duties, responsibilities and requirements of medical men; for exciting and encouraging emulation and concert of action in the profession, and for facilitating and fostering friendly intercourse between those engaged in it."

Our present constitution, adopted in 1901, has not added to or changed materially these excellent purposes as originally declared, save in one particular, which is significant of the progress of medicine and the relations of physicians to the community. "The broad problems of hygiene" are substituted for "the duties, responsibilities and requirements of medical men" as the subject for enlightenment and direction of public opinion.

### EARLY ORGANIZATION

At the birth of the Association much discussion was given to the question whether it should be organized as a representative body or as a self-constituted and self-perpetuating society, electing its own members. It is curious to think what would have been the history of the Association had not the wiser choice been made, in favor of the more democratic, representative plan. This plan, which continued in operation for fifty-five years, provided for representation not only from permanently organized medical societies, whether local, district or state, but also from medical colleges, hospitals and other institutions, every ten members of an auxiliary society being entitled to a delegate and only the delegates having a voice in the conduct and affairs of the Association. However cumbersome and ineffective this basis of representation became with the growth of the profession and of the country, it was well suited to the conditions existing at the time of its adoption.

### FIRST HALF-CENTURY

The Association has grown so rapidly and achieved so much since its improved organization nine years ago, that we are in danger of losing sight of the great service which it rendered to the profession during the preceding half-century, in spite of defects and failures and errors. The founders of the American Medical Association brought into being a national organization, truly representative of the whole medical profession of this country. Such an organization has inherent elements of strength which secure its future even against its own blunders and still more against attacks from without. In spite of an unfortunate incident in its history the Association has been from the beginning the great unifying force for the profession of this country, whose common interests it has been its chief endeavor to serve. Since its foundation it has had the devoted loyalty and faithful services of many leaders of the profession.

English and American physicians of the early part of the last century were greatly inspired by the work of the admirable Manchester physician, Dr. Thomas Percival, entitled "Medical Ethics," which appeared in 1803, and many medical societies of that period adopted codes of ethics based upon the precepts of this excellent book. The American Medical Association followed this custom in framing such a code and thereby exerted a distinctive and beneficent influence upon standards of professional conduct throughout this country. Although in form and certain details this code became obsolete, its underlying principles are enduring.

The central object of the organization, the cultivation of medical science and art, was always kept clearly in view. The condition and the progress of American medicine are well reflected in the thirty-three volumes of our *Transactions,* followed by The Journal, established in 1883. My memory goes back to attendance on meetings in the late seventies and I recall attractive programs, inspiring addresses, valuable scientific papers, agreeable personal and social intercourse and generous hospitality.

What the Association was able to accomplish in the first fifty-five years of its existence in regard to such matters of professional and public interest as medical education, legislation, organization, protection from fraud, is insignificant in comparison with the achievements of the last decade, but this failure was not due to lack of effort or of interest or of realization of the conditions. The fault was mainly in the machinery of organization, long recognized as outworn and inadequate, which rendered practically impossible orderly and effective transaction of business, deliberate and well-considered action, and the adoption and carrying out of any continuous policy or undertaking.

### NEW ERA

My object in this brief reference to the past of the Association is not to trace details of history, but to indicate, in the first place, that improvement in organization was urgently needed and, secondly, that the improved organization effected nine years ago marked no break with the past, but was in the nature of an orderly evolution along predetermined lines toward larger and better things. The past decade is often spoken of as a new era in the life of the Association, and such it is, although only in the sense that it is characterized by the attainment of results long desired and long striven for and by possibilities of ever-increasing usefulness.

### IMPROVED ORGANIZATION

The much-needed but very simple change in the form of organization effected in 1901 after full discussion and mature consideration was in its essential features identical with that proposed in 1887 by a committee of which the founder of the Association, Dr. Nathan Smith Davis, was chairman; and there can scarcely be found a more striking illustration of the defects of the old plan than the long delay in the adoption of this proposal, a delay resulting not from opposition, but from sheer inability to secure proper deliberation and effective action in the business meetings. It is gratifying and worthy of note that both the earlier and the present plans of organization should embody so largely the conceptions of one man, whose great services to the profession and the public as founder of this Association and for more than half a century zealous promoter of its welfare, as eminent physician and educator, and as public-spirited and far-sighted citizen should stir the members of the Association to more active efforts in behalf of the Davis memorial fund, so that the sum of $5000 conditionally appropriated to this purpose by the trustees may be rendered available.

By basing membership and the right of representation in the Association on the state associations, by creating a delegated business body, large enough to be truly representative but not so numerous as to be ineffective in the transaction of business, and meeting separately from the general and scientific sessions, and by securing on the part of the state associations the adoption of the county society as the unit of the system, a federative organization of the medical profession of this country has been brought about as simple as it is effective. Whatever may be needed in perfecting details of this plan of organization, the experience of nearly a decade has demonstrated convincingly the soundness and wisdom of its fundamental features.

Organization, however carefully devised by man, is inert until it acquires living force by the efforts of those who set it in motion, and the good accomplished depends far more on the character of these efforts than on the instrument employed.

The Association in these latter years has been fortunate in enlisting the adhesion and cooperation of many of the best workers in the profession and even in allied fields, who have given unselfishly their time and energy and thought to work in behalf of professional and public interests; but there are two men, entrusted with most important official duties, whose services have been so conspicuous and are so deserving of the gratitude of the profession that it is only just to mention their names in this connection: Dr. George H. Simmons, who, as General Secretary and manager and editor of THE JOURNAL, has done more than any one else to determine and further the policies of the Association and to place it in its present high position of influence and usefulness; and Dr. Joseph N. McCormack, who, in connection with his valuable work as organizer, has preached the gospel of public health throughout the length and breadth of this land.

### ACHIEVEMENTS OF LAST DECADE

Among the more striking beneficial results accomplished by the Association during the past decade I may enumerate the unification and effective organization of the profession; the growth of the national and constituent associations in membership and influence; the development of THE JOURNAL to an importance unsurpassed by any medical weekly in the world; the improvement of the educational and scientific work of the Association through its sections, its scientific exhibit, its grants in aid of research, and the public lectures and addresses of Dr. McCormack; the establishment of the Council on Pharmacy and Chemistry with its chemical laboratory, the Council on Medical Education, the Committee on Medical Legislation, the Council on Defense of Medical Research, the Committee on Ophthalmia Neonatorum, the Committee on Nomenclature and Classification of Diseases, the Board of Public Instruction on Medical Subjects, the Women's Committee on Public Health Education (the status of which, however, awaits clearer definition) and other special committees supported by funds of the Association and working continuously; the compilation and publication of two editions of an authoritative medical directory, owned by the profession; the foundation and publication, without expense to the Association, of the *Archives of Internal Medicine,* in order to meet an urgent need of higher clinical medicine; and, finally, the erection of a new building to accommodate the printing plant and working forces of the Association. This is indeed a record of large and beneficent achievement. To describe in any detail the results of the activities here enumerated would far exceed the limits of this address; but on a few of the more significant ones permit me to touch.

### COUNCIL ON PHARMACY AND CHEMISTRY

Of the work accomplished by councils and committees that of the Council on Pharmacy and Chemistry is the most notable, and merits the high commendation which it has received from the profession and the enlightened public. A check has at last been put on the exploitation of the profession and to a considerable extent likewise of the public by the strongly entrenched and widely ramifying patent-medicine evil with its shameless frauds, misrepresentations, deceits and dangerous practices. The work of this Council has assumed international proportions and it is gratifying to note that legitimate pharmacy and the respectable manufacturing pharmacists are coming to appreciate more and more its benefits to them.

### MEDICAL EDUCATION

For the last six years the Council on Medical Education, by steady, continuous, well-directed work, including personal inspection, has been engaged in collecting and publishing a vast amount of accurate, detailed information concerning the medical schools and every phase of medical education in this country. Its conferences have been attended by leading educators, and the addresses and discussions on these occasions have been interesting and valuable. The purpose of all this work has been constructive and not critical. The facts elicited, as well as those published in the highly important "Report on Medical Education of the Carnegie Foundation for the Advancement of Teaching," which has just appeared, while confirmatory of general impressions, acquire impressive significance when marshaled in concrete, statistical form and are of enormous consequence to the medical profession and the community. The attitude of physicians should be clear in this matter, for the strength and credit of the profession, the great interests of public health, municipal, state and national, and the welfare of the individual all depend on the quality of training given in our medical schools.

The immediately urgent directions of improvement are reduction in the number of poorly supported, existing medical schools by demise or by merger, provision of adequate financial support beyond the fees of students, the elevation and, even more, the conscientious enforcement of the requirements for preliminary training and of standards, the maintenance of at least five well-equipped laboratories conducted by teachers giving their whole time to the work, far better clinical training, such as can be given only in a hospital owned by the school or affiliated with it as its teaching hospital, and realization on the part of universities of their responsibilities for their departments of medicine.

The argument that the country needs to-day, if it ever did, cheap and inferior medical colleges is wholly fallacious, for we have at present in this country practically as many medical schools as all the rest of the world combined, and four to five times as many doctors in ratio to the population as Germany and the older civilized countries; and, moreover, graduates of low-grade schools manifest no peculiar inclination or tendency to seek remote and unpromising localities, but prefer competition in fields already overcrowded.

There have been in recent years influences in operation tending to a diminution in the number of medical schools and of students of medicine. Among these influences may be recognized the inevitable pressure exerted by the demands of state licensing boards and an awakened sense of loyalty and duty to the profession on the part of some of the weaker schools and of many physicians in consequence of fuller realization of the educational requirements of modern medicine, but, as the phenomenon is world-wide, some deeper causes are operative. There may be larger recourse to certain special healing cults and a growing discrimination on the part of the public between well-trained and ill-trained physicians; but more significant is the lessened demand for the services of physicians, resulting from the marked diminution in the amount of disease, especially the acute infections and tuberculosis, as the result of modern sanitation and public health movements, and the increasing tendency of rich and of poor alike to seek treatment for medical as well as surgical ailments in hospitals.

Certain of these conditions afford much food for serious thought, as they are of great economic importance to the medical profession, but I cannot pause to discuss them on this occasion, save to remark that new and rewarding opportunities and a new mission of service are opening to properly trained physicians in the great fields of public hygiene and preventive medicine. It is a serious defect of our medical schools in general that they do not at present provide adequate training for work of this character.

The outlook for improvement of medical education in this country is most encouraging. We already have a few excellent medical schools, comparable with the best in Europe, and the general average is rapidly advancing, so that we need not despair of attaining conditions of medical education which shall cease to be a reproach to us. The reform of medical education in this country is moving forward by the aid of many agencies and influences, and when its history is written the work of the Council on Medical Education of this Association will fill an important chapter.

The City of St. Louis to-day offers in the reorganization of the medical department of Washington University the finest possible example of improvement in medical education and the way to accomplish it. This medical school, aided by splendid gifts of enlightened benefactors and by the affiliation of a group of admirable hospitals and broadly planned with clear recognition of the needs of modern medicine, is destined to be among the foremost in this country and to exert a strong influence on medical education throughout the land, and especially in the middle West and South. I am sure that my colleagues of the American Medical Association desire me to extend, on this occasion and in this place in their behalf, our hearty congratulations and best wishes to Washington University and its medical school and to express to the donors our grateful appreciation of their generous benefactions to the cause of higher medical education and thereby to humanity.

### ANIMAL EXPERIMENTATION

The Council on Defense of Medical Research is performing well a duty which we owe not only to the present generation, but to all who are to follow us, for there would be little hope for the future of medical education or the progress of medical science and art if medicine were deprived of the method of experimentation. This method, which from the nature of the subject matter must consist largely in experimentation on animals in the biologic and medical sciences, is for the science of medicine precisely what it is for chemistry and physics, its greatest lever of advancement. Observation and experiment are the warp and woof of the fabric of scientific medicine, the one as necessary as the other. Animal experimentation, however, differs from experimentation with inanimate matter in that it should never be undertaken without a serious purpose and a grave sense of responsibility to avoid the infliction of all unnecessary pain; and it is a fact that in no other use of animals for the benefit of man is equal solicitude exercised in this regard.

The antivivisectionists are engaged in an utterly hopeless undertaking in their attempts to convince the public that experimentation on animals is of little or no benefit to mankind. As all physicians know, these benefits are simply inestimable, and one is almost inclined to welcome an agitation which has afforded us the opportunity to present to the public conclusive evidence on this question in the admirable papers already published and in course of preparation under the supervision of the Council on Defense of Medical Research, which is doing a work comparable to that of the British Council on the same subject. These papers, issued in pamphlet form, have been widely circulated and are at the service of any one who desires to use them.

In their charges of wanton cruelty brought against physiologists and physicians, as well as in their efforts to demonstrate the inutility of animal experimentation, the antivivisectionists have long conducted an agitation unmatched for recklessness of statement, slanderous misrepresentation and deceit, unbounded credulity, and ignorance, through any personal knowledge, of the object of their attack or of its relations to the interests of science and humanity. The agitation for the prohibition of experiments on animals, conducted under the guise of an humane purpose, is fundamentally inhuman, for if it were to succeed the best hopes of humanity for further escape from physical suffering and disease would be destroyed.

Those who are familiar with the conditions of animal experimentation as practiced in this country and are most competent to judge are convinced that no further legislation relating to the subject is needed. No special legislation regulative of this practice and at all acceptable to those who seek such regulation has ever been proposed which is not open to serious objections as interfering with useful and proper experimentation and subjecting experimenters to unnecessary and intolerable restrictions, supervision and annoyance. The enactment of such legislation in Great Britain has been a stimulus rather than a quietus to continuance of the pernicious agitation and has been detrimental to the interests of medical science and art in that country. Vigilance in guarding against the enactment of legislation of this character in any part of this country is a duty which physicians owe to the science and art which they cultivate and to the welfare of the community.

### MEDICAL AND HEALTH LEGISLATION

This Association as the representative of the medical profession of this nation cannot and should not be indifferent to legislation relating to important matters of public health and medicine, but the determination of the precise character and extent of its activities in this field is a question of considerable difficulty which we have not as yet fully and satisfactorily solved. The Association should assuredly keep aloof from politics in the customary significance of this term, and it should never resort to the arts of the politician. It should never appear in advocacy of legislative measures which are not clearly for the public welfare. Being a national organization, it should not intervene actively in state legislation, although here it may be helpful in an educational and advisory capacity. Its function and indeed its duty in relation to national legislation concerning health and medicine is to utter the voice of medical science as effectively as possible and to endeavor to have it heard by the lawmakers. It was entirely right and proper for this Association through its Committee on Medical Legislation to aid in the defeat of the antivivisection bill before Congress ten years ago and to support the passage of the Food and Drugs Act, the pensions for the widows of our medical heroes, Reed, Lazear and Carroll, the introduction of trained nursing in the army, the various public health bills, including the one now under consideration for a department of public health, and indeed, I believe, of every bill which this committee with varying success has advocated in Congress.

When Congress manifests such ignorance and indifference to urgent demands of sanitation as it did in framing the bill constituting the Isthmian Canal Commission, which took the fullest cognizance of the engineering problem and utterly ignored the equally important and not less difficult sanitary problem, the Association would have been culpable in not directing attention to the omission and in failing to urge the appointment as a member of the Commission of the eminent sanitarian whom I am proud to succeed in this presidential office, and who had already given proof that if any one could conquer the pestilences which had frustrated previous attempts to construct the canal, he was the man. And how well he has justified our faith by achieving the greatest triumph in practical sanitation in history!

The field of usefulness for this Association regarding legislation properly within its purview, includes, however, more than the advocacy or disapproval of specific laws already framed; it embraces likewise such matters as the collection of facts, legal opinions, historical data and information bearing on the questions concerned, the careful study of fundamental legal principles and of existing conditions in order to know what is right and also what is practicable, the examination of medical and sanitary laws, administration and activities in this country and abroad with a view to useful recommendations, the discriminating consideration of the powers and functions of the national government and of state and local governments respectively in the protection and promotion of the public health, cooperation with other agencies and efforts, especially those endeavoring to secure greater uniformity in state legislation by framing model laws relating to vital statistics, medical licensure, pure food and drugs, and the like, and the education of public opinion in support of laws for the common good, which are the only laws in which this Association has any interest whatever.

Since the establishment of the Bureau of Medical Legislation at the Association headquarters three years ago a good beginning has been made in constructive work of this character. The interesting and exhaustive discussion on a model law for the regulation of the practice of medicine at the joint conference of the Committee on Medical Legislation and the Council on Medical Education held in Chicago last March, while it constituted a most valuable contribution to this intricate and perplexing subject, brought out the lack of agreement on fundamental principles and forcibly exemplified the need of such preliminary work as I have indicated.

### VITAL STATISTICS

The framing of a model bill for the registration of vital statistics, combined with the excellent work of the Committee on Nomenclature and Classification of Diseases, should greatly facilitate the extension of the area of registration of births and deaths in this country and improve conditions within the registration area. Vital statistics is the very foundation of sanitary science and of practical sanitation, and its neglect in this country has been as much of a reproach to us as our low standards of medical education. The Association and all the physicians of the country should do their best to remove this reproach as rapidly as possible. The intimate connection of accurate registration of births with public health problems may be illustrated by the emphasis justly placed upon it in the admirable reports of the Committee on Ophthalmia Neonatorum. This Committee, whose work is a great credit to the Association and has become an important factor in the stirring campaign for the prevention of blindness, is brought likewise into close contact with another serious legislative problem, namely, the regulation of midwifery practice.

### DEPARTMENT OF HEALTH

Most gratifying is the awakening of sentiment beyond the confines of the medical profession in favor of the creation of a department of public health in the national government, of which this Association in its official action has long been an earnest advocate. It is especially significant that economists, experts in life-insurance, those interested in the industrial and social conditions of the laboring classes and others whose occupations and studies lead them to a realization of the enormous waste of life and energy from preventable diseases have espoused the movement for greater activities of the federal government in the protection of the people's health. The Committee of One Hundred, originating as a committee of the section of social science and economics of the Association for the Advancement of Science, which represents science in this country as our Association represents medicine, has done an important and patriotic service in educating public opinion and stirring up interest in this great cause.

I do not see how any intelligent and patriotic citizen who has studied the question can fail to reach the conclusion that the federal government should do far more than it is doing in the promotion of public health, and that such increased activity, properly directed, would be of incalculable benefit in the saving of human life, health and energy. I agree with the great majority of the members of this Association that the best way to secure this result is by the creation of a national department of public health. While it may be that a mature and detailed plan of organization for such a department has not yet been devised, the primary and essential thing is to demonstrate the need, and this, I believe, has been done. The Public Health and Marine-Hospital Service is already a partial bureau of health with an excellent hygienic laboratory, so far it has been developed. Its incorporation in a department of health would enable it to increase its functions and expand its usefulness. There are many suggestive analogies between the growth, functions and general plan of organization of the Department of Agriculture and the corresponding features of the proposed department of health and the argument for the establishment of the latter is stronger than was that for an agricultural department when this was formed.

Those who have been fighting for years the battles of public health in this country and have been discouraged by the indifference of our national legislators to this subject in its relations to the federal government have been inspired in the last few months by the appearance in the Senate of the United States of a champion of this cause, Senator Owen of Oklahoma, who, with an intelligent grasp of the significance of preventive medicine for the conservation of the human resources of the nation, has vigorously urged the need of further action by Congress in this direction, and has introduced a bill for the creation of a federal department of public health. The principles of this bill—and it is only on the principles, not the details, that Senator Owen himself lays importance—have been endorsed by the Committee on Legislation of this Association, the Committee of One Hundred, and a large number of eminent physicians, sanitarians and others who have interested themselves in the matter.

### SECTARIAN MEDICINE

The introduction of Senator Owen's bill has been made the pretext for an attack on this Association of such a preposterous nature and led by interests of such a character that there is no occasion for our concerning ourselves seriously with it. We represent no school of medicine and no system of healing, allopathic, old, regular or other. We are simply physicians, as chemists are chemists and physicists are physicists, seeking to advance the boundaries of medical knowledge and to base, so far as possible, the practice of our art on scientific principles and sound experience. Our concern with the legal regulation of the practice of medicine differs in no respect from that of the rest of the community and is merely that those who assume to practice the healing art as a profession shall have some adequate knowledge of the human body in health and in disease. While we know, as all men of science must know, that there can be no dogma, principle, system or method universally applicable to the treatment of disease, we are aware that new knowledge may come from the most unpromising sources, and we are eager to discover what good there may be in the claims of the advocates of any peculiar system of treatment; and if such is found, there is nothing whatever in our principles to prevent us from adopting it, or, in fact, from employing any method of cure which the physician may deem best. We have no intention or desire to interfere, even if we could, with the freedom of the individual to employ any one or any method of healing he may please, so long as the interests of public health are not endangered thereby. Incredible as it may seem to those whose vision does not extend beyond personal and commercial interests, we are engaged in the campaign for public health from purely altruistic motives, for we hope the day is not far distant when there will be less disease to demand the services of physicians.

The idea that a federal department of health could have anything whatever to do with the regulation of the practice of medicine throughout the country merely betrays abysmal ignorance of the constitutional principles of our government. Of the two great divisions of medicine, it is only with the curative that sectarian medicine has concerned itself, while to the preventive side, where our great conquests lie, it has contributed nothing. It is not surprising that the better representatives of sectarian medicine, realizing the false position in which it has been attempted to place them, should have hastened to disclaim any connection with the grotesque movement organized to defeat the creation of a federal department of health on the ground that it is favored by the great body of physicians of this country represented in this Association.

### INTERNATIONAL CONGRESS OF HYGIENE

Had time permitted I should have been glad to speak of other activities of the Association, particularly the somewhat scattered ones in the field of public hygiene. Here I shall only remind you that the important International Congress of Hygiene and Demography, which is to meet in this country in 1912 on invitation of the government, will doubtless be of great interest and should give a powerful impetus to the movement for better sanitary administration throughout the country.

### GEORGE WASHINGTON MEMORIAL ASSOCIATION

The difficulty of housing such a congress in the national capital and our experience in this respect in caring for the International Congress on Tuberculosis in 1908 bring home to us forcibly the importance of aiding the efforts of the George Washington Memorial Association, already endorsed by this Association, to provide in the City of Washington a suitable building containing halls, lecture rooms and a large auditorium for the accommodation of national and international congresses.

### NEED OF ECONOMY

My service for six years as a Trustee of this Association leads me to remind the members that our funds are relatively small in comparison with the fields of usefulness which we would like to cover. This condition necessitates careful consideration by the Delegates and the Trustees of the numerous proposals in order to select those which seem to belong most properly to the sphere of the Association and are not adequately provided for by other agencies, and of these to choose the ones which appear to be most important and most urgent and to give promise of the most rewarding results. Experience has shown that the best returns are obtained from systematic, centralized work continuing over a number of years.

### SECTIONS AND SCIENTIFIC EXHIBIT

While I have devoted the larger part of this address to the consideration of certain subjects of wide professional and public interest which have properly engaged the attention of the Association in its capacity of national representative of the great body of physicians of this country, it should never be forgotten that the main purpose of this organization is that which is placed first in our constitution—the promotion of the science and art of medicine. All of the activities should center around this purpose and be contributory to it. These central educational and scientific functions are most effectively served by THE JOURNAL and by the meetings of the various Sections at the annual sessions. It is these more than aught else which interest the members of the Association and which hold the organization together. Their development and success should always be the first thought and highest endeavor of the Association.

The scientific exhibit, under the energetic, self-sacrificing direction of Dr. Wynn, to whom the Association owes a large debt of gratitude, has grown into one of the most useful, attractive and instructive features of our meetings, with promise of even wider and more varied scientific and educational value. It has already gained a position which, to say the least, is coordinate in interest and importance to a section, and it should receive every possible encouragement and support from the Association.

### ORGANIZED EFFORT

Organized effort is a distinguishing mark of modern civilization. It is as essential for the advancement of science, of education, of social and industrial reform, of philanthropic endeavor, as for the promotion of commerce. With the remarkable progress of medical science, especially during the last three decades, man's power to control disease has been vastly increased, and the sphere of usefulness of the physician has been correspondingly widened, and with advancing knowledge will continue to expand. The skill and knowledge of the physician and sanitarian have acquired a new and ever-increasing importance and significance in the movements for social amelioration, for improvement of the conditions of labor and of living, for the conservation and most efficient utilization of the productive energy of the world, and for the reclamation of regions now yielding no return to civilization.

Among the organized forces for advancing the prosperity, the happiness and the well being of the people of this country, the American Medical Association has an important part to play. We are justified in the confidence that, with the united support and loyalty of the profession, this Association, broadly representative and standing for the best ideals of medical science and art and for professional and civic righteousness, will contribute a beneficent share to the working out of our national destiny.

807 St. Paul Street.

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# THE IMPORTANCE OF THE EUGENIC MOVEMENT AND ITS RELATION TO SOCIAL HYGIENE*

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> "Like leaves on trees the race of man is found,
> Now green in youth, now withering on the ground;
> Another race the following spring supplies
> They fall successive and successive rise."

If it be true that the whole human race gets a fresh start at least thrice every hundred years; that the kind of race in existence in any period depends on the quality of the children born and the influences to which they are exposed after birth; that the supreme reason for marriage is parenthood; that the quality of children born depends (1) on the elements inherent in the germ-cells of the parents, and (2) on the environment of those germ-cells before their union and also after their fusion to form a new being; that a critical study of the relatives of a prospective parent will give valuable evidence regarding the nature of the elements—good, bad and indifferent—inherent in his or her germ-cells and likely to be transmitted; that poisons like alcohol, lead, or the toxins of syphilis circulating in the blood of either parent before a germ-cell union, or and more especially, in the blood of a mother before the birth of her child, may make the offspring the victim of malformation, infantilism, mental defect or epilepsy—if these things be true I think it probable that it would be possible and wise to interest young and marriageable people in the facts, and to a certain extent consciously to direct selection by marriage, and further, consciously to protect from injury germ-cells which possibly may fuse, or have already united to form a new human being.

### CREATE PUBLIC OPINION

If it be true that the quality of human beings born depends on the inherent qualities of the germ-cells of the parents and their environment before and after fusion, may it not be possible by education to cultivate a public opinion that will lead families to show as much pride in making provision for characteristics of health, energy, ability, courage and courtesy in their posterity as some of them now evince in their ancestry? May not family sentiment be developed in the direction of suppressing parenthood in the racially unworthy and of facilitating fatherhood and motherhood for those who are able to transmit to their offspring desirable qualities unhampered by glaring defect? In the words of Zarathustra, may we not say to the family: "In the future let not your pride be whence ye have come, but whither ye go."

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* Read before the Maryland Society of Social Hygiene, April 19, 1910.

If it be true that those born deaf and dumb, or feeble-minded, or with an insane or epileptic tendency, or color-blind, are likely to propagate their kind; and if it be true that the chronic inebriate, the prostitute, the drug habitué and the habitual criminal are, as a rule such because of the nervous systems they have inherited, and that they are likely to transmit defective nervous systems to their offspring, it would be desirable to educate public opinion, not only to discountenancing, but actually to legislative prohibition of parenthood for individuals so afflicted.

### THE FIT AND THE UNFIT

If it be true that the decline and fall of nations following from no apparent external causes is really explicable through "the relative fertility of the fitter and unfitter elements combined with what we now know of the laws of inheritance;" if it be a fact that the success of a people usually leads to a cessation of natural selection within that people, and hence is often followed by survival of the worse; if we can be convinced that by applying scientific knowledge it would be possible to stem racial decadence and determine a racial ascent, surely there could be no more laudable, patriotic movement than one which will help a nation in its struggle by seeing to it that the children of that nation have their origin in the fusion of the better germ-cells available, and that those germ-cells and those children are protected from the injury which results from undernourishment or from the action of such racial poisons as alcohol, lead, and the toxins produced by infectious agents. We do not have to look far afield to observe that certain of the civilizations in existence today are trying to apply every scrap of biologic knowledge which they believe will help them in the struggle; woe be to the societies and nations which fail to apply this new knowledge as it accumulates; the fate of such negligent or non-compliant communities is sealed; they are making no proper effort to postpone the time when they will be "one with Nineveh and Tyre."

If it be true that as the human race advances and the range of intellect widens, the tendency is to work for the future of humanity as well as for its present good; if, from the time of Plato to our day, the best minds have cherished the idea of a more perfect state, and have urged the suppression of human baseness and the creation and the appreciation of a "super-man;" if modern science has placed in our hands the key which unlocks the box containing the secret of race-ennoblement, namely, the picking out by preference of the racially superior for parenthood combined with the protection of childhood and the support of maternal care by fatherhood—if these be facts, then the phenomena of sex may ultimately come to be regarded by more people with awe; parenthood will be looked on as the noblest and most sacred of functions, entailing the heaviest responsibilities, and "the science which deals with all the influences that improve the inborn qualities of a race" (Mr. Francis Galton's definition of eugenics), will become a constituent of the higher human religions.

### EUGENICS

The science which has for its object the prevention of the birth of the unfit and undesirable, and the improvement of the race by furthering the productivity of the fit and the desirable by early marriages and by healthful rearing of children, has been called by Mr. Francis Galton, whose life has been devoted to a campaign in favor of it, the science of eugenics. Whereas, natural selection depends on overproduction and wholesale destruction, the aim of eugenics is to see that no more children are born than can be properly cared for and to make sure that those born come of the best stock. This science assumes that it is possible to improve the race by the application of the newer knowledge which modern studies of heredity and environment have yielded.

Until recently young people approaching marriage have had no way of obtaining definite information concerning fit and unfit matings and many of them have never been taught to consider whether or not a proposed marriage would lead to the birth of children with healthy bodies and sound and able minds. Students of heredity and of hygiene are now making the effort to supply the much-needed information and we must be grateful for the various publications which have recently attempted to present in a popular way the existing state of our knowledge concerning these vital matters. For those who wish to begin a course of reading along eugenic lines I would recommend:

C. W. Saleeby: "Parenthood and Race Culture: An Outline of Eugenics" (New York, 1909).

W. Bateson: "Methods and Scope of Genetics" (Cambridge, 1908) and his "Mendel's Principles of Heredity" (Cambridge, 1909).

T. H. Morgan's "Experimental Zoology" (New York, 1907).

C. B. Davenport: "Eugenics: The Science of Human Improvement by Better Breeding" (New York, 1910).

Karl Pearson: "National Life from the Standpoint of Science" (Edinburgh, 1905).

R. R. Rentoul: "Race Culture or Race Suicide" (Edinburgh, 1906).

In the first book mentioned references will be found to the more technical sources, including J. A. Thompson's Heredity, Francis Galton's publications, Westermarck's "History of Human Marriage" and Forel's "The Sexual Question."

### PUBLIC INTEREST IN EUGENICS

There is now in existence in England a Eugenics Education Society, and the publication of a *Eugenics Review* has been begun. In this country the American Breeders' Association has organized a Committee on Eugenics for purposes of investigation, education and legislation. In Germany there is an excellent journal called the *Archiv für Rassen-und Gesellschafts-Biologie*. It seems probable that eugenic societies, eugenic committees and eugenic publications will rapidly multiply, and it is not at all improbable that wise philanthropists, seeing that the millions of dollars now used for caring for the weak and defective help only one generation, will soon be induced to provide large sums for eugenics, with the idea of preventing the production of the imbecile, the insane, the inebriate and the criminal.

### MENDELIAN LAWS

My purpose now is not to dwell at any length on studies in heredity or the various theories which have been devised to interpret its phenomena. There have been, however, certain developments in the study of heredity to which as yet popular attention has been insufficiently drawn; I mean the rules regarding inheritance which have resulted from the experimental studies begun by the Abbot Gregor Mendel in the cloister garden at Brünn about a half century ago. For a time it seemed possible that these studies held good more particularly for the life of plants and of lower animals, but of late there has been a rapid accumulation of evidence which makes it seem certain that the Mendelian rules are also valid, at any rate to a large extent, for the higher animals and man. It now seems probable that inquiries into the physiology of heredity and variation will progress largely by the application of experimental methods similar to those which grew out of Mendel's discovery.

For a long time it has been known that most animals and plants begin life by the union of two cells, the one male, the other female. Biologists describing those cells call them gametes; that is, germ-cells or marrying-cells. These germ-cells contain in some way or another the factors on which all the powers, both physical and mental, possessed by the living creature to which they give rise, depend. It was Mendel who first appreciated the full consequences of the double nature of each individual being, due to the fact that two cells are concerned in its production. To understand the facts of heredity it will no longer do to think of a boy or a bee or a beech-tree as each being one thing, but we must think of each of them as being two things, indeed, as being double in composition throughout.

It is no uncommon experience to see the attempt made in families to analyze each individual into the aggregations or mixtures of parental characteristics manifest in them, to recognize, for example, the mother's voice, the father's passion for music, the mother's eye or the father's bony frame-work. But scientific students of heredity teach us that such an analysis, while true, since the various characters are transmitted independently, misses the most important point; namely, that in each of his qualities an individual is double. To understand really the make-up of an individual it is necessary to know how each of the two original germ-cells which united to give rise to him was endowed, as regards the factors concerned in voice, skeleton, musical faculty, color, hair and other characteristics. In analyzing the inheritance of a human being, therefore, we have to consider the contribution of each of his parental germ-cells separately for each quality or faculty; in other words, it is not sufficient to make a single column of values for the ingredients that go to form a man, but, as Bateson suggests, we must rule two columns, one for the ovum from the mother and one for the sperm-cell from the father, and in each column we must indicate how that germ-cell was supplied in respect to each of the ingredients in the list. Now, it will be clear that the male and female germ-cells may make the same or different contributions as regards any of the ingredients. When the two cells yield the same contribution the organism which results is said to be *pure-bred* for that ingredient; on the other hand, when the contribution from the two parent cells is dissimilar, the organism which results is said to be *cross-bred*. This is one of the most important conclusions to which studies of heredity has led.

From what I have said it will be clear that an individual according to our present views of heredity, is made up of a large number of distinct ingredients or units contributed from two sources and that as regards any one of these units he may have inherited two similar portions or two dissimilar portions.

To proceed with the analysis, I think I cannot do better than adopt an illustration used by Bateson in his popular address. He imagines the contents of a germ-cell as a fluid, made by taking a drop from each of a definite number of bottles in a chest containing tinctures of the several ingredients. Thus the male germ-cell is supposed to be compounded from one chest of bottles and the female germ-cell from a corresponding set of bottles in a similar chest. Should one or more of the bottles be empty in either chest then the germ-cell receives no ingredient from that chest; if corresponding bottles should be empty in both chests then neither germ-cell contains the ingredient concerned and the new individual resulting from the union of the two germ-cells by mixing the two collections of drops together would not contain the missing ingredient at all. It is obvious that an individual may be pure-bred (that is to say, similar on both sides of his composition) for any particular ingredient in either one of two ways; he may have received the ingredient from both the male and the female chest, or he may have received it from neither. Again, he may be cross-bred in respect of any single ingredient or unit, receiving the presence of it from one germ-cell and the absence of it from the other.

Having got this far, we can now conceive of the individual as composed of what are called presences and absences of all the possible ingredients. Hurst's studies of the eyes of parents and children happily illustrate this point. It appears that people have blue eyes when a factor or unit which forms pigment on the front of the iris is absent. If both parents of a child have blue eyes the children will not have dark eyes, for a dark eye has been shown to be due to either a single or a double dose of the unit missing from the blue eye. This is why dark-eyed persons may have children who are all dark-eyed or who are dark-eyed and light-eyed in certain proportions which, on the average, are definite.

The long hair in angora cats or in guinea-pigs seems to be due, not to a factor added to short hair, but rather to the absence of a unit which stops growth in short-haired animals.

It is too early as yet to offer any opinion as to the actual nature of the factors we are now talking about. Some time we may know really what they are, but as yet we are in ignorance.

### PRINCIPLE OF SEGREGATION OF UNITS

Having described the formation of an individual from units brought into him by the two germ-cells derived from his parents, we may now turn to an examination of the mode of formation of the germ-cells which are formed in him himself and which will be concerned in his contribution to his children should he have them. It will be interesting to see how the various ingredients of which he himself was originally compounded are distributed among the germ-cells which are budded off from him. The observations which have been made teach that except for rare variations the germ-cells formed from him are all alike in respect of those units of which he is pure-bred. This might have perhaps been expected, but the constitution of his germ-cells in respect of the units of which he is cross-bred—I mean those units which he received from the germ-cell of one parent and not from that of the other—could scarcely have been foreseen. In the cases thus far studied experimentally in animals and plants some of the germ-cells from such individuals contain a representation of the unit and others do not, just as the parent germ-cells did or did not contain it. This fact, known as the principle of segregation of units (or determiners), is the most important discovery made by Mendel.

We now see that if a certain unit were brought in by both parent germ-cells, then all the daughter germ-cells have it; if it did not come in through either parent germ-cell, then no daughter germ-cell will have it; if it came in through one parent germ-cell and not through the other, then about half the daughter germ-cells will have it and about half of them will not. In other words, the individual made by the mixing of tinctures from two chests of bottles sorts the tinctures back again into a double row of bottles, a pair corresponding to each ingredient or unit, and each of the germ-cells budded off from him receives a drop from one or other bottle of each pair. This is what is known as the purity of germ-cells. "They are pure in the possession of an ingredient or in not possessing it; and the ingredients or factors, as we generally call them, are units because they are so treated in the process of formation of the new gametes and because they come out of the process of segregation in the same condition as they went in before fertilization." (Bateson.)

### TYPES LIMITED

Two given parents can therefore produce only a limited number of types of offspring; the relative numbers of the types thus produced by recombinations of the parental units can often be predicted according to simple mathematical rules.

If we could know the unit characteristics which both parents possess as well as those which they both lack, and also the unit characters in which they differ, and if we further knew for each characteristic whether it was due to a presence or an absence, we could go far toward predicting the result of a particular marriage. Of course we are as yet only on the threshold of such knowledge. It is often very difficult to tell whether a parent possesses a given factor or not, but for some characters it is quite easy and can be told at once, since there are factors which cannot be present in an individual without manifesting their presence. In some families, for example, a certain number of the members are affected by night-blindness. If an individual affected marries one unaffected, their children will be partly affected and partly unaffected, but their unaffected children in turn, not containing the unit responsible for night-blindness, cannot pass it on.

### COMPLEMENTARY UNITS

Through the study of pedigrees, but more particularly through experimental studies, our knowledge of Mendelian heredity is slowly progressing and very astonishing answers are being obtained to the questions which scientists are putting to nature.

Certain bodily characteristics seem to depend, not on a single ingredient or factor, but on the combined activities of several factors—the so-called complementary units. Thus in mice, if only one color factor is present the fur is chocolate; if another factor in the series be added the fur becomes black, and if a third factor concurrently act, the fur has the brownish-gray color of the common wild mouse.

### INTERACTIONS AND REPULSIONS

Students of heredity have also found that units of different nature sometimes interact with one another during cell division. There seem to be, for example, mutual repulsions among Mendelian units, and if an individual is cross-bred in respect of two repelling factors, that is, if he has received only a single dose of each, then the germ-cells budded off from him are so composed that each contains one or other of the two repelling factors; not both. This fact has been beautifully demonstrated by the studies of Bateson and Punnett on the hybridization of sweet peas.

### HEREDITY AND DISEASE

Observations on human beings show the importance of studies of heredity, not only for the understanding of normal life, but for obtaining an insight into the prevalence of abnormalities and of disease. In some families the hands have short fingers, each digit having only two instead of three phalanges.[1] The abnormality appears to be due to the presence of a Mendelian unit which inhibits the normal process of growth in the fingers. A short-fingered person married to a normal person will have children all or half of whom are short fingered; should two individuals, however, even though derived from short-fingered strains, be themselves free from short fingers, their child will be normal. The same rule in all probability applies to diabetes insipidus.

Sometimes an abnormality or a disease is due to the absence of a Mendelian unit rather than to an abnormal presence. In some families the lining membrane of the eye undergoes a pigmentary form of degeneration. Here not only members of the family affected with the disease may transmit the disease to offspring, but even those with good eyes may have children suffering from the pathologic change. The same is true of deaf-mutism. In the disease of the eye just spoken of and in deaf-mutism it is exceedingly dangerous for an affected person to marry a blood relative even if that relative does not suffer from the same defect.

### IMBECILITY

Imbecility, in certain of its forms, appears to be due to the absence of some definite simple factor. If two imbeciles marry, even though they be unrelated to one another, the offspring are all imbeciles. I need only refer to Barr's case in which an imbecile of thirty-eight married a delicate wife and twenty years later was the father of nineteen defective children. Davenport states that he can find no case on record in which two imbecile parents have produced a normal child, and yet thousands of children are born every year in this country of imbecile parents. One can only think it will not be long, in view of this, before imbeciles will be restrained from reproducing their kind. The family of hereditary ataxics studied by Dr. Sanger Brown, the brains of two members of which I have studied and made a report on, illustrates well the baneful propagation of a bad stock.[2]

If time permitted statistics could be given regarding the insane, the epileptic, the chronic inebriate and the habitual criminal which would convince anyone that such persons should never become parents, and would cause to be initiated a movement to awaken public opinion and legislative action in these matters.[3]

### RESISTANCE TO DISEASE

While studies of heredity show us the direction in which we must work on the negative side, they are also full of promise on the positive side. One of the most fascinating investigations with which I am familiar is that of Biffen[4] which led to the demonstration that the power to resist a disease may depend on the presence in a germ-cell of one of the simple Mendelian units to which I have been referring. It has long been known that certain kinds of wheat are very susceptible to a disease known as wheat-rust which is due to an infection with a fungus. Certain other varieties of wheat are immune to this rust disease. If an immune strain be crossed with one which is not immune, the resulting hybrids are all susceptible to rust, but when such hybrids are permitted to undergo self-fertilization they yield seeds from which appear susceptible and immune plants in the ratio of 3:1. This little experiment gives an entirely new and precise significance to what we have hitherto designated as resistance to disease; it is conceivable that a field of research has here been opened up which may yield results of great practical as well as theoretical value. It is quite conceivable that what has been found to be true in this case may turn out to be true of resistance to many other diseases in both plants and animals; and who knows but that before long the attention of medical science will be turned less than at present towards modes of infection and more than now toward the breeding of a race with heightened resistances? Indeed it seems now far from being impossible "that liability to a disease or the power of resisting its attack, addiction to a particular vice or to superstition," may be found to be "due to the presence or absence of a specific ingredient and that these ingredients are transmitted to the offspring according to definite predicable rules."

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[1] Cf. Farabee, W. C.: Inheritance of Digital Malformations in Man, Cambridge, 1905; Walker, G.: Remarkable Cases of Hereditary Anchyloses or Absence of Various Phalangeal Joints, etc., Bull. Johns Hopkins Hosp., 1901, xii; and Drinkwater, H.: An Account of a Brachydactylous Family, Proc. Roy. Soc., Edinburgh, 1908, 35.

[2] Barker, L. F.: Description of Brain and Spinal Cord in Hereditary Ataxia. Decennial Publications, University of Chicago, 1903.

[3] Cf. Bateson, W.: An Address on Mendelian Heredity and Its Appication to Man, Brain, 1906, xxix, 157.

### APPLICATION OF EUGENICS TO RACE CULTURE

The science of eugenics aims to make use of all these newer facts of heredity as well as those resulting from statistical or biometric inquiries, and to apply them in race culture. It will not, however, neglect the very important influence of environment, and must pay especial attention to the rôle of racial poisons like alcohol, lead and the toxins of syphilis. Time will not permit me to dwell on the obstacles in the way of eugenic progress, nor can I even refer to all the methods proposed by those who harbor the eugenic ideal. It seems to me important, however, to point out that certain of the methods recommended by enthusiasts for the improvement of the race would, if resorted to, be likely to be more harmful than useful. It seems to me probable that the new facts of heredity may be applied best through the utilization of the institution of marriage. I do not think it probable that any method incompatible with marriage, with the love of the sexes, or with the care of the children chiefly by their own parents, will be adopted at any rate in the near future. The suggestions of Plato, of Malthus, of Spencer and of Nietzsche, though important in certain directions, were all fallacious in others. It is highly probable that some of the views most generally held to-day will not bear the test of time, but, despite this, we have enough certain knowledge to permit us to do much toward the elevation of mankind by eugenic methods. Though the birth-rate is decreasing, the population of the world is increasing. Though one-third of the infants born die within five years, great strides are being made in the prevention of infant mortality. It is not necessary to foster infant mortality in the hope of removing the unfit. It is much more important to prevent the birth of the unfit. By understanding Nature and obeying her we shall learn to command her. Most of the illegitimate children now born die soon after birth. The majority of undesirable citizens do not propagate their kind, even under our present social arrangements. Selection by marriage, faulty as it is, has on the whole favored the improvement of the race. Women are becoming freer to choose husbands than ever before and social opinion regarding the length of time of engagements and the prevention of unfit matings is becoming ever more enlightened. It might be advantageous if women especially suited for motherhood were made financially independent by the state. So-called codes of honor found to be wrong are being abandoned. More and more provision is being made for the permanent detention of inebriates, insane, the feeble-minded and criminals; parenthood will be more and more prevented among these degenerate individuals, by permanent detention, or possibly, as has been seriously recommended and practiced by some, by surgical or *x*-ray sterilization. Young people are being educated better than before as to the significance of sex and the responsibilities of parenthood, of the dangers of racial poisons, and especially of the risks of venereal disease. With the help of the Wassermann reaction it is now possible to find out whether an individual who has once had syphilis has been sufficiently treated to prevent his transmission of the disease to a conjugal partner or a child.

### HEREDITY NOT A BUBBLE

One fact is outstanding; heredity is *not* a "mere bubble to be pricked," despite the cleverness of Mr. Bernard Shaw. Through our knowledge of its laws we shall be able to progress toward the better part of the ideal of Nietzsche, who longed for the highest perfection of man. As a practical advisor for the attainment of this perfection Nietzsche may not have been wise, but no one could have had a higher aim. Thus spake Zarathustra: "Hitherto all things have brought forth something better than themselves, are you going to be the ebb of this great tide? Man is something that is to be surpassed. Thou, the victorious one, the self-subduer, the commander of thy senses, thou shalt build better than thyself. But thou must thyself be built square in body and soul. Thou shalt create a higher body, a prime motor, a self-rolling wheel; thou shalt create a creator."[5] Similar views have been expressed by one of the greatest of our American poets. What could be more eugenic than this striking passage?

> Lead the present with friendly hand towards the future—
> Bravos to all impulses sending sane children to the next age!
> But damn that which spends itself with no thought of the
>   stain, pain, dismay, feebleness, it is bequeathing! . . .
> I see tremendous entrances and exits, new combinations, the
>   solidarity of races—
> Always a nonchalant breed, slightly emerging, appears on
>   the streets,
> Arouse, for you must justify me!
> Not to-day is to justify me and answer what I am for,
> But you, a new brood . . . greater than before known . . .
> Great idea, idea of perfect and free individuals!

### EUGENICS SHOULD BE STUDIED

Fragmentary as has been this presentation, I trust that it may stimulate thought regarding the eugenic ideal; I hope that the subject will be studied and that people may become instructed in it. In becoming thorough eugenists, we shall act in accordance with the highest aims and purposes of all persons interested in true social hygiene. Though the old doctrine of predestination gets new support from the recent studies, these studies also teach us how mankind can control its destiny. It will be absolutely necessary to attack the problems of (?) the improvement of races and families and (?) the extinction of hereditary disease in the one single way in which permanent betterment is possible. We must more consciously control the union of germ-cell qualities, and we can do this by creating new sentiments regarding marriage and parenthood. In these problems lie, it seems to me, the most important and the most difficult tasks now confronting families, nations and the human race!

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[4] Biffen, R. H.: Studies in the Inheritance of Disease—Resistance. Jour. Agric. Soc., Cambr., 1907, ii, 109.

[5] Mügge, M. A.: Friedrich Nietzsche; His Life and Work, London, 1908.

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# A STUDY OF TRANSILLUMINATION *

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The data presented in this paper were gained by clinical observation of a large number of normal and diseased eyes in adults, children and infants, transillumination of enucleated globes in the rich and varied collection of the Pathological Laboratory of the New York Eye and Ear Infirmary, and experiments with globular artificial eyes filled with blood, serum, fibrin and various colored fluids. In the last two categories, the possibility of controlling and proving the facts determined during transillumination was of great practical value. The results were such as to corroborate, in the main, what clinical ophthalmology has taught us in regard to the optical reaction of various intra-ocular structures to light transmitted through the sclera; yet a number of instructive and interesting as well as novel exceptions were encountered which will be considered somewhat in detail later.

Both the Sachs and Würdemann lamps were used throughout; the examinations being conducted in a dark room and sometimes exclusion of light was further effected by the use of a black rubber sheet over the head of the examiner and subject. Examined in this way, the normal sclera was always found to be uniformly translucent, something like the web of the fingers when held up to bright light.

In enucleated eyes this trans-scleral glow clearly outlined the entire globe and appeared at the pupil as a bright red reflex. The latter was most intense when the transilluminator was placed at the posterior pole, and the rays came directly forward toward the eye of the observer, or when it was placed over the ciliary body, and the pupil inspected obliquely from the opposite side. The latter is, of course, the only way in which bright illumination can be obtained *intra vitam.* The cornea offers, as might be expected, no obstruction whatever to transmitted light. It is somewhat surprising, however, that corneal opacities, no matter where situated or how dense, seem to melt away and give passage to a bright glow. Old leucomata can be transilluminated with ease, allowing us to make ont the position and topography of the pupil.

Dense pannus, of recent formation, tends to obscure the reflex slightly. This is probably due to the presence of blood in the newly formed corneal capillaries, as old, obliterated blood-vessels have no such effect. Deposits of uveal pigment on the cornea, as elsewhere in the eye, act as an absolute barrier to light from the transilluminator, so that we have in this instrument a very effective means of differentiating fibrinous or purulent deposits from those containing chromatic granules. The lens, whether clear or opaque to oblique illumination, is absolutely transparent to transillumination, so that not only nuclear, polar, cortical and capsular opacities, but mature senile cataract, as well, seem to have disappeared. In siderosis affecting the lens I have observed some dimming of the light, but this was by no means marked. Cataract, accordingly, offers no obstacle to the detection of an intra-ocular tumor, or possibly of a foreign body, by transillumination.

The true stop or diaphragm for transmitted light is the pigment in the uveal layer of the iris and ciliary body. That in the chorioid is so scattered as not appreciably to affect the rays. The normal iris is absolutely opaque. I have not been able to find any difference between light blue or gray and brown or black eyes, in this respect, nor is there any appreciable difference between the dense ciliary body and the thinner iris. Uveal pigment deposits on the lens, similarly, obstruct the light and appear quite black, no matter how small or thin. In many diseased states of the iris the pigment layer disappears and the light then comes through the stroma of this tissue as brightly as it does through the clear pupil. In many cases of atrophic iris, as in chronic glaucoma, there is a marked reticulation with the appearance of cribriform or accessory pupils.

Secondary membranes after cataract extraction obstruct the light only when they contain dense blood-clot or uveal pigment. In recent intra-ocular hemorrhage there is slight dimming of the light, and a blood-clot entirely arrests it. This was seen most unmistakably in old subretinal hemorrhage and in organized clot in the vitreous. Detached retina is absolutely transparent.

The differentiation of this condition from intra-ocular tumor, particularly from sarcoma, is one of the most important applications of transillumination. As is well known, melanosarcoma casts a dense shadow. This may often be seen as a dark area at the site of the new growth, as well as by dimming of the pupillary glow. It has been claimed that unpigmented sarcoma does not show by transillumination, but at least in one instance I was able to disprove this statement by eliciting a very manifest shadow over a deep-seated leucosarcoma of the chorioid. In the absence of any macroscopically evident pigment—the tumor appeared as a dense white mass—we must assume that the irregular arrangement of tissue cells is sufficient to obstruct the passage of light. Translucent or transparent structures, such as the sclera, cornea and lens, are composed of tissue elements arranged parallel and at right angles to the rays of light which traverse them. An irregular arrangement will naturally obstruct light to some extent even if no pigment be present. Glioma of the retina is always transparent, but the presence of bony or calcareous changes is invariably indicated by opacity.

Transillumination gives no indication whatever of the circumlental space. The annular bright area immediately beyond the limbus depicted in the article by Würdemann is due to light rays which traverse the anterior chamber and come through the thin sclera about Schlemm's canal. It is only seen when the transilluminator is applied obliquely and well forward. When the light comes from the rear, the circumlental space disappears completely in spite of brilliant transpupillary reflex. Again, the appearance and dimensions of this light ring are unaltered by gross changes which not only

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* Read in the Section on Ophthalmology of the American Medical Association, at the Sixty-first Annual Session, held at St. Louis, June, 1910

alter, but completely abolish the circumlental space. Thus, in aphakia, there is no appreciable difference in the light ring from that seen in normal eyes. In buphthalmos and staphyloma of the cornea, the light ring may be seen to depend directly on the dimensions of the anterior transparent segment.

As the lens itself is quite pervious to light rays and, as we have seen, allows the brilliant reflex to pass through it even when completely cataractous, a delimitation of any circumlental space must be an optical, and hence, literally, a physical impossibility. Furthermore, the iris and ciliary body act as an absolutely impassable barrier extending from the pupil to the region of the ora serrata, so that no space within these limits could become visible externally. The comparison of a large number of glaucomatous eyes, before and after operation, with normal globes in patients of corresponding age has failed to reveal any differences whatever in the circumcorneal light ring.

In addition to its well-known uses for the detection of intra-ocular tumors and their differentiation from detachment and optically similar conditions, transillumination gives important information in many cases in which ophthalmoscopy is impossible, and oblique illumination alone teaches us little. This applies particularly to conditions associated with dense opacity of the cornea, such as staphyloma, extensive leucoma and occluded pupil. In dense leucoma with adherent iris, the size and shape of the pupil and the extent of its mobility under a mydriatic can be determined accurately. The site of an optical iridectomy, or the advisability of tattooing a corneal leucoma, may be determined in the light of transillumination.

This method may be combined with ophthalmoscopy for the examination of the ora serrata and neighboring ciliary region at present inaccessible on account of insufficient illumination due to the extreme angle of tilt which it is necessary to give to the ophthalmoscope mirror. With the combined method the structures far forward are seen beautifully.

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## ABSTRACT OF DISCUSSION

**Dr. Edward Jackson**, Denver: The statement of Dr. Fridenberg that "transillumination gives no indication whatever of the circumlental space," is absolutely correct, and it is strange that the idea of such a connection ever gained credence. As I demonstrated before the Colorado Ophthalmological Society, at its meeting in December, 1908 (*Ophth. Rec.*, March, 1909, p. 128), the principles of optics render any connection of the circumlental space with this circumcorneal illumination impossible. The simple experiment shows that when the source of transillumination is back of the ciliary region no circumcorneal illumination occurs. Only when the tip of the transilluminator is brought forward, so as to light up the limbus on one side of the cornea, does the circumcorneal illumination appear on the opposite side. The circumcorneal ring is influenced by the absence of the lens, its dislocation or partial dislocation, or its congenital smallness.

Narrowing of the circumlental ring in connection with glaucoma does, I believe, occur. In an address before the Buffalo Ophthalmological Club a year ago (*Am. Jour. Ophth.*, December, 1909), I pointed out that this narrowing was associated with diminished depth of the extreme angle of the anterior chamber. It may also indicate sclerotic changes in the tissue surrounding Schlemm's canal, or pigment deposits in this region. Such narrowing certainly occurs in some cases of glaucoma. Possibly it may have significance as an indication as to the operation of choice in a given case of glaucoma, whether or not iridectomy is likely to give relief.

**Dr. R. D. Gibson**, Youngstown, O.: At the meeting of the American Medical Association in Boston I called attention to a form of transilluminator that I had to extemporize for the work we are often called on to do—the location of a foreign body. The tip of the illuminator was curved and had the lamp bulb in the end. This point can be inserted through a wound and the entire interior of the eye can be illuminated, or the point can be passed into any cavity. At the Boston meeting Dr. Würdemann, who followed me, presented his instrument, which is exactly the same, except that the light globe is placed at a different point. It is a handy instrument for emergency cases.

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# THE QUESTION OF ENUCLEATION IN PURULENT PANOPHTHALMITIS

## WITH A BRIEF EXPERIMENTAL STUDY OF THE SUBJECT *

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According to Becker,[1] forty-three cases of meningitis after enucleation of the eye had been placed on record up to 1888. The first two of these were reported by von Graefe at the Heidelberg Ophthalmological Congress in 1863, and he took occasion to warn against enucleation when the eye was in the active stage of an acute purulent panophthalmitis. With the exception of the contributions of Andrews[2] and George C. Harlan,[3] little or nothing on the subject has appeared in this country. The contributions of Leber and Deutschmann,[4] in Germany, are well known and are referred to by Andrews in his paper. Within the past twenty years, then, there has been no discussion of this interesting and practical subject, and I think that it is the first time that it has been brought before this Section. Since the above reports, others of a similar character have appeared now and again, as, for instance, that of de Lapersonne,[5] who reported a case in which the meningitis was due to the pneumococcus which was found in the sheath of the optic nerve and also at the base of the brain.

Some years ago a colleague of mine had a distressing experience with one of his patients, a child, who was struck in the eye by a piece of glass. Iridocyclitis followed and later panophthalmitis. The eye was enucleated, and three days later meningeal symptoms showed themselves and the child died. The utmost care was employed in the course of the operation and nothing was left undone which might have averted such a result. I recall a number of cases of purulent panophthalmitis in the hospital service of the late J. J. Chisolm. Prompt enucleation was the routine treatment with him for this class of cases, and I have seen some shocking looking eyes removed in the active stage of a purulent panophthalmitis and never with bad result, certainly not with fatal result. I must say, however, that I have no way of determining whether any untoward symptoms developed immediately after enucleation, symptoms which might be explained by a mild meningeal inflammation and which disappeared just as they sometimes do, without being sufficiently suggestive to alarm the surgeon or even to attract his attention. It seems to me important that those who make a habit of enucleating eyes in the active stage of a purulent panophthalmitis should keep such patients for several days after operation under the closest observation, with special reference to temperature and symptoms generally suggestive of meningeal involvement. It is quite possible for a mild meningitis to exist for a short time without being detected. It has been my rule to watch the temperature of all patients after enucleation, and I think I can say offhand that no temperature elevation followed. I speak now of eyes in which the inflammation was apparently confined within the eyeball. The conditions are different, however, when we consider an eye which is tense, full of pus, protruding and surrounded by engorged tissues, and generally this has been the picture presented in cases in which death followed the enucleation. It is in the hope of bringing out a full discussion that I bring the subject before this Section. It may be of interest to refer to discussions of this question before other gatherings of ophthalmologists. In 1888[6] the subject was up for discussion before the French society of ophthalmology. While Panas, Dufur, Motais and Gayet favored enucleation in these cases, Meyer, Galezowski and Abadie raised their voices against this procedure. According to Andrews, the late C. R. Agnew expressed himself as opposed to enucleation. In a discussion before the Ophthalmological Society of the United Kingdom,[7] Dr. Brudenell Carter, Mr. McHardy and Mr. Gunn favored enucleation, while Nettleship, Higgins and Mules were opposed to enucleation in such cases. It is evident from all this that there is much difference of opinion among able men on this point.

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* Read in the Section on Ophthalmology of the American Medical Association, at the Sixty-first Annual Session, held at St. Louis, June, 1910.

1. Die Universitäts Augenklinik in Heidelberg, 1888.
2. New York Med. Jour., Dec. 29, 1888.
3. Trans. Amer. Ophth. Soc., 1879.
4. Von Graefe's Arch. f. Ophth., 1885, iv.
5. Echo méd. du Nord, Lille, 1897.

H. D. Noyes, in his text-book, states that from 1868 to 1888 there were 1,164 enucleations at the New York Eye and Ear Infirmary, and, of these, purulent panophthalmitis was present 161 times, and there was no fatal result. It is clear that one can practice enucleation in panophthalmitis a great many times without disaster; but when death has occurred it has nearly always been where the enucleation has been performed in the presence of a purulent panophthalmitis, especially when associated with great phlegmon of the orbital tissues. It would be interesting to get statistics of meningitis in those cases in which the eye had not been subjected to surgical interference. Cases of this character exist, as reported by Webster.[8]

## EXPERIMENTAL DATA

The following experiments were undertaken to ascertain whether meningitis could be produced in some of the lower animals by first producing a purulent panophthalmitis and then removing the eye in the active stage of the disease. The animal was always etherized. The only instruments employed in the earlier experiments were a small hypodermic syringe and fixation forceps, which were boiled before using. The following case is an illustration of the behavior of the rabbit after operation, though in this, the first case, the animal died two weeks after enucleation:

Rabbit 1.—The eyeball was pulled forward and downward and the conjunctiva was dissected away, leaving the sclera bare at a point about 2 mm. behind the lens. Five minims of a suspension of *Staphylococcus aureus* were injected into the vitreous. The next day the anterior chamber was cloudy and the eyeball was intensely red. On the third day there was a typical picture of purulent panophthalmitis so the eye was enucleated. The animal declined and died two weeks later but the autopsy showed nothing abnormal in the brain.

Rabbit 2.—Jan. 17, 1909, a rabbit was inoculated in the same way and in three days purulent panophthalmitis was present. The eye was enucleated on the fourth day. The effect of the operation was negative and the animal died five weeks later from an injury received in transferring it from one part of the building to another.

Rabbit 3.—Feb. 2, 1909, I inoculated the right eye of a rabbit just as in the other two cases. The reaction seen next day was positive but less pronounced than in either of the preceding cases. There was cloudy vitreous with pericorneal redness. The condition subsided in large measure in a week, that is to say, the redness disappeared. Another injection was made in about the same place and this was followed by a sluggish inflammation of the retina and chorioid, leaving a picture which was strongly suggestive of the so-called pseudoglioma. Inasmuch as the organism employed seemed to have lost its potency through age, I injected a culture of the same organism of a 48-hours growth. This was followed by an intense panophthalmitis and on the third day the eye was enucleated. The experiment was negative.

Seven rabbits were treated in this manner and with the same result, and with the exception of the two mentioned all were living and well two months after the experiment.

Six guinea-pigs were subjected to the same experiment and the result in every case was negative.

Another series of experiments on rabbits was commenced. Instead of injecting a suspension of organisms an infected foreign body was introduced into the vitreous and allowed to remain there. The foreign body selected was a tack 1/4 inch long. A small incision was made in the usual location with a Graefe knife and the tack was pushed in with a pair of delicate forceps. Three of the tacks had been smeared with a pure culture of *Staphylococcus albus*. On the second day there was always iridocyclitis and on the fourth day typical panophthalmitis. The eye was enucleated at the height of the inflammation. Seven rabbits were treated in this manner and the result was negative in every case.

A new series was commenced and instead of using aseptic precautions the conditions surrounding the usual every-day accident were present. In six rabbits, a small piece of rusty wire 1/8 inch long was introduced into the viterous and in two rabbits a No. 5 shot. In every case purulent panophthalmitis followed and enucleation apparently had no effect on the health of the animal. In nine other rabbits particles of iron, pieces of glass and small fragments of copper wire, just the things which we see produce such disastrous results in human beings, were introduced and the results were negative. Generally speaking, the animal was a little depressed on the second and third day after operation (injection), but this had passed away by the time the enucleation was performed and with the exceptions noted were all alive and well after six weeks when the experiment was regarded as negative.

Thinking that a mild meningitis might be produced by experiments of this character and disappear without causing noteworthy symptoms six rabbits were killed at periods ranging from three to eight days after enucleation and cover slips from the surface of the brain were examined for pus cells and a piece of the brain was cut in each case from near the chiasm, hardened and examined, but there was no evidence of infection having found its way to the brain.

The results of these (43 in all) experiments tally precisely with what happens in human beings under similar circumstances, and they help to impress us with the fact that death from meningitis induced by enucleating an eye in the acute stage of a purulent panophthalmitis is an exceptional event. That the infection travels by one or more of several routes (i. e., by the lymph and blood passages, the sheaths of the optic nerve) is probable.

Yet it is my practice to abstain from enucleation, notwithstanding that the evidence speaks for its comparative freedom from risk. I always make two crucial incisions in panophthalmitic eyes, one on the external side of cornea about a quarter of an inch from the limbus and a little below and parallel to the equator of the eyeball, and another incision in a corresponding situation on the opposite side of the cornea. I have had a conviction that to enucleate such an eye was a risk, in spite of what

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[6] La Semaine médicale, May 9, 1888.
[7] Trans. Ophth. Soc., United Kingdom, 1887.
[8] Trans. Med. Soc. State of New York, 1888.

Panas, Mr. Gunn and others say to the contrary, and I strongly hoped to be able to prove this by my experiments. The panophthalmitis which is experimentally produced does not differ apparently in the slightest degree from the process seen in human beings, and, while experiments of this character on rabbits (which are unusually resistant) cannot be regarded by any means as very strong evidence that the procedure is a safe one, it must be conceded that such results coincide with the views held by many ophthalmologists, that the risk, if any, is too slight to be considered.

In conclusion, let me say that, in spite of the experimental and statistical evidence in favor of the comparative harmlessness of enucleating a panophthalmitic eye, I am of the opinion that incisions in the eyeball constitute a measure which is perhaps safer, and I should perform enucleation only as H. Knapp suggests in cases in which a speedy and painless recovery would be of high importance, as, for instance, in old and enfeebled persons.

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## ABSTRACT OF DISCUSSION

**Dr. L. Webster Fox**, Philadelphia: Being situated in a manufacturing city I have had an extended experience in enucleation of the eyeball. From the different mechanical shops we have various panopthalmic conditions to deal with. Iron workers who lose their eyes by accidents with hot metal rarely have panophthalmitis, but we find many cases among brass and copper workers. In cases in which we cannot perform the substitute operations we enucleate if pus has formed and there is destruction of the interior coats of the eye. I have not command of the statistics and do not know how many such cases I have encountered, but I have had sufficient to know that I would never hesitate to enucleate in an acute case of panophthalmitis. I have never had a case of associated meningitis follow any of these cases. Meningitis would seem to be sure to follow some of these severe cases of inflammation of the eyeball, especially after injuries. We do get it in metastases following gonorrheal inflammation of the joints or following a chorioiditis. I have had a number of such cases, and they almost come in the same class of cases as panophthalmitis, but the resistance of the posterior part of the eye seems to prevent the backward passing of the streptococci, and the stretching of the eyeball and the weakening of the cornea allows the pressure forward and not back; therefore the pus currents are directed anteriorly instead of posteriorly. I believe that prompt enucleation, as Dr. Randolph says, is the proper thing to do in these cases, and I do not hesitate to perform that operation when pus is present to such an extent that at the end of the third day there is enormous edema of the eyelids and the anterior chamber is filled with pus, and the cornea is already clouded.

**Dr. C. J. Kipp**, Newark, N. J.: I have practiced for fifty years and during that time I have enucleated every eye that presented this condition. I have never seen a case in which I regretted it. I think it is the proper thing to do under all conditions to relieve the pain, especially in working people. The trouble is thus cut short and I have never yet seen the slightest harm result from enucleation.

**Dr. L. H. Taylor**, Wilkes-Barre, Pa.: It seems to me that it is not a question as to whether it is a dangerous procedure, but whether it is not a more dangerous procedure not to enucleate. I have performed many enucleations in panophthalmitis and have always felt that it was my duty to perform the operation in the acute stage. I have done so without hesitation and have never seen any bad results. After reading Dr. Randolph's paper I did not have time to go over all my cases, but went over some of them and find that in the earlier years of my practice I operated in a very large percentage of the cases of panophthalmitis. I have not done so many in recent years, because I believe we do not have so many cases in proportion to the number of enucleations, but I have never yet seen a bad result following an operation under such circumstances.

**Dr. C. H. Williams**, Boston: I want to add my experience in one case. The patient was a man about 70, and in very good health, but with panophthalmitis. I enucleated that eye. Following that there was apparently a meningitis and the man died in about two weeks. I was unable to obtain an autopsy. That is the only case that I have ever had in which a fatal result followed enucleation, but it shows, I think, that there is a certain amount of danger—not enough to prevent the operation from being done where it seems necessary, but enough to cause us to be very careful in regard to all our aseptic methods.

**Dr. S. L. Ledbetter**, Birmingham, Ala.: Living in a manufacturing and mining section, I have had quite a number of these cases, but still not enough to make out a case for or against the operation. In a large percentage of cases in which I have done an enucleation I have found a rupture of the sclera and there was already pus in the tissues behind the ball. Taking that view of the case, I believe there is more danger of leaving the pus than in removing the ball and allowing drainage.

**Dr. E. C. Ellett**, Memphis, Tenn.: Something must be done in these cases, and of course the alternative to enucleation is evisceration. Now lest we should think this an absolutely safe procedure I should like to relate my experience in one case. The patient, a negro, was shot in the eye with a slungshot, the missile being a piece of a small iron nut. When he came to me he was sure that the missile when it struck him had fallen to the ground, and beyond a dressing of the eye nothing was done primarily. The patient developed a panophthalmitis. An evisceration was done and this body removed from the interior of the eyeball. There was no penetration of the sclera, the wound of entrance being through the cornea and wholly within the cornea. The patient developed a general septic infection and died. I did not think he had a meningitis. A culture from the fluids in the eye at the time of evisceration showed colon bacillus.

**Dr. Prince**, Springfield, Ill.: Ever since the publication of Dr. Wisner's article suggesting the danger of enucleation in panophthalmitis I have followed his recommendation and have invariably eviscerated. I have never had any complication from that procedure since the very earliest operations. At first I had an enormous amount of inflammation following the evisceration, but I very early learned to cauterize the inside of the stump with phenol and to fill it with iodoform. This raises in my mind two questions: One is the danger of fatality and the other is the preservation of the stump. In every case in which there is not a septic condition I introduce a gold ball for the purpose of preserving a good stump. In enucleation in some instances I believe we get almost a gangrenous process and in one case the inflammation was so severe as to produce a paralysis of the superioris muscle. I have never had a complication of the ball or lid following evisceration, and if it can be shown that we can get a better cosmetic effect I should be in favor of evisceration rather than enucleation in panophthalmitis.

**Dr. S. L. Ziegler**, Philadelphia: I have had many of these cases and have never hesitated to enucleate. One case, in which the result was fatal, certainly was an exception. It was a case of lime-burn following the use of a spray. The man, not receiving the effect from the spray, looked into the nozzle, and at that moment, the spray, like the gun that is not loaded, went off and the eye was filled with whitewash. This was followed by a severe inflammation. I did not see the patient until three or four days after the accident. I think that before the enucleation was decided on there were certain symptoms which indicated a very mild meningitis. The symptoms certainly appeared to be severe enough to warrant enucleation. There was in connection with this a certain amount of discharge, which may have some bearing on the ultimate result. When the eye was enucleated, and afterward, although there was more or less antiseptic dressing used, the discharge continued. In another such case I certainly would dress it as an open wound with formalin dressing, but instead of enucleating I would undertake the old-fashioned method of splitting the eyeball, allowing the inflammation to subside, and dressing it as an aseptic stump until it was in a condition for further operative procedure.

Dr. Edward Jackson, Denver: I have never seen a serious complication from an enucleation during a panophthalmitis. I have sometimes eviscerated and sometimes split the eyeball from the fear that something serious might result. I saw one case in the practice of another surgeon in which the panophthalmitis was subacute—not very severe. The eye was let alone—no operation was done—but afterward, I believe, between two and three weeks, a meningitis developed and ran a somewhat slow course to a fatal termination, although the eye had not been interfered with in any way.

Dr. Hiram Woods, Baltimore: This thing sometimes assumes importance from an economic point of view in a few cases in which men have been injured in industrial accidents, and there is something in the point of Dr. Taylor that it might be more dangerous to let them alone. In a case I saw, a man was injured in the afternoon and brought, bleeding from the nose, into the hospital late, where he was seen by the intern and cleaned up. A crowbar had gone through the left eye. The next day I found that the inner wall of the orbit was inflamed. There was no pain and the eye was wide open. The question came up whether to enucleate or withhold operation on account of the fear which Dr. Randolph has brought out in his paper, and the eye being wide open and the patient being free from pain and free drainage present I decided to let him alone. He did well for two weeks; then suddenly his temperature shot up. The intern called a consultant, and lumbar puncture was done but the man died from meningitis and a culture showed infection from the Flexner organism. The Flexner serum was tried, but without effect. Dr. Flexner wrote Dr. Wilson that it was the first traumatic case in which this organism had been found. The case resulted in a lawsuit. It occurred to me to ask myself what the result would have been if I had taken that eye out. The man was let alone because the ocular symptoms were not severe enough to make us do anything in an operative direction. He apparently contracted a meningitis from the rupture of the inner wall of the orbit.

Dr. R. L. Randolph, Baltimore: I did not want to give the impression that I was in favor of enucleating the panophthalmitic eye in all cases promptly. Such certainly was not the intention in the paper. I stated that in that variety in which there is an enormous amount of engorgement of the surrounding tissues that I always made incisions in the anterior part of the eyeball. I think it is quite evident that there is not the same diversity of opinion among American ophthalmologists as among our confrères across the Atlantic. At the same time I cannot help thinking from my reading and from the discussion this afternoon, that there is a small element of danger in removing an eye in this condition, and I still think it is the safer procedure, perhaps, to make incisions as I suggested rather than take out the eye in the active stage. The cases reported by Dr. Jackson and Dr. Woods, and I think one or two of the others, and Dr. Webster's case, in which meningitis followed, are interesting. I understand Dr. Woods to say that in his case there had been a direct entrance of the foreign body into the brain. Of course that case would be thrown out of the class of cases having an optical origin or a bearing on the question of meningitis following a panophthalmitis, because it would not be necessary to consider the eye as the source of the infection.

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**Mosquitoes and the Vernal Recurrence of Chorea.**—In the *Woman's Medical Journal*, April, 1910, Dr. Marion Craig Potter, Rochester, N. Y., reports five cases of chorea occurring in the spring or summer, two of them recurrent cases, in which investigation seemed to indicate that mosquitoes stood in a causal relation to the occurrence of the disease. In one case the disease recurred a second and third season within two weeks after going to a summer resort where the child was severely bitten by mosquitoes. In the other cases there was a definite history of being severely bitten by mosquitoes with the development of the chorea following.

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# THE RADICAL TREATMENT OF LACRIMONASAL DISEASE BY RAPID DILATATION AND ALLIED MEASURES *

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Free drainage of the mucous-membrane-lined cavities and canals of the body is a fundamental essential in preserving their physiologic functions and preventing their infection. The radical relief of tear-duct disease presupposes, therefore, the successful accomplishment and maintenance of a patulous lumen in the lacrimonasal canal. The most important measures utilized for this purpose consist of dilatation, incision, introduction of styles, irrigation, electrolysis and cauterization. Extirpation of the lacrimal sac occupies a special field of its own and will not be discussed at this time.

## ANATOMIC CONSIDERATIONS

For convenience we may roughly divide the tear-drainage apparatus into three parts, the first portion comprising the lacrimal puncta and canaliculi, the second the lacrimal sac, and the third the *ductus ad nasum.* The bony canal is lined with periosteum covered with cavernous tissue, over which is superimposed a layer of mucous membrane paved with columnar ciliated epithelium. This lining is often thrown up into transverse folds or rugæ which may be annular in arrangement and sometimes possess a valve-like action. The muscle of Horner at the upper end and the valve of Hasner at the lower end complete all the tissue elements essential to our problem.

The length of the bony canal varies from 20 to 29 mm. and its diameter has been variously estimated at from 2 to 7 mm., the average being 4 mm. Power[1] in 1885 carefully measured 551 bony canals and found that the average diameter was 3.77 in whites, 4.70 in negroes and 4.63 in Mongolians, the general average of all races being 4.22 mm. Theobald[2] in 1877 stated that an examination of 70 bony canals revealed an average diameter of 4.11 mm., while tests of muco-periosteal lined canals in the cadaver showed a caliber of from 4.47 to 5.25 mm. It is evident, therefore, that moist cadavers permitted larger probes to be passed than could be passed through the distorted bony canals of dried skulls. To go a step farther, we may naturally deduce what I have found to be a fact, that the lacrimonasal canal *in vivo* is more distensible than it is in skulls because the bones and tissues are more flexible.

## PHYSIOLOGIC DESIDERATA

The normal function of the tear-duct is to draw off from the lacus lacrimalis the excess of tears collected there and to pass them freely downward into the nose. By winking and slight muscular contraction we encourage a suction or siphonic action which carries off this lacrimal fluid through capillary attraction. It should be our aim, therefore, to secure a patulous tear-duct and at the same time to preserve, so far as possible, this physiologic function of capillarity. The ideal method should accomplish this by a sudden wide dilatation of the duct without incision of the punctum or of the canaliculus.

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* Read in the Section on Ophthalmology of the American Medical Association, at the Sixty-first Annual Session, held at St. Louis, June, 1910.

[1] Power, Henry: Lectures on Diseases of the Lacrimal Apparatus, Lancet, London, 1886, ii, p. 908.

[2] Tr. Med. and Chir. Faculty of Maryland, 1877, p. 154.

### PATHOLOGIC FACTORS

The pathogenic influence of intranasal lesions in the etiology of lacrimal disease is generaly accepted. It is estimated that at least 90 per cent. of these cases have a nasal origin. Secretions that are chemically irritating and laden with infectious bacteria are poured out from the accessory sinuses onto the floor of the nose and carried by reversed capillarity up into the lacrimonasal duct. The inflammation resulting from this irritation may be superficial, causing ulceration, stricture or catarrhal thickening of the mucosa. On the other hand, the infection may penetrate the deeper structures, resulting in periostitis, caries or even in the formation of abscess. We must always bear in mind, therefore, the possibility of two active factors in the etiology of ocular disease, first, the pus-laden nasal fluids which the tear-duct may suck up and transmit directly to the eye, and second, the perverted secretions which the obstructed tear-duct may develop within itself. I have elsewhere[3] referred to this as follows:

> If now we concede an infectious cystitis of the antrum, we can comprehend how it is possible for an unlimited stream of pathogenic micro-organisms to be poured out onto the cup-like floor of the nasal chamber, and by capillary attraction drawn up into the lacrimonasal duct, and thence to the ocular cul-de-sac. The lacrimonasal duct itself is, moreover, a most fertile nidus for this bacterial development. The presence of strictures, viscid secretions, ulceration of the lining membrane, or interstitial thickening of the same, all tend to interfere with its siphonic action in the downward drainage of the tears. The bacterial growth is greatly facilitated by the consequent stagnation. Not only are the tears prevented from passing into the nose, but microbic infection is carried upward to the eye by the regurgitation of these septic secretions.

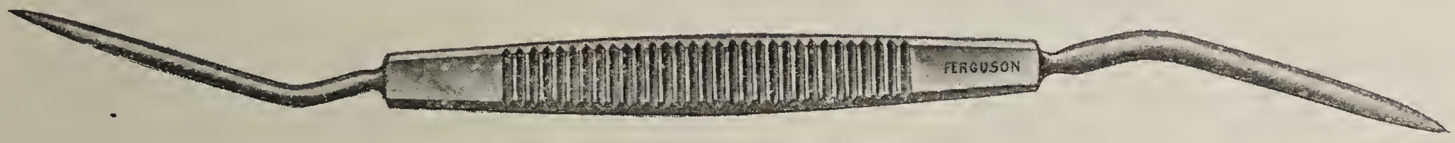

Fig. 1.—Ziegler's lacrimal dilator.

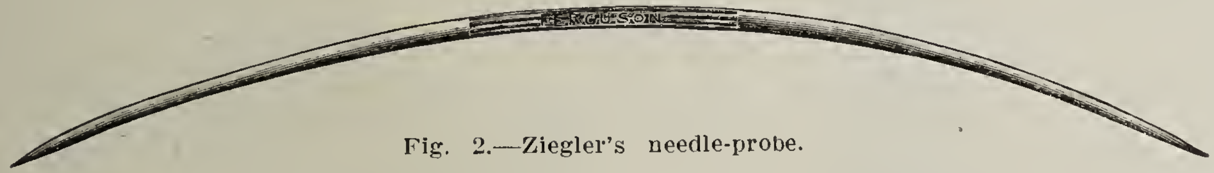

Fig. 2.—Ziegler's needle-probe.

The ocular tissues that are most vulnerable to these septic and irritating fluids are the cornea, the conjunctiva and the palpebrum. Ulcerative keratitis, especially when recurrent, phlyctenular keratitis, vascular keratitis, sloughing of the cornea and wound infection may originate in this manner. Chronic conjunctivitis, eczema of the lid, and blepharitis marginalis may arise from the same cause, while the influence of persistent lacrimal irritation in causing ectropion and entropion is well known.

The absence of epiphora or blennorrhea does not contraindicate lacrimonasal disease. On the contrary, we should always remember these two important facts, first, that we may have obstructive lacrimal disease without epiphora, and second, that we may have ocular infection without visible blennorrhea.

### DILATATION OF THE DUCT

While many authorities have advocated probing of the tear-duct, Bowman probably did most to popularize this procedure. His probes, however, were very small, the largest measuring only 1.5 mm. Credit for the use of very large probes is undoubtedly due to Theobald, who in 1877 began to advocate publicly such extreme measures, and to demonstrate the excellent results which he had obtained. His probes were cylindrical in shape with a conical point, the series ranging from 0.25 mm. (No. 1) to 4 mm. (No. 16), the interval of increase being 0.25 mm. Probes of similar caliber were also adopted by Couper of London at about the same time, but were not so well accepted owing to the olivary shape of the point and the larger interval of increase (0.50 mm.).

While intern in the Wills Eye Hospital, from 1887 to 1889, I saw many patients treated with large probes in the services of Dr. Goodman and Dr. Harlan, and was greatly impressed with the superiority of this method over others in use at that time. My observations, however, convinced me that there were several disadvantages that ought to be overcome: (1) the process of dilatation was too slow; (2) oft-repeated probing created irritability of the tissues; (3) treatment was neglected by the patient because of the frequent visits required; (4) irritating nasal secretions were frequently expelled into the eye by blowing the nose; (5) the capillarity of the duct was completely destroyed by the combined Bowman's incision and the extreme dilatation secured by the use of No. 16 probes (4 mm.). The conviction was forced on me, therefore, that if a large caliber was necessary this should be accomplished at one sitting by a forcible dilatation, *ad maximum*, but without incision of the tissues, thus preserving the capillarity of the duct and avoiding the many disadvantages of the older method.

### DESCRIPTION OF AUTHOR'S LACRIMAL DILATOR

I accordingly devised, in 1890, a lacrimal dilator[4] with a cylindrical body and an oval point (Fig 1), based on the old conical dilator of Levis, but essentially different in its size, shape and action. The conical dilator of Levis had three serious defects: first, it was so thin at the point that a false passage might easily be made; second, the cone in entering the bony canal became a sort of wedge that passed through the sac easily but soon became blocked; and, third, the thin point of the instrument did not properly stretch the inferior portion of the canal as it emerged into the nose. I therefore changed the body of the dilator to a cylinder, and made the point more ovoid or bellied, with a sudden widening of the caliber just above the apex. This allows it to dilate so rapidly that the point does not catch in the mucous lining of the canal, and the body of the dilator never becomes wedged as with the simple cone.

The instrument is made in the shape of a double bayonet, two sizes of the dilator being joined together on a single handle. The smaller end is somewhat sharp-pointed and has a diameter of 2 mm., corresponding to a No. 8 probe, the shaft being 28 mm. long. The larger end is more dull and has a diameter of 3 mm., which corresponds to a No. 12 probe, the shaft measuring 30 mm. in length. The maximum diameter (3 mm.) which I adopted, therefore, was sufficient to accomplish the end desired, although it was considerably less than the 4 mm. caliber exemplified by the No. 16 probe of Theobald. This dilator depends for its success on the rapidity of its dilatation, the avoidance of repetition in probing and the fact that it retains and improves the capillarity of the duct. The instrument is made of forged steel to avoid any danger of bending. A needle-probe (Fig. 2) was also devised for use in cases of atresia. The needle-probe has the same quick expansion just back of the point, which is much sharper than that of the dilator. The oval point in like manner avoids the danger of catching in the tissues. Either the needle-probe or the small end of the dilator may be used to dilate the punctum and canaliculus, but the large dilator should always be used to stretch the *ductus ad nasum*.

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[3] Corneal Ulceration due to Nasal Infection, Am. Med., April 9, 1904, p. 599.

[4] Wills Hosp. Rep., January, 1895, i, p. 31.

### AUTHOR'S METHOD OF RAPID DILATATION

*Anesthesia.*—As the operation is somewhat painful anesthesia is required. The instillation of cocain and epinephrin into the cul-de-sac may prove to be sufficient. These solutions may also be injected into the duct through the small cannula of the lacrimal syringe, or, if preferred, with the hypodermic syringe. As a rule local anesthesia will suffice, but nervous patients will require general anesthesia. In private practice I frequently employ nitrous oxid, but chloroform and ether may also be used for this purpose.

*First Stage.*—If local anesthesia has been used the patient may be seated and his head covered with a towel. For the right eye the operator stands behind the patient, whose head should rest against the surgeon's chest. With a small piece of cotton under his left thumb the lower lid is drawn down and out until the margin is tense. Holding the dilator (or needle-probe) vertically in his right hand, the small end is inserted into the punctum with slight force in order to be sure that it is engaged. A feeble click may sometimes be heard, or a sensation of sudden yielding be felt, as the punctum stretches open.

*Second Stage.*—Still holding the lid tense, the dilator is rotated from the vertical to the horizontal position, and slowly but firmly passed through the canaliculus, the shaft being directed obliquely upward and inward, until the point rests solidly against the bony wall of the sac. If elastic resistance is felt at this point the bony landmark has not yet been reached, and further pressure should be made. As the dilator enters the lacrimal sac a rather pronounced click may be heard, or a yielding sensation may again be felt, as in entering the punctum.

*Third Stage.*—The small dilator (or needle-probe) is then withdrawn from the canaliculus and the large dilator (No. 12) is inserted, as in the first and second stages, until firm bony resistance is again felt.

*Fourth Stage.*—The lower lid is now released from the traction of the left thumb. The point of the dilator is held snugly against the bony wall while the shaft is again raised 90 degrees to the vertical position and half rotated on its long axis until the shoulder of the bayonet is turned backward. Still hugging the bone the point of the dilator describes a half-curve backward and downward as it slips over the bony ridge of the lacrimal crest and engages in the sac. It is then pushed with firmness and considerable force, downward and slightly forward, through the nasal duct into the nose. The bayonet shape of the shank allows this to pass without pressing against the eyebrow. The dilator is allowed to remain *in situ* for a moment (or longer if desired) and then withdrawn directly upward.

### MINOR ACCIDENTS

A small rupture of the punctum may occur, but this is insignificant and usually heals promptly.

There may be some ecchymosis or even swelling of the lower lid, but this soon disappears.

The nose frequently bleeds for a few minutes owing to a slight scratch of the nasal mucosa by the point of the dilator as it emerges beneath the inferior turbinate.

Patients should be warned not to blow the nose for twenty-four hours, as a very slight rupture in the lining of the canal will permit a palpebral emphysema that might prove alarming and unsightly, although it will disappear spontaneously in a few days.

Irrigation should not be attempted for at least one week, as part of the fluid might escape through some minute laceration of the lining membrane and thus cause infiltration of the tissues.

In a few cases I have noted a crackling sound that indicated slight fracture of the bony walls of the duct, but I can only agree with Theobald in saying that nothing more serious than ecchymosis has followed.

I have often been asked as to the danger of making a false passage. I have never seen such an accident, but an ignorant, careless or unskilful operator may spoil any operation. I have encountered a few cases of caries in which the usual pressure might have caused the dilator to perforate the lacrimal bone and to enter the nose over the middle turbinate. One must always "have an eye in the point of the dilator."

### POST-OPERATIVE TREATMENT

The after-treatment is usually very simple, consisting of a soothing eyewash, to which epinephrin may be added in the proportion of 1 to 16. If the eyelids are glued together for a few days following the operation an astringent application will promptly check the conjunctival discharge. If there should be any puffing of the lids ice-pads may be applied. If there is ecchymosis hot stupes are indicated. If emphysema occurs no treatment is necessary, as it will promptly and spontaneously disappear.

### INDICATIONS FOR RAPID DILATATION

Rapid dilatation of the lacrimonasal duct is indicated whenever a permeable canal is desired. It is particularly effective in those cases of epiphora and obstruction arising from atresia, localized stricture and general stenosis with interstitial thickening of the mucosa. Absorption of this submucous hyperplasia will often be stimulated by the mere mechanical pressure of the instrument in the canal. The most striking success of rapid dilatation is probably shown in ulcerative lesions of the cornea, and especially those of the recurrent type. The phlyctenular variety also yields promptly to this treatment. In sloughing keratitis, however, we must supplement the dilatation of the duct by disinfecting the corneal slough with formalin (1 per cent.) and by using an antiseptic wash or spray in the nostril, either hydrogen peroxid or potassium permanganate (1 to 2,000). I do not hesitate to practice rapid dilatation in cases of wound infection (lacrimal) following operation or injury, and even after cataract extraction, thus eliminating the focal origin of the infection. In many of these cases, however, I inject formalin (0.25 per cent.) into the anterior chamber, in addition to disinfecting the margins of the wound and cleansing the nostril. This technic has undoubtedly saved many eyes that appeared to be hopelessly lost.

Rapid dilatation is also of value in cases of chronic conjunctivitis, blepharitis marginalis and eczema of the lid, in which the chemical irritation of the lacrimal fluids is the chief etiologic factor. It is likewise indicated in ectropion and entropion of mild degree arising from persistent lacrimal irritation. Contraction of the socket, with an irritating discharge and more or less palpebral disturbance, is a positive indication for this procedure. I have, for many years, performed rapid dilatation in every case of enucleation, as a routine measure, for the sole purpose of preventing any secondary disturbance that might arise from the accumulation of irritating secretions in the socket. This plan has been markedly successful in preserving a healthy socket.

I have previously discussed the treatment of trachoma[5] before this section (1897) by advocating rapid dilatation of the tear-duct to relieve corneal maceration and pannus through the free drainage of acrid lacrimal secretions. At the same time I recommended that this operation should be combined with canthoplasty or external canthotomy (cantholysis) for the purpose of relieving the friction and corneal erosion caused by the tarsal pressure of blepharophimosis. Each one of these procedures thus supplements the other.

### ALLIED MEASURES

While rapid dilatation is invaluable in cases of acute dacryocystitis, mucocele, persistent blennorrhea, suppuration, abscess and fistula, certain auxiliary measures may also be necessary. Irrigation, incision, stricturotomy and the insertion of styles or medicated bougies are often indicated to meet the requirements of the symptom-complex which these cases present.

Irrigation may be practiced either before or after rapid dilatation. The injection of an astringent or antiseptic solution is always a valuable cleansing adjuvant and often a curative agent. I have devised an all-glass lacrimal syringe (Fig. 3) for this purpose, which is provided with four cannulas; a small gold cannula for introduction into the punctum; a platino-iridium hypodermic needle for local anesthesia; a Tansley cannula with lateral perforations and closed end; and the ordinary Anel or De Wecker cannula.

Schwenk secures good results by injecting liquid petrolatum into the tear-duct once or twice a week and allowing it to remain until absorbed. Following the method of treating fistulous tracts by the use of bismuth-petrolatum paste, introduced by Beck,[6] of Chicago, I have been injecting his formula modified as follows:

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|---|---|
| Formalin | 1/2 part |
| Alypin | 1 part |
| Antipyrin | 2 parts |
| Paraffin | 5 parts |
| White wax | 5 parts |
| Bismuth subnitrate | 25 parts |
| Petrolatum, enough to make | 100 parts |

Mix and make antiseptic paste.

This paste can be heated and injected into the tear-duct with the glass lacrimal syringe, in a fluid state, taking care that it shall not be forced through into the nose, and applying a small ice-bag in order to quickly harden it, *in situ*. If preferred, the compound may be used in a cold or congealed state, and forced directly into the duct by means of the cold paraffin syringe. I usually employ the latter method.

By the substitution of gelatin for petrolatum in the above compound it may be poured into moulds and hardened to form "lacrimal bougies." I have been using these gelatin bougies of formalin-bismuth and also those made with argyrol, but I have not tested them for a sufficient length of time to make a definite report on the results. I am convinced, however, that they will prove valuable. I have observed that the slower they dissolve the greater is their efficiency.

The incision of Bowman is indicated when suppuration is already established. This should be supplemented, however, by rapid dilatation. In performing Bowman's operation I prefer to use an instrument combining my needle-probe on one end and a modification of Weber's knife on the other (Fig. 4). I have shortened this knife, widened the blade, made the edge more oval and used a straighter tip. With such a combination we can stretch the punctum and slit up the canaliculus without changing instruments, which is a great advantage when we have ignorant and unruly patients to deal with.

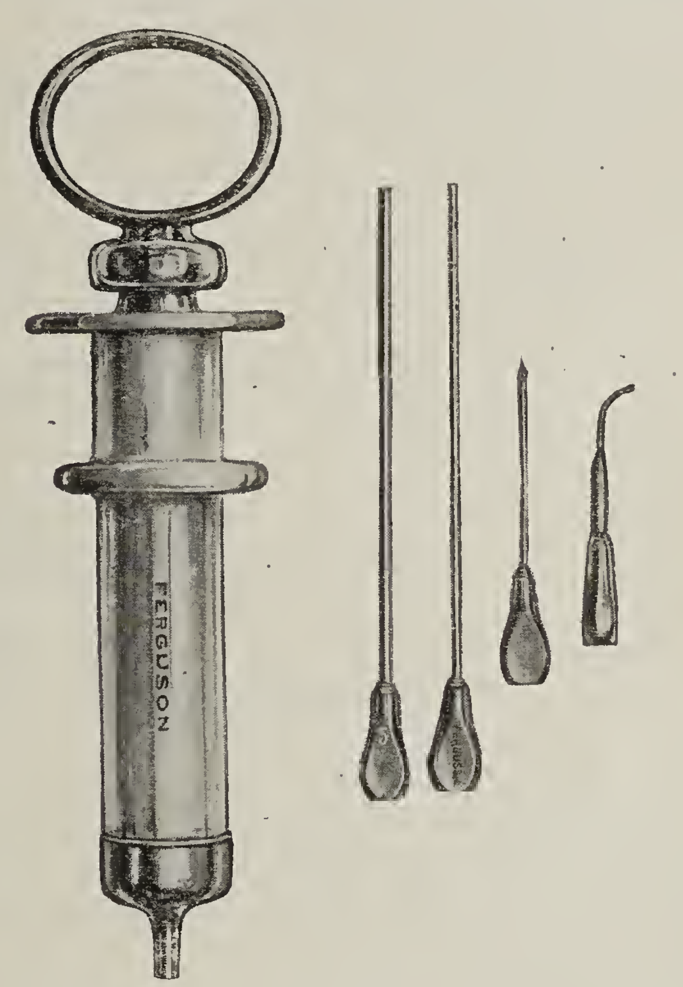

Fig. 3.—Ziegler's glass lacrimal syringe with special cannulas.

In cases of lacrimal abscess the abscess should be opened, formalin applied to its lining membrane, Bowman's incision made and rapid dilatation performed. In lacrimal fistula the same method is indicated. A lead style may also be inserted. This promotes free drainage of pus and allows the inflamed tissues to undergo normal healing, without further irritation.

It is sometimes necessary to go a step further and perform stricturotomy, after the method of Stilling, particularly in those cases in which localized bands of contraction are obstructing the canal. Instead of Stilling's knife, however, I prefer the lacrimal stricturotome[7] of Thomas (Fig. 5), which has a stronger blade than the Weber knife, is probe-pointed and has a long malleable shank. Bowman's incision is performed first, followed by rapid dilatation and lastly by stricturotomy. The Thomas knife is inserted into the duct, the probe-pointed blade is pushed down through the stricture and again drawn up, thus cutting through the stricture fore and aft; or, if necessary, four quarter-sections may be made. An application of formalin to the diseased lining of the canal is sometimes an efficient supplementary measure.

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[5] The Surgery of Trachoma, The Journal A. M. A., Jan. 15, 1898, p. 131.

[6] Beck, E. G.: Fistulous Tracts, Tuberculous Sinuses and Abscess Cavities; A New Method of Treatment by Bismuth Paste, The Journal A. M. A., March 14, 1908, p. 868.

[7] Tr. Ophth. Sect. A. M. A., 1892, p. 235

If proliferation occurs in the lumen of the duct I employ a lacrimal curette to remove the granulomata. I have devised a small curette (Fig. 6), for this purpose, consisting of a long oval cup with teeth on the edge and a shank that is flexible but not malleable. This can be easily introduced and used with considerable pressure. The procedure is simple and the result will often prove most gratifying.

Lead styles have been popular ever since they were first recommended by Green[8] in 1868. They are indicated chiefly in cases of dacryocystitis, stricture of the duct and caries of the lacrimal bones. They may be allowed to remain in the duct until the lining has reformed, although they should be removed at stated intervals and the canal irrigated. Occasionally they will create irritability of the tissues accompanied by granulations and must then be abandoned for some other form of treatment.

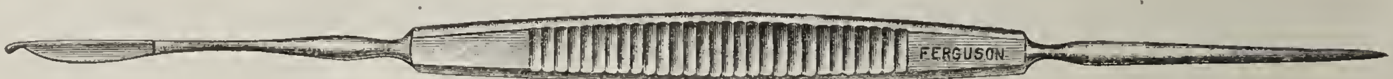

Fig. 4.—Modified Weber's knife with Ziegler's needle-probe.

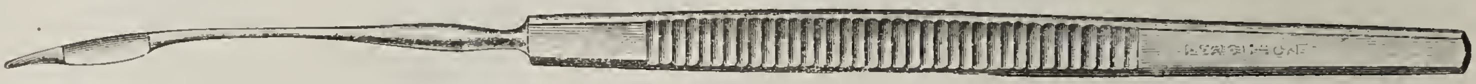

Fig. 5.—Thomas' lacrimal stricturotome.

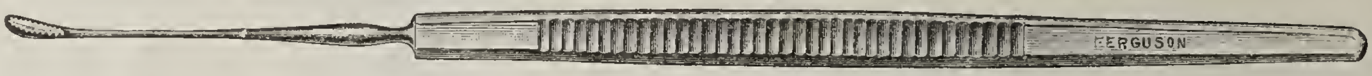

Fig. 6.—Ziegler's lacrimal and chalazion curette.

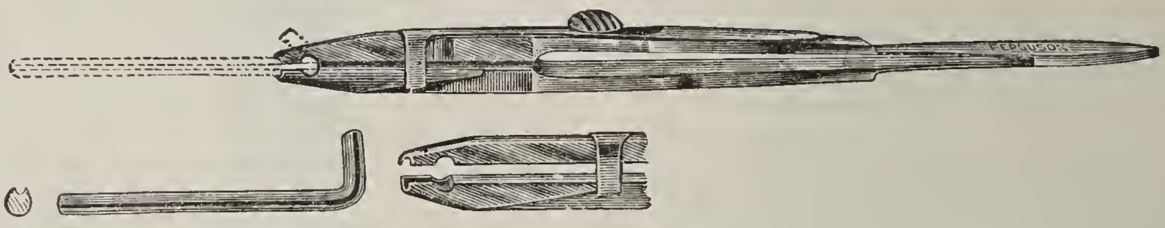

Fig. 7.—Ziegler's lead style introducer with grooved lead style.

As pure lead wire is very soft, and may bend on itself while being introduced, I have modified this by the addition of a small amount of tin alloy, which so strengthens the wire that it can be passed more readily and still retain the necessary flexibility. I have made a further modification of this wire by having it drawn with a small groove, which I think facilitates the drainage problem. I generally use the 2 mm. wire, which is the equivalent of a No. 8 probe. Lead styles have the advantage that they are cut from the solid wire and are preferable, therefore, to any form of gold or silver canulas, which soon become filled with septic and foul-smelling secretions. They should be made perfectly smooth in order to avoid the deposit of accretions on any roughened area.

To facilitate the insertion of the lead style I have devised a pair of forceps with grooved jaws (Fig. 7) which grasp the style and hold it absolutely rigid. After the style has been introduced into the duct it can be released with the greatest ease by simply pushing the slide catch. If the style should subsequently slip down into the duct, or the tissues should grow over it, there may be considerable difficulty in locating and removing it. By using one of the small curettes, preferably with teeth, it can be gently probed for and easily removed by slipping the curette under the bent arm of the style and drawing it upward.

### AUXILIARY TREATMENT OF THE NOSE

We should never lose sight of the nasal etiology of tear-duct disease, and should apply our treatment accordingly. The rhinologist should remove all obstructive lesions, by reducing the hypertrophied tissues and instituting measures to restore ventilation of the upper air chambers and free drainage of the sinuses. As the anterior portion of the inferior turbinate sometimes presses on the valve of Hasner, and thus obstructs the lacrimal drainage, the fleshy fold of the turbinate should be excised, if necessary. Temporary disinfection of the nostril is especially indicated in all cases in which direct ocular infection is suspected.

### IN CONCLUSION

Rapid dilatation of the lacrimonasal duct is by no means a panacea, but if used with judgment and discretion will undoubtedly prove a most valuable addition to our treatment of tear-duct disease. Its value lies in the rapidity of the dilatation, the avoidance of repetition in probing, and the retention of the capillarity of the duct. In some cases, however, the capillarity must be sacrificed, and in a very few cases it will be necessary to repeat the dilatation. In cases of periostitis or caries a second dilatation may be necessary, after the lining of the duct has healed. Stretching is likewise repeated in cases in which a prolonged course of nasal treatment has been instituted and completed. These cases of repetition probably constitute 1 per cent. of all cases treated. I abandoned the use of lacrimal probes nearly twenty years ago and have since relied almost exclusively on rapid dilatation of the tear-duct in order to secure the permanent patulous lumen which the radical treatment of lacrimonasal disease demands.

1625 Walnut Street.

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### ABSTRACT OF DISCUSSION

Dr. H. Moulton, Fort Smith, Ark.: Rapid dilatation is not a new procedure; see Juler's text-book, 1884, etc. The bivalve dilator of Galezowski is well-known. But Dr. Ziegler's method I believe is absolutely unique; first, in the pointed cylindrical shape of the dilator, second, in the fact that it is to be passed through the uncut punctum and canaliculus. The shape of the probe or dilator is ideal for its purpose. Is there ever complete cicatricial closing of the punctum after Dr. Ziegler's operation? It is often observed, I believe, that a slight abrasion of the lumen of the punctum by the point of a syringe or the moderate stretching by the pointed Weber's dilator will produce its obliteration. To dilate the punctum to a diameter of 3 mm. may have a different effect: it may so paralyze, as it were, the sphincter that it cannot shut up and grow together until the epithelium has reformed. On the contrary, when it is necessary, a clean properly made cut of the canaliculus is not harmful. I have never seen epiphora remain after such a cut when the diseased condition of the passages below has been removed. Hence, I do not hesitate to make this cut when it facilitates the treatment. How long does the effect of a dilatation last? Dr. Ziegler states that a repetition is seldom necessary; but how long a time is covered by his observation of a series of cases? His endorsement of this method is certainly sufficient to warrant any of us in trying it in suitable cases. Its painfulness, if nothing else, will probably limit its employment somewhat in private practice. I can endorse what Dr. Ziegler says of the value of the treatment of the lacrimal passages in trachoma, and of lead styles. In 1908, at Chicago, I presented a paper to this Section on the subject of lead styles. I continue to use them and the results are excellent. I do not find it necessary to have the styles grooved as does Dr. Ziegler. The drainage with the round wire is perfect; hence what is the use of a groove which might be irritating to the tissues which will certainly collapse into it. I find the fuse wire of electricians the best material of which to make these styles.

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[8] Tr. Am. Ophth. Soc., 1868, p. 31

Dr. J. L. Thompson, Indianapolis: I have operated on the ducts for forty years. I at first opened the upper canaliculus instead of the lower and then resorted to styles, not like the recent and larger ones we have. I would curve them so that they hung out over the lids. We were using these styles when Theobald began using the large probes. I used them large enough, as I said at Edinburgh once, for a horse, and they would close up. I have had my poorest successes in the treatment of the lacrimal duct unless I obliterated or extirpated the sac. There was only one author who had worse success, and that is B. Kocher of London, who wrote a book on the eye some years ago and who gives one to understand that after all these trials there will be relapses in a large number of cases. In one case I put in very large lead styles and in spite of everything the duct would close. Those of you who have not practiced a long time will find that you will meet with your poorest successes in the treatment of lacrimal duct troubles of almost anything you have to deal with.

Dr. Donovan: At the meeting of the Academy of Ophthalmology in Denver six years ago I described an operation I am still using. I opened the upper duct and cut instead of dilating. My experience in dilating with the probe has been unsatisfactory. For that reason I have used the cutting method and have had no bad results from the use of the knife and a clean incision. I start with a Theobald probe, about 6 in size, and skip two or three at a time and reach 13 or 14. No. 12 I have not found quite as satisfactory as Dr. Ziegler has. I have usually had trouble a few days later, but if I used a 13 or 14 I could then afterward use a 12 at intervals of several days covering a few weeks of time. Another method I spoke of in connection with this last year was the use of an ointment of biniodid 1 to 5,000, made by rubbing mercury and potassium iodid with hydrated wool-fat and petrolatum, and injecting it in the sac and duct. It has helped a great deal in my treatment of these cases.

Dr. Charles H. Williams, Boston: It seems to me in a great many of the more severe forms of lacrimal sac trouble we get better results by the removal of the sac rather than by probing. Has Dr. Ziegler had trouble, from the very sharp-pointed probes described in the paper, in getting a false passage in passing such a probe?

Mr. J. Herbert Parsons, London: I have strong opposition to probes, as expressed in papers in England, and believe that the best treatment is extirpation of the sac. I have seen the practice of various surgeons, some of whom persist in using probes, others using the method of extirpating the sac, and have had opportunity to compare the two series of cases. The results, I believe, would convince most people that extirpation of the sac is very greatly the superior method. Of course I cannot say anything about the peculiar method of Dr. Ziegler, whose probe is specially devised, and it may have special advantages which the ordinary probes do not possess; but the pain and discomfort from the probing, and the repetition of the operation which is almost invariably necessary seem to be a grave objection as compared with the slight discomfort experienced after a satisfactory extirpation of the sac.

Dr. John E. Weeks, New York: I have had some years of experience in treating lacrimal stenosis and my experience with dilatation of the canal has been so unsatisfactory that I have given up largely systematic probing. Those who have had a large experience know that the dosage must be repeated frequently, and sometimes it is continued for a long period of time, as Mr. Parsons has said. I employ extirpation of the sac in all cases of chronic dacryocystitis in which the patient will submit to it. But there are a number of cases in which the patients will not submit to such an operative procedure, and I have found that I obtain satisfactory results by the use of styles, as has been mentioned. The use of lead, silver or iron styles is objectionable on account of the deposits and the corrosion in the case of silver and iron. I find that gold styles are the best. A style 1.5 mm. in diameter, which does not fill the entire canal may be inserted. The precaution to be employed is to make the style sufficiently long to have a button or hook on the upper extremity so that the style will not be lost in the canal. I have treated a number of cases with these gold styles and the results have been very satisfactory. The patient may have to wear the style a year, but three months may be enough. Then it can be removed and the canal will remain patent. The cannula should not be grooved, because the canal soon fills and the grooved have no advantage over the smooth styles. They permit the formation of a ridge of tissue which it is difficult to obliterate and which does not heal smoothly. The style should be round or oval and perfectly smooth.

Dr. Hiram Woods, Baltimore: After Dr. Ziegler wrote his former article on the subject of phlyctenular conjunctivitis, keratitis, chronic forms of conjunctivitis and blepharitis as possibly due to reinfection of the lacrimal sac from the nasal passages, emphasizing the view that epiphora is not a diagnostic mark of such lacrimal infection, I began to look into that alleged fact with reference to some of the inexplicable chronic inflammations, and that led to my first use of the smaller one of the probes he has shown here—the opener. I was surprised to find, in the first place, how easy it was to introduce that through the punctum and canaliculus, making way for the use of a 2, 3 or 4 Theobald probe, and how frequently such patients recovered without any splitting of the canaliculus at all, but by simply making the first opening with the Ziegler probe and following it with small probes and the irrigation of the sac. That is one class of cases in which I find the Ziegler instrument extremely useful. The dilatation of the punctum preserves the siphon-like action, while splitting destroys it, and I am not sure but that a good deal of the epiphora that follows splitting is the result of this. There are many patients with dacryocystitis who would not recover without extirpation of the sac. But the repeated probings that Dr. Weeks and Mr. Parsons speak of are barbarous and the repeated traumatism is damaging. The use of the Ziegler large dilator in these cases will be found useful. One dilatation gives a good opening into the duct and I have apparently cured many patients. I cannot tell how long they will remain cured, but one has been cured for a year, and several that have been subjected to the excision operation by the use of this dilator and subsequent irrigation with a 0.25 per cent. formalin solution. I have found that in cases of blepharitis and conjunctivitis and dacryocystitis the results are very good from the line of procedure that Dr. Ziegler has mapped out.

Dr. S. L. Ziegler, Philadelphia: Complete atrophy does not occur following the stretching of the soft tissues. The tissues are so rapidly stretched that, as in any other rapid dilatation, as of the uterus, there is no contraction. I have seen a slight nick in the canaliculus itself, which soon heals and still leaves open the caliber of the punctum. As to the length of time the cures remain, I have seen recently a case in which dilatation was done eight years ago and one in which dilatation was done fifteen years ago when the child was 3 months old, with a severe dacryocystitis, practically, I presume, congenital. In the latter case dilatation was probably done more easily on account of the very soft condition of the tissues. I used the large end of the dilator as I have in every case. We see many cases of enucleation in which there is a chronic discharge from the socket. I have been able to relieve the postoperative condition by stretching the duct. Apparently there has been enough regurgitation from the nose to create this condition in the socket. That brought me many years ago to stretching in all cases of enucleation for the purpose of preventing this condition, and I certainly have had cleaner sockets in my practice since that time than previously. The bismuth paste of Beck which is being used by all surgeons in sinus work and in taking *x*-ray photographs has proved to be very satisfactory, although, as stated in the paper, I have not used it long enough to be absolutely satisfied. I have been using a cold paraffin syringe for forcing it into the duct. It is possible also to use it by dissolving it, as Beck does, and using it in the fluid condition. The illustration shows the instrument as a trifle sharper than it actually is. One end is rather sharp and I use it as a needle-probe and follow it by the large end. The needle probe is quite sharp, as all needle-probes should be for passing from the punctum to the sac. I have not seen false passage. It is possible, but I do not see how it is probable with the large dilator, as there is no room in the duct for a false passage unless we force it through the bony passage, or there is necrosis of the bone and then we should have an eye in the end of the dilator.

I explicitly stated in the beginning of the paper that I was not raising the question of extirpation, but wished to avoid it. In the cases reported extirpation was out of the question. I have recently seen a case in which, according to the patient's statement, the sac had been removed three times, and in which I had to dilate. I succeeded in getting a passage, with relief to the dacryocystitis. I cannot pass judgment on the former surgical work, as I do not know what was done, beyond the patient's statement.

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# THE THERAPY OF WORK*

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A distinguishing characteristic of the developed human mind is its vision of unity, that power of seeing more or less clearly the whole through the part; and to our profession is peculiarly granted the large opportunity of studying man as a whole. The incompleteness and one-sidedness of much which has been called medically scientific is to be replaced by that broader grasp the whole man's needs, which has ever been the province of great physicians. This paper is written to add whatever emphasis it may to the now accepted law that man is mentally, morally and physically so attuned that when disordered, his perfect restoration demands intelligent readjustment of each element.

## CLASSES OF INVALIDS

An injury may be primarily mechanical, chemical or psychic. If the original damage deranges the mechanical workings or integrity of the body, we speak of the condition as surgical, and these most obvious of all injuries have been the objects of increasing skill through the centuries of medicine, until to-day anatomic knowledge and surgical technic allow us to invade every precinct of the body. The wonderful development of this branch has, unfortunately had its attendant evils, and but few years have elapsed since surgeons who called themselves able and honest were removing practically normal organs, and subjecting patients to exploratory incisions for the "mental effect." It is good to state that that phase of the surgeon's work has now reverted to the tyro and charlatan.

The secrets of metabolism and secretion reveal themselves all too slowly, and the modern physician, even with his years of careful, special training and his immense therapeutic armamentarium, must still feel the stigma of empiricism as he faces many of the baffling disease processes of internal medicine. Yet to many of us our patients have appeared either mechanically out of order or suffering from damaging chemical perversions, while we have ignored the very core of the sufferers' being, the psyche, that principle of life connected with, dominating, and making real the body. For years the neurologist has been pleading for a hearing in behalf of the suffering thousands on whom the surgeon has operated and reoperated, the internist toniced, depleted, stimulated and narcotized, pleading for an intelligent recognition of the fact that a certain percentage of invalids are nervously, that is, psychically sick.

## THE NEUROPATH

History tells of no age which did not produce its quota of neurotic sufferers, most of them victims of perverted ideas, and few of the nervous may be found, who do not possess some moral perversion or weakness. A young wife loses her husband. The emotional shock from which she suffers is too frequently interpreted through her physical sensations. From the strong, useful woman, she rapidly becomes self-centered, her body responds to her mental suffering in the form of various perversions of sensation, and with the assistance of the physician, who has a powder for every pain, the man who has failed to apply his psychology, she starts her round of treatment, passes through the hands of the family physician, the oculist, abdominal surgeon, the osteopath, and finally finds her cure in the negations of Eddyism—and medicine is rightfully discredited.

A daughter of affluence, reared with every false protection, condemned to a life of enervating ease, and hounded by the apprehensions of a doting mother, with her reiterated suggestions of care, slips on the waxed floor of her palatial prison and injures her knee. Yes, it "looks tuberculous," and is put into a cast, later she is taken to the orthopedic specialist, is *x*-rayed, nothing is found. Months pass, and in spite of massage, Swedish movements and special nursing, she remains a cripple unable to walk. Five years later, a humble chiropractic, with his preliminary training as streetcar conductor, and a year's course at his special school of learning, lifts the head of a rib from some hypothetical, compressed nerve-plexus, and the patient walks, she dances, and the family shouts praises, but not of our profession.

She has been married six years. The only little one was taken, and as time passes, hopes for the fruition of mother love weaken. Her husband is not as thoughtful as formerly, and when he comes in late is sometimes unkind. Gradually the heaviness of her heart becomes a load on her stomach, and the doctor, who forgets this little woman's mentality, calls it indigestion. Of course, it is pepsin and the whole long list of digestants and tonics, and then the specialist uses test meals and performs lavage, and the stomach-washings and prison fare help for a while. Then the patient cannot sleep and the mental depression suggests rest cure. She returns home in good color and good flesh and everybody says she is well. But within a year she is worse than before. A great opportunity has been lost during those weeks of rest, because her mental needs have been neglected. Fortunately, financial reverses come. She must do her own work. Care of self is out of the question and a dead sister's children are brought to add their needs to her burden—needs which call out that strength so long unused, inherent and yet unrecognized by the physician who saw in the human body only a machine of mechanical construction and a laboratory of chemical reactions. These cases but inadequately illustrate the diversity of the neuropath. All of us come in contact with examples equally pertinent if we will but see.

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The neuropath may be of the hereditary type. If so, his case is usually difficult. The acquired form may result from exhaustion, intoxication, or have its birth in its owner's brain. Theoretically, the exhausted class is large; exhaustion is an extremely popular, one might say, praiseworthy disorder; and the overworked neurasthenic receives much gratifying sympathy. In fact, the case of pure exhaustion is rare, but when existing, demands the full rest-cure. The rôle of frank intoxicants, alcoholics, mineral poisons and the narcotic group, in producing nervous damage, is common knowledge. The influence of the autochthonous poisons, while long disregarded, is becoming much more generally understood, and those definite symptoms following hypothyroidism and hyperthyroidism, altered intestinal flora and defective urea elimination, now receive intelligent attention. Not enough thought is given, however, by most of us to the rôle played by the excessive ingestion of highly organized foods by those who live lives of muscular inactivity. Disproportionate calory ingestion to calory consumption is the too often undiscovered cause of nervous breakdown. But the mind's own concepts and morbid moods are sources of the large part of nerve suffering, and I must again emphasize that law of unity which impels mind and body to respond to the constructive power or damaging depression of our emotional selves.

It is a dreary list we recount, as we tell over those injurious influences which are so specific in the reduction of nerve integrity: profitless introspection, morbid self-consciousness, ultrasentitiveness, self-depreciation, cynicism, pessimism, doubt, and that influence most baneful of all, fear in its many forms: dread, apprehension, embarrassment, terror, horror, fear of sickness, fear of injury, fear of the elements, fear of scandal; and those more prolonged states including enemity, grief, sorrow for loss, rebellion of death, envy, jealousy and hatred. Are these not the toxins of the soul? And what has surgery and medicine to offer as antidotes? Perchance, the physician may with his belief in his diagnosis and treatment inspire the sufferer with his own confidence in the scalpel and his potions, but the unending list of failures has long proclaimed the need of a true psychotherapy. The call is universal for men practised in all the arts of medicine, and in addition students of the human mind—men who will investigate every somatic deficiency, and with equal honesty, intelligence and precision, seek out and find the psychic need. The very length of the list of false psychotherapeutic cults but emphasizes the need for a true, rational psychotherapy. Mesmerism, healing clairvoyants, and voodoo doctors, faith-healers, homeopathy with its half-truths, osteopathy and its child, the chiropractic; the barefoot cure, goat-lymph, the great cult of Eddyism and its more orthodox associate, Emmanuelism, the miracle-working prayer-cure, charms, amulets and incantations, all assert in a chorus most emphatic the fact that beliefs, though false, may displace morbid ideas and effect cures. This truth must come home to us with a reiteration that may not be denied till a rational psychotherapy becomes as definite a branch of scientific medicine as is obstetrics or surgery. What this science in its fullness is to be is yet unrevealed. Workers are multiplying and in the absence of perfected methods, each is striving with his light to approximate the ideal.

### PSYCHOTHERAPY

A number of years devoted largely to the development of a workable, practical psychotherapy, have convinced me of the preponderating value of work as a present help, as well as a lasting benefit, in the treatment of the nervous, and this even in the face of the oft-reiterated claim of these patients that they are suffering from overwork. The great value of Dr. Mitchell's rest-cure is unquestioned. It will not be displaced as a form of treatment in numbers of cases. Often, however, is it unwisely used, and too frequently proves inadequate, though helpful even in cases of exhaustion. With its wise supervision of diet and the oxidation incident to ample massage, it fills the immediate need in many toxic cases, while during the weeks of isolation, physician and nurse have the rarest opportunity to employ persuasion and to substitute wholesome, rational thought life for murky and morbid moods. Unquestionably, it fills certain needs, but that great law of our being, that for which our bodies were formed and our minds endowed, directed action, is not fulfilled.

*The Law of Work.*—Work truly is life, and any treatment which ignores every means which will make possible such life in greater abundance, cannot be comprehensive. Stanley Hall has well said, "The human body is made for action and it has other muscles than those that wag the tongue or move the pen. Many starved longings and unrealized desires are but misinterpreted calls to work." Lotze's conclusion in comparing the human body with other animals, is that "man stands at the head of the scale of creatures when estimated by capacity for work. Some animals are swifter, some are stronger, some are longer-lived, but none have such combined advantage in capacity for work. The human body is made for action."

*The Therapy of Work.*—In prescribing work as a therapeutic measure, a proper form should be specified. Physical employment well within the strength of the patient, productive in nature, so that its effects may be permanent, and employing sufficient mental activity to distract attention from the purely physical, is the ideal. But even drudgery has its place. A large part of the world's work is drudgery, and to the pampered neuropath there is a wholesome discipline in working for work's sake. There comes a development of will hitherto unknown in the accomplishment of common foot tons of labor.

It is unnecessary to state the physical benefits of manual labor. No man is living his best who does not daily put into activity that large bulk of his physical body, his muscular system, and into such activity as will call for a virile expenditure of energy. A large majority of neuropathic patients have worked for years along mental lines, and even though there may have been some physical expenditure it usually has been associated with emotional wear and tear. The mental relaxation and rejuvenation which follow substitution of reasonable physical employment for high-pressure mental strain, cannot be gainsaid. While there is no question that energy may be trained to flow into either physical or intellectual channels with equal efficiency, wholesome benefits to the mind come from the physical exaltation following the normal use of our muscles. But the greatest influence, the true and lasting benefit in work as a therapeutic agent, rests in the moral uplift, the great mastering of self which comes when one is taught to work right, when one knows the joy and forgets the burden of doing, when self-mastery displaces indulgence, when doubt of one's strength and ability is replaced by faith—faith which grows out of visible evidences of one's accomplishment—when morbid self-centeredness, that miserable dwarfer of the soul, gives way to an externalizing self, the forgetting of self in its relations with people and things; then the passion for material comfort will lose its devitalizing power in the face of that independence which comes with the toughening and the strengthening of will, the off-spring of productive accomplishment. Theory, sermonizing, the stimulation of music and art, the inspiration of poetry and song, have their places in the needs of many-sided man, but for developing power and character and for making man's spirit master of his body, mortal man has to work since the days of fair Eden. In fulfilling the law of work, man's spirit may not only master itself and cure itself of its quirks and quibbles, but to a surprising degree may obtain and retain a mastery over the body, which it should normally rule, a mastery superior to petty discomforts of temperature and weather and the habits of our neighbor's children and the din of traffic, a mastery superior to the miserable hyperesthesias and dysesthesias so incident to nervousness. "Is there not a crying need for that physical education which inculcates habits of obedience, mental concentration and application, and forces into the background the former man?"

### REPORTS OF CASES

From a list of happy results, based on the physical, mental and moral benefits following the insistence on physical work in broken-down neurotics, I append a few short histories:

Case 1.—Mr. E., aged 50, was reared on a farm, and developed a superb physique. At 22 he went into manufacturing; at 46 he was a millionaire, and a depressed, sleepless neurasthenic, fleshy, soft, and continually anxious concerning the uncertain health of his wife, a chronic hysteric. For two years he rested, took hydrotherapy in Europe, and sought sleep in the extremes of climate until his depression seemed to anticipate an early mental disruption. An unusually intelligent attendant, isolation from his family, one-half mile leisurely walking, increased in ten days to three miles fairly brisk walking, the prescription of a wheelbarrow and spade and so many feet of sod to move each day, with some simple problems in landscape gardening, and a later explanation of the nature and mortal innocence of his wife's hysteria, resulted in a growing confidence. The walks were increased and mountain-climbing added. At the end of three months, a two weeks' tramp, "rough and tumble" over the Black Mountains, sleeping in the open and reaching 20 miles of mountain tramping a day, proved his declaration of independence. His soft 225 had become sturdy 190 and he returned to his family superior to worry, sleeping and eating normally, because he was living rationally—and he has lived rationally these five years. But he writes that he has never found a substitute for the wheelbarrow and spade.

Case 2.—Miss M., at 23 was a healthy, well-nourished woman with no object in life., and a worrying solicitous mother. A fall injured her back, her left leg became helpless, and troubles multiplied. A ventrofixation was done; a second operation removed the appendix, a third an ovary. Nine months of one year were spent in a surgical hospital. For five years the patient was unable to walk a block unassisted. Repeated vomiting and "colitis" seemed to add, at times, a grave element to the case. A course of rest treatment failed. Varied diagnoses were made. Six weeks' isolation with strict discipline, the overcoming of fear of the stomach-tube by its daily use, convincing the stomach that it could digest, and digest well, large quantities of nutritious food, revealing to the patient her constant habit of autosuggestion, paved the way for two months rapidly increasing out-of-door work, transplanting shrubs, digging, and long mountain tramps. Progress from one hobbled block to nine spry miles—her daily average six miles—sent her home eager to take a useful place in life and to use her new-found strength productively.

Case 3.—Mr. B. inherited wealth and for fifty years was a dilettante. He played at work, he played at business. Doubt was his enemy and doubt broke him down at 28, but the diversions of a trip to Europe restored his ability to play at work. At 42 doubt again divided his energies. Europe failed, but interest in a new New Hampshire farm, with a new variety of play work succeeded. At 48 his doubts and their attendant fears rendered him incapable of signing a check, selecting a tie for the day or deciding whether to take his walk or sit by the fire. Europe was again tried; the New Hampshire farm this time proved unavailing and two years of life were wasted. Physically, the patient was in excellent shape. His trouble was his mentality. He had never had to do a real thing. Isolation was advised. In addition to a rational routine, a bushel of rusty, crooked nails was given this hereditary millionaire to straighten. There was immediate and energetic rebellion. The gentle logic of persuasion was employed to convince the sufferer that as he had found his strength inadequate to decide even the pleasures of life, the demand that he develop the will by daily performing that which was undesirable, first suggested by another, later as the will strengthened, planned by himself, that some time every day should be spent in the performance of those tasks he would prefer not doing, was the ground on which his battle must be fought. The progress was rapid. He even became zealous to straighten the whole bushel unassisted, and to-day writes in praise of crooked, rusty nails as the best chalybeate for moral anemia. He now works every day certain hours with his muscles and certain hours and efficiently, with his brain.

Case 4.—Miss L., of delicate ancestry, grew into young womanhood with no training for self-support. Misfortune reduced the family income, and her efforts to utilize her excellent education for practical ends threw her into contact with a woman of strong passions, and an intense mutual attraction followed. Under the woman's influence, the girl's sexual initiation occurred. Later she was separated from her ardent friend; shame and remorse and the feeling that she was forever unworthy rapidly produced a motor hypersensitiveness of unusual severity. A morbid shyness made her almost a recluse and her faith in humanity was sadly injured. A gynecologist located the trouble in the pelvis. The uterus was curetted and suspended, a cystic ovary removed and six months in bed prescribed. The patient left the hospital under the admonition to avoid physical exertion. The damage to the psyche had not been considered. Three miserable years of hothouse living followed. The motor sensitiveness became almost intolerable. The patient was a burden to herself and her family. Physiologic rest seemed impossible. An examination which sought and found the true injury was the beginning of her recovery. Her own conscience recognized her true need, and the placing of her wrong in its proper relation to life, the helpfulness which came from ventilating this darkened chamber of her existence, with ten weeks of isolation under the care of a nurse capable of giving the sympathy which inspires strength and resolution, then a gradual transition to walks and active work in the garden, followed by combined outdoor and indoor practical work, made her for the first time in her life a producer, and for over two years she has been independent.

Case 5.—Dr. W., at 40, was a surgeon of national reputation, slight in stature, with no generous circumferences save those of his cranium, typically neurotic. The doctor had had three years of unusual European advantages and had returned to his American practice with the irritations of the phlegmatic continental operators superadded to a natural mental hypersensitiveness. He worked hard, but he worked wrong. He worked in an atmosphere of criticism. Explosions of temper were uncontrolled; they bespoke the touch of genius. Ambition and jealousy contributed their corroding touch, and he broke down. It seemed entirely physical. For the last months of his work he ceased walking entirely, using his machine for even the shortest trips, depending on the elevator, and ready to abuse all things mundane which did not respond to his command. Walking became impossible. "Colitis" supervened, physical exertion adduced great discomfort in the legs and abdomen, and diarrhea was the penalty of any extra work. He was well treated physically at home and abroad, but the last state was worse than the first. It finally occurred to his physician that a neurologist might throw some light on the case. The neurologist sent him to an institution which he entered with little hope. The patient was too weak for much work. His mind, however, was very active; he was skilful with the knife and occupied himself whittling ingenious toys for his children, deriving much pleasure in applying the simpler laws of mechanics to and artistically finishing his handiwork. As this man's breakdown had not resulted from work, but from emotional damage due to his wrong moral attitude, and as no physical lesion was discernible, it was possible to ignore the physical and let him know that it was ignored. Discussion of his bodily ills was tabooed, and he and his nurse began measuring the distances from the institution to various points of interest. At the end of two months he was making five miles of good mountain tramping a day in winter weather. Three months from his entrance he was cutting loose from the trails and going straight over some of the highest of our Appalachian Mountains. Two weeks later he resumed his practice. He now operates four and half days a week, rests one day, and works in the open with axe and pick one and a half days. No day passes that he does not do homage to his muscles, and he has displaced the jealousies and vaulting ambitions and lack of self-control with wholesome motives.

## CONCLUSION

Who of us but recall cases in which our best efforts have proved unavailing, yet in which the patients have recovered in response to methods which we know were crude, unscientific and inadequate? Some form of psychotherapy had remedied a disturbance of psychic source. And what more perfect influence can there be than that which recognizes the need of the whole man, which utilizes his entire capacity, which harmonizes the warring elements of his being, and restores unity, wholeness and productiveness? Such will ever be the mission of work when divorced from damaging moods.

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# THE DIAGNOSIS OF RETROPERITONEAL ENLARGEMENTS*

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## I. THE METHOD OF DIAGNOSIS

This is an old subject, and yet an important thought brings perennial refreshment to its discussion, and attaches to it a more than passing value; for on the correct solution of many of these examples in abdominal algebra is based the wisdom of the choice of a transperitoneal or retroperitoneal operation.

Although I intend to deal with objective enlargement as the point of departure for my discussion, so important is everything which concerns the definite location and identity of disease on one or the other surface of the peritoneum, that I may take the liberty to digress at certain points a little, to consider cases in which the absence rather than the presence of enlargement adds confusion to the situation.

The busy surgeon has to answer such questions out of hand, without consideration of statistics or text-book classification, and reads the riddle—if at all—by the light of experience, and by the extemporaneous application of a cultivated logical faculty. We may be justified in thinking, therefore, that even when made the text of more ambitious discourses, this subject, when treated clinically, will thus yield the more lively interest, and will carry farther into the mind of the practitioner accustomed to every-day occurrences.

This paper, then, is an informal one, based altogether on a few salient personal experiences, with scant reference to authors or authorities. We can find enough of the clinically unusual in the simple recital of observations along a great surgical frontier to satisfy the most ardent seekers after diagnostic excitement.

In my student days, it was a favorite observation of an old friend and teacher—who still holds toward many of us the same beloved dual relation—that no two cases of typhoid are alike, and that no one case is ever just like the type the physician carries in his mind's eye. Just so do we find most retroperitoneal conditions; as soon as we have our ideas well formulated from a melancholy contemplation of past failures, up crops some wretched novelty in a false face to upset our notions of the fundamentals. If we start, then, with too many formulas, we shall not only cloud that clearer vision which knows a few truths and knows them well, but we can hardly reach any very comprehensive basis of diagnosis. The occasional exception may prove a rule, but too many either of rules or exceptions hamper decisive movement.

And first let us consider briefly the personal element underlying all diagnosis. A retrospect of my own many and constantly recurring diagnostic errors shows that they have been made largely either through ignoring or incorrectly valuing easily accessible diagnostic data, or else through accepting the crude opinions of others on vital points. In history-taking the statement of an absolutely ignorant patient, who is seeking relief and not damages, and who has a mind altogether virgin of opinions, is of more value than that of an educated crank with a fixed idea. In history-taking one should seek facts, and best of all objective facts; one should shun opinions—even those of colleagues. Many of the errors here frankly enumerated were due to disregard of these oft-repeated medical platitudes.

Secondly; when it comes to guessing—and who does not indulge in surgical guessing?—we should even then in the same way reserve to ourselves the right to guess independently. But we should guess as does the insurance actuary—scientifically, with the tables spread out before us. If the doctrine of probabilities, fortified in this manner, is a reasonable basis for the most conservative business in the world, why should the surgeon ignore it? To look for cancers in the old and sarcomas in the young, for acute abscess and the results of neglected trauma during the years of productive activity, and for chronic abscess and tuberculosis at all times—this in brief is the working theory of probabilities as applied to surgical diagnosis; the exceptions are few, and whoever accepts the doctrine to its fullest will be right the greatest number of times.

In this connection, let us note that many men have too much exceptional but undisciplined knowledge, and ignore safe guides for the conduct of everyday surgical life. Book knowledge brings as close familiarity with the unusual as with the usual, but leads to a disregard of averages. The commonplace man who makes a judicious canvass of symptoms and settles down behind the doctrine of averages is apt to be right the greatest number of times. The usual is more likely to occur than the unusual, and the skilled diagnostician takes this into account.

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* Read before the Tennessee State Medical Association, Memphis, April 13, 1910.

Case 1.—In a recent case brought into the hospital for diagnosis, this doctrine strongly influenced the diagnosis, although the case was held to be inoperable and surgical confirmation was thought unnecessary. A rosy and well-nourished child of 4, without history of previous diseases, presented an abdominal tumor of about six months' standing. Although the patient was said to have had previous high fever, during one week's observation, there was no fever or leucocytosis, and a von Pirquet test was negative. The skiagraph was negative. There was no vomiting, constipation, or diarrhea, no pain, and no urinary finding. The bladder, however, was thick and large, and there was continual urinary incontinence. There was no axillary, cervical or inguinal glandular enlargement. The abdomen was swollen and careful percussion showed it to contain a small quantity of fluid. Behind the descending and transverse colon was a growth, extending from the extreme left flank to the outer margin of the right rectus; there was some doubt whether the smaller portion to the right of the median line was actually joined to the larger portion to the left. The left border of the growth was rounded and smooth, and could be traced well under the costal arch above, and to an ill-defined point behind the sigmoid below. There was no fluctuation, and no pain or tenderness. Within the abdomen could be felt a few less-defined lumps which were not freely movable and seemed to be more closely associated with the posterior layer of the peritoneum than with anything actually within the cavity.

A diagnosis of tabes mesenterica had been made prior to admission.

The probabilities and known facts in this case pointed toward renal sarcoma, with only a remote possibility of tabes, and it was a little difficult to see why the latter diagnosis could have been previously entertained. While tabes sometimes exists in well-nourished children, without fever, without bowel symptoms, without adenopathy in other lymphatic regions, and possibly also as a primary large rounded tumor which might even so completely encroach on the kidney region as to simulate a renal tumor, it would have to be conceded that a wide margin of probability lay against such a large and characteristically located infantile growth proving to be anything other than renal sarcoma. Nor with the secondary enlargements present would it have been possible to entertain the diagnosis of urinary cyst. The safest diagnosis, therefore, was renal sarcoma.

Case 2.—A baby, 6 weeks old, weighing but five pounds, and nourished by bottle, vomited continually. My simple mind grasped only the connection between bottle and vomiting, and I hunted up a wet-nurse. The mother, a hysterical and unreasonable woman, became alarmed and made me bring in, coincidently with the wet-nurse, a consultant. My consultant happened to be a widely read man, but somewhat mentally astigmatic; and, his recent reading happening to have been along the line of congenital pyloric stenosis, he immediately saw good reason for suspecting it in this infant, and strongly hinted at an operation. This was too much for the mother; she sought shelter in the bosom of homeopathy, taking the precaution, however, to take her wet-nurse with her, and the baby recovered forthwith.

Case 3.—A supposed hour-glass contraction of the stomach was introduced into a clinic, held for the benefit of a distinguished English abdominal surgeon, and, after preliminary demonstration by an internist, was operated on only to disclose a stomach free from deformity or other conditions demanding operative interference.

Both Patients 2 and 3 presented a number of symptoms of stenosis, but also of other and simpler conditions, and a proper recognition of the probabilities should have placed them in some other category—at least temporarily.

Thirdly, it is a fair question to ask, in certain puzzling situations, What may a man be reasonably supposed to know and not to know? Even the luminous mind of Herbert Spencer reached its limitations; sadly enough, it is true, but at the end of his years he frankly admitted that he could see only a small segment of life, and even that as through a glass, darkly. Why should not we admit the same limitations? Such confession of the boundaries of knowledge is not only scientific, but appeals to the practical common sense of most patients.

Case 4.—A large middle-aged traveling man presented himself with a slowly growing tumor, not very hard, but also not fluctuating, the size of a grape-fruit, at the level of the navel and lateral to a line dropped from the right nipple. The patient had lost flesh, had slight subacute temperatures; was pale and cachectic, but not jaundiced; had no colic, vomiting, or constipation, and but slight local tenderness. The findings in urine and feces were negative. The tumor followed moderately the movements of the diaphragm, was closely associated with but under the colon, and could not be disassociated from the liver. The diagnosis was any man's, for there could be no positive answers to either of those two crucial anatomic and pathologic questions which must be answered in every case if there is to be any true diagnosis: What organ is involved? What process involves it? Incision down to the tumor at its most superficial point disclosed a retroperitoneal mass, composed of layers of fibrin and inflammatory deposit surrounding a core of old semisolid blood, which had descended from the pleura under the ligamentum arcuatum externum, and had burrowed its way along the fascial planes in front of the kidney up into the mesocolon. Closer questioning and examination during the patient's convalescence brought out a fractured rib—the result of a forgotten fall across a chair-back several months previously. It should be noted especially that the tumor could neither be associated with nor disassociated from any of the important organs lying in its vicinity. The key to the situation was ignored in the history-making.

And yet we have no right to put into any of these common ports of refuge of the indolent man until the real and available sources of knowledge are exhausted. We may rely as much as we please on common sense, and surgical instinct, and the doctrine of probabilities—these when legitimately used are merely methods of applying experience to concrete problems, and involve no occult powers peculiar to people of genius. We may in a pinch even, as in the instances just cited, shelter ourselves behind the limitations of knowledge. But none of these processes improperly employed can excuse the failure systematically to seek out, classify, and weigh all available diagnostic data.

At the bottom then, of diagnosis lies educated method, whether consciously or instinctively directed.[1]

### II. THE PROBLEMS OF THE REGION

After this rough sketch of the scanty framework on which all diagnosis must be erected, let us consider a few of the special problems and diagnostic resources of this great borderland region.

There is no more promising approach to a comprehensive grasp of retroperitoneal diagnosis than one which takes normal position as a fixed point, but which traces, with the aid of an imaginative faculty bred of experience, the variations from that standard usually and primarily produced by perverted function. Thus we find ourselves recurring constantly and inevitably to our first years' studies in anatomy and physiology. And more so in these regions than in the extremities, for there we have a standard ready at hand in the companion limb to jog our flagging memories; whilst here, observation, memory and imagination—joint attributes of great intellects—must supply the deficiency.

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[1] In a recent address, President Hadley of Yale made the far-reaching observation that education, by the study of abstract and often intrinsically useless subjects, teaches the methods by which the fully developed man solves the practical problems which come to him in his years of productive activity.

Many of us can recollect an instance of the operation of this great imaginative faculty, which sees the link joining the normal with the abnormal, in a memorable controversy of half a generation ago between a teacher of anatomy, and the greatest of all American surgical pathologists. The point in dispute was the relation of the structures passing to the liver in front of the foramen of Winslow between the two layers of the hepaticoduodenal ligament. The surgical contention was that the portal vein encroached on and menaced the approach to the common bile-duct. The anatomist scouted the idea and produced text-books and finally a pocket-edition cadaver with which to overwhelm anatomic doubts. The great pathologist—the discoverer of the ball-valve production of intermittent jaundice by stone in the common bile-duct[2]—listened silently to the demonstration, then responded: "Very good, very good, but I speak as a surgeon and a pathologist, and my relations are not yours." Those who operate on the diseased and obstructed common duct have had occasion to confirm the literal correctness of his observation.

The old arbitrary division of the abdomen by lines into geometrical regions is still the best, and no modern classification can surpass it in its clinical value. To each region anatomy assigns its own peculiar organ, and the clinician is justified in insisting that any organ suspected of having escaped from its own territory must have its identity proved beyond doubt. We can never forget that the enlargement found in the left hypochondrium should—anatomically—be spleen or kidney; an epigastric tumor should be stomach or pancreas, unless it may be a cyst of the lesser omentum; a hypogastric growth should be vesical or genital; inguinal tumors should be hernial or ovarian, cecal or sigmoidal; those in the umbilical region should be aneurismal, intestinal, mesenteric or omental; and lumbar enlargements should be renal, colonic or appendiceal. Nor should we forget that each organ is entitled physiologically to its own normal range of motion. On this anatomic basis we are justified in opening our investigation.

But right away we make two discoveries:

First: These regions are of concern mostly to the anatomist—it is the dividing lines between them, and the encroachments on them which interest the surgical pathologist.

Second: There are certain abdominal foci which represent centers of normal activity and which occur quite without relation to any arbitrary lines or divisions. These foci are apt to serve also as storm-centers from which radiate morbid processes. Such centers are points where the different physiologic systems come into contact, and here pathology also centers and the diagnostic trouble begins.

Consider, for example, the classical McBurney's point: within a circle two inches in diameter we may find normally the inflamed appendix, the cecum, and the calculous ureter; but we may also find the abnormally high ovary, the low gall-bladder, not to mention the cold abscess, the dislocated kidney, and any wandering neoplasm which claims squatter rights.

We draw another circle of the same diameter and center it at the foramen of Winslow, midway on the oblique line from the navel to the costal arch. Here are normally, gall-bladder, common duct, pylorus, pancreas, duodenum—each capable, with its train of morbid phenomena, of rapidly deranging the functions of every other organ in the vicinity.

Within the first region the displaced ovary is dragged up and plasters itself to the inflamed appendix; the ureteral stone impounded at the pelvic brim draws cecum or appendix into its troubles; the low and obstructed gall-bladder apes the dislocated kidney or the distended appendix, and the inflamed omentum covers all. It is even on record that this region has been invaded by a pyloric cancer[3] developing in a badly prolapsed stomach. In the second region, the swollen membranes around the foramen of Winslow may mask the perforated gall-bladder, the obstructed common duct, the pyloric or pancreatic cancer, or the thickened gastric or duodenal ulcer. Every surgeon of ordinary experience has faced problems which have to find solution along these lines.

Here are several examples from these regions where the important question was, peritoneal or retroperitoneal?

Case 5.—A fat woman, not jaundiced, presented herself with a roundish, movable tumor in the right lumbar region, lateral to and not covered by the colon. There was local pain, but otherwise no physiologic derangement. There was good basis for suspecting either the kidney or gall-bladder—which was it? Inflation of the colon by Ziemssen's method failed to separate the tumor from the loin, or to show that it belonged in the hypochondriac region. Manipulation, however, pushed it most readily forward and upward—it would not slip into the normal kidney position, and was, therefore, recognized as gall-bladder. Incision made cautiously directly down to the tumor proved the diagnosis to be correct.

Case 6.—A young man entered the hospital with a round, finger-sized and shaped, painful swelling under the colon in the right lumbar region, well above McBurney's point. Several mild previous attacks, and like this one, without fever. No vomiting, no constipation. Leucocytes, 20,000; polymorphs, 84 per cent. Loin colic, but only moderately rigid rectus. Urine contained some pus. Was it the ureter or the appendix?

Diagnosis was reasonably clear, for the tumor was too far to the right to be the ureter—which is rarely displaced. Incision directly over the tumor disclosed a very high appendix lying lateral to the colon.

Case 7.—A fat saloon-keeper came, after a previous operation for appendicitis, complaining that his pain was just the same. He was so fat that it was not possible to make out a tumor, but there was great pain on deep pressure in the loin. His urine was loaded with pus, and he had a constant evening temperature of 101. The enlarged kidney pelvis was incised and drained, but the temperature continuing for two weeks, it was found necessary to remove the kidney. After separating all of the organ except the upper portion, I finally tore that loose from some dense adhesions, and with it tore out the lower wall of a great subphrenic abscess, the existence of which had never been suspected. The patient had a good left kidney and recovered perfectly in spite of repeated blunders in surgical diagnosis.

Now strangely enough, the spleen also frequently becomes the center of unjust suspicions. One would suppose theoretically that an organ so definitely located and so securely placed would hardly mix matters very seriously for any of its neighbors. It should be traceable, if enlarged or prolapsed, back into its pocket under the deeply concave roof of the diaphragm, and if it pushes downward it should also project forward and lie superficial to and cephalad to the colon, which falls with it. And yet my note-book recalls two cases in which although we held a strong belief that the spleen could not be excluded, the culprit proved to be another organ.

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[2] Stones in the Common Duct and Their Surgical Treatment, Am. Jour. Med. Sc., 1896.

[3] Osler: Lectures on Abdominal Tumors, New York Med. Jour., Feb. 3. 1894, p. 132.

Case 8.—A Montenegrin who spoke no English entered the hospital for treatment. His previous history was negative of all facts which could throw light on his present condition. In addition, the temperature, weight, blood and urinary findings were negative. In the left side, projecting from beneath the ribs, was a roundish solid tumor in which one could feel a notch not unlike that of the spleen. The tumor moved with respiration into the abdomen, but could best be felt in the flank. When the colon was inflated, the tumor was still found to lie more in the flank than toward the median line, but the colon was displaced downward. I erred in giving this latter point too great weight—the tumor was a large hypernephroma, pushing the spleen up and the colon down. The respiratory mobility was transmitted to the tumor through the spleen. The key to the diagnosis was the great lateral growth into the loin under the peritoneum, instead of toward the navel within that membrane.

In a second case, the spleen was called on to prove an alibi in another direction.

Case 9.—A parchment-colored and emaciated native from the American Nile district around Cairo wandered up to Chicago with a tumor. The growth was larger than an Osage orange, and projected from beneath the left costal arch into the epigastric, umbilic, and left lumbar regions, but in a plane not usually invaded by the spleen. It could hardly be called movable, and its lower border was none too well defined. The tumor and the patient's history and residence suggested a malarial spleen; but although the red blood cells were reduced and irregular, there were no parasites, and persistent vomiting pointed strongly to the stomach. An analysis of the stomach contents after a test breakfast showed no blood, but hydrochloric was replaced by lactic acid. On this analysis a diagnosis of probable cancer of the stomach was based, but I held that the spleen could not be excluded. An incision showed a cancer of the distal extremity of the pancreas with secondary involvement of the greater curvature of the stomach. The spleen was normal.

Instances of situations in which organs encroach on and must be differentiated from one another might thus be multiplied until the limits of this paper were reached. But enough has been said to develop certain added diagnostic truths with which to supplement the division of the abdomen into anatomic regions, physiologic centers, and pathologic boundary lines. The following simple generalizations will be found to harmonize with scientific views of the influence which normal anatomy has on the development of abdominal disease:

1. The zones surrounding the different physiologic foci just enumerated are well defined under normal conditions, but overlapping often occurs when the range of motion or of growth of the organs lying within them becomes pathologic. This occurrence alone is strong presumptive evidence of disease.

2. In studying those cases in which change of position is a factor, two important aids to diagnosis are noted:

A. Displaced organs—"unknown quantities"—when manipulated, still show their easiest range of motion toward, rather than away from, their normal centers.

B. In cases in which an organ enlarges abnormally its direction of growth is still within the zone and cleavage plane normal to that organ, and rarely into or across new fascial planes. This last generalization is subject to apparent exceptions in cases in which large growths push the planes ahead of them, in which malignant growths involve all planes, and in which an intraperitoneal growth takes on a pedicle. It finds its most brilliant application in the diagnosis of those chronic fluid accumulations which occur so frequently in the retroperitoneal spaces.

### III. COLD ABSCESS

There is another important factor which I have separated somewhat from our study of organic diagnosis, because it has to do pathologically and clinically with a process rather than with an organ. I refer to that greatest and most confusing of all elements which cloud abdominal diagnosis—the cold abscess.

If one were looking for a universal point of departure for a system of differential diagnosis, one need go no farther than the study of the many-sided aspects of chronic suppurations. This phase of the subject cannot be studied too much, nor can we see and remember too many of these cases, to keep us alive sufficiently to the fact that we have them always with us, and always under fresh disguise.

Let us analyze briefly some of the essential features of these pseudo-growths and pseudo-organs—for such they invariably appear to the clinician as they occur in the retroperitoneal space—in the hope that out of their apparent and invariable irregularity we may develop some sort of system.

1. They involve spaces and fasciæ, rather than organs, and when organs are involved in consequence of the anatomic arrangement of fasciæ, these are merely imbedded in the abscess and are not a part of it.

2. Through the insinuating properties of the liquids of which these accumulations are composed, they follow the fascial planes more definitely than do either tumors or organs, and are apt to assume elongated and unusual shapes.

3. But on account of their hard rind of fibrin and inflammatory tissue, as well as of the tense fascia which surrounds them, they rarely fluctuate and easily simulate roughly the adjacent solid organs or tumors.

4. But this similarity is apparent rather than real. The growth is atypical and the simulation if closely pressed does not conform to type in vital particulars. Organic diagnosis, whether of the normal or of the diseased organ, finds itself—as the French say—in an *impasse*, and this very fact should lead us to suspect the donkey in the lion's skin. In this phase of diagnosis, we should be ever on the alert to entertain suspicion, even if organic exclusion cannot be positively established. If "probability is the rule of life," we cannot escape here the doctrine of probabilities, for there is no patient too young or too old to be immune to infection, and chronic abscess is more common than any other pathological process.

5. More than elsewhere, do we find these cases clarified by a study of the history. In one of the cases (Case 3) already cited, the discovery of the half-forgotten traumatism to the chest would have thrown a flood of light on the atypical quiet tumor in the right lumbar region.

Case 10.—In another case I was fortunate enough, through a study of the history, to identify an enlargement low down in the left lumbar region, as a pulmonary abscess which had burrowed from the lung beneath the diaphragm and lumbar fascia. This patient was supposed to be dying of consumption. Temperature was hectic; expectoration was profuse, but without tubercle bacilli. The history showed that her trouble began with pneumonia, and physical examination showed the left lower lobe well broken down, with the rest of the lung in fairly healthy condition. The tumor did not fluctuate, but the inference was plain that the cause lay eight inches away in the lung.

Less obvious are those insidious cases in which the abscess drifts down from some forgotten trauma to the spine, or from traumatic hemorrhage so near the kidney or colon that quiet infection takes place after the lapse of weeks. Such cases are especially obscure when the elevated temperature is only subacute and the white count but 9,000 to 11,000.

Case 11.—In one case the abscess pointed at the base of Scarpa's triangle and was taken for an iliofemoral aneurism on account of transmitted pulsation.

Case 12.—In another, there was a history of a bad fall with subsequent inability to work on account of great pain throughout the pelvic and lumbar regions. Subsequently a painful hard, irreducible tumor appeared in the groin, which many surgeons identified—for no particular or obvious reason—as a "traumatic hernia." Incision proved it to be a psoas abscess, and a skiagraph demonstrated a carious spot in the lumbar spine.

In these two cases the error in diagnosis was hardly excusable, for a reasonable inquiry into the history, and a more careful investigation into the local findings would easily have shown that the conditions suspected in each case were clearly impossible. In the first case the most casual application of our ordinary knowledge of the stigmata of aneurism would have effectually blocked that diagnosis—the pulsation was not intrinsic but transmitted; there was no bruit. The same method should have saved Case 12, in its travels from surgeon to surgeon, from an impossible diagnosis—an incarcerated and irreducible hernia could not have existed for twenty-four hours without the most fulminant abdominal symptoms; this patient had a soft painless abdomen and normal bowel movements.

In another case, however, no such charge could lie, for several surgeons worked long and intelligently for a diagnosis before the operation disclosed the true nature of the disease. This case is cited in detail in order to direct attention also to a practical application of a new and very important aid to diagnosis by exclusion:

Case 13.—E. M., a baker, aged 47, entered the Alexian Brothers' Hospital to be treated for chronic neuralgia and sciatica. He made his own diagnosis and was assigned to the medical service. He complained also of chronic asthma, due to the inhalation of flour in his trade. The lung findings were negative; and the evening temperature was persistently normal, with a pulse of 60. The urine was normal; the blood was slightly deficient in red cells, and the white cells were 6,300. The sciatica was left-sided, and there was also pain along the anterior crural nerve. Treatment was antirheumatic. After several days an irregular tumor was discovered in the left abdomen which was described by the history-writer as kidney-shaped, but which was, on more careful examination, found to consist of two somewhat distinct masses—a small one beneath the costal arch joined to a large one near the sigmoid. Inflation of the colon showed the tumor or tumors to lie behind that structure, and covered by it, except where the size of the growth caused it to project into the flank. The growth was hard, non-fluctuant, and fairly movable, but only the upper mass moved with the diaphragm. By the medical officer, the tumors were thought to be primary and secondary sarcoma of the kidney, and the patient was referred to the genitourinary service.

Repeated examinations of the urine drawn by ureteral catheters from the separate kidneys gave only normal findings. A lead probe was, therefore, introduced into the pelvis of the left kidney through the ureter, by Dr. H. L. Kretschmer under the direction of, and by the method described by Dr. L. E. Schmidt.[4] The patient was then skiagraphed with probe *in situ*. The plates showed no stone and no tumor shadow, but the ureter was shown to be displaced toward the spine and the probe passed well beyond the tumor region, thus excluding both kidney and spleen.

On these findings, the patient was transferred to the general surgical service with a probable diagnosis of cancer of the bowel developing into the mesentery.[5] In this diagnosis I could hardly concur, for there were no bowel symptoms such as should have been caused by so large a growth—distention, obstruction, mucous or bloody stools. Inasmuch as there was no spinal pain or deformity, I still suspected a new growth near but not connected with the lower pole of the kidney and not involving the ureter. The age of the patient made sarcoma more possible than probable, and a suspicion of fluctuation recorded prior to operation made it not impossible that we were dealing with a cyst from the lower pole of the kidney.

It was at this point that the doctrine of averages should have found recognition, for what more natural than to remember that a swelling, painless and irregular, possibly fluctuating, and incapable of certain association with any organ, should be a cold abscess? On the other hand, the absence of fever, the painless, normal spine, the advancing age, the failure to elicit a history of trauma, all pointed away from that conclusion.

There was nothing in this case to give positive support to the diagnosis of abscess except the doctrine of averages, and the great surgical truth that malignant disease is usually of organs, while chronic abscess involves fascial planes and spaces, with all the irregularity of form, development, and location which fascial anatomy implies. And yet the tumor proved to be an ordinary cold abscess, and subsequent skiagraphy showed it to have originated from a quiet carious process in the body of the second lumbar vertebra.

### IV. PAIN AND HYSTERIA

It would be a grave omission if I failed to mention—even in this superficial enumeration of the more puzzling clinical aspects of retroperitoneal diagnosis—the parts played by pain and its great twin motive, hysteria. I do not here refer to patients in whom there is obvious tumor or obvious variation from physiologic standards—such patients can be safely studied along objective lines. But there are many cases through which, to the surgeon, pain moves like a minor and elusive discord, and he can neither silence it nor seize it because the key in which it is pitched is altogether subjective. Yet to the patient, pain is no secondary overtone, for in the absence of its vibrations many a tumor has reached a hopeless size even before diagnosis has been sought, and many another pathologic deposit thus solely announces its presence subjectively long before mere volume—its "fundamental"—makes it known to the surgeon. Such cases present psychologic phases which call out the real genius of the diagnostician, and no child either in surgery or worldly wisdom can solve them. For oftentimes—in patients suspected of hysteria—they demand an analysis of occult motive, and a weighing of the genuineness of pain, which would do credit to a prosecuting attorney.

Now, whatever may be said about "the curative effects of operations *per se*" in hysterical patients—and we should not be slow to acknowledge that for the hysterical patient, who can be positively identified as such, there is nothing so much deserved and so calming to the troubled soul as cold steel—the surgeon, at least, for the honor of his craft, should understand and should record beforehand on his operating book, his diagnosis and the object of his incision.

It is a grave question whether pain which the surgeon believes to be genuine, but which exists alone and as the solitary symptom, can ever justify him in cutting either into the peritoneum or into the retroperitoneal space. My own experiences in thus venturing for exploration into these great dark labyrinths, with no other guide than the expressions of pain, have been sad indeed.

Case 14.—An old friend, a very stout florid woman at the menopause, came to me complaining of pain in the left iliac region, and of continued hemorrhage from the bowel. I found no hemorrhoids and no cause for the bleeding. She took purgatives constantly, complaining of obstinate constipation; she had a good appetite and was losing no flesh. She took a very gloomy view of her case and wished an operation. I refused, and sent her to a colleague for an opinion; he thought her symptoms suspicious. On account of her size I still hesitated, but under pressure consented to use the sigmoidoscope and to remove a few tags of hemorrhoids. The sigmoidoscope showed nothing, but she presently returned and urged a laparotomy. This was performed and the sigmoid and iliac regions were thoroughly explored in spite of enormous deposits of fat. Nothing was found, and the patient died on the seventh day of ileus. Her sister had died a few months before of cancer.

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[4] Kolischer, G., and Schmidt, L. E.: New Method of Skiagraphic Diagnosis for Renal and Ureteral Surgery, Nov. 9, 1901, p. 1228.

[5] A very similar case is cited by Osler: Lectures on Abdominal Tumors, New York Med. Jour., May 5, 1894, p. 545.

Case 15.—"*Aus meiner Docentenzeit*"—not my case. A nervous young school teacher complained of pain in the right loin radiating into the penis and testicles, with frequent and painful micturition—as often as every twenty minutes; the urine was strongly acid, but otherwise negative. This patient cheerfully went through four operations—the last a nephrectomy—and died after the last through the slipping of a ligature placed on the renal artery. Absolutely no anatomic basis for the pain was found at the post-mortem.

In these two cases, literal acceptance of the patient's statements led straight to the operating-table and the dead-house—and yet, in the light of the result, we can see that there was not a single symptom, either objective or subjective, which did not pass through and receive improper and exaggerated color from a panicky patient. It is a fair question to ask whether the patient or the surgeon was most the victim of hysteria.

There is, however, a certain morbid yet legitimate delight which probably every surgeon has felt in allowing plainly hysterical patients to reach the operating-table, simply by permitting their vicious and lying symptomatology to work itself out to a logical conclusion. We may fairly ask, why not take such patients at their word, and let them suffer the consequences? But always with our eyes open.

Cases 16 and 17.—Two hysterical patients complaining of pain in the left kidney were operated on without other symptoms and without operative findings. One, a fat old person with chronic hospitalism, was operated on by the loin route, and the kidney fastened—no result; she lived, of course. In the other—long known to the operator as a hysterical offender—a median incision was made; a nephroptosis was present on both sides, but inasmuch as pain was present only on the left side, the kidneys were not touched. A retroverted uterus was treated by the Alexander-Adams method. This patient became pregnant presently, and forgot her loin pains in more genuine twinges when the round ligaments began to tighten up.

In this connection we should not fail to note the close association so frequently observed between hysteria and the various forms of visceroptosis. It is hardly safe, however, to attribute the morbid mental state to the ptosis—more probably the two derivatives lead back to common roots in malnutrition and venous stasis in all the body cavities.

In my experience, operations have no terrors for the hysterical, and there is nothing gained by trying to scare such a patient out of her pain—in fact the mere hint of an operation is often seized on as a source of renewed excitement and the victim takes positive pleasure in mounting the operating-table.

On the other hand the mere existence of unidentified pain and the willingness of the patient to undergo repeated operations are no positive evidence of hysteria. To the student who combines the study of human nature with that of surgery the following case will have a deeper significance than when studied merely as a problem in diagnosis:

Case 18.—A hardworking, good-looking Irish woman of 35 was employed in the millinery department of a large store. Her occupation justified a certain amount of hysteria, but she was possessed of unusual intelligence and poise. Her interesting and suggestive history was as follows:

About a year previously she had begun to have pains high up in the rectum, with rectal and vesical tenesmus and occasional incontinence. Her menstruation was more than usually painful and she had pains in the thighs and in one great toe, alternating with numbness, and acute cramps in the same calf. There was also a constant and oppressive deep pain in the back in the sacral region. During the year she had been operated on twice—the rectum, cervix and urethra had been thoroughly stretched, and the rectal mucosa had been trimmed clean of various supposedly offending polypi. Still the pain, etc., continued. My net finding was a retroverted and adherent uterus, with a suspicion of a large right ovary adherent high up. Abdominal palpation showed nothing. Median laparotomy was frankly exploratory. The theory was the usual one of retroversion, sacral adhesions, hard work, referred pains, with a liberal allowance of easily accounted-for hysteria. After freeing adhesions and raising the uterus, the finger sweeping over the rear pelvic wall detected, beneath the peritoneum and quite out of sight, a hard tumor the size and shape of a half plum and growing from the sacroiliac cartilage. The tumor was admirably placed to elude detection by either abdominal or rectovaginal palpation, and but for the instinctive and final exploratory sweep of the finger would probably have remained undiscovered, until the slow growth of ensuing years would have brought it within palpating distance. The tumor was a metastatic deposit from a hypernephroma. (Report of Dr. LeCount.)

Such a case gives us pause in the too free use of those diagnostic refuges—"hysteria" and "referred pain."

## V. CONCLUSIONS

To sum up these very fragmentary observations, let us formulate a few conclusions, bred of that sober second thought which comes from the contemplation of personal catastrophe.

Method—educated method—lies at the bottom of all diagnosis. The genius for surgical diagnosis is rarely anything more than systematized knowledge.

The surgeon should take no man's word in abdominal diagnosis—he should do his own guessing, but do it scientifically.

He should recollect that abdominal diagnosis, like all applied knowledge, has its limitations—it is more scientific to announce that they have been reached, than to confess error later on.

"Probability is the rule of life," and the rule holds equally good between the ribs and the pelvis.

Abdominal regions are for the student of normal anatomy; boundaries concern the surgeon and the pathologist.

Displaced organs still move most readily toward their normal habitat.

The growth of the abnormally enlarging organ is still apt to occur within the zone and fascial plane normal to that organ; such growth is usually along, rather than across the normal cleavage planes; to the surgical pathologist the part of anatomy which is most profitably studied is that which concerns the distribution of fasciæ.

Neoplasms are usually closely associated with organs; the irregular and atypical enlargements which follow fascias rather than organs are apt to be either secondary deposits or chronic suppuration—more likely the latter.

In case of doubt, one should never forget that arch-deceiver, the cold abscess.

Chronic suppuration is rarely recognized by the direct method—the rule is diagnosis by exclusion.

Attention is especially directed to the history sheet, the temperature chart, the blood-count and the urinalysis report.

Inflation of the colon by Ziemssen's method often enables us to assist diagnosis by crowding the tumor into one or the other space in front of or behind the posterior layer of the peritoneum. If the growth is found by this method to be retroperitoneal, the kidney should be studied again by palpation, urine analysis, the $x$-ray, and finally by metallic ureteral catheterism combined with skiagraphy.

The neglect to recognize and properly to appraise hysteria is as frequently a cause of the miscarriage of diagnosis as is the failure to identify the cold abscess.

During those impressionable years which succeed every man's graduation from college, I served in a large hospital and followed many cases from the medical to the surgical wards and often—it must be confessed—to the dead-house. It was our privilege—which even then we recognized to be a glorious one—to serve under a man who thought little of time or money and much of the honest foundations of his great art in diagnosis and pathology—Christian Fenger. He made mistakes, but under the inspiration of his method they were to our fecund minds more vitalizing than the triumphs of other men. For from his own errors, he taught himself and us, and led the way to a keener search for future truth. "Did we observe all the observable facts?" "Were the facts distorted by passage through refractory media or by incorrect methods of observation?" "Well, then, our deductions were wrong, and we must observe and reason better next time!"

607 Rush Street.

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# INTESTINAL OBSTRUCTION FROM ASCARIDES LUMBRICOIDES

## REPORT OF A CASE

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The older authors denied the possibility of obstruction from this cause. Treves, in his work on obstruction of the intestines, expresses the opinion that "there is no trustworthy illustration of this somewhat rare form of intestinal obstruction."

Peyrot[1] does not mention a single case in his exhaustive observations on intestinal obstructions.

Rilliet and Barthez[2] think it possible, but state that strangulation caused by worms must be exceedingly rare.

D'Espine and Picot[3] contend that not a single example of intestinal strangulation exists, at least in the case of a child.

Galvagno Bordoroni in 1887 was the first to report a case of obstruction from lumbricoides, which he confirmed by the post-mortem examination. In the same year Stepp[4] speaks of a case of a 4-year-old child in which the post-mortem showed fifty ascarides, hermetically sealing the lumen of the bowel.

Taylor[5] in 1899 reported a case in which he operated and found two feet of the ileum inflamed and edematous. He opened the intestines and delivered sixty-six worms in a mass producing the obstruction. The intestine was damaged beyond repair and the child died on the third day after the operation.

Botoff[6] describes a case of obstruction of the bowels with perforation and subsequent peritonitis, in which the post-mortem disclosed 500 ascarides in the bowels.

Simon[7] in an autopsy on a child dead from obstruction of the bowels, found a mass of worms interlaced and strangling the intestines.

In a number of cases reported, the diagnosis of obstruction from worms was made and after the administration of anthelmintics and purgatives a large number of worms passed and the obstruction disappeared.

In other cases, at operation or autopsy, a few worms have been found producing an obstruction. This was due rather to the position of the worms than to the large number mechanically blocking the intestines.

A large lumbricoid has been found in the appendix vermiformis, coiled within the appendix and wrapped around the bowel, producing the constriction.

I find on record very few cases in which the obstruction has been convincingly shown to be due to the mass of lumbricoides.

That a collection of great numbers may be present without producing symptoms of obstruction is mentioned by Winocoucoff[8]. In one case 2,500 were expelled in five months from a child and in another child 12 years old 5,000 were expelled within three years.

*Patient.*—I saw the child, a boy aged 2½, for the first time at 10 p. m., February 28. The parents stated that he had not been well for some time and that he had worms, having passed eighty in a few days. Careful inquiry convinced me that these worms had merely worked their way out of the child's mouth and anus.

*Examination.*—In appearance the child was small for his age and very much emaciated. He complained of pain in the abdomen and was restless. The skin was dry and harsh. There was no nausea or vomiting. The child refused nourishment but took water freely. There was no distention of stomach or abdomen. Palpation of abdomen did not show much tenderness. The bowels seemed to be filled with masses, palpable through the thin abdominal wall, which both Dr. F. M. Phillips, who saw the case with me, and myself, thought were worms. The worms forming these masses could be so distinctly felt as to leave no doubt in our minds that they were causing the obstruction.

During the night ten worms came from the patient. We advised operation and the next day the child was brought to the hospital. By this time the stomach and abdomen were distended and on palpation painful.

*Operation.*—The abdomen was opened in the midline, incision three inches. The abdominal cavity contained a small amount of free bloody serum. The small intestines seemed everywhere filled with worms. Twenty-four inches of the jejunum was distended, almost to the point of rupturing. I opened the bowel and extracted the worms as rapidly as possible. So tightly were they impacted that it was necessary to remove them one at a time until the mass was somewhat untangled. After clearing this portion of the bowels the incision in the bowel was closed. About the middle of the ileum another impaction was found about 10 inches in extent; this was similarly treated. The last point of impaction was found at the cecum. Here the worms were massed in the ileum as well as the cecum and the appendix was so packed that it stood up like one's thumb. It was evident at this time that the bowel had been too largely distended to regain its tone and a resection was considered, but the child's condition did not justify this. No fecal matter was found in any part of the intestines.

*Postoperative History.*—The abdominal wound was rapidly closed and salt solution given subcutaneously and by rectum. The child was almost pulseless when put on the operating table and died six hours after. In this case the obstruction was clearly due to the large number of worms mechanically blocking and overdistending the bowels. There was no fecal matter anywhere in the bowels, no volvulus, constriction or anything producing the obstruction other than the large masses of worms. The average size of the worms was 9 inches, the smallest 7 inches. Two hundred and seventy-three worms were removed at the time of the operation. Ninety were passed by anus before operating and, as only the masses sufficiently large to produce obstruction were removed, I should think one hundred or more were left in the bowels.

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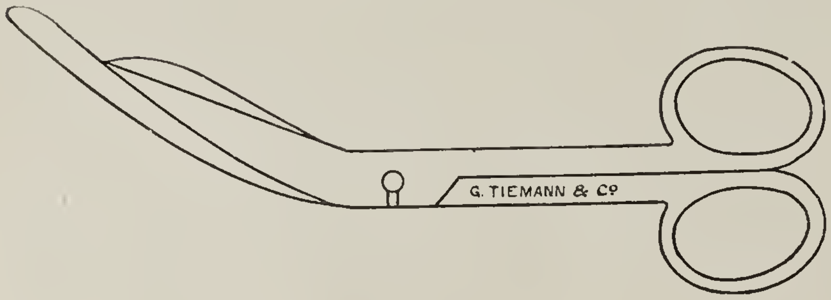
[1] Peyrot: Obstructions de l'intestin, Thèse d'agrégation, Section de chirurgie et accouchement, Paris, 1880.
[2] Barthez and Rilliet: Traité des maladies des enfants, Ed. 3.
[3] D'Espine and Picot: Manuel des maladies de l'enfance, Edition 4, 1885.
[4] Stepp: München. med. Wchnschr., 1887, No. 51.
[5] Taylor: Am. Jour. Obst., 1899, p. 800.
[6] Botoff: Jour. de clin. et thér., 1897, No. 10.
[7] Simon: Rev. médical de l'est., 1892, p. 228.
[8] Winocoucoff: Centralbl. f. Kinderh., May 1, 1907.

## DISSECTING SCISSORS

B. F. JENNESS, M.D.
Passed Assistant Surgeon, U. S. Navy
BUFFALO, N. Y.

This instrument was designed to facilitate the work usually done by a grooved director and scalpel, especially that of enlarging wounds and making incisions where important structures lying beneath the field are not visible. It is particularly useful in enlarging peritoneal incisions, and in hernia work, where the slitting of fascia and aponeurosis necessitates separation from important structures beneath. The tapering steel dissector on the scissor-blade may be pushed beneath tense membranes, and if upward pressure is maintained and the point of the dissector slightly elevated, it will push away the soft tissues beneath, and the structure to be cut will slide on the lower blade of the scissors.



Dissecting scissors.

After a small incision in the peritoneum this instrument can be used to enlarge the cut, without endangering the intestines which may be distended and lying in contact with the peritoneum.

## DERMATITIS FROM ARISTOL

HENRY H. AMSDEN, M.D.
CONCORD, N. H.

This case is reported because of my inability to find record of similar disturbance from this drug in the literature at my command.

A. M., aged 27, was delivered March 11, 1910, after normal labor, of a healthy child. There was a superficial laceration of the perineum, closed by silkworm-gut sutures. Aristol was used as a dusting powder, and twenty-four hours later a maculo-papular eruption appeared, affecting principally the extensor surfaces of knees and elbows, thighs and lower back, accompanied by intense itching. The eruption promptly subsided on withdrawal of the aristol; no other probable cause could be assigned for its appearance.

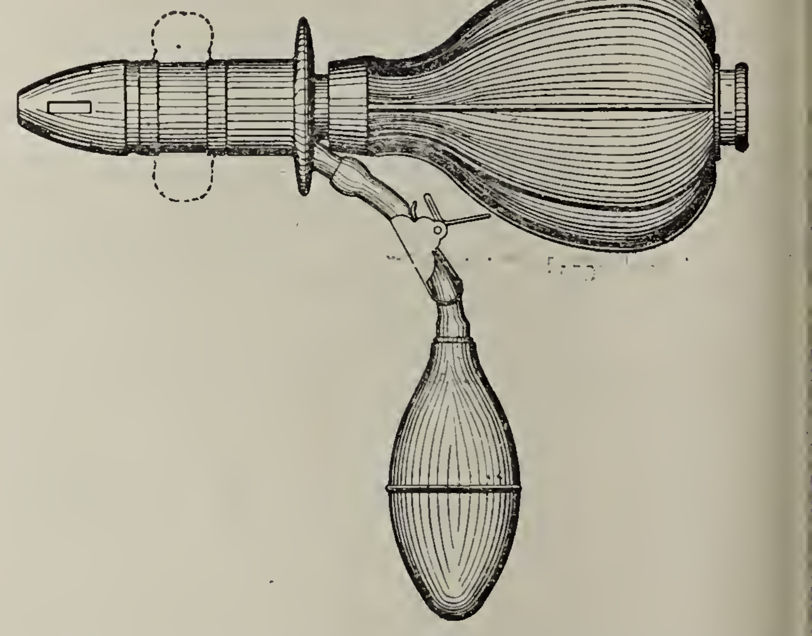
Whether the thymol or the iodin radicle was responsible for the symptoms is a question. It would seem that the common use of this preparation as a local application might not infrequently be followed by dermatitis in susceptible individuals

## A SYRINGE FOR TREATMENT OF CERTAIN VAGINAL DISEASES

S. L. KISTLER, M.D.
LOS ANGELES, CAL.

The syringe shown in the accompanying illustration consists of a nozzle to which is attached a Politzer bag, also a small bulb. The nozzle has surrounding it an inflatable band ring or sleeve and under this band ring the exit of a canal reaching into the small bulb above referred to. The canal leading from the small bulb to the inflatable sleeve has on the small rubber tube a shut-off. The small bulb may be filled with air or other liquid and when it is desired to inflate the ring the small bulb is compressed, which causes distention of the sleeve, and when the cut-off is closed prevents deflation of the sleeve. The Politzer bag attached to the nozzle has an inlet or filling device in its proximal end. A small fountain-syringe or face-bag may be used instead of a Politzer bag, and any desired pressure obtained, according to the height at which the bag is held above the nozzle.

As is well known, germs (particularly gonococci) are prone to penetrate the epithelium and to establish themselves in the deeper layers, even in the submucous tissues, and when so situated a solution injected can have little effect unless pressure is used to produce penetration into the nidi, so that the medicament may be applied directly to the bacilli, or to the tissues in order to hasten repair and thus destroy the germs. Ballooning the vagina is the result of pressure when the instrument shown in the accompanying illustration is used, all crypts and folds being obliterated by the ballooning and the cul-de-sac distended. Consequently the solution is allowed to reach the bacilli directly, a result impossible to obtain with any other syringe with which I am acquainted. Non-staining silver salts are ideal, also colorless hydrastis, zinc and other colorless preparations are recommended for obvious reasons. This treatment is made possible by the water-tight plug or valve which closes the canal and which is the original feature of this device.



Vaginal syringe, consisting of a Politzer bag attached to a nozzle surrounded by an inflatable band ring from which a canal leads into a small bulb. The dotted line shows the vaginal closing device expanded while in use.

3146 Vermont Avenue.

# A UNIQUE CASE OF LACERATION OF THE SPHINCTER ANI

A. B. COOKE, M.D.
NASHVILLE, TENN.

*History.*—Feb. 26, 1910, a boy, aged 7, who lived on a farm, went out to his favorite place behind the corn-crib to attend to a call of nature. While engaged in the act a pet dog, a hound of medium size, came up from the rear and mounting him, effected entrance into the anus and became "accoupled." The child's outcries quickly brought his mother on the scene. The dog had reversed his position and was in the same relation to the boy as is ordinarily seen following sexual intercourse with a bitch. The mother's excitement was naturally very great and in her frantic efforts to disentangle the two she used considerable violence, first with her hand, and finally jerking the dog loose by main strength. When the physician arrived the hemorrhage had practically ceased, but on inspection he discovered that the bowel was lacerated and advised that the boy be taken to Nashville for treatment. He was taken to St. Thomas' Hospital, where I saw him at 10 p. m. the same day.

*Examination.*—There was no bruising of the surrounding parts and little external evidence of injury. Traction on the anus, however, revealed that several lacerations of considerable extent were present. Under general anesthesia next morning the deepest of these was found to be near the middle line posteriorly, extending from a point two inches up the rectum, through the sphincter muscles and out on the skin surface for a distance of approximately one inch. The external sphincter was torn in two places at this site, one tear being complete, the other partial. Anteriorly there was a second laceration into, but not through, the fibers of the sphincter. In addition there were a number of minor tears in the anal margin involving the superficial tissues only.

*Operation.*—Fourteen interrupted catgut sutures were used in repairing the posterior laceration and four in the anterior. The others did not require suturing. The result was entirely satisfactory. Union was prompt and complete and the patient returned home in two weeks with perfect sphincter control.

Jackson Building.

# DEXTROCARDIA IN PULMONARY TUBERCULOSIS

RICHARD N. DUFFY, A.B., M.D.
NEWBERN, N. C.

Moderate degrees of dislocation or displacement of the heart not associated with disease of the heart itself are not infrequently seen. Pleuritic effusions, pneumothorax, pulmonary tumors, fibrosis of the lungs, meteorism, peritoneal exudates and transudates and other causes of increased intra-abdominal pressure, all may cause displacement of the heart in various directions depending on the location of the pathologic condition. Again, one may find the heart in an abnormal position at birth in that rare condition known as situs transversus or inversus. By far the most frequent cause of noncongenital dislocations of the heart to the right side, dextrocardia, is pulmonary tuberculosis. Seldom, however, in this disease do we see a complete transposition to the right side.

In a clinical study[1] of 2,344 tuberculosis cases at the Phipps Institute in Philadelphia some degree of displacement of the heart was found in 57 instances, that is, in 2.4 per cent. of the cases. According to Pottenger,[2] however, it is exceptional not to find the heart displaced in advanced pulmonary tuberculosis. In right apical lesions of long standing, according to Brown,[3] even when the physical signs are slight, the right border of the absolute cardiac dulness is not infrequently found three quarters to one inch or more to the right. Turban[4] considers this "a typical and cardinal symptom" of tuberculosis of the right apex. The displacement of the heart in pulmonary tuberculosis may be due to fibrosis consecutive to the tuberculous involvement, to pleurisy with the formation of adhesions, extensive cavity formation, pneumothorax, or a pleuritic effusion.

Complete dislocation of the heart to the right is very uncommon. Only five instances among 2,344 cases examined are reported from the Phipps Institute.[1] The displacement may take place suddenly, owing perhaps to the giving away of slight adhesions, or to sudden changes of intrathoracic pressure. Brown[3] reports a case illustrating the former condition. Or the displacement may be more gradual. Young[5] reports a case of this kind. Brown[3] has also reported an interesting case of valvular pneumothorax from the rupture of the wall of a cavity in the lower part of the left upper lobe, in which the heart was several times gradually forced over to the right side, but always returned when a needle was introduced and the air allowed to escape.

I wish to add the report of the following case to the literature of this subject:

*History.*—Mr. H., a white man and a native North Carolinian, 43 years old and unmarried, was first seen by me on November 18, 1908, complaining of "consumption." There has been no previous indication of tuberculosis on either side of his family. He has five brothers and all are perfectly healthy. He himself was well up to his eighteenth year when he had a severe attack of measles. This was followed by a pneumonia and a severe diarrhea. He finally recovered from the acute attack but was never strong after this. Four years ago he became very much "run down" and developed a pain in his right chest. He consulted his family physician, was told that he had pulmonary tuberculosis and was advised to go to the North Carolina mountains. This he did and improved slightly. Later he went to Hot Springs, Ark., and here his condition became worse. He was now holding his weight fairly well, but had a harassing cough with profuse expectoration. He had coughed up blood-stained sputum on numerous occasions and had had severe night sweats. He had had an evening rise of temperature to 100-102 F. for several years. Tubercle bacilli had been repeatedly demonstrated in his sputum. About two years before the time of consultation, the patient said, while walking along the street with his hands on his chest he felt his heart beating on his right side. He asserted positively that up to this time his heart had been on the left.

*Examination.*—The patient was much emaciated and had an almost constant cough. His pulse was 23 to the quarter minute, regular in force and rhythm, of small volume and low tension. His eyes, ears and throat seemed normal. The respirations were rapid and shallow. The intercostal spaces were very prominent and the right clavicle was much more prominent than the left. The respiratory movements of the chest could be well seen on both sides but the movement of the left half of the chest was more marked than that of the right, especially in the upper half. The vocal fremitus was everywhere felt and was especially marked on the right side from the apex to the fourth rib in front. On percussion, the note was slightly dull at the left apex but hyperresonant over the whole of the remainder of the left front and back. On the right side the note was slightly tympanitic at the right apex and infraclavicular region. In the right axilla there was pure tympany down to the fourth interspace and this tympanitic note was also found over the right front, extending from the second to the third rib. The note over the remainder of the right front was dull down to the lower border of the liver. On auscultation, at the left apex the breath sounds were tubular, and fine moist râles were heard at the end of inspiration. Elsewhere over the left front and back the breath sounds were bronchovesicular, but there were no râles. The sounds at the right apex and infraclavicular region were a distant tubular, and over the area of pure tympany the sounds were loudly tubular. Over this whole area were heard râles of all varieties—fine and coarse moist râles, sonorous and sibilant râles. Pectoriloquy was also marked here. Over the remainder of the right lung in front the breath-sounds were a distant tubular and were accompanied by fine and coarse moist râles. The right back was markedly infiltrated throughout. On examination of the heart I was astonished to find the point of maximum impulse just beneath the right nipple. The beat was regular and forcible and there were no thrills to be made out. The area of cardiac dulness extended about 1 cm. to the right of the nipple and above to the third rib in the right mammillary line. It reached its highest point at the second interspace at the right border of the sternum. It then dropped extending across the sternum to the third interspace at the left sternal border. It then curved out about 0.5 cm. to the fourth interspace, then to the right, again reaching the midsternal line at about the fifth interspace, and descending downward and to the right it mingled with the liver dulness. The liver dulness seemed normal in its extent. On auscultation of the heart there was a soft systolic murmur at the apex. This was not transmitted and the sounds elsewhere were normal. There were no signs of circulatory disturbances. The stomach was in its normal position and the abdomen seemed normal throughout.

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[1] Second Annual Report of Phipps Institute, 1906.

[2] Pottenger: Diagnosis and Treatment of Pulmonary Tuberculosis.

[3] Brown: Am. Jour. Med. Sc., December, 1908.

[4] Turban: Diagnosis of Tuberculosis of the Lungs, 1906.

[5] Young: Boston Med. and Surg. Jour., 1907, clvii, 791.

This remarkable condition seems to me to have only one of two possible explanations. Either there has been a plastic inflammation between the two layers of the pleura and the pericardium with the formation of adhesions and a subsequent retraction of the right lung due to fibrosis; or, there has been a cavity formation in the right lung and a compensatory hypertrophy of the left lung with a crowding of the heart over into this cavity, the sudden dislocation being probably due to the rupture of delicate adhesions. From the history and the physical signs the latter explanation is probably the correct one.

This patient is still living and it has now been nearly a year and a half since I first saw him. It is therefore about three and a half years that his dextrocardia has existed. He still shows no signs of circulatory disturbance of any moment and is apparently as comfortable with his heart on his right side as he was with it on the left.

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# Therapeutics

## DIABETES INSIPIDUS

While diabetes insipidus is perhaps never really a disease and is often a symptom, it may be a more or less permanent condition. Any suggestion as to its cause or any means of diagnosing its cause is of value in directing the treatment. While many times the condition is unimportant, not infrequently it is of serious import.

The condition called polyuria should be separated from the condition to which the above name applies. Hysterical polyuria, nervous polyuria, or the polyuria of excitement, the polyuria of high tension, of arteriosclerosis, and of chronic interstital nephritis is well understood, but generally the amount of urine passed under these conditions is represented by pints, while diabetes insipidus is represented by quarts.

Cerebral irritations and certain diseases of the cerebrum and injuries to the cerebrum have been recognized as factors in producing diabetes insipidus, but the inability of the kidneys to excrete urine of normal specific gravity, necessitating enormous amounts of water excretion to eliminate the salts which must pass out of the body, has perhaps not been recognized.

O. Minkowski (*die Therapie der Gegenwart,* 1910, li i, p. 4) defines diabetes insipidus as any disease in which there is an increased excretion of non-sugar-containing urine, without being accompanied by a lesion of the kidney. It is necessary for the practitioner to distinguish the following: 1. Whether the increased urine excretion is a primary disorder, which would lead to a reduction in the water content of the organism unless large quantities of water were taken. 2. Whether the real cause of the large volume of urine is an excessive thirst accompanied by excessive drinking. 3. Whether one or both of the above are produced by other disorders.

In general, one observes the effect of a great reduction in the water intake on the urine excretion. If the disease is a primary polydipsia, the urine excretion should be reduced by limiting the amount of water drunk. If, on the other hand, the urine volume is not reduced, the inference is that polyuria is the primary disorder. Under the latter conditions the patient will experience an enormous loss in weight, due to the removal of the water from the tissues, especially if the water intake is reduced. In most cases of diabetes insipidus, increase in the specific gravity of the blood and lowering of its freezing-point are avoided by the withdrawal of water from the tissues into the blood. Consequently, these physical properties are of little value in the differential diagnosis.

A number of authors, particularly E. Meyer, have believed in a special functional disorder on the part of the kidney which they describe as "a loss of the ability to concentrate the urine." If this is true, it would be necessary to excrete a large volume of urine in order to remove a large amount of waste from the body, and this would necessitate a large water intake. If the requisite amount of water were not taken, the tissue moisture would be removed else a retention of the solid urinary constituents would occur, resulting perhaps in uremia.

This inability of the kidneys of certain patients to excrete concentrated solutions, is particularly true of solutions of sodium chlorid, and to a lesser extent true of solutions of urea. If such patients receive from 10 to 20 gms. of sodium chlorid ($NaCl$) with the food, the concentration of the urine in salt is very little increased (from 0.1 to 0.2 per cent.). A large amount of urine and considerable time are therefore necessary for the excretion of all the salt. Minkowski makes use of this fact in differentiating between polyuria due to inability of the kidneys to concentrate the urine, and polyuria dependent on some other factor. If, after giving from 10 to 20 gms. sodium chlorid, the urine of the next twenty-four hours contains practically all of the salt, the individual is placed on a water-poor diet. If very little of the salt is excreted without increasing the water intake, the best treatment is to put the patient on a sodium chlorid, nitrogen-poor diet. In one patient treated by the latter method, there was a reduction in the urine volume from 12 to 14 liters (quarts) to 3 to 4 liters daily.

The diagnosis of the cause of diabetes insipidus having been made, the treatment may be aimed more or less successfully to cure the condition, or to prevent the operation of the cause. A simple polyuria from overdrinking can, of course, be easily prevented. Nervous causes may be modified if there is not actually some pathologic condition in the brain. If the blood-pressure is high, the lowering of it by proper baths, massage, physical exercise, change to a warm climate, diet, or by vasodilators will prevent it. Polyuria may, however, occur with low blood-pressure causing perhaps some disturbance of the brain, as theoretically low blood-pressure should not cause diabetes insipidus. Such instances may be helped by the vasoconstrictor drugs, and especially by ergot. It is possible that this effect of ergot is due to its action in preventing cerebral irritation, cerebral congestion, and possibly the slight cerebral exudate that may occur.

It is obvious that if large amounts of urine are passed, even if the water intake is reduced, that the patient should not be deprived of drinking plenty of water, as otherwise he will extract water from his own tissues to his immediate and perhaps permanent injury. This fact having been ascertained, and the persistent low specific gravity of the urine showing that a metabolic mistake is present in the kidneys, the outcome of the condition is very uncertain. Naturally, a nitrogen-poor and a salt-free diet could not be long persisted in, but each individual patient with this condition should be so carefully studied that he does not lose weight, and then possibly, little by little, the kidney ability to excrete urine of proper specific gravity might be developed. This improvement in the kidneys at times probably occurs. In other words, the physiology of any organ may improve. Whether the administration of kidney extracts or kidney tissue would help this kind of an insufficient kidney has not been demonstrated. It probably should be tried, even though these extracts have not much modified the excretion of nitrogen or prevented uremia in nephritis.

## PROTECTIVE APPENDICITIS

So much has been said, and has been said so emphatically and so vociferously, of the necessity for immediate operation in appendicitis, and the conditions found at operation are so many times so much more serious than was anticipated, that it is time to note that there is a group of cases in which operation may be deferred or entirely avoided.

It is especially a pleasure to quote the opinion of one who has been so insistent in preaching the gospel of early operative treatment as Dr. Robert T. Morris, of New York. At the International Medical Congress, at Budapest, last September, Dr. Morris presented his views on this subject. (*Medical Record,* Jan. 8, 1910). He described protective appendicitis as "an irritative lesion, occurring in the course of normal involution of the appendix, and dependent on irritation of nerve filaments which persist in the contracting hyperplastic connective tissue which has replaced other normal structures of the appendix."

This form of appendicitis he distinguishes from another irritative lesion due to serous infiltration of the tissues of the appendix, which is seen in lithemic conditions, in obstruction of the lymph and blood circulation, and in loose right kidney which is said to cause obstruction by pressure on the superior mesenteric vein; and from two forms of infective lesions, one due to intrinsic infection, and the other to extrinsic infection. Morris believes that the most common lesion of the appendix is the irritative lesion which he now proposes to call "protective appendicitis," which he formerly called fibroid degeneration of the appendix, which Senn, in 1894, called appendicitis obliterans, and Ribbert, in 1902, called normal involution of the appendix.

The pathology of this condition consists of a replacement by connective tissue of structures susceptible of acute infective processes, *i. e.,* normal involution of the appendix. Nerve filaments persist longer than most other histologic structures and are irritated by the contracting connective tissue, hence the occurrence of more or less pain. Morris believes that this pathologic process probably is actually protective against local infective processes.

The symptoms of this condition are discomfort in the appendix, of long duration and varying intensity, but not sufficiently severe to cause the patient to go to bed; flatulence; more or less constipation and symptoms of chronic intestinal indigestion.

Among important considerations in the diagnosis of this condition Morris finds hypersensitiveness on deep pressure at the location of the right group of lumbar ganglia, situated about an inch and a half to the right of the navel, and close to the lumbar vertebræ. If there is sensitiveness in this region on both sides of the abdomen, the lesion is probably pelvic rather than appendicular. Another symptom of diagnostic importance is the distention of the cecum and ascending colon with gas, which is more dependent on paralytic relaxation of the muscular coat of the intestine than on fermentation in the intestine. Some observers claim that in most of these cases the presence of an appendix firmer than normal can be determined by palpation.

The treatment depends on the conditions present in each individual patient. If the pain is not severe and the patient is of sufficiently calm temperament not to be annoyed by it, operation need not be advised, and the patient may be told that there is no necessity for the removal of the appendix on the ground of impending danger. His comfort, however, should be increased by such hygienic, dietetic, tonic, and laxative treatment as seems advisable to improve the intestinal digestion. The patient may also be told that his abdominal discomfort will probably gradually be less frequent and finally not recur. If, on the other hand, the discomfort is considerable and continuous, and renders the patient anxious and apprehensive, so that his usefulness is impaired, an operation may be advised, and can be performed with comparatively little danger, certainly with far less danger than by the removal of the healthy appendix, in doing which a point of infection is opened in the midst of an unprepared field.

**Radium Ores as Remedies.**—In a communication to *Nature,* Nov. 11, 1909, H. Warth suggested that since radium has been found of therapeutic value in many conditions, that pitch blend might also be thus utilized. He says: "The very minute proportion of radium in pitch blend need be no real objection. If we substitute, in the case of pitch blend, grams for milligrams and days of application for so many minutes, a disparity of one million is soon made up, and there may be some action, although perhaps different from that of pure radium salt. Moreover, we must expect a beneficial influence from minute quantities of radioactive substance if the assumption is to be finally proved that certain thermal waters owe much of their virtue to such traces. In addition to raw pitch blend, a possible utility of pure (yellow) uranium oxid might also be considered." In a later number of the same journal (December 16) Antoonovich writes from St. Petersburg and reports that the workmen in a uranium mine which he was developing in Turkestan, where the ore averaged from 3.8 to 30 per cent. or more, when cautioned in regard to the poisonous nature of the minerals, claimed that the powdered mineral dusted over wounds caused a much more rapid healing. A cut on the hand, they said, which lasts for a long time in a coal mine, gets well very quickly when powdered by the uranium ore. As they worked part of the year in coal mines they could compare their experiences.

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[*For other information see second page following reading matter*]

SATURDAY, JUNE 18, 1910

## PHOSPHORUS POISONING IN THE MATCH INDUSTRY IN THE UNITED STATES

The recent work by the secretary of the American Association for Labor Legislation, Dr. John B. Andrews,[1] on the occurrence of phosphorus poisoning in this country is a valuable contribution to the study of this form of industrial poisoning. Contrary to a more or less widespread impression, even among physicians and dentists, Dr. Andrews shows that phosphorus necrosis of the jaw in serious form is not at all a rare occurrence among match workers. It is true that manufacturers and others claim that the disease has not occurred to any noteworthy extent in this country during the last twenty years; Andrews, however, was able within a comparatively short time, to unearth the records of more than one hundred recent cases. On account of the peculiar difficulties in the way of securing accurate information, the total number of cases and their proportion to the number of workers probably cannot be precisely determined. We learn that the fifteen factories studied (there are sixteen factories in all in this country) employ about 3,591 persons, so that it is clear enough that phosphorus poisoning in the match industry in this country at present is not an insignificant matter.

Three kinds of matches are made: the safety match which contains no phosphorus and is harmless, the igniting composition, which consists of red phosphorus, and which is harmless when pure, being painted on the box; a strike-anywhere match, the paste in the head of which contains poisonous white phosphorus; and a strike-anywhere match in which the poisonous phosphorus is substituted by the non-poisonous sesquisulphid of phosphorus. The last match has been used exclusively for the last twelve years in France; in this country the strike-anywhere match made with poisonous phosphorus constitutes the principal output.

It is in the mixing, dipping, drying and packing rooms of the factories that the danger from breathing phosphorus fumes and from contact with phosphorus is always present. It is thought that minute particles of phosphorus enter cavities in the teeth and set up the progressive inflammation and necrosis of the bones of the jaws which characterize phosphorus necrosis. Dr. Andrews' study of the actual conditions in the fifteen factories investigated revealed that 65 per cent. of the employees were working under exposure to the fumes of white phosphorus and consequently to the dangers of poisoning; on account of the nature of their employment the women and children are more exposed than the men. Indeed, 95 per cent. of the women and 83 per cent. of the children under 15 years of age were so exposed. Undoubtedly lack of knowledge of the facts must be held responsible, in some measure at least, for the ignorance displayed of the dangers involved and for the neglect in some places to use even the simplest precautions as shown by the absence of means for carrying away the fumes arising visibly from the benches of the workers, by insufficient washroom facilities, lack of mouth washes, etc. In some factories the employers had done nothing to instruct the employees of the dangers to which their work exposed them. During recent years the conditions have been greatly improved by the institution of modern ventilation, improved machinery, better lavatory facilities, etc., but the disease exists and still claims its victims one by one, though not to the same extent as twenty years ago.

Attempts at removing the conditions which bring about "phossy jaw" were begun long ago by various European states, but the disease could not be wholly prevented even when the conditions were greatly improved. This experience has led to the prohibition in many countries of the use of white phosphorus in the manufacture of matches. This was done by Finland in 1872 and in Denmark two years later, since which time no case of phosphorus necrosis has occurred in these countries. More recently the leading European countries have abandoned attempts to suppress by regulation phosphorus necrosis, and now prohibit absolutely the use of white phosphorus in matches (France, 1897; Switzerland, 1898; Netherlands, 1901), and in 1905 the International Association for Labor Legislation secured a treaty providing for the prohibition of the making and selling of matches made of white phosphorus, which treaty has been signed by France, Denmark, Germany, Italy, Switzerland, the Netherlands and Great Britain. The experience of Great Britain is especially noteworthy; twelve years ago a thorough investigation of the conditions was made and stringent regulations, coupled with an efficient inspection, instituted. But "phossy jaw" was not prevented, and in 1908 this country also prohibited the use of white phosphorus.

No American state has yet adequately provided for the protection of workers in match factories, and, everything considered, it would seem clear that the use of a substance of such insidious poisonous action as white phosphorus should no longer be permitted so long as harmless substitutes are available and commercially practicable.

The remedy is to prohibit absolutely the use of white phosphorus in the manufacture of matches, as well as the importation and selling of matches thus made.

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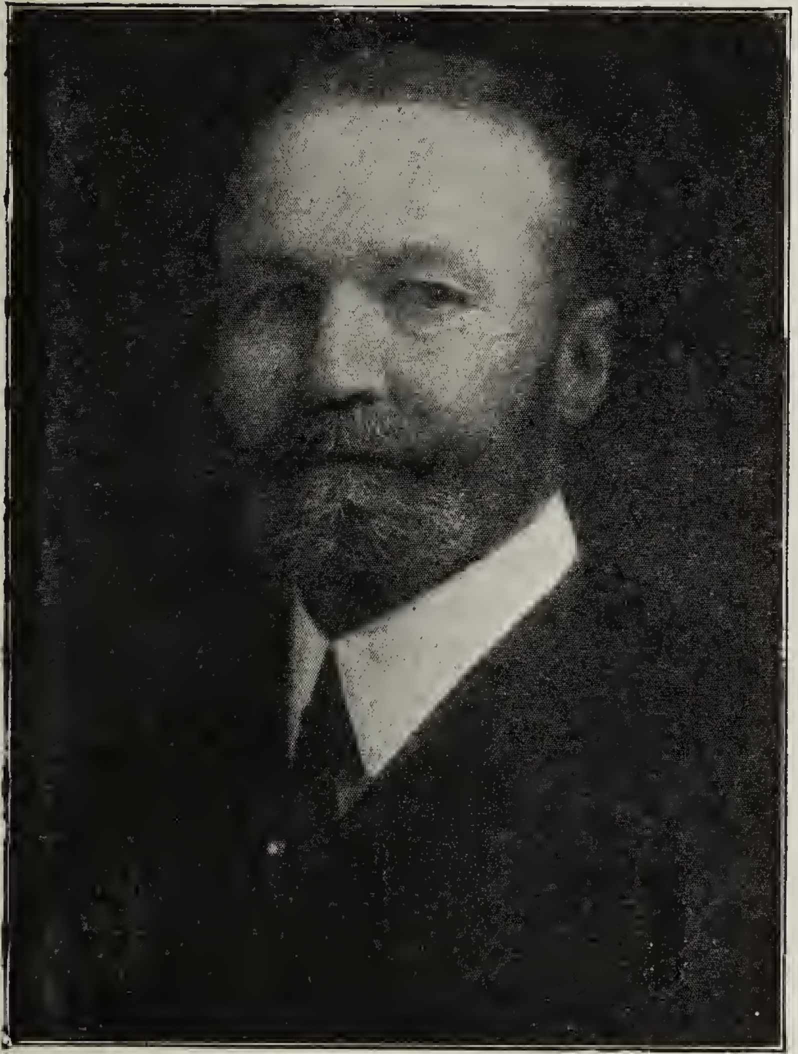
[1] Bull. Bureau of Labor, January, 1910, No. 86, p. 31.

## PRESIDENT-ELECT JOHN B. MURPHY

There are probably but few men in the ranks of American medicine who are better known at home and abroad than the President-Elect of the American Medical Association, Dr. John Benjamin Murphy of Chicago. His work in surgery easily places him in the front rank of American surgeons—which means in the front rank of the surgeons of the world.

Dr. Murphy was born in Appleton, Wis., Dec. 21, 1857. He was reared on a farm, attended the secondary schools and was graduated by Appleton High School in 1876 and by Rush Medical College in 1879. After service as intern in Cook County Hospital, Dr. Murphy formed a partnership with Dr. Edward W. Lee. In 1882 he went to Europe, where he studied in the hospitals of Vienna, Berlin, Heidelberg and London, returning in 1884 to Chicago.

Dr. Murphy has been successively lecturer in surgery at Rush Medical College; professor of surgery in the College of Physicians and Surgeons, Chicago; professor of surgery in the Northwestern University Medical School; professor of surgery in Rush Medical College, and for the second time, professor of surgery in the medical department of Northwestern University, which position he still holds. While Dr. Murphy is known best to the medical profession in general as a surgeon, he is known to an increasingly large portion of the profession as an instructor of the highest rank. He is a born teacher and not only has a message to give but possesses in a marvelous degree the power to give it.


JOHN B. MURPHY, M.D.

As a surgeon Dr. Murphy is typical of the country; not content blindly to follow precedent, he has blazed new trails. And, what is of even more import, in attacking a problem he is not content to leave it half-solved, in a formative stage as a mere interesting academic possibility; when it is perfected he has a fully developed, practical method, given as a complete procedure to his contemporaries. In this particular Dr. Murphy stands unique; he has not only invented, he has perfected.

Some of the best-known of Dr. Murphy's writings are: "Cholecysto-intestinal, Gastro-intestinal, Entero-intestional Anastomosis and Approximation Without Sutures;" "Ileus;" "Resection of Arteries and Veins Injured in Continuity;" "Surgery of the Lungs;" "Operative Surgery of the Gall Tracts, with Report of Twenty Successful Cholecysto-Enterostomies by Means of the Anastomosis Button;" "Fracture of the Olecranon Treated by Subcutaneous Exarticular Wiring;" "Surgery of the Spinal Cord and Peripheral Nervous System;" "Tuberculosis of the Patella;" "Proctoclysis in the Treatment of Peritonitis."

As a progressive and aggressive member of the medical profession no less than as a leading educator and a surgeon of high rank, Dr. Murphy honors the office to which he has been elected.

## THE ST. LOUIS SESSION

The St. Louis Session of the American Medical Association was an unqualified success. From the scientific point of view, and from the effect in the promotion of a closer and more harmonious organization of the profession, as well as of social interest, little more could have been desired. The registration was a little over four thousand, a number exceeded only twice—at Boston and at Chicago.

In the scientific interest and in the earnestness and fulness of the discussions on the topics presented the section meetings equaled or surpassed those of any previous session. Every section had profitable meetings and the attendance in each was good. Especially notable were the symposiums in the Section on Preventive Medicine and Public Health on hookworm, pellagra and typhoid fever, and in the Section on Pathology and Physiology on cancer—subjects which, aside from their interest to the profession, have particular interest for the public, because of the wide-spread morbidity and mortality which they cause, especially in the instances of typhoid fever and cancer. Indeed, it is interesting to note the many points at which the papers throughout the whole program of this session touched the public directly in the matter of hygiene, sanitation and prevention. It is a reflection of the wide-spread interest of the public in what is being done in medicine. In many respects the Section on Preventive Medicine was the most interesting of the Session. Cancer, with its frightful mortality and increasing prevalence, was probably the most prominent subject of the Session, being considered in one or more of its aspects in almost every section, far outshadowing tuberculosis in this respect. In some of the other sections symposiums on diabetes, the infectious diseases and eclampsia, with the discussions, served to clear the atmosphere about many mooted questions. There were many other interesting features of the scientific program, but space forbids further mention of them here.

The meetings of the House of Delegates were harmonious throughout. Each succeeding year the reference committees are doing more and more work, making it possible to investigate thoroughly all the various propositions that come before the House; and thus the House is able to accomplish much more, and to do the work in a deliberate, satisfactory manner. Of the important things done by the House of Delegates, one was the creation of a new Section on Genito-Urinary Diseases, as petitioned for by many members doing work in that line. Another was the creation of the Council on Health and Public Instruction, which is to have charge of the work formerly done by several overlapping committees, covering such matters as preventive medicine, medical legislation, economics, public instruction in medical, sanitary and hygienic questions, etc. The Council will organize complete machinery to facilitate the attainment of these objects.

Any impression that there was the slightest lack of harmony in the organization was dispelled by the work of the House of Delegates and by the spirit shown in the daily work; and any attempted disparagement of the aims and purposes of the American Medical Association was silenced by the splendid statement of them contained in the address of President Welch at the General Meeting. That the public correctly understands these aims and endorses them was evinced in the admirable address of Governor Hadley and the other gentlemen who spoke at the General Meeting.

The arrangements for the entertainment of the visitors—barring those for Wednesday afternoon, when the rain interfered—were admirably carried out. The pervasive quality of hospitality, the geniality and cheerful friendliness of the South, which are characteristic of the people of St. Louis, were in evidence. The physicians and their wives and daughters were delightfully entertained at the President's reception and at many dinners and luncheons. The school and class reunions were also occasions affording pleasure and satisfaction to those participating in them.

The arrangements at the various section meeting-places were declared by some to be a distinct advance over anything heretofore seen, and the local subcommittee in charge of these arrangements deserves the highest praise. Nothing was overlooked which would minister to the comfort and convenience of the members or which would facilitate the smooth running of the sessions. The meeting-halls were models, and telephones, stenographers, messengers and everything needed were provided. A member of the committee was always in attendance to see that nothing was lacking.

The Scientific Exhibit and the Commercial Exhibit, in the Coliseum, in harmony with the rest of the Session, were a complete success. The Scientific Exhibit in the balcony, though not so accessible, perhaps, as could be desired, was interesting and well attended. The demonstration of the hookworm, for which Smith of Atlanta was given the prize, was especially attractive. Worthy of particular note was the exceedingly interesting and valuable exhibit of the St. Louis Historical Society adjoining the Scientific Exhibit. A feature of the balcony exhibit was that of the Association Laboratory, in the exposé it made of a number of well-advertised nostrums, in furtherance of the work which the Council on Pharmacy and Chemistry is doing. It elicited much favorable comment from visitors and the graphic way of presenting matters caused surprise to many.

In the interest displayed in the purely scientific subjects, in the practical subjects, in the matter of preventive medicine as touching the public and the general welfare, and in the association as an organization having the highest aims and the most altruistic purposes, the St. Louis session was a notable milestone in the gratifying progress of the American Medical Association.

## INDUSTRIAL HYGIENE

Three important national conferences, one on industrial accidents and workmen's compensation, one on industrial diseases, and one on labor legislation, were held on June 10 and 11 in Chicago; and many important bodies were represented in the discussions. It is earnestly hoped and expected—and the expectation is reasonable—that by means of these conferences and the resulting coordinated activities, great and salutary changes will be achieved in the conditions to which people working in trades are subject.

Of these conferences, that on industrial diseases was the first ever held in this country. The interest which the medical profession should take in this subject was well indicated by Mr. Frederick Hoffman, actuary of the Prudential Insurance Company, of Newark, N. J., who declares that in many trades one-third of the deaths recorded are due to one specific disease; and that, at a conservative estimate, the money loss alone in the United States in one year, due to preventable occupational disease, is nearly a billion dollars. (Another statement made at this conference was that the money loss alone in the United States in one year due to sickness cost, loss in wages, and economic loss in industry, may be conservatively placed at a billion and a quarter dollars.)

Mr. Hoffman continues: "Medical practitioners will realize some day the practical advantage of special knowledge of diseases of occupation;" and it is exceedingly gratifying to note his assurance that the truth requires only to be known to produce a remedy for intolerable or needlessly injurious conditions. "Employers of labor are now doing much to ameliorate conditions. An awakened public conscience is at last being aroused. It is the duty of those qualified to do so (such as physicians) to ascertain the truth of industrial conditions affecting the physical well-being of American wage-earners."

The need of wider interest in the health problems of modern industry was also expressed on this occasion by Dr. Henry B. Favill of Chicago: "It is pretty nearly axiomatic that the modern labor problem is a health problem." Careful investigations should be made by men trained both in physiology and economics, so that effective means may be forthcoming for the prevention of the human waste in industry. Thousands suffer and die yearly from preventable occupational diseases, as for example, in those industries which make use of poisons, such as yellow phosphorus, still employed in this country, though harmless substitutes for it have long been employed in Europe.

It would appear, from the viewpoint of the general practitioner, if from no other, that no anamnesis is complete without an exhaustive consideration of the patient's occupation (which, indeed, cannot be adequately appreciated unless the physician has more than a casual and superficial understanding of the actual working conditions); nor is any plan of therapy likely to succeed which does not take into account a healthful environment during the patient's working hours.

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## ADDED ENDOWMENT FOR WESTERN RESERVE

Announcement has just been made of a gift of $250,000 to Western Reserve University, by Mr. H. M. Hanna, as an addition to the endowment of the medical department. It is intended that the income from this gift shall be used largely to place the various clinical professorships on a modern university basis. This gift is very opportune, coming as it does with the news that the consolidation of the Cleveland College of Physicians and Surgeons with the Medical Department of Western Reserve University has been consummated.

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## AMERICAN SURGERY—AN APPRECIATION

Europeans who have made a study of commercial life in the United States maintain that the fundamental difference in methods between the American and the European is one of mental attitude. With the European the tendency is to adhere to, or at most to modify, the old; with the American, to attempt what is altogether new. The European engineer prides himself on the fact that his machinery is so well made and so carefully preserved that it will last a generation; the American engineer on the other hand does not hesitate to relegate to the scrap-heap the most elaborate piece of machinery the moment a more efficient piece is invented to take its place. That this progressive attitude is not confined to mechanics and commerce in America is evidenced by the observations recently made in the *Practitioner,* by a London surgeon, Mr. W. Arbuthnot Lane of Guy's Hospital. In contrasting the skepticism of British surgeons with the attitude of the surgeons of the United States and Canada he says: "They are in advance of us in many ways in their methods of investigation. They attack any new problem very thoroughly and do their utmost to verify every fact by personal observation and they determine whether there is any truth in it or not. Trouble or expense affords no obstacle to their thirst for knowledge. They are not satisfied to accept unreservedly any statement or observation, and least of all, any opinion, and they are only prepared to receive it when they themselves have either seen it or are satisfied as to its accuracy. They have no respect for so-called authority and part with innumerable surgical creeds which continue to control us as readily as their business men 'scrap' machinery the moment a better mechanism is devised. It is this attitude of the American surgeon that is exerting such a magnificent influence on the surgery of that country and is, in my opinion, making them the most progressive surgical body in the world." Mr. Lane of course has been in the United States and evidently speaks from observation.

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## THE NEW YORK COCAIN LAW

During the last session of the New York legislature a particularly vicious amendment was made to the penal law of that state relating to the sale of cocain or eucain. As the law now stands the druggist must give to every person who presents a prescription in which cocain or eucain or their salts are ingredients a certificate worded as follows:

..................191

This is to certify that the bearer obtained from me on the above date, upon the written prescription of

..............................................M.D.

of..............................................

..........grains of cocain or eucain.

This certificate is furnished in conformity with the Act Amending the Penal Law of New York State in relation to the sale of cocain or eucain, enacted April, 1910.

Druggist, ............................

....................................

Registered Pharmacist.

This prescription cannot be refilled nor copy given.

What the object of such an amendment is, it is hard even to guess; what the results must be is evident. The patient is at once informed of the fact that he is taking cocain—a fact that the conscientious physician is usually careful to conceal. Such a certificate in no way prevents the prescribing of these drugs by renegade physicians to cocain habitués but it does possess enormous potentialities for harm in the making of habitués. Any law that will prevent the misuse of valuable but dangerous drugs is to be welcomed but such laws must be drawn up by those who have at least a working knowledge of the many points involved. As the New York law now stands it not only does not prevent the misuse of cocain and eucain but may easily be the means of leading to the abuse of these valuable but potent drugs.

# Medical News

## CONNECTICUT

**State Medical Society Meeting.**—The one hundred and eighteenth annual meeting of the Connecticut State Medical Society was held in New Haven, May 25 and 26. Secretary Anson Phelps Stokes, Jr., of Yale University, stated that $2,000,000 would be necessary to make a first-class school of the Yale Medical School, and asked the aid of the Connecticut physicians in raising this amount. The following officers were elected: President, Dr. Frank K. Hallock, Cromwell; vice-presidents, Drs. Edmund P. Douglass, Croton, and Edward T. Bradstreet, Meridian; secretary, Dr. Walter R. Steiner, Hartford (reelected), and treasurer, Dr. Joseph H. Townsend, New Haven (reelected).

**Personal.**—Dr. Charles A. Goodrich has been elected secretary and Drs. Marcus M. Johnson and Joseph E. Root have been elected members of the executive committee of the Hartford Dispensary.——Drs. Nicola Mariani and Dr. William Francis Verdi, New Haven, have been made Chevaliers of the Crown of Italy.——Dr. Arthur J. Wolff has been reappointed bacteriologist of the health board of Hartford, and Drs. Alfred M. Rowley, Robert S. Starr, John F. Rooney and David J. Mohunphy have been elected medical inspectors.——Dr. William H. Carmalt, New Haven, has been elected councilor of the New Haven County Medical Society.——Dr. George H. Knight, Lakeville, has been elected a member of the Board of Directors for the Establishment of County Homes for the Treatment of Tubercular Patients, to fill the unexpired term of the late Dr. John P. C. Foster, New Haven.——Dr. Herbert E. Smith, after 25 years' service as dean of Yale Medical School, New Haven, has resigned.——Dr. Emilio G. Sera, New Britain, has returned from Europe.

## IDAHO

**New Member of State Board.**—Dr. George H. Coulthard, Idaho Falls, has been appointed a member of the State Board of Medical Examiners.

**Society Meetings.**—The Idaho County Medical Association was organized at Grangeville, May 27, and the following officers were elected: President, Dr. C. S. Busey, Clearwater; vice-president, Dr. John D. Shinnick, Cottonwood, and Secretary-treasurer, Dr. Carl W. Slusser, Grangeville.——At a recent meeting of the Southern Idaho Medical Society, held in Caldwell, Dr. C. L. Dutton, Meridian, was elected president; Dr. John W. Gue, Caldwell, vice-president; and Dr. Robert L. Glase, Boise, secretary.——Twin Falls Medical Association held its annual meeting in April in Twin Falls, and elected Dr. Walter F. Pike, president; Dr. John Coburn, vice-president, and Dr. James S. Purdy, secretary-treasurer.

## ILLINOIS

**Hospital Dedicated.**—The new St. Francis Hospital, Evanston, erected at a cost of $150,000, was dedicated by Archbishop Quigley, May 28, with impressive ceremonies.

**School Named for Physician.**—The new school being erected in the west part of Champaign is to be named the Howard School in honor of the venerable Dr. Hartwell C. Howard, who has practiced medicine in that city for more than sixty years.

**Openings for Hospital Positions.**—Civil service examinations will be held throughout Illinois, July 7, to secure assistant physicians in the insane hospital and other state institutions. It is necessary to apply to the State Civil Service Commission, Springfield, before July 1.

**Physician Found Guilty.**—In the case of Dr. Benjamin A. Arnold, Freeport, charged with making an attack on a young girl, on whom he had operated for appendicitis, and in which the jury rendered a verdict of guilty in April, the defendant is said to have been sentenced, May 27, to imprisonment for four years in the penitentiary. An appeal is to be taken to the supreme court.

**Personal.**—Dr. John A. Koch and wife, Quincy, have sailed for Germany.——Drs. Oliver Hughes, Elmer Erickson, Isaac F. Freemmel, interns at Elgin State Hospital, have passed the examination for assistant physicians.——Dr. Thomas R. Foster, assistant physician at the Elgin State Hospital, has been appointed first assistant at the Watertown State Hospital.——Dr. P. S. Weidman, Edwardsville, said to be the oldest practitioner in Madison county, was seriously injured in a fall from his chair, June 2.——Dr. Elbert J. Clark, Rockford, has succeeded the late Dr. George W. Rohr as district pension examiner.

### Chicago

**Emergency Work in Hands of Police.**—The removal of the ambulance and hospital service from the health department to the police department was accomplished June 1, under the direction of Dr. George C. Hunt. Eleven ambulances and sixteen surgeons are connected with the service and headquarters will be in the office of the chief of police.

**Golden Jubilee.**—Sister Mary Raphael, superintendent of Mercy Hospital for forty-one years, celebrated the fiftieth anniversary of her taking of vows, May 30. Dr. John H. Hollister, the only surviving member of the original staff of Mercy Hospital, Dr. John B. Murphy, and President A. W. Harris of Northwestern University, were the principal speakers.

**Personal.**—Dr. and Mrs. Emanuel J. Senn, Dr. and Mrs. Henry B. Thomas, Dr. and Mrs. George S. Isham and Dr. S. C. Stanton have sailed for Europe.——Dr. and Mrs. Sidney McCallin were seriously injured in an automobile accident, June 9.——Drs. William L. Baum and Charles L. Mix have been appointed members of the commission to take charge of the work of preparing plans for the rebuilding of the Cook County Hospital.

**Commencement Exercises.**—At the annual commencement exercises of Northwestern University Medical School, May 31, a class of 150 was graduated.——On May 28, the annual commencement exercises of the College of Physicians and Surgeons, the College of Medicine of the University of Illinois, were held June 7, when the degree of doctor of medicine was conferred on a class of 131. President Edmund J. James of the University of Illinois delivered the doctorate address.

**The Latest Diploma Mill.**—Dr. Alexander C. Chittick, whose license to practice medicine is said to have been revoked by the State Board of Health, May 24, for unprofessional conduct in connection with the sale of diplomas from the Chicago Medical University and Crescent Medical University, and who was indicted by the grand jury, June 2, is said to have agreed to plead guilty to the use of the mails to defraud, provided a two months' sentence was imposed. The judge ordered the plea of guilty withdrawn and continued the case to June 20.——In the case of Norbert O. Bourque, a graduate of the National University, charged with a similar offense, action was deferred by the State Board of Health, pending the obtaining of further evidence. This individual is said to have signed one diploma, but alleges that he did not know what he was doing.

## MARYLAND

**Personal.**—Dr. James T. Johnson has been appointed secretary of the Cumberland City Board of Health.——Dr. John E. Sanbury, Forestville, has been re-elected health officer of Prince George county.

**Board Forced to Reciprocate.**—By the recent decision of the District of Columbia Court of Appeals, noted in the *Bulletin of the Medical and Chirurgical Faculty of Maryland*, the action of the Washington Board of Medical Examiners in refusing Dr. Louis B. Thompson, a Maryland physician, a license to practice in the District of Columbia, was declared arbitrary, and license has been issued by application of the court. The application of Dr. Thompson was originally denied by the board on the ground that the examination of the Maryland board was not equivalent to that of the District of Columbia. The court, however, declares that "equivalent conditions exist under the statute by virtue of the provisions of the law, and not under the rules and regulations of the board, as is claimed." A similar suit for a reciprocal license from the District Board instituted by Dr. Henry H. Hazen in March, 1909, was decided in the same way.

**Home for Widows and Orphans.**—In December last, the foundation of a home for widows and orphans of medical men by the Medical and Chirurgical Faculty of Maryland, was noted. Unanimous action was taken, and a board of managers, consisting of twenty-four persons, was appointed. The board proceeded to adopt active measures to raise funds to inaugurate the home, one of which was application to the legislature. The society would not permit this on the ground that it might jeopardize the application of the society for an appropriation to pay off the debt on the new building. This dispelled the prospect of an early opening and deprived the board of a large part of the support on which it relied. At the annual meeting of the society, a committee, consisting of Drs. William H. Welch, William S. Thayer and William S. Gardner, was appointed to report on the home project, and after taking legal advice, reported that the charter of the society gave no authority for the project, and recommended that the resolution of December 16 be rescinded. This was done and a motion was also voted down, having for its object the securing of legal sanction for carrying on the home. The board of trustees, however, was not willing to abandon the project, and decided to continue the organization under an independent state charter. Mrs. Eugene F. Cordell, president of the board, announces that while the "Fund for the Relief of Widows and Orphans" still remains in the hands of the state society, and is limited to its membership, the "Home," has become divorced from it, and will be conducted hereafter independently and for the benefit of the entire medical profession.

### Baltimore

**Honors for Porto Rican.**—Miss Palmira Gattell, daughter of the head of a drug firm in Porto Rico, won the gold medal for superior scholarship at the Woman's Medical College. She will practice in San Juan.

**Alumni Meeting.**—The annual meeting of the Alumni Association of Baltimore Medical College was held May 2 and the following officers were elected: President, Dr. James M. Delevett; vice-president, Dr. James E. Poulton; secretary, Dr. John A. Evans, and treasurer, Dr. Harry E. Peterman.

**Portrait of Dr. Osler.**—A bronze relief portrait of Dr. William Osler has been placed in Osler Hall of the Medical and Chirurgical Faculty. It is by F. C. V. de Vernon, a French sculptor, and is an enlargement of a small one made in 1903 by the same artist and now in the Johns Hopkins Medical Library. It will be placed by the side of the Osler portrait by Corner on the north wall, and on the other side will be hung the Welch medallion.

**Personal.**—Dr. Ira Remsen, president Johns Hopkins University, sails for Europe June 14.——Dr. Claribel Cone sailed for Germany May 26.——It is reported that Dr. Harvey W. Cushing has been offered and has accepted a position in Brigham Hospital, Harvard University.——Dr. Charles E. Simon has sailed for Switzerland.——Dr. Edward Hume and family have returned to their station in Changsha, China.——Dr. Frank C. Bressler has sailed for Europe.——Dr. George W. Dobbin, who was recently injured in an automobile collision, is reported to be convalescent.

**Dr. Cushing's New Appointment.**—It is officially announced by the trustees of the new Peter Bent Brigham Hospital at Cambridge, Mass., that Dr. Harvey W. Cushing, of Johns Hopkins Hospital, has been appointed chief of the surgical staff. He will not leave Baltimore until the completion of the hospital, about two years hence.——Dr. E. Deichmann, principal of the Deichmann College Preparatory School, has been reappointed state examiner for the medical, dental and pharmaceutical colleges of this city (except Johns Hopkins Medical School, which requires an A.B.). Henceforth formal written examinations will be held in the school building in August, September and October.

**Commencements.**—The Woman's Medical College held its twenty-eighth annual exercises May 30, graduating a class of six. President Eugene A. Noble of Goucher College delivered the address.——Maryland Medical College held its annual commencement exercises May 30. Dr. Joseph L. McLaughlin of New Hampshire received the gold medal for scholarship.——Baltimore Medical College held its twenty-ninth annual commencement exercises May 26, graduating a class of fifty-four. The Hippocratic oath was administered by President Charles G. Hill of the college and the announcement of graduates was made by Dean David Street.——The University of Maryland held its one hundred and third commencement June 1. There were 241 graduates, viz.: St. John's (arts and sciences), 17; medicine, 85; law, 60; dentistry, 54; pharmacy, 25. Hon. Henry B. Macfarland of Washington, D. C., delivered the address. The honorary degree of LL.D. was conferred on Dr. Henry R. Carter, U. S. Public Health and Marine-Hospital Service, a graduate of the year 1879.——At its thirty-eighth annual commencement, June 2, the College of Physicians and Surgeons graduated 66, Prof. William T. Councilman, of Harvard University, delivering the address to the graduates. Those receiving gold medals were: Roy W. Locker, Ohio; Harris Goldman, Maryland; William B. Hunter, West Virginia; W. D. Blankensmith, Ohio. Dr. Charles E. Simon has been elected professor of clinical pathology and experimental medicine.——At the commencement of Johns Hopkins University, June 14, the degree of M.D. will be conferred on 68 graduates. The German Ambassador will deliver the address to the graduates.

### NEW YORK

**Reciprocity With New Jersey Denied.**—Owing to the lowering of the standard of preliminary education required for admission to the medical schools of New Jersey, they being below the standard required for admission in New York State, the Board of Regents annulled the reciprocal relations between New Jersey and New York.

**Antitoxin for Tetanus.**—There are annually one hundred deaths in this state from tetanus as the result of accidents, the majority of which are due to Fourth of July celebrations. Health Commissioner Porter has issued a notice to local health officers urging them to procure from the state a supply of tetanus antitoxin for use in emergencies.

**City Can Bar Up-State Milk.**—A suit against the New York City Board of Health to recover damages because the plaintiff's milk was rejected at the Cold Spring Creamery, which alleged that it was unfit for consumption, has been decided in favor of the New York Board of Health. The judge held that the New York City Board of Health had absolute jurisdiction without as well as within the city lines, and could impose whatever rule and regulations its officials wished, and compel their observance under penalty of prohibiting the sale of dairy products shipped to New York for consumption as food. It is said that the dairymen will appeal the suit.

**Personal.**—Dr. Edgar A. Vander Veer, Albany, has succeeded Dr. Irving S. Haynes, New York City, as a member of the Medical Board of the Champlain Valley Hospital.——Dr. and Mrs. William H. Montgomery were given a dinner by the staff of the Willard State Hospital, May 10, on the occasion of Dr. Montgomery's transference to the Long Island State Hospital, King's Park, where he becomes second assistant physician.——Dr. Robert S. MacDonald, formerly first assistant physician to the Dannemora State Hospital, has opened an office in Plattsburgh.——Dr. Edward G. Cox, Albany, was injured in an automobile accident near Loudenville, May 25.

**State Board of Regents Makes Appointments.**—Dr. William Warren Potter and Dr. Lee H. Smith, Buffalo, and Dr. Glentworth Reeve Butler, Brooklyn, have been appointed on the State Board of Medical Examiners; Prof. James Law, Ithaca, Dr. C. F. Greenside, New York, Dr. R. C. Reed, Elmira, Dr. H. S. Beebe, Albion, and Dr. George A. Knapp, Millbrook, have been appointed on the State Board of Veterinary Examiners; Dr. A. M. Holmes and Dr. H. H. Burkhart have been reappointed and Dr. E. C. Parker of Poughkeepsie, appointed on the State Board of Dental Examiners; Charles F. Prantice and George R. Fox have been appointed examiners in optometry.

**Bills Signed by the Governor.**—The bill lowering the standard of milk so that it shall be considered adulterated when it contains less than 11½ instead of 12 per cent. of milk solids.——The bill providing that when a convicted murderer appears insane, the Governor may appoint a commission of three to examine him and to report to the Governor, whereupon, if found insane, the Governor may order his removal to a state hospital for insane convicts, where he shall be kept in custody until cured of his insanity, when, on an order of the justice of the supreme court, the convict is to be returned to the warden of the state's prison to suffer the sentence given him under the law.——A bill signed by Governor Hughes creates a new State Board of Pharmacy of nine members, to be appointed by the State Board of Regents, to take the place of the present board of fifteen members. This law is favored by the State Pharmaceutical Society and establishes a standard for drugs and medicines.

### New York City

**Women Physicians Dine.**—The alumnæ of the New York Women's Medical College held their annual dinner at the Hotel Manhattan on the evening of June 1.

**Measles on Ocean Liner.**—The Cunard steamer, Pannonia, arrived from the Mediterranean, May 26, with more than twenty cases of measles on board. The patients were removed to Hoffman's Island.

**Professional Building.**—The Herald Square Health Co. is about to erect, on a lot 40x102 feet off West Seventy-first street, an eight-story building to be devoted entirely to the use of physicians and dentists.

**Berlin Professor to Lecture in New York.**—Dr. E. Grawitz, professor of pathology in the University of Berlin, will deliver an address in English before the New York Academy of Medicine on "The Definition of Pernicious Anemia and its Treatment."

**Summer Home Opens.**—The Association for Improving the Condition of the Poor has opened the Sea Breeze Home. By the middle of the month the Home will be filled to the fullest capacity. The cost of maintaining this resort is $90,000 for the season.

**Death-Rate Drops.**—The week ending May 20 showed a decrease in the death-rate from the corresponding week of 1909. The rate for 1909 was 16.76, while for 1910 the rate was 16.10. Pneumonia and heart disease caused fewer deaths than last year, while diphtheria caused more.

**Personal.**—Dr. and Mrs. Thomas E. Satterthwaite have sailed for Europe.——Dr. Maurice H. Gross has opened an uptown office in the Sydenham Building.——Dr. Abraham L. Wolbarst has been appointed delegate from the Peace Society of New York to the eighteenth International Peace Congress, to be held in Stockholm, Sweden, August 1 to 6.

**Hospital Outgrows Quarters.**—The German Hospital, situated at St. Nicholas avenue and Stanhope street, has been forced to authorize the construction of an annex that will cost $25,000. The proposed annex will provide for three wards and will be ready for occupancy in about three months. The funds for the increased expenses of the institution have not yet been provided, but the Hospital Benefit Society is preparing a benefit.

**Equality League Branch Formed.**—At a meeting held in Belmont Municipality Hospital, Hempstead, L. I., May 23, the woman physicians' and surgeons' branch of the Political Equality League was formed with the following twelve charter members: Drs. Jennie V. H. Baker, Brooklyn; Mary E. Pelton, Anna H. Shaw, Mary L. Lines, Brooklyn; Mary E. Fish, Sophie B. Scheel, Brooklyn; Cornelia C. Brant, Brooklyn; Mary Halton, Harriet Van Buren Peackham, Brooklyn; Harriet W. Hale, Brooklyn; Rachel R. Nottage, Brooklyn, and Kate MacLaren, Borough of Queens.

## PENNSYLVANIA

**King Edward Memorial.**—At a meeting held at Pittsburg, June 5, $25,000 was subscribed towards erecting a memorial to the late King Edward VII. The building to be erected is to be a part of the proposed tuberculosis hospital of Pittsburg.

**Memorial Annex to Hospital.**—The Board of Managers of the Chester Hospital has accepted an offer from Mrs. Charles B. Houston to erect a building in connection with the hospital to be known as the "C. B. Houston Children's Ward," in memory of her deceased husband.

**Personal.**—Dr. W. T. Miller has returned to take up his permanent residence in McKeesport.——Dr. Ehlers, an assistant resident physician in the male department of Norristown State Hospital, has resigned.——Dr. Rothe has been appointed intern for the female department of the hospital.

**Sanatorium Favored.**—Dr. Samuel G. Dixon, State Commissioner of Health, sent a letter approving the action of the Central Poor Board of Wilkes-Barre in arranging to build a sanatorium for caring for the indigent victims of tuberculosis. The work will not interfere with the activity of the state in the same direction.

### Philadelphia

**Polyclinic Faculty Changes.**—Dr. John H. Jopson was elected professor of surgery; Dr. Wendell Reber, professor of ophthalmology, and Dr. William Zentmayer, extramural lecturer in ophthalmology. With the exception of these three changes the faculty of the institution will remain the same as last year.

**Jefferson's New Laboratory.**—Jefferson Medical College has purchased the old building of the Pennsylvania Dental College at Eleventh and Clinton streets, for a consideration of $47,500. The lot is 40 by 116 feet with a lot in the rear 40 by 60 feet. No important changes will be made in the building for the present and it will be used as a laboratory.

**Museum Grounds Transferred.**—An ordinance passed by the common and select council gives the University of Pennsylvania the possession of a large tract of land along the western shore of the Schuylkill river, south of Pine street. The grounds and buildings at present are occupied by the Commercial Museum of Philadelphia, who are to remain in possession until the city provides another site for the museum. The University in return is to give the city seventy-five scholarships annually, the distribution of which rests with the mayor of Philadelphia.

**Medico-Chirurgical Alumni Banquet.**—The annual banquet of the Medico-Chirurgical College was held in the Bellevue-Stratford, June 2. About 400 men were present and Dr. John Egan presided. Addresses were made by Hon. Henry F. Walton, president of the board of trustees; Dr. J. W. Holland, dean of Jefferson Medical College; Hon. Edwin S. Stuart, governor of Pennsylvania; Hon. John Reyburn, mayor of Philadelphia; Dr. Ernest LaPlace and Mr. A. E. Hetherington. The following officers were elected: Dr. C. T. Faries, president; first vice-president, Dr. Edward Guyon; second vice-president, Dr. W. A. Sears; third vice-president, Dr. E. F. Bickel; secretary, Dr. E. H. Erney; treasurer, Dr. E. S. Gans.

**Rush Hospital Addition Open.**—The completed portion of the Rush Hospital for the treatment of consumption, was opened for the inspection of the public, May 21, and opened for patients, May 23. This hospital was one of the first in the country for treating tuberculosis, and beside its city plant has a country branch at Malvern, Pa. Facing on Thirty-third street, the new addition contains administration rooms, dispensaries, an apothecary shop, nurses' quarters and rooms for private patients. The building is finished in the most approved hospital style, without corners. At present the addition is but two stories, but when completed (when sufficient funds are raised) will be four stories.

**Jefferson Alumni Banquet.**—The annual banquet of the Alumni Association of the Jefferson Medical College was held in the Bellevue-Stratford, June 4, with nearly 500 men present. Dr. J. M. Fisher presided and addresses were made by Dr. S. Weir Mitchell, who this year celebrates the sixtieth anniversary of his graduation from this institution; Hon. Edwin S. Stuart, governor of Pennsylvania; and Dr. Lawrence F. Flick, who spoke for the alumni. A special feature of the meeting was the presentation of an oil portrait of Hon. William Potter, president of the board of trustees. The presentation was made by Dr. J. Chalmers Da Costa and accepted by Mr. Simon Gratz, secretary of the board. At the same time a large silver loving cup was presented to Mr. Daniel Baugh, a member of the board of trustees, by the hospital staff, in recognition of his services as chairman of the hospital committee. The cup was presented by Professor H. A. Hare.

**College Commencements.**—The eighty-fifth annual commencement of the Jefferson Medical College was held at the Academy of Music, June 6, 1910. The graduates numbered one hundred and forty-two, and received their diplomas from Hon. William Potter, president of the board of trustees. Three features of the commencement made it especially notable. A glowing tribute to the memory of Professor Samuel D. Gross was made in an address by Dr. William W. Keen, and announcement was made of the endowment of a chair in surgery by Mrs. Maria Gross Horwitz as a memorial to her father, to be known as the Samuel D. Gross chair of surgery. Professor J. Chalmers Da Costa was elected to fill the position. The degree of LL.D. was conferred on Dr. S. Weir Mitchell, marking the occasion as the sixtieth anniversary of his graduation from the college. A portrait of the dean of the college was presented to the trustees by Dr. William L. Rodman in behalf of the Alumni Association. An oil portrait of Dr. J. W. Holland, dean of the college, was presented to the Board of Trustees by the Alumni.——The thirtieth annual commencement of the Medico-Chirurgical College was held in the Academy of Music, June 3. Eighty-four men received diplomas and the annual address was delivered by Hon. David J. Foster, of Vermont. Forty-nine hospital appointments were received by members of the graduating class.——The annual commencement of the Women's Medical College of Pennsylvania was held in the Academy of Music, June 2. Thirty women received degrees and the address to the class was made by Dr. Ira Remsen of Johns Hopkins University.

## VIRGINIA

**Commencement Exercises.**—The seventy-second annual commencement exercises of the Medical College of Virginia, Richmond, were held May 18. Dr. Simon Baruch, New York City, delivered the address before the alumni association, "The Therapeutic Lesson of Half a Century," and President Lyon G. Tyler of William and Mary College gave as his commencement address, "Medical History of the State from 1607 to the Present Day." Diplomas were delivered to a class of thirty-seven by Dr. Christopher Tompkins, Dean of the College.——The University College of Medicine, Richmond, held its annual commencement exercises, May 17. The annual address was delivered by Dr. Stuart McGuire, Dean of the Faculty and diplomas were conferred on a class of twenty-two. Major James C. Hemphill, editor of the *Times-Despatch*, delivered the doctorate address.

## GENERAL NEWS AND COMMENT

**Section Officers.**—The new officers of the sections of the American Medical Association for 1910-1911 are as follows:

PRACTICE OF MEDICINE—Chairman, Allen Arthur Jones, Buffalo; Vice-Chairman, Charles L. Greene, St. Paul; Secretary, Wilder Tileston, New Haven; Delegate, J. A. Capps, Chicago; Alternate, Alexander Lambert, New York; Orator, C. F. Hoover, Cleveland, Ohio.

OBSTETRICS AND DISEASES OF WOMEN—Chairman, Horace G. Wetherill, Denver; Vice-Chairman, Fred J. Taussig, St. Louis; Secretary, C. Jeff Miller, New Orleans; Delegate, Arthur E. Benjamin, Minneapolis; Alternate, S. W. Bandler, New York.

SURGERY—Chairman, George W. Crile, Cleveland, Ohio; Vice-Chairman, Emmet E. Rixford, San Francisco; Secretary, John T. Bottomley, Boston; Orator, George E. Brewer, New York; Delegate, August F. Jonas, Omaha.

OPHTHALMOLOGY—Chairman, Albert E. Bulson, Jr., 219 Wayne St., Ft. Wayne, Ind.; Vice-Chairman, Edward C. Ellett, Memphis, Tenn.; Secretary, Edgar S. Thompson, New York; Delegate, John C. Bossidy, Boston.

LARYNGOLOGY AND OTOLOGY—Chairman, Roy Dunbar, Atlanta, Ga.; Vice-Chairman, W. E. Sauer, St. Louis; Secretary, George E. Shambaugh, Chicago; Delegate, H. W. Loeb, St. Louis.

NERVOUS AND MENTAL DISEASES—Chairman, W. A. Jones, Minneapolis; Vice-Chairman, Herman H. Hoppe, Cincinnati; Secretary, E. E. Southard, Boston; Delegate, Theodore Diller, Pittsburg; Alternate, J. H. McBride, Pasadena.

PREVENTIVE MEDICINE AND PUBLIC HEALTH—Chairman, W. A. Evans, Chicago; Vice-Chairman, Marshall Langton Price, Baltimore; Secretary, C. Hampton Jones, Baltimore; Delegate, J. N. Hurty, Indianapolis; Alternate, J. H. White, New Orleans; Orator, W. A. Evans, Chicago.

STOMATOLOGY—Chairman, S. L. McCurdy, Pittsburg, Pa.; Vice-Chairman, Virgil Loeb, St. Louis; Secretary, Eugene S. Talbot, Chicago; Delegate, G. V. I. Brown, Milwaukee, Alternate, M. H. Fletcher, Cincinnati.

DISEASES OF CHILDREN—Chairman, S. M. Hamill, Philadelphia; Vice-Chairman, Thomas D. Parke, Birmingham, Ala.; Secretary, L. T. Royster, Norfolk Va.; Delegate, A. C. Cotton, Chicago.

DERMATOLOGY—Chairman, James C. White, Boston; Vice-Chairman, Martin F. Engman, St. Louis; Secretary, H. R. Varney, Detroit; Delegate, J. A. Fordyce, New York.

PHARMACOLOGY AND THERAPEUTICS—Chairman, Lawrence Litchfield, Pittsburg, Pa.; Vice-Chairman, George B. Wallace, New York; Secretary, M. I. Wilbert, Washington, D. C.; Delegate, Reid Hunt, Washington, D. C.

PATHOLOGY AND PHYSIOLOGY—Chairman, Yandell Henderson, New Haven, Conn.; Secretary, Leo Loeb, Philadelphia; Delegate, Walter L. Bierring, Iowa City, Iowa; Alternate, M. J. Rosenau, Boston.

GENITO-URINARY DISEASES.—Chairman, W. T. Belfield, Chicago; Vice-Chairman, James Pederson, New York; Secretary, Hugh H. Young, Baltimore.

**Academicians Meet.**—The annual meeting of the American Academy of Medicine was held in St. Louis, June 4 and 6, and the following officers were elected: President, Dr. Charles S. Sheldon, Madison, Wis.; vice-presidents, Drs. Adol Alt, St. Louis; Philip Mills Jones, San Francisco; Cyrus Lee Stevens, Athens, Pa., and Henry B. Hemenway, Evanston, Ill.

**Gastro-Enterologists Elect.**—At the thirteenth annual meeting of the American Gastro-Enterological Association, held in St. Louis, June 6 and 7, the following officers were elected: President, Dr. Walter B. Cannon, Boston; vice-presidents, Drs. John A. Lichty, Pittsburg, and George D. Kahlo, French Lick, nd.; secretary-treasurer, Dr. Charles D. Aaron, Detroit, and ouncilor, Dr. Julius Friedenwald, Baltimore.

**Orthopedists Hold Meeting.**—At the annual meeting of the American Orthopedic Association, held in Washington, D. C., May 3-5, the following officers were elected: President, Dr. Albert H. Freiberg, Cincinnati; vice-presidents, Drs. Aurelius R. Shands, Washington, D. C., and Robert B. Osgood, Boston; secretary, Dr. Ralph R. Fitch, Rochester, N. Y. (reelected), and reasurer, Dr. Gwilyn G. Davis, Philadelphia.

**Pathology of Plague.**—The Surgeon-General of the United States Public Health and Marine-Hospital Service reports that uring the past year the Federal Plague Laboratory at San Francisco has furnished pathologic specimens showing the lesions of rodent plague to all medical colleges in the United States which have requested them. In this manner one hundred and four institutions have added plague material to their athologic laboratories.

**New Officers of Medical Editors' Association.**—At the annual meeting of the American Medical Editors' Association, held in St. Louis, June 4 and 6, the following officers were elected: President, Dr. Joseph MacDonald, Jr., New York City; vice-presidents, Surgeon-General Walter Wyman, U. S. P. H. and M.-H. Service, Washington, D. C., and Dr. Thomas L. Stedman, New York City; secretary-treasurer, Dr. John J. Taylor, Philadelphia, and executive committee, Drs. Wallace C. Abbott, Chicago; Cyrus Lee Stevens, Athens, Pa., and Anthony G. Kreidler, Cincinnati.

**Insurance Examiners Hold Meeting.**—The American Association of Medical Examiners held its annual meeting in St. Louis, June 6 and 7, and adopted resolutions approving the national department of public health, and extending thanks to the members of the profession who have been pioneers in the endorsement of this proposition of having a medical scientist in charge of the new portfolio. The following officers were elected: President, Dr. Liston Homer Montgomery, Chicago; vice-presidents, Drs. W. Edward Grant, Louisville; William T. Tilly, Muskogee, Okla.; James Taggart Priestley, Des Moines, and C. T. Cutting, Seattle; secretary, Dr. Allen E. Cox, Helena, Ark., and treasurer, Dr. Thomas A. Stevens, Caney, Kan.

**Change in State Board Statistics.**—A graduate of George Washington University Medical Department calls our attention to the fact that in the state board statistics published in THE JOURNAL, May 21, 1910, three graduates of George Washington University Medical Department who passed the license examination in West Virginia had been reported to us as graduates of Georgetown University School of Medicine, and had, therefore, been accredited to the latter school. This correction decreases very slightly the failure percentage of the former school and increases that for the latter, but in neither case is the difference sufficient to change the classification of the college named.

**Meeting of Licensing and Examining Boards.**—At the annual meeting of the National Federation of State Medical Examining and Licensing Boards, held in St. Louis, June 6, Joseph C. Guensay, Chicago, was elected president; Drs. James A. Egan, Springfield, Ill., and Charles A. Tuttle, New Haven, Conn., vice-presidents; Dr. George H. Matson, Columbus, O., assistant treasurer; Dr. Darlington J. Snyder, Columbus, O., assistant secretary-treasurer; Drs. Albert H. Hamel, St. Louis, Mo., Nathaniel R. Coleman, Columbus, O., Edwin B. Harvey, Boston, James A. Duncan, Toledo, and Daniel P. Maddux, Chester, Pa., members of the executive council, and Drs. W. Fred Singer, Pueblo, Colo., and Fred C. Zapffe, Chicago, members of the newly organized examining committee.

**Dr. Cushing Accepts Position at Harvard.**—Dr. Harvey Cushing, head surgeon at the Johns Hopkins Hospital at Baltimore, has accepted the office of surgeon-in-chief of the proposed Peter Bent Brigham Hospital, the new teaching hospital of Harvard University Medical School. With the appointment also of Dr. Henry A. Christian, dean of the Harvard Medical School, as physician-in-chief of the hospital, the two leading places on the staff are now filled. Dr. Cushing was born in Cleveland in 1869 and comes of a distinguished medical family, both his father and his grandfather having been prominent physicians. Dr. Cushing graduated from Yale University in 1891 and from Harvard Medical School in 1895. In 1897 he received the appointment of resident surgeon at the Johns Hopkins Hospital at Baltimore, since which time he has been constantly associated with both the Johns Hopkins Medical School and Hospital, and for some years has been the associate professor of surgery in the medical school. Since 1901 Dr. Cushing has devoted his attention principally to neurologic surgery and his skill, shown in operations on tumor of the brain, as well as for injuries to the spinal cord and on various superficial nerve paralyses and neuralgias, have brought him in the front rank of American surgeons. The Peter Bent Brigham Hospital will not be completed until about 1912, which means that Dr. Cushing will not take up his residence in Boston until that time. The fund for the new hospital has been accumulating for about twenty-five years and the original bequest of $1,800,000 has grown to about $8,000,000. The hospital building will be of brick with stone trimmings and the estimated cost exceeds $1,000,000. In preparing for this hospital the trustees believed that to fulfill its highest purpose it should not only care for the sick but should serve an educational purpose to both medical students and practicing physicians. For that reason they decided to ally themselves with Harvard Medical School and the prospects are that this hospital will some time stand among the greatest hospitals in the world.

## LONDON LETTER

*(From Our Regular Correspondent)*

London, June 3, 1910.

### The Recognition of Medical Gynecology

About twenty years ago, before the modern developments of abdominal surgery, diseases of women were treated by "obstetric physicians," men who specialized on midwifery and on the minor gynecology of that time, but who never opened the abdomen. If a laparotomy was necessary the case had to be transferred to a surgeon. With the great development of operative gynecology that specialty has become a branch of surgery and is now practiced only by surgeons. Necessary and beneficial as this change is, it has one unfortunate consequence. The greater part of the work of gynecologists is devoted to the elaborate technic of abdominal surgery and in the medical schools they teach the students little else. But when the latter become general practitioners they have to treat diseases of women which generally require other than surgical treatment, about which they have learned little. They have spent their time in learning about elaborate abdominal operations which they cannot be expected to perform. Since the recent death of Dr. John W. Taylor, professor of gynecology at Queen's College, Birmingham, the successor of Lawson Tait, it has been decided to avoid this evil by rearranging the teaching of the department. It is suggested that the chair of gynecology shall be given up and that the course be called "midwifery and diseases of women," and be under the supervision of the professor of midwifery, who will deliver two-thirds of the lectures. The remaining third are to be delegated to an assistant or lecturer, who will teach the subject of diseases of women in a form suitable for the requirements of students in the after-practice of their profession. There will be no divorce between medicine and surgery, but the relative value of each will be duly estimated and explained.

### Further Decline in the Birth-Rate

The summary of the vital statistics for 1909 has just been published and shows a further decline in the birth-rate. The marriage-rate was 14.6, which was 0.3 below the rate for 1908 and 1.1 below the average rate in the decade 1898-1908. The birth-rate was 25.6 per 1,000, which was 0.9 below the rate for 1908 and is the lowest on record. Compared with the average for the previous decade there was a fall of 2.2. The death rate was 14.5 per 1,000, which was 0.2 below the rate in 1908 and is the lowest on record. Compared with the average of the previous decade there was a fall of 1.6. This fall is due to diminution of the infant mortality, which has more than counterbalanced a slight increase at the other end of life. The infant mortality, measured by the proportion of deaths under the age of one year to the births, was 109 per 1,000, which was 11 below the rate for 1908, and lower than any rate on record. The reduction in the infant mortality has been mentioned in previous letters to The Journal and shown to be due to instruction of mothers and increasing care in the rearing of infants. The present reduction is all the more remarkable in that it has followed the considerable fall which has taken place since 1901. In London the marriage rate was 15.8, the lowest on record. Similarly the birth rate was 24.2, the lowest on record. This rate was 1 below that for 1908, and no less than 3.4 below the average for the previous decade. In the main the fall in the birth-rate is due to diminished fertility of married women. In 1867 the rate was 36.5, so that a fall of one-third has taken place in the last half century. For the first time since 1905 smallpox appears as a cause of death, two fatal cases having occurred.

### The Output of Drugs and Chemicals in the United Kingdom

As the result of a recent law, called the Census of Production Act, reliable figures are for the first time available as to the quantity of drugs and chemicals produced in the United Kingdom. Forms were sent to all the manufacturers engaged in these industries, on which they were compelled to state the articles manufactured, the quantities manufactured, the quantities sold, the value of the articles, and the number of the work-people employed. The gross output of factories engaged in the manufacture of chemicals, drugs and perfumery in the past year is valued at $115,000,000, and the cost of the materials used at $66,000,000. The number of persons employed is 51,088. The following are some of the most interesting items: Drugs and galenical preparations, $12,000,000; fine pharmaceutical chemicals (alkaloids, chloroform, ether, etc.), $8,000,000; "patent medicines," *i. e.*, nostrums, $11,000,000; prepared foods for infants and invalids, $2,800,000; druggists' sundries, $6,400,000; essential oils, $455,000; perfumed spirits, $1,500,000.

## PARIS LETTER

*(From Our Regular Correspondent)*

Paris, May 27, 1910.

### Serious Disturbances at the Concours d'Agrégation

The tumultuous incidents will be recalled following which the *concours d'agrégation*, opened in December, 1908, was adjourned (The Journal, Jan. 16, 1909, lii, 223). Since then no new *agrégés* have been recruited. The government at last decided to announce a new *concours*. In the first session, which took place May 23, and which was to have been entirely devoted to calling the roll of the candidates, great violence broke out. When the members of the jury, preceded by the president, Dr. Landouzy, entered the great amphitheater, they were greeted by an explosion of cries and whistles. The noise was so great that Dr. Landouzy, after having tried in vain to speak a few words, was obliged to name the candidates by writing their names on the blackboards. Among the candidates were some who had entered only to disorganize the *concours*. They did not confine themelves to tumultuous shouts at the jury, but threw at them eggs and tomatoes.

The second day was marked by still greater violence. The college of medicine was occupied by police which tended to augment the disturbance among the candidates. A police officer arrested a rioter who had just thrown an egg at members of the jury; this was the signal for a regular riot between the police and the candidates. Several rioters were arrested. During the evening M. Briand, the premier, received a delegation of practitioners who came to request the liberation of the physicians and students arrested during the riot, and the withdrawal of the police. M. Briand replied that it appeared to him intolerable to allow the candidates to assault the members of the jury. Tomatoes, eggs and blows with canes did not constitute arguments. The premier added that if the violence continued the duty of the government would be not to refuse the police to assure order at the *concours*, and that the best way for the delegates to obtain the liberty of their comrades would be to stop the violence.

On the other hand, the group of "serious candidates" had drawn up a protest against the obstruction practiced by a small group of disturbers, against the violence to which the members of the jury have been subject, and against the interference with the rights of the candidates to compete in conformity with the laws and regulations. At present, thanks to the very energetic measures which have been taken to restore order, the *concours* has been resumed, but access to the ampitheater where the sessions are held is no longer open to the public. To assure the legal publicity of the sessions, however, at the opening of the doors, besides the candidates, the twenty persons who first present themselves are allowed to enter and the numerous seats left are occupied by municipal guards and the police.

### Election of Professor Gauchèr to the Academy of Medicine

In its session on May 25, the Académie de Médecine elected a member in the section of medical pathology to replace Professor Brissaud, who died last December. The academy elected Professor Gaucher, who is the successor of Professor Fournier in the chair of syphilitic and cutaneous diseases at the Paris College of Medicine.

## BERLIN LETTER

*(From Our Regular Correspondent)*

Berlin, May 26, 1910.

### Antituberculosis Conference

At the meeting of the German central committee for the campaign against tuberculosis referred to in my previous letter, Professor Nietner presented the business report. According to this about $40,000 (167,000 marks) was expended by the central committee during the last year for the establishment of sanatoria and other tuberculosis institutions. There are now available 99 public sanatoria with over 11,000 beds for adult tuberculous patients, in addition to 74 private sanatoria with 1,972 beds. Children with pronounced tuberculosis may be admitted to 18 sanatoria with 810 beds, and 89 institutions with 8,000 beds are provided for scrofulous children. In addition, there are 93 forest convalescence stations and 11 forest schools; 15 convalescence homes also receive tuberculous patients, and 9 observation stations permit the selection of patients for the sanatoria. There are 325 special dispensaries and advising stations for tuberculosis in Germany. The important relation between tuberculosis and the dwelling was discussed both at the general meeting and at the directors' meeting of the German central committee. According to Professor Römer of Marburg the chief cause for the spread of human tuberculosis is man himself. Almost every human being passes out of childhood already subject to tuberculous infection. In 90 per cent. of tuberculous individuals it is demonstrable that infection with tubercle bacilli occurred in childhood. The origin of tuberculous consumption in adults is to be attributed to a severe reinfection with tuberculosis from some tuberculous focus already present in the organism. The severe infections of children which result in consumption take place principally in the dwelling and within the family. The protection of children is therefore the most important problem in the prophylaxis of consumption.

Gretsel of Darmstadt, national housing inspector, treated this question from the practical standpoint, emphasizing that the common occupancy of small rooms by many individuals contributes very largely to the spread of tuberculosis. In Berlin, half of all the dwellings, namely, 197,000 (in which about half of the entire population live) consist of only a sitting room and kitchen. Thirty-three thousand apartments have only one room that can be warmed, 2,400 have no room that can be warmed, and 4,086 apartments consist exclusively of a kitchen in which sometimes as many as twelve persons live. In other large cities and in the country the conditions are quite as bad. For this reason, in addition to securing normal housing conditions, the provision of cheap, good and sanitary apartments for the less well-to-do classes in both city and country is urgently needed. The tuberculous patient ought to have his own room or at least a bed to himself, and in case of moving or death thorough disinfection should be done and, in case of need, beds should be provided. The sanitary renovation of dwellings must be undertaken at public cost, if the occupants of the house have not the necessary means. Compulsory notification of tuberculous cases must be introduced. A housing reform for the entire German empire must be carried out by legislative means. According to the statements of Professor Kirchner there exists so far no requirement to disinfect the dwelling on occasion of change of residence of tuberculous patients, or illness of members of the family from tuberculosis. There does not seem to be much prospect of legislative action to remedy this deficiency. At the suggestion of the minister of education, many communities in the last two years have indicated their readiness to undertake disinfection at public expense. The essential thing is the education of the population in cleanliness and hygiene by public instruction. Healthy children should be removed from families where disease is present and placed in healthy families to be brought up. Kirchner does not agree with Professor Römer that tuberculosis is almost exclusively acquired, nor that scarcely any human being is free from tuberculosis. According to his opinion, only those who are in the environment of tuberculous patients are endangered. Professor Petrouschky of Danzig is like Römer of the opinion that tuberculosis is acquired in childhood as a rule. Gottstein of Charlottenburg called attention to the appearance of tuberculosis in groups in various localities of the city in which the density of the population plays a prominent rôle.

The president of the imperial health office, Dr. Bumm, discussed the question whether it is necessary to obtain the permission of the patient or, in case of children, the permission of the parents before making the tuberculin skin test of von Pirquet. His conclusions were in the affirmative on the ground that otherwise physicians might be involved in litigation. In the discussion this opinion was concurred in by most of the speakers. Very favorable experiences in regard to the value of he von Pirquet test in the campaign against tuberculosis in schools were reported. One speaker urged compulsory vaccinaion of all school children. Experience shows that patients discharged from sanatoria find difficulty in obtaining new mployment, and there was considerable discussion on measures for removing this difficulty. A combination of inteligence offices, the establishment of workshops and agricultural olonies, enlightenment of employers and similar methods were ecommended. The relations of glass grinding and metal polshing and basket making to the spread of pulmonary tuberulosis were discussed by Professor Nietner, the general secreary. On account of the possibility of mechanical injury of he respiratory mucous membrane by sharp angles and points, tone dust, metal and glass dust are among the most dangerus forms. The harder the material under manipulation, the more dangerous must be the dust. As in grinding glass the work is done without exception with wet material, the development of dust is prevented and tuberculosis is not frequent mong these workers. Tuberculosis is also rare among metal rinders because the workshops are adapted to modern ygienic requirements. The frequent occurrence of tuberulosis among basket workers does not depend on the trade *per se* but is to be attributed to the bad social condition of hese workmen.

# Pharmacology

## SARTOLIN

### Another Consumption "Cure"

When an American quack or nostrum-vender has milked his gullible native clientèle dry he often transfers his field of operations to Europe where he goes through the same process. In a like manner when a nostrum has worn out its welcome in Europe its astute exploiter casts his lines in American waters in hope of relieving the credulous sick of their dollars.

Sartolin is a "consumptive cure" which had its origin several years ago in Germany, its "inventor" being one Robert Schneider of Berlin. Apparently it did not take very long for this nostrum to be discredited in the land of its birth, and then advertisements began to appear in the British newspapers extolling the wonderful virtues of sartolin and detailing its "cures." Still more recently the newspapers in this country recorded the fact that "Dr." Robert Schneider of Berlin had arrived in the United States and was on his way to Chicago where he "would demonstrate his method of curing consumption." Now we find that the "U. S. Head Office & Depot" of the Sartolin Company is located in Chicago.

According to the booklet put out by the Chicago concern, Sartolin is "the newly discovered treatment for consumption and kindred diseases" and has been patented in the United States. Further we learn that the "treatment" consists of vaporizing the mixture which constitutes sartolin, and inhaling the fumes. According to the patent specifications sartolin seems to be composed of:

| | |
|---|---|
| Powdered eucalyptus leaves | 7.5 |
| Oil of eucalyptus | 4.5 |
| Flowers of sulphur | 63.0 |
| Powdered wood charcoal | 25.0 |

A small amount of this mixture is placed on a slab under which an alcohol lamp is burning. The whole thing is supposed to be operated in a room that is tightly closed and in which the tuberculous patient is required to stay. As the booklet of directions puts it: "The fumes are breathed in a closed bed-room during the night ...." In the advertising matter the open-air treatment is belittled and serum therapy designated as valueless. The victim is urged to use the "sartolin treatment," which consists in shutting himself up for the night in a tightly-closed room to breathe the stagnant air laden with the products both of his own exhalations and of the combustion of the stinking mixture which forms the nostrum. If there are degrees of viciousness in the various fake cures for tuberculosis it would seem that sartolin surely should rank as one of the worst.

## DIGEST OF COMMENTS ON THE U. S. P.

The work of the United States government in preparing for the new Pharmacopeia by issuing bulletins containing abstracts of the comments and criticisms which have been made on the eighth decennial revision was noticed in an editorial in The Journal, Nov. 27, 1909, p. 1824. The work for 1905 was embodied in Bulletin No. 49, Hyg. Lab. U. S. Public Health and Marine-Hospital Service. A similar bulletin for 1906 has since been issued and receives extremely favorable comment from a British authority, the *Pharmaceutical Journal and Pharmacist* (April 23, 1910, p. 510). Our contemporary says:

> "As an example of thoroughness in the department to which it especially applies, Bull. No. 58 of the Hygienic Laboratory of the United States is probably unequaled anywhere."

After noting the change in the status of the U. S. Pharmacopeia incident to its becoming a legal standard, the *Pharmaceutical Journal* continues:

> "This status of the U. S. Pharmacopeia as the official standard for determining the purity and strength of widely used medicaments could not be maintained on better material than is to be found in this digest, for the compilation of which the pharmaceutical and chemical literature of the whole civilized world has been ransacked in a way which, one is almost compelled to think, can only be done in America. The compilers having hit on what is undoubtedly the right way to go about it, have apparently left no leaf unturned in their efforts to find material which in any way dealt critically with official articles. Commendatory notices have been studiously ignored, on the ground that the value of a compilation of comments on

the officially recognized standards must lie largely in the direction of recognizing shortcomings to be corrected and errors to be eliminated. It might be expected that a volume compiled on such lines would contain all the material necessary to make the Pharmacopeia to which it refers perfect in all respects. Doubtless it does contain this material, but unfortunately ideals in most things are very apt to become modified or distorted when practical politics step in. In the present case, while bearing in mind the need of efficient and active medicaments for the conservation of the public health, the desirability of maintaining equitable standards from an economic point of view must not be lost sight of. It is a sensible view to take of the question, and our hard-headed transatlantic friends may be trusted to profit by its acceptance. All the available suggestions have been collected by the compilers without comment, and while they appreciate the fact that many of the suggestions and claims put forward are not practicable, they are none the less valuable in that they are suggestions and serve to emphasize the care that must be exercised in the final utilization of these suggestions in connection with the revision of the national standards.

"The plan of Bulletin No. 58 is quite similar to that of Bulletin No. 49 and covers the literature for the year 1906. One may appreciate the thoroughness of the search made for comments and criticisms when one notes that not only medical and pharmaceutical journals have been examined, but even an engineering journal is quoted from on page 67 (*Chem. Eng.*, Philadelphia, 1906 and 1907)."

These collections of criticisms, more than anything else, probably, should receive the credit for any improvement shown in the next revision of the book. Physicians who are interested in an advanced materia medica cannot sufficiently show their appreciation of this work. They should write to the Hygienic Laboratory for a copy of Bulletin No. 58, which will be sent on request.

## *Correspondence*

### An Improvised Pneumatic Tampon for Nosebleed

*To the Editor*:—I lately had a case of nasal hemorrhage that I could not control by the ordinary anterior and posterior tampons. I cut a finger from a thin rubber operating glove, inserted a catheter, pushing it up to the closed end, and tied the cut end tightly about the catheter. This was inserted into the naris and inflated by blowing into the catheter. In this case I had to tampon the posterior naris and hold the tampon tightly in place with a thread through the nostril in order to keep the glove-finger from ballooning into the pharynx. The catheter was closed by doubling and tying or by catching with a hemostat, and was held out of the way by fastening to the cheek or neck with adhesive plaster. This controlled the hemorrhage and was much more comfortable than the tampons.

A. B. Stewart, Owatonna, Minn.

### Another Case of Poisoning with Mercury Bichlorid

*To the Editor:*—Several cases of poisoning with corrosive sublimate have been reported recently. I wish to add one more; this one being unique in the manner in which the poisoning occurred. It also shows how easy it is for children to obtain this drug.

M. R., aged 16, while visiting in a small town, became infected with pediculus capitis. On the advice of her grandmother she went to a druggist and purchased 10 cents worth of corrosive sublimate powder. This was mixed with an equal quantity of lard and the entire amount of the mixture was rubbed into her scalp. In a few minutes intense burning arose, and became excruciating. The girl's head was cleansed with soap and warm water, and household remedies applied to relieve the burning. In an hour intense headache, nausea, vomiting and great prostration came on. A physician was summoned and worked with the patient twelve hours before she showed any signs of improvement. At the end of three days sloughing began. Ten days after the poisoning occurred the patient returned home. I was called to see her and found no constitutional symptoms worthy of mention. The hair was dry at the extremities but matted at the roots; the scalp was a mass of crusts and ulcers, some of the crusts being 2 inches in width. A wash of 1 per cent. compound solution of cresol and green soap was ordered to be used morning and night; nitrate of silver 60 gr. to the ounce was applied to the ulcers.

At the end of four weeks the scalp was entirely healed, but there were large areas entirely denuded of hair. A tonic of cantharides and quinin was prescribed. Two months ago, or ten months after the last previous time I had seen the patient she called at my office. She stated that she had undergone scalp massage and tonic treatments during the ten months. Her hair was glossy but sparse, and there were twelve areas varying in size from a dime to a half a dollar entirely denuded of hair, the scalp here being a pearly white and glistening. The grandmother had no doubt confused red precipitate and corrosive sublimate.

Arthur D. Kurtz, M.D., Philadelphia.

## *The Public Service*

### Medical Department, U. S. Army

Changes during the week ended June 11, 1910:

Sweazey, Verge E., capt., left Hot Springs, Ark., on 4 months' leave of absence.

Gregory, J. C., capt., left Jefferson Barracks, Mo., on 2 months' leave of absence.

Pinkston, O. W., capt., left Hot Springs, Ark., en route to take station at Fort Meade, S. D.

Weed, Mark D., 1st lieut., M. R. C., reported for duty at Walter Reed General Hospital, Takoma Park, D. C.

Allen, William H., 1st lieut., M. R. C., reported for duty at Fort Slocum, N. Y.

Schlanser, A. E., 1st lieut., M. R. C., reported for duty at Walter Reed General Hospital., Takoma Park, D. C.

Bastion, J. E., 1st lieut., M. R. C., reported for duty at Walter Reed General Hospital., Takoma Park, D. C.

Bailey, Howard H., capt., detached as surgeon of the transport *Sumner* for the voyage to Buenos Aires, Argentine Republic, sailing from New York, June 14.

Love, Albert G., capt., granted leave of absence for 10 days.

Pillsbury, Henry C., 1st lieut., in addition to his other duties, is assigned to temporary charge of the Medical Supply Depot, St. Louis.

Reynolds, Charles R., major, will proceed to Gettysburg, Pa., to investigate the sanitary condition of camp site.

Lauderdale, Robert N., dental surgeon, detailed to represent the Dental Corps of the Army at the meeting of the National Dental Association, to be held in Denver, July 19 to 22.

Shugerman, Harry P., M. R. C., honorably discharged from the service of the U. S., June 7, 1910.

Foster, George B., Jr., M. R. C., ordered to Washington Barracks, D. C., for temporary duty.

Register, Edward C., M. R. C., ordered to Fort H. G. Wright, N. Y., for temporary duty.

Sheep, William L., M. R. C., ordered to Fort Myer, Va., for duty with the 3rd Field Artillery, while on detached service at Gettysburg, Pa.

Long, Charles J., dental surgeon, will proceed from Fort Adams, R. I., to Fort Banks and Rodman, Mass., to render dental service in the Artillery districts of Boston and New Bedford.

Munson, Edward L., major, detailed for duty at American Lake, Wash., camps of instruction, during August, 1910.

Cole, Blase, M. R. C., ordered to report to the Commanding Officer, 16th Infantry, to accompany Headquarters Band and 2nd and 3rd Battalions, 16th Infantry to Seattle, Wash.

Gunckel, George I., dental surgeon, ordered to Fort Screven, Ga., for a period of 3 weeks.

The following named officers of the Medical Department are detailed to accompany troops to the camps of instruction at Gettysburg, Pa.: Waterhouse, Samuel M., major; Allen, John H., major; Bailey, Howard H., capt.; Webber, Henry A., major; Davis, William R., capt.

Kouper, Conrad E., major, granted leave of absence for 20 days.

Enders, William J., M. R. C., granted leave of absence for 2 months, to take effect about July 28, 1910.

Hewitt, John M., M. R. C., relieved from duty at the Presidio of San Francisco, and assigned to duty as surgeon of the transport *Buford*, with station at San Francisco.

### Medical Corps, U. S. Navy

Changes during the week ended June 11, 1910:

Stibbens, F. H., P. A. surgeon, detached from the Naval Training Station, Newport, R. I., and ordered to the Naval Training Station, San Francisco.

Halton, E. P., acting asst.-surgeon, detached from the Naval Hospital, Newport, R. I., and ordered to the Naval Training Station, Newport, R. I.

Stanley, A. C., asst.-surgeon, detached from the *Virginia* and granted sick leave for 3 months.

Ryder, C. E., P. A. surgeon, detached from instruction at the Naval Medical School, Washington, D. C., and ordered to duty at the Naval Hospital, Naval Home, Philadelphia.

Dunn, H. A., Seaman, W., Payne, J. H., Richardson, R. R., Stepp, J., Stuart, A., P. A. surgeons, detached from instruction at the Naval Medical School, Washington, D. C., and ordered to examination for promotion, on completion of which to wait orders.

Tolfree, H. M., P. A. surgeon, detached from instruction at the Naval Medical School, Washington, D. C., and ordered to wait orders.

Hightower, C. C., and Howard, J. V., acting asst.-surgeons, appointed acting assistant-surgeons from June 4, 1910.

# Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

### TREATMENT OF INOPERABLE CANCER

*To the Editor:*—Please give me any information regarding late developments in the use of methylene blue or the anilin derivatives in the treatment of inoperable cancer. I have a case of recurrent pelvic cancer in a patient aged 70, operated on two and a half years ago for cancer of the rectum. What is the dosage, and does combination with nutmeg prevent vesical irritation? Does the drug tend to inhibit pain and the development of the growth? What is the present opinion as to its efficacy? Would exposure to the *x*-ray have an inhibiting effect on the growth? A. B. S.

Answer.—An examination of the literature shows that not much has been written recently on the use of the anilin derivatives in inoperable carcinoma, so that the procedure, which had a certain vogue a number of years ago, has probably been largely abandoned. One of the most recent articles published in The Journal concerning the use of the methylene blue in cancer is that of Dr. A. Jacobi (The Journal, Nov. 10, 1906, p. 1545). In this paper Dr. Jacobi reports having used it in at least 120 cases extending over a period of fifteen years, with good results in the way of relieving pain, retarding or diminishing the growth and size of the neoplasm and prolonging life, in many cases for a number of years beyond the probable length of life without treatment. He gave the drug in small doses, beginning with 2 grains a day, running it gradually up to 3, 4 and 6 grains a day, combining it in pill form with belladonna, which he found more effective in preventing dysuria than nutmeg, giving three-fourths of a grain in the daily dose. He also frequently used 1/40 to 1/20 grain of arsenic trioxid and also 1/10 grain of strychnin in the daily dose. Patients should be told that the urine will be blue. In a discussion of Dr. Jacobi's paper, H. R. Slack reported using it hypodermically, 1 c.c. of a 2 per cent. solution every other day, with alleged beneficial results. References to the use of this and other anilin derivatives will be found below. The *x*-ray is still used to some extent in the treatment of superficial cancer and for the prevention of recurrence after operation in surface growths. It has an analgesic effect. It is found less effective in deep-seated growths such as the one referred to.

Einhorn, M.: "Methyl Blue in Malignant Inoperable Growths," *New York Med. Rec.*, 1891, xxxix, 358.

Meyer, W.: "Treatment of Inoperable Growths with Anilin Dyes," *New York Med. Jour.*, 1891, liii, 435; "Results Obtained Through the Use of Anilin Products in the Treatment of Carcinoma," *Ann. Surg.*, 1893, xviii, 522.

Slack, H. R.: "Blue Pyoktannin in the Treatment of Inoperable Malignant Growths," The Journal A. M. A., 1897, xxviii, 1227.

Jacobi, A.: "Methylthionin Hydrochlorid in Inoperable Cancer," The Journal A. M. A., Nov. 10, 1906, p. 1545.

### THE UNCINARIA AND THYMOL TREATMENT

*To the Editor:*—1. Are hookworms visible to the naked eye? 2. Are the eggs visible to the naked eye? 3. What is the best method of administering thymol? C. W. Benson, Bartlett, Tex.

Answer.—1. Hookworm comprises two species: *Ankylostoma duodenale* (the old-world species) and *Uncinaria americana* or *ecator americanus* (the new-world hookworm). *Ankylostoma duodenale* is described as follows: The length of the female is 8 to 18 mm. (⅓ to ⅔ inch); that of the male 8 to 12 mm. (⅓ to ½ inch). The head of the worm, which is curved backward, is conical and as a large bell-shaped mouth, surrounded by a horny capsule and ossessing four hook-like teeth ventrally situated and two smaller ertical teeth on the dorsal side by which the worm fixes itself to he mucous membrane. The body is thread-like. The tail of the emale ends in a point, but that of the male contains a three-fold ulbous swelling in which the intestine and vas deferens end. The ookworm is easily visible to the naked eye but a low power of the microscope is necessary to make out the details of the structure just escribed. *Uncinaria americana* has no hook-like teeth but has a orsal pair of prominent semilunar plates or lips and a ventral pair f slightly developed lips of the same nature. The female varies ess in length than that of *Ankylostoma duodenale,* being 9 to 11 mm. long.

2. The eggs are not visible to the naked eye but can be seen with he low power of the microscope. The eggs of *Ankylostoma duodenale* re about 0.05 mm. (1/500 inch) long and about half as broad and how segmentation in the shape of 2 or 3 furrows. The eggs of *ncinaria americana* are somewhat larger—64 to 72 by 36 to 40 icrons.

3. Thymol should be given in capsule, the crystals being first iturated with sugar of milk to prevent agglomeration, or in emulon with acacia in 30-grain doses repeated in two hours for an dult In administering thymol, it is essential that none of the solvents of the drug should be given either with it or immediately after. The solvents include alcohol or alcoholic drinks, ether, chloroform, glycerin and oils. In order to prevent poisoning by thymol it should be followed by a saline purge, and castor oil should not be used. For further details see The Journal, Oct. 16, 1909, p. 1307; also article by E. E. Lindeman in The Journal, May 28, 1910, p. 1765. In the search for uncinaria, if the microscope is not at hand, it is recommended by Stiles to give a small dose of thymol, followed by Rochelle salt, and to collect all the stools passed; to wash the stools several times in a bucket and to examine the sediment for worms about half an inch long, about as thick as a hairpin or hatpin and with one end curved back to form a hook.

### EFFECT OF CHOCOLATE ON THE URINARY ORGANS

*To the Editor:*—Please give information concerning the following questions: 1. What is the explanation of irritation of the urinary organs and passages following the ingestion of chocolate and chocolate candies, usually in large amounts? 2. On what substances in the chocolate, or chemical changes induced in the digestion do the irritating qualities depend? 3. Kindly give a chemical analysis of ordinary chocolate. X. Y. Z.

Answer.—1. We are unable to find any statement that irritation of the urinary organs is a common result of the ingestion of chocolate or chocolate candies. If this symptom has been observed, it appears not to have been made the subject of pharmacologic investigation.

2. The principal constituents of the cacao bean are fat (oleum theobromatis), theobromin, other nitrogenous substances, volatile oil, tannin and cocoa red, and gum. The fat is a non-irritating, easily digestible substance having a composition similar to other fats, with the exception that it contains a glycerid of arachidic acid. It is improbable that irritation could be produced by the fat unless indirectly by disturbing digestion in susceptible people. Theobromin (dimethylxanthin) is a base similar to caffein (trimethylxanthin) and acts as a powerful diuretic. It is converted to a large extent into purin compounds and may possibly increase the amount of uric acid in the urine. The other nitrogenous substances are mostly insoluble and indigestible and have no constitutional effect. Nothing appears to be known about the action of the tannin and cocoa red or the gum. It is supposed that the aroma of cocoa depends on a volatile oil, but nothing is known regarding its pharmacologic action so far as we can learn.

3. Ordinary chocolate consists of the roasted and ground cacao beans, from which a portion of the fat has been removed and the residue pressed into cakes, either with or without the addition of sugar. In consequence of the varying methods of manufacture, it is not practicable to give an exact analysis of ordinary chocolate. The following is an analysis of the Caracas cocoa nibs: Moisture, 7.77; nitrogenous substances, including theobromin, 14.13; theobromin, 1.48; fat, 45.54; starch, 19.40; cellulose, 6.19; ash, 4.91; sand, 2.06 (Weighman).

# Marriages

Bert L. Ware, M.D., Fort Smith, Ark., to Miss Bessie Chandler, of Greenwood, Ark., June 5.

George S. Fultz, M.D., Broadway, Va., to Miss Alma K. McDowell, at Broadway, June 8.

Homer B. Catron, M.D., Hanaford, Ill., to Miss Edna Earle Price, of Belle Rive, Ill., June 1.

Donald Church Balfour, M.D., to Miss Carrie Louise Mayo, both of Rochester, Minn., May 28.

Bernard J. Lachner, M.D., Rock Island, Ill., to Miss Anna Elizabeth Kelley, of Philadelphia, June 1.

Charles E. Howard, M.D., Cogswell, N. D., to Miss Florence E. Latourell, of Mankato, Minn., recently.

John Roberts Caulk, M.D., Easton, Md., to Miss Bessie Jenifer Harrison, at Towson, Md., June 1.

John P. Fletcher, M.D., U. S. Army, to Miss Jeannette Mattfeldt, at Mount Washington, Md., June 1.

Royden Winthrop Davison, M.D., Trenton, N. J., to Miss Inez May Gruber, of New Haven, Conn., June 1.

John James Kennedy, M.D., Mill Creek, W. Va., to Miss Mary Louise Miller, at Cumberland, Md., June 1.

Robinette Burns Hayes, M.D., Fayetteville, N. C., to Miss Minnie Bond Anderson, at Baltimore, June 1.

Louis Wardlaw Haskell, Jr., M.D., Memphis, Tenn., to Miss Robin Hamilton, at Mount Sterling, Ky., June 1.

Herman A. Beck, M.D., Lebanon, Ind., to Miss Nellie Goodnight, of Kempton, Ind., near Elizaville, Ind., recently.

# Deaths

**Henry Granger Piffard, M.D.** College of Physicians and Surgeons, New York City, 1864; a member of the American Medical Association, New York Academy of Medicine and American Dermatological Association; who served in 1862 with the United States Sanitary Commission, and in 1867 and 1868 as the surgeon of the Seventh Regiment N. G. S. N. Y.; president of the New York Dermatological Society in 1876; since 1869, surgeon to the New York Dispensary for Diseases of the Skin; and since 1871, surgeon to the Charity Hospital; in 1873 and 1874, lecturer on urinary analysis in the University of the State of New York, and since 1874, professor and emeritus professor of dermatology in that institution; consulting surgeon to the City Hospital; author of several standard books on diseases of the skin and genitourinary system; died at his home in New York City, June 8, from pneumonia, aged 67.

**Simon Leopold Elsner, M.D.** College of Physicians and Surgeons, New York City, 1887; a member of the American Medical Association; examiner for the National Jewish Hospital for Consumptives, Denver; formerly chairman of the gynecological section of the Rochester (N. Y.) Academy of Medicine; assistant physician to the Rochester City Hospital; died suddenly in Rochester, June 5, from angina pectoris, aged 43.

**Samuel L. Dutton, M.D.** Harvard Medical School, Boston, 1860; a member of the Massachusetts Medical Society; assistant surgeon of the First Massachusetts Volunteer Heavy Artillery and later surgeon of the Fortieth Massachusetts Volunteer Infantry, and surgeon-in-chief of the Third Brigade First Division Eighteenth Army Corps during the Civil War; for many years pension examining surgeon for Boston and vicinity; died at his home in Chelmsford, May 27, aged 74.

**Oscar Fordyce, M.D.** College of Physicians and Surgeons, Chicago, 1885; a member of the American Medical Association; president of the Guthrie County (Iowa) Medical Society, and a member of the Iowa State Association of Railway Surgeons; local surgeon for the Rock Island System at Guthrie Center, and commissioner of insanity for Guthrie county; chief surgeon of the Fordyce Hospital; was instantly killed in an automobile accident, near Guthrie Center, June 5, aged 49.

**John Stewart Kulp, M.D.** University of Pennsylvania, Philadelphia, 1889; who entered the United States Army as assistant surgeon in 1893, was made captain and assistant surgeon in 1898, major in the medical corps in 1906, and was retired, Dec. 4, 1908, on account of disability in line of duty and moved to Seattle and was appointed surgeon of the National Guard of Washington in 1909; died in a hospital in Seattle, June 3, aged 44.

**William C. Chapman, M.D.** Miami Medical College, Cincinnati, 1873; a member of the American Medical Association; for several years president of the Toledo Federation of Charities; a member of the medical staff of St. Vincent Hospital, and for several terms a member of the board of health of Toledo; died at his home, May 29, from nephritis, aged 69.

**Camillus Bush, M.D.** Johns Hopkins University, Baltimore, 1902; of San Francisco; a member of the American Medical Association; assistant in surgery in the University of California, and visiting surgeon to St. Helena Sanitarium; died in the Adler Sanatorium, Woodland, Cal., May 28, from typhoid fever, aged 32.

**Henry S. Wishart, M.D.** University of Pennsylvania, Philadelphia, 1864; a veteran of the Civil War, and representative from Fulton county in the legislature in 1875 and 1876; for many years a practitioner of McConnellsburg, Pa.; died at the home of his daughter in Johnstown, June 2, from cerebral hemorrhage, aged 78.

**John Edward Groves, M.D.** Bennett Medical College, Chicago, 1887; a member of the Effingham County (Ill.) Pension Board; died at his home in Altamount, May 17, from perforation of the bowels and stomach, due to an abscess of the gall-bladder, for which two operations had been performed, aged 45.

**Henry Napoleon Austin, M.D.** College of Physicians and Surgeons, New York City, 1865; for many years a practitioner of south Arkansas, near Pine Bluff, and one of the founders of the Austin Company at Dumas, died in Asheville, N. C., April 20, from carcinoma of the neck, aged 72.

**George K. Meschter, M.D.** University of Pennsylvania, Philadelphia, 1867; vice-president of the Perkiomen Seminary, Pennsburg; a leader of the Schwenkenfelder Church; died at his home in Centre Point, Worcester, Pa., June 4, from cerebral hemorrhage, aged 70.

**Stiles Kennedy, M.D.**, University of Pennsylvania, Philadelphia, 1858; a member of the Michigan State Medical Society; and for more than half a century a practitioner of St. Louis, Mich.; died at his home, May 27, from cerebral hemorrhage, aged 72.

**Murray Sims Hitchcock, M.D.** Louisville Medical College, 1893; a member of the American Medical Association; formerly surgeon for the Alabama Consolidated Coal and Iron Company at Brookwood, Ala.; died at his home in Birmingham, May 27, aged 43.

**Edwin H. Knowles, M.D.** Eclectic Medical College of Pennsylvania, Philadelphia, 1879; a veteran of the Civil War; member of the board of health of North Stonington; in 1889 a member of the state senate; died at his home, May 30, from nephritis, aged 67.

**William H. Gray** (license, examination, Ind.); of Michigan City; a veteran of the Civil War; who was adjudged insane, May 18, and committed to the Northern Indiana Hospital for Insane, Logansport; died in that institution, June 2, aged 71.

**Rio Delos Barber, M.D.** Harvard Medical School, Boston, 1866; a veteran of the Civil War, and for twenty years a practitioner of Corona, Cal.; died at his home in that place, May 26, from heart disease, aged 71.

**Frederick Selnow, M.D.** University of Goettingen, Germany, 1862; for more than 40 years a practitioner of Hudson county, N. J.; died at his home in lower Jersey City, May 20, from myocarditis and nephritis, aged 75.

**Thomas W. E. Winders, M.D.** Fort Worth (Texas) University, 1906; a member of the Tombstone Medical Society; died at his home in Tombstone, Ariz., Aug. 7, 1909, from peripheral neuritis, aged 24.

**Reuben K. Dawson, M.D.** University of Nashville, 1858; for many years a practitioner and clergyman of Maury county, Tenn.; died at his home in Knob Creek, June 3, from heart disease, aged 78.

**William Krause, M.D.** Jefferson Medical College, 1884; for a long time a sufferer from an incurable disease; died at his home in Philadelphia, June 3, from asphyxiation by illuminating gas, aged 63.

**Beverly Allen Henry, M.D.** Jefferson Medical College, 1852; a practitioner of Elberton, Ga., for many years; died at his home, "Henry Place," Elberton, April 12, from senile debility, aged 81.

**William H. Dunn, M.D.** Medical College of Ohio, Cincinnati, 1874; of Gaston, Ind.; a member of the Delaware County Medical Society; died in Indianapolis, May 30, from heart disease, aged 63.

**James T. Prevatt, M.D.** George Washington University, Washington, D. C., 1905; a member of the Medical Association of Georgia; died at his home in Monticello, May 27, aged 38.

**George Almarian Dean, M.D.** Hahnemann Medical College, Chicago, 1878; for 25 years a practitioner of Kansas City; died at his home, June 1, from cerebral hemorrhage, aged 64.

**Hugh C. Calloway, M.D.** Beaumont Hospital Medical College, St. Louis, 1890; a member of the Wyoming State Medical Society; died at his home in Lander, May 23.

**George Waldron Bartlett, M.D.** New York Homeopathic Medical College, 1895; died at his home in Bath Beach, Brooklyn, N. Y., June 5, from heart disease, aged 57.

**Alfred R. Ligon, M.D.** Southwestern University Medical College, Dallas, 1904; died at his home in Henderson Cross Roads, Tenn., May 31, from pellagra.

**Silas Warrick Hall, M.D.** Starling Medical College, Columbus, Ohio, 1849; died at his home in Weston, W. Va., May 18, from malignant disease, aged 85.

**Charles Rowley Enos, M.D.** Homeopathic Medical College, St. Louis, 1874; died at his home in Jerseyville, Ill., May 12, from senile pneumonia, aged 95.

**John Thomas Richter, M.D.** Kentucky University, Louisville, 1904; of Louisville; was struck by a street car, June 1, and instantly killed, aged 30.

**R. T. Long** (license, Tenn., 1889); for many years a practitioner of Columbia, Tenn.; died at his home, May 29, from cardiac asthma, aged 70.

**Thomas F. Joyce, M.D.** New York Homeopathic Medical College, New York City, 1859; died at his home in Brooklyn, Dec. 16, 1909, aged 71.

**W. A. Boyd, M.D.** University of Louisville, 1853; died at the home of his daughter in Mayfield, Ky., May 31, from cerebral hemorrhage, aged 78.

# PROCEEDINGS OF THE ST. LOUIS SESSION

## MINUTES OF THE SIXTY-FIRST ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT ST. LOUIS, MO., JUNE 6-10, 1910

### *Third Meeting — Tuesday Afternoon, June 7*

The House of Delegates met at 2 p. m., and was called to order by President Welch. The Secretary called the roll.

Dr. H. Bert Ellis, Chairman, presented a supplementary report of the Committee on Credentials.

The minutes of the previous meeting were approved.

### Report of Committee on Scientific Exhibit

Dr. Frank B. Wynn, Indiana, Director, read the report of the Committee on Scientific Exhibit, as follows:

*To the Members of the House of Delegates*:

The Scientific Exhibit of the St. Louis session will compare favorably with previous exhibitions, especially in the variety of material presented. It has been the policy of the committee from year to year to seek to widen the range of instructive exhibits beyond the museum type, so as to include all forms of medical activity. The present exhibit shows an encouraging response in this direction. It will give emphasis and illumination to the following subjects:

1. The clinical application of research work.
2. The practical value of thorough scientific work, whether in the laboratory or the hospital.
3. The methods of newer medical teaching.
4. The progress of clinical work in hospitals and dispensaries.
5. Newer methods in dealing with the tuberculosis and other sanitary and hygienic problems.
6. The rôle of parks and playgrounds in conserving the public health and comfort.
7. The advantages of competent food and dairy inspection.
8. The desirability of local medical societies giving more attention to medical history.

A booklet issued at the time of registration gives details as to institutions and exhibitors. Thirty-three institutions are represented in the Exhibit, and no less than fifty members of the Association have aided in its preparation or presentation. The local profession have abundantly atoned for any past delinquency in participation by a most generous patronage of the present Exhibit under the efficient direction of Dr. F. J. Lutz.

When it is recalled that the labor of preparing this Exhibit is largely gratuitous, the services of the men become an eloquent testimonial to their unselfish devotion to the higher ideals of medicine. Theirs is a labor of love, and their reward the consciousness of service to others, which, after all, is the true foundation of happiness.

Following the plan of a year ago, certificates of honor will be given to a limited number of exhibitors. Gold medals will be awarded (a) for the best research exhibit relating to some phase of pathology or internal medicine, and (b) for the best research exhibit bearing on clinical surgery. A committee on awards (of three members) should be appointed by the President at once.

It is recommended that $500 be appropriated to meet the ordinary expenses for the ensuing year, and $300 for medals, certificates of honor and small cash grants to encourage exhibitors who have made heavy personal outlay, especially in investigation work.

The Scientific Exhibit has abundantly proved its usefulness. The benefits are to be reckoned not merely by the practical lessons taught the visiting members of the Association at each annual session. An educating influence still more potent has been stimulated, through the friendly rivalry of institutions which have participated. The practical effect has been the growth of museums in colleges and hospitals, and the advancement of the standards in medical teaching. Traceable, likewise, to the Association's efforts are the exhibits now generally in vogue for the education of the public on the various sanitary and hygienic problems.

What is to be the future of the Scientific Exhibit? Have the limits of its usefulness been attained? Must we continue in the path now well beaten, or are there other fields to explore and develop?

In answering these questions it may be well to call attention to a rapidly growing sentiment in the Association that the organization should take a hand in a large way in spreading knowledge among the people concerning the problems of hygiene, sanitary science and all matters relating to the public health and comfort. While the campaign under the efficient direction of Dr. McCormack had for its primary object medical organization, he sought to blaze the way for judicious medical instruction of the public. This same sentiment was voiced at the last session of the House of Delegates by the passage of a resolution calling on county medical societies to devote at least one annual meeting to a publicity program.

There are so many ways in which well organized and well directed medical effort would aid the public weal that the question may well be asked: *What is the Best Thing to Do?*

Objection is raised against the Association entering on a campaign of publicity, because it is claimed that the field is already occupied by the American Public Health Association, the National Association for the Study and Prevention of Tuberculosis, Boards of Public Health, etc. The same reasoning would have prevented the Association from elevating the standard of medical education or attempting the eradication of the proprietary medicine evil.

Again, it is asserted that health boards would resent activity of the Association in this field as an intrusion. On the contrary, it is just such national, cooperative support from nonpolitical sources that health boards everywhere feel the need of. On every hand they are hampered in the prosecution of public health work; at one time by a suspicious and uneducated public sentiment; at another time by narrow-minded and pernicious public officials, more concerned in guarding the interest of corn, hogs and corporations than in the protection of the people's health; or, more frequently still, public health officials are held fast in the mire of politics.

No one will contend that the Association should undertake the details of police surveillance in public health matters. Its functions should be educational and advisory. It is entirely practicable for the organization to inaugurate and exert a powerful moral and educational force throughout the country which will prepare the soil for the growth of public health work. It should seek in every way possible to divorce this type of public service from politics. It may furthermore undertake very properly the standardization of public health methods.

Many health boards, state and local, well officered and with ample funds, are doing magnificent work. Many others, because of local conditions, inadequate financial aid or bungling methods, are bringing discredit on preventive medicine in the public mind.

Granting that the Association should undertake a campaign of publicity: *What Is the Best Method to Pursue?*

Public lectures, accompanied by stereopticon views and exhibits, constitute the most popular method at the present time. Forensic presentations, when well conducted, are most valuable and should be continued and extended. Such efforts, however, are apt to be spasmodic—occurring at long intervals. Towns, villages and the rural districts do not enjoy their benefits. There is wanting, also, that continuity of educational effort which counts.

Forensic presentations are open to the further objection that they may not be judiciously conducted. Through inexperience or lack of adaptation to the work, bungling may result. Recently, in a college town, a course of talks to students on sexual hygiene and the social evil was presented with so little judgment and tact that it brought the ridicule and condemnation of the student body, causing abandonment of the movement by faculty action. Another, and not a small objection to local forensic presentations on public health matters, is that many people look on them as a scheme of doctors for personal ends; and the prominence of a few medical men in the work often arouses jealousy and unworthy criticism from rival members of the profession.

The practical utility of the public health exhibit as a means of instructing people has been abundantly demonstrated. The information they receive in this manner is more likely to be carefully weighed. The knowledge people gain through the eye from pictures, charts, models, etc., makes more lasting impression than the spoken word. The impersonality of the exhibit is another factor to commend it. Local jealousies and criticisms are not so apt to be aroused.

Your Committee on Scientific Exhibit has for several years given careful study to the matter of public health exhibits as ordinarily conducted. They are generally heterogenous and wanting in systematic arrangement. Often the data they contain are unwarrantably sensational, terrifying or misleading to the public. They are cumbersome in size. Their initial cost is great, and their maintenance and presentation necessitate a large expenditure. They are only practicable, therefore, for the health boards of states and large cities. Only at long intervals are they available for county seats. Villages and the country districts do not receive their benefits. These exhibits are of the traveling kind; their effect, like that of the traveling revivalist, may once in a long period stir up a little hygienic or sanitary fervor, but in a short time after the "big meeting" is over the people become backsliders. Let us make hygienic and sanitary reform a religion of daily life.

Your committee is under the conviction that the exhibit offers the most practical means of bringing this to pass. It lies within the power of this Association to develop cheap, compact, and yet complete exhibits relating to all the problems of the public health and comfort. It would be possible in this way to standardize to a large extent public health methods throughout the country. The wise and judicious hand of the Association would guard against erraticism in the field of preventive medicine, and seek on every hand to cooperate with and aid existing forces working for the public health and comfort.

Your committee is impressed with the feasibility of such a publicity campaign by means of exhibits. We would therefore ask for the appointment of a representative special committee to meet in conference with the Committee on Scientific Exhibit for more detailed consideration of the plan, to be reported back to this body.

*Respectfully submitted,*
Frank B. Wynn, Director.

The President stated that unless there was objection, the report of the Committee on Scientific Exhibit would be referred to the Board of Trustees, and as there was none the report was so referred.

### Report of the Committee on Scientific Research

In the absence of Dr. Alfred Stengel, Pennsylvania, Chairman, the General Secretary read the report, as follows:

*To the Members of the House of Delegates of the American Medical Association:*

Your Committee on Scientific Research would report that it has made for the current year three grants which become effective, the amount being $200 for each grant.

The first of these is to Dr. R. M. Pearce, of New York, for the following pieces of work which will be presented at the meeting of this year:

1. Homer F. Swift. The effect of Treatment on the Wassermann Reaction.
2. Thomas MacRae, A. B. Eisenbrey, and Homer F. Swift. The Use of Pure Lipoids and Alcoholic Extracts with Active and Inactive Serum in the Complement Fixation Tests for Syphilis.
3. Homer F. Swift and William C. Thro. A Study for Streptococci with the Complement Fixation and Coglutination Reactions.

These three studies were made in the laboratory of Dr. Pearce and under his direction.

The second grant is to Dr. Gerald B. Webb, of Colorado Springs, for a report on "Production of Immunity by Inoculation of Living Bacteria."

The third to Dr. E. C. Rosenow on "Studies on the Pneumococcus."

Several other applications were made and grants would have been made but for delay or failure of applicants to complete their work.

The Committee has exercised a great deal of discretion in making grants, and requests that the amount allowed at last year's meeting be not reduced, as the pending applications which have not become effective this year will be repeated for the following year.

Alfred Stengel, Chairman.

On motion of Dr. Alexander R. Craig, Pennsylvania, the report was referred to the Board of Trustees.

### Report of Committee on Organization of Council on Public Health, Publicity and Legislation

In the absence of Dr. Charles A. L. Reed, Ohio, Chairman, the General Secretary read the report, as follows:

*To the Members of the House of Delegates of the American Medical Association:*

Your committee presents the following amendments to the constitution and by-laws:

Amend Section 3 and Chapter 10, page 19 of the by-laws, to read as follows:

(a) Judicial Council.
(b) Committee on Transportation and Place of Session.
(c) Council on Medical Education.
(d) Council on Legislation, Health and Publicity.

Strike out Sections 5 and 8 of Chapter 10 and substitute for Section 5 the following:

There shall be a Council on Legislation, Health and Publicity to consist of five members, to be elected by the House of Delegates, on nomination by the President. Those first appointed shall serve one for one year, one for two years, one for three years, one for four years and one for five years. The respective terms of service shall be determined by lot and thereafter one member shall be elected annually, on nomination by the President. The President shall have power to fill by appointment all vacancies arising from any cause during intervals. The Council shall organize and shall elect a Chairman from its number. The Board of Trustees shall appoint a Secretary on nomination by the Council, and shall fix his salary.

The Council shall adopt such rules and regulations for the government of its actions as it may deem expedient. It shall expend money or contract financial obligations only as shall be authorized in writing by the Board of Trustees.

The work of the Council shall embrace the following subjects:
(a) Legislation.
(b) Organization.
(c) Publicity.
(d) Defense of Medical Research.
(e) Health.

It may appoint committees to carry on the respective purposes of the Council.

It shall make an annual report of its work to the House of Delegates.

The office of the Council shall be at the headquarters of the Association.

*Respectfully submitted,*
Charles A. L. Reed, Chairman.

On motion, the amendments were referred to the Reference Committee on Constitution and By-Laws.

### Report of Reference Committee on Sections and Section Work

The report was read by the Chairman, Dr. John E. Weeks, as follows:

*To the Members of the House of Delegates of the American Medical Association:*

At a meeting of the Reference Committee on Sections and Section Work, at which all of the members were present, proposals to establish a "Section on Urology and Venereal Diseases," a "Section on Physical Forces in Medicine" and a "Section on Hospitals," referred to this committee by your body, were considered. Arguments in favor of these proposals were listened to and the data submitted. It was unanimously agreed to submit the following recommendations:

#### GENITO-URINARY SECTION FORMED

1. That a section entitled "Section on Genito-Urinary Diseases" be authorized and established at this session. It is further recommended that the following named gentlemen be appointed officers of this section to serve during the first year of its activities, and that these officers be empowered to appoint an Executive Committee of three—one member to serve one year, one to serve two years, and one to serve three years, the subsequent election of officers and the constitution of the Executive Committee being provided for in the By-Laws of this Association.

*Officers:* Dr. W. T. Belfield, Chicago, Chairman; Dr. James Pederson, New York, Vice-Chairman; Dr. Hugh Young, Baltimore, Secretary.

2. In regard to the proposal to establish a section to be known as the "Section on Physical Forces in Medicine," your committee is unanimously of the opinion that the time is not yet opportune for the establishment of such a section.

3. In regard to the proposal to establish a section to be known as the "Section on Hospitals," your committee finds

that the subject is not yet sufficiently advanced to make it evident that there is sufficient demand for the creation of such a section. Your committee, therefore, respectfully recommends that this proposal be referred back to the proposers for subsequent presentation if they so desire, when, in their opinion, sufficient support has been obtained to warrant favorable action by the committee to which it may be referred.

John E. Weeks, Chairman.
E. C. Hay, Secretary.
C. J. Smith.
Alfred D. Sawyer.
Orland J. Brown.

It was moved and seconded that the report be adopted. Carried.

### Report of the Reference Committee on Medical Education

Dr. Hubert Work, Colorado, Chairman, presented the report of the Reference Committee on Medical Education, as follows:

*To the Members of the House of Delegates of the American Medical Association:*

Your committee believes that we are, at the present moment, at a very important stage in the efforts of the American Medical Association to benefit the community by raising the standards of medical education. For this reason the Committee has given the report of the Council on Medical Education careful and critical study.

We wish to congratulate the Council on the excellent work it has done, and on the great progress in medical education since it began its work, six years ago. This is shown not only in the raising of standards of admission, but in the more systematic and better arrangement of the curriculum, and in improvement in the personnel and methods of teaching, which now approach more nearly to university standards.

When the Council began this work there were 168 medical schools in the United States. Some of the poorest schools have been forced to discontinue. A number have disappeared through the amalgamation of schools, thus making stronger and better schools. The number has now been reduced to 133.

Much of this improvement is due to the methods by which the work of the Council is carried out. With a paid Secretary, devoting his whole time to this work, the Council has been able to establish a bureau of statistics and information on medical education, which is invaluable in the study of these problems.

Furthermore, it has been enabled to undertake a work that was much needed, yet for which there seemed to be no established official agency—namely, the investigation of the actual standing and condition of the various medical schools of the country. This investigation has covered several years. We believe it has been done conscientiously and with thoroughness. The standing of all schools has been made on a uniform basis of marking that is broad and fair. Whatever questions there might be as to the absolute value of the rating given a school, there can be no question that the rating fairly expresses the relative standing of the schools.

After investigation, the Reference Committee is impressed by the leniency with which these ratings have been made. Consequently, we would urge the schools in Class A (rated over 70 per cent.) not to feel that they have reached perfection because they are designated "first class." Class A contains 70 schools.

The schools in Class B were rated at 50 to 70 per cent. They are unsatisfactory, in certain particulars, but capable of improvement to a satisfactory basis. To all these schools information has been sent, showing in what lines improvement should take place. There are 29 schools in this class.

Class C comprises the schools falling below a rating of 50 per cent. Some of these schools are regarded as hopeless; others can be made satisfactory only by a thorough reorganization along more advanced lines. The Council will gladly furnish information to these schools as to their short-comings, if they desire it. Twenty-seven schools belong to Class C.

The schools for colored students have been classified on a still more lenient basis. This is justified, not on the ground of any racial difference, but on account of peculiar educational conditions.

#### TO PUBLISH RATINGS OF SCHOOLS

The Council believes that the time has come when the best interests of medical education demand that this rating of schools should be made public. In this opinion the Reference Committee concurs. It seems to be a disagreeable but necessary duty.

We would, therefore, recommend that the House of Delegates authorize the publication of the rating of the schools. We believe that the Association should assume this responsibility.

We would recommend, secondly, that the Council be requested to continue its investigations along these lines in some conservative way. We shall thus secure a healthy advance on the part of the worthy schools, yet shall not aim at impossible results.

Thirdly, we would recommend that the Council be encouraged to continue its plans for securing the cooperation of all organizations which are interested in the improvement of medical education, but we would have them continue to recognize that the American Medical Association should establish its own standards, and that these standards can be only such as the present status of education in the United States warrants.

#### FOR UNIFORM PRACTICE ACTS

Fourthly, we believe that the House of Delegates should urge the Council to further efforts in the direction of securing more uniform state regulation of the practice of medicine, and in securing reciprocity between states.

Finally, we would endorse a plan that the Council mentioned to your Committee for the establishment of a registry of medical students. Such a plan has been carried out by the General Medical Council of Great Britain, and it should be of great benefit. As it would involve further expense, your Committee recommends that the House of Delegates approve this plan and refer it to the Trustees for action.

Respectfully submitted,
H. D. Arnold, Massachusetts.
T. D. Tuttle, Montana.
J. A. Capps, Illinois.
James B. Bullitt, Mississippi.
Hubert Work, Colorado, Chairman.

As a supplement to its report, the Committee presented the following classification of medical colleges, furnished by the Council on Medical Education:

#### CLASS A.—ACCEPTABLE MEDICAL COLLEGES

*1. Giving a complete four-year course:*

Alabama
  University of Alabama Medical Department.
California
  Leland Standford Junior University Medical Department (Cooper Medical College).
  University of California, Medical Department, San Francisco-Los Angeles.
Colorado
  Denver and Gross College of Medicine.*
  University of Colorado, School of Medicine.*
Connecticut
  Yale Medical School.
District of Columbia
  George Washington University, Department of Medicine.
  Georgetown University, School of Medicine.
Illinois
  Northwestern University Medical School.
  Rush Medical College, University of Chicago.
  College of Physicians and Surgeons, Chicago.
  Hahnemann Medical College and Hospital, Chicago.
Indiana
  Indiana University School of Medicine.
Iowa
  State University of Iowa, College of Medicine.
  State University of Iowa, Homeopathic College.
  Drake University, College of Medicine.
Kansas
  University of Kansas, School of Medicine.
Kentucky
  University of Louisville, Medical Department.
Louisiana
  Tulane University of Louisiana, Medical Department.
Maine
  Medical School of Maine.
Maryland
  Johns Hopkins University, Medical Department.
  University of Maryland, School of Medicine.
  College of Physicians and Surgeons, Baltimore.
  Baltimore Medical College.
Massachusetts
  Boston University, School of Medicine.
  Harvard Medical School.
  Tufts College Medical School.
Michigan
  University of Michigan, Department of Medicine and Surgery.
  University of Michigan, Homeopathic College.
  Detroit College of Medicine.
Minnesota
  University of Minnesota, College of Medicine and Surgery.

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* These two colleges have been merged and will constitute the School of Medicine of the University of Colorado.

Missouri
- St. Louis University, School of Medicine.
- Washington University, Medical Department.
- University Medical College, Kansas City.

Nebraska
- Creighton Medical College.
- University of Nebraska, College of Medicine.

New Hampshire
- Dartmouth Medical School.

New York
- Albany Medical College.
- Columbia University, College of Physicians and Surgeons.
- Cornell University Medical College.
- Fordham University, School of Medicine.
- Long Island College Hospital.
- New York Homeopathic Medical College and Hospital.
- Syracuse University, Medical Department.
- University and Bellevue Hospital Medical College.
- University of Buffalo, Medical Department.

Ohio
- Ohio-Miami Medical College, Medical Department, University of Cincinnati.
- Starling-Ohio Medical College.
- Western Reserve University, Medical Department.

Oregon
- University of Oregon, Medical Department.

Pennsylvania
- Hahnemann Medical College and Hospital, Philadelphia.
- Jefferson Medical College.
- Medico-Chirurgical College of Philadelphia.
- University of Pennsylvania, Medical Department.
- Woman's Medical College of Pennsylvania.
- University of Pittsburg, Medical Department.

Tennessee
- Vanderbilt University, Medical Department.

Texas
- University of Texas, Medical Department.

Vermont
- University of Vermont, College of Medicine.

Virginia
- Medical College of Virginia.
- University College of Medicine.
- University of Virginia, Department of Medicine.

2. *Giving a two-year course acceptably:*

Mississippi
- University of Mississippi, Medical Department.

Missouri
- University of Missouri, Medical Department.

North Carolina
- University of North Carolina College of Medicine.
- Wake Forest College, Medical School.

North Dakota
- University of North Dakota, College of Medicine.

Oklahoma
- University of Oklahoma, School of Medicine.

South Dakota
- University of South Dakota, College of Medicine.

Utah
- University of Utah, Department of Medicine.

West Virginia
- West Virginia University, Department of Medicine.

Wisconsin
- University of Wisconsin, College of Medicine.

## CLASS B.—MEDICAL COLLEGES NEEDING CERTAIN IMPROVEMENTS TO MAKE THEM ACCEPTABLE

Alabama
- Birmingham Medical College.

Arkansas
- College of Physicians and Surgeons, Little Rock.
- University of Arkansas, Medical Department.

California
- College of Physicians and Surgeons, Los Angeles.
- Hahnemann Medical College of the Pacific.
- Oakland College of Medicine and Surgery.

Georgia
- Atlanta College of Physicians and Surgeons.
- Atlanta School of Medicine.
- Medical College of Georgia.

Illinois
- American Medical Missionary College.
- Chicago College of Medicine and Surgery (Valparaiso University).
- Bennett Medical College.*

Kansas
- Kansas Medical College.

Missouri
- Barnes Medical College.
- Kansas City Hahnemann Medical College.

New York
- New York Medical College and Hospital for Women.

Ohio
- Cleveland Homeopathic Medical College.
- Eclectic Medical Institute.
- Toledo University Medical Department.

Pennsylvania
- Temple University Medical Department.

South Carolina
- Medical College of South Carolina.

Tennessee
- College of Physicians and Surgeons, Memphis.
- University of Nashville.†
- University of Tennessee.†
- Memphis Hospital Medical College.

Texas
- Baylor University, College of Medicine.
- Fort Worth University, Medical Department.
- Southwestern University Medical Department.

Wisconsin
- Marquette University, Department of Medicine.
- Wisconsin College of Physicians and Surgeons.

## CLASS C.—MEDICAL COLLEGES WHICH WOULD REQUIRE A COMPLETE REORGANIZATION TO MAKE THEM ACCEPTABLE

California
- California Medical College (Eclectic).
- College of Physicians and Surgeons, San Francisco.

Georgia
- Georgia College of Eclectic Medicine and Surgery.
- Hospital Medical College (Eclectic).

Illinois
- College of Medicine and Surgery, Physio-Medical.
- Hering Medical College.
- Jenner Medical College.
- National Medical University.
- Reliance Medical College.

Kentucky
- Southwestern Homeopathic Medical College and Hospital.

Maryland
- Atlantic Medical College.
- Maryland Medical College.

Massachusetts
- College of Physicians and Surgeons, Boston.

Michigan
- Detroit Homeopathic College.

Mississippi
- Mississippi Medical College.

Missouri
- American Medical College.
- Ensworth Medical College.
- Hippocratean College of Medicine.
- St. Louis College of Physicians and Surgeons.
- Western Eclectic College of Medicine and Surgery.

Nebraska
- Lincoln Medical College.

New York
- Eclectic Medical College of the City of New York.

North Carolina
- North Carolina Medical College.

Ohio
- Pulte Medical College.

Oregon
- Willamette University, Medical Department.

Tennessee
- Chattanooga Medical College.
- Tennessee Medical College.

## MEDICAL SCHOOLS FOR THE COLORED RACE

### Class A

Howard University, Medical Department, Washington, D. C.
Meharry Medical College, Nashville, Tenn.

### Class B

Leonard Medical College, Raleigh, N. C.

### Class C

Flint Medical College, New Orleans.
Knoxville Medical College, Knoxville, Tenn.
University of West Tennessee, Medical Department, Memphis, Tenn.
Louisville National Medical College, Louisville, Ky.

## CANADIAN COLLEGES

### Class A

Manitoba Medical College, Winnipeg.
McGill University, Medical Faculty, Montreal.
Queen's University, Medical Faculty, Kingston, Ontario.
University of Toronto, Medical Faculty, Toronto, Ontario.

### Class B

Laval University Medical Faculty, Quebec.
Laval University Medical Faculty, Montreal.
Halifax Medical College, Medical Department of Dalhousie University, Halifax, N. S.

### Class C

Western University Medical Department, London, Ontario.

On motion of Dr. Work, seconded by Dr. Chas. Jewett, New York, the report of the Reference Committee on Medical Education was adopted.

## Committee on Awards Appointed

The President appointed as members of the Committee on Award of Prizes and Medals in connection with the Scientific Exhibit, Drs. E. E. Southard, Boston; Hugh Young, Maryland, and T. D. Coleman, Augusta, Ga.

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* This school has recently been united with the Illinois Medical College and, it is reported, will be developed as the Medical Department of Loyola University.

† These colleges have been merged and are known as the Medical Department of the Universities of Nashville and Tennessee.

The report of the Reference Committee on Amendments to the Constititution and By-Laws was called for. Dr. Alexander R. Craig, Pennsylvania, Chairman, stated that the Committee had been zealously at work, but at this time could only report progress, as the members had by no means completed the immense amount of work assigned to them.

Dr. George W. Guthrie, Pennsylvania, Chairman, presented the report of the Reference Committee on Reports of Officers, as follows:

## Report of the Reference Committee on Reports of Officers

*To the Members of the House of Delegates of the American Medical Association:*

The Reference Committee on Reports of Officers begs leave to report as follows:

### I. THE PRESIDENT'S ADDRESS

In compliance with the suggestion of the President, concerning vacancies occurring in the standing committees during the interim between the meetings of the House of Delegates, the Committee recommends that Section 1, Chapter X, of the By-Laws, be amended to read as follows:

### CHAPTER X.—COMMITTEES

*Section 1.—Classification of Committees.*—Committees shall be classified as (a) Standing Committees, (b) Reference Committees, and (c) Special Committees. These committees shall be nominated by the president and elected by the House of Delegates, unless otherwise provided. Any of these committees, acting during the intervals between the sessions of the House of Delegates shall be subject to the Board of Trustees, and any vacancies occurring in any of said committees during the interval between the annual sessions of the Association shall be filled by the president.

### II. THE REPORT OF THE GENERAL SECRETARY

The Committee concurs in the recommendation of the General Secretary,—that the Medical Association of the Isthmian Canal Zone be recognized as one of the component bodies of the American Medical Association, and recommends appropriate action by the House of Delegates.

The Committee but voices the unanimous sentiment of this body in expressing regret that the Secretary finds it necessary to ask the House of Delegates to relieve him of the responsibilities of the General Secretary. Dr. Simmons needs no assurance as to the temper and position of this body concerning him personally and officially. It always has stood, and stands to-day, a solid wall behind him, and has no words to express fully its high appreciation of his efficient and faithful services.

The Committee, however, feels that the request of Dr. Simmons should be respected, and, therefore, with great reluctance, recommends that it be granted in order that his great abilities may be exclusively devoted to the duties of Editor of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,—the best medical journal in existence.

### III. THE REPORT OF THE BOARD OF TRUSTEES

The Committee has no recommendation to make on this report, except as to the subject of the Public Health Education Committee. The Committee approves the action of the Board in refusing to recognize this Committee, as it had no legal status in the Association; but, in view of the fact that this Committee has been acting in good faith under a misapprehension as to its legal status, and as certain expenses have been incurred under such misapprehension, the Committee recommends that the House of Delegates authorize the Board of Trustees to meet such expenses as it may deem just to said Committee.

Respectfully submitted,
GEO. W. GUTHRIE.
W. B. RUSS.
C. R. P. FISHER.
D. S. FAIRCHILD.
VICTOR H. STICKNEY.

At the conclusion of the report, Dr. Guthrie moved its adoption, with the exception of that part of it pertaining to an amendment to the By-Laws, and that this amendment be referred to the Reference Committee on Amendments to the Constitution and By-Laws. Seconded and carried.

## Report of Reference Committee on Miscellaneous Business

Dr. T. A. Woodruff, Chairman, presented the following report of the Reference Committee on Miscellaneous Business.

*To the Members of the House of Delegates of the American Medical Association:*

Your Reference Committee on Miscellaneous Business recommends that the report of the Committee on the United States Pharmacopeia be received and concurred in.

### COMMITTEES CONTINUED ON PHARMACOPEIA, NOMENCLATURE AND ANESTHESIA

In view of the excellent work done by the Committee on Pharmacopeia, we recommend its continuance until the revision of the Pharmacopeia is completed.

Your Reference Committee on Miscellaneous Business would suggest that the report of the Committee on Nomenclature and Classification of Diseases be received. As there are no definite recommendations in this report, no further action is required. It is recommended that the Committee be continued.

Your Reference Committee on Miscellaneous Business recommends that the report of the Committee on Anesthesia be received and the committee continued. We suggest that the Board of Trustees give this committee definite instructions as to the scope and limitations of the investigation.

Respectfully submitted,
T. A. WOODRUFF.
EDWIN WALKER.
E. A. HINES.
E. J. GOODWIN.

**On** motion, the report was adopted.

## Report of the Committee on Organization

*To the Members of the House of Delegates of the American Medical Association:*

Dr. J. N. McCormack, Kentucky, Chairman, read the report of the Committee on Organization, as follows.

Accounts of my itineraries in New England and the Northwest were given such publicity in Association and state journals at the time that I shall confine this report to the subject of national health legislation, which was put so prominently before the profession by the action of this House two years ago, and has been kept constantly before it by the indefatigable labors of your Legislative Committee since, in an effort to secure a national department of health, the aspiration and hope of this Association for half a century.

### MOVEMENT FOR PUBLIC HEALTH LEGISLATION

After years of unselfish and apparently unappreciated effort it came to us unexpectedly that leading laymen all over the country, and the American Association for the Advancement of Science, had taken up the subject of public health legislation and were working on lines parallel to ours, and our forces were soon joined. This lay movement was led by a remarkable man, whom I came to appreciate first in the National Conservation Commission, and of his personality and labors it has become essential that you should know. Irving Fisher, a Jerseyman by birth, graduated from Yale some twenty years ago with higher honors than any other man, except one, had ever received from that institution. At once given one of the most important professorships, he soon developed tuberculosis, went West, and taught for several years in the universities of Colorado and California. An investigator, and student by nature, and vitally concerned in a personal way, he applied himself to the mastery of the laws of health, became a robust man and, fired by a noble zeal to save from, or cure others of, preventable afflictions similar to the one to which he had fallen a victim, he returned to Yale, changed to the field of political economy as best suited to the purposes he had in view, became one of the world's greatest students and writers in this field, organized the American Health League, became the leader of the lay forces, which started out with the avowed purpose of putting a knowledge of the laws of better and cleaner living, the benefactions of modern science, within reach of every hearthstone in this country, as his counterpart, Lord Ashley, had done in England a century before. I was impressed at the outset of our acquaintance that he had not seen the best side of our profession and had some of the prejudices, only more frankly expressed, of the average layman as to its aims and attainments; and asked him to make the same careful study of its plans of organizations and purposes that he had given to other problems, with the result that he soon became one of our most appreciated friends.

### HEALTH PLANKS IN NATIONAL PLATFORMS

He joined Dr. Reed and others in securing the insertion of the health planks in the national platforms of the leading political parties, enlisted the active interest of President Roosevelt, leading educators, life insurance, labor, farmer and other great lay organizations, spending his time and means as freely and unselfishly to save others as if his own life or the life of his family were at stake.

### FRIENDS IN CONGRESS

Soon another great layman, Senator Robert L. Owen, of Oklahoma, entered the lists as our official advocate in the national senate, largely through the influence of Major W. O. Owen, his brother, a retired medical army officer of ability, long interested in public health work, as have Sternberg, Gorgas, Reed, Carroll, Lazear, White, Blue, Carter, Gihon, in this and other branches of the public service. It has been one of the greatest privileges of my life to be intimately associated with these two lay friends of ours, Owen and Fisher, and knowing them and their unselfish purposes as I have come to do, I ask for them the gratitude and appreciation of the profession and people of this country, which is constantly in my own heart, that this be extended to Dr. Owen, for the important, if less conspicuous, work done by him.

Sent on to Washington by your Legislative Committee, after the great speech of Senator Owen had impressed this country as Gladstone had done England a few decades before, "that care for the public health is the first and highest duty of the statesman," I found many leading men of both houses outspoken in support of the principles of his bill, and a number of our most experienced friends believed that there was an excellent chance to perfect and pass it at the present session of the Congress. After looking over the ground and conferring with Doctors Sower, Wiley, Kober, Woodward, Owen and others (and I have never seen men more devoted and earnest in a cause), the hearings were arranged, and it is believed that few measures of such a nature were ever more ably supported.

### OPPOSITION TO THE OWEN BILL

As the time for the hearing drew near an opposition developed, which was so vociferous and claimed so much as to deceive all but the most experienced men in and out of Congress.

Although the national government has no more authority over the practice of medicine outside of the District of Columbia, than the practice of law or farming, that this bill provided for the prevention and not for the cure of disease, and made no provision for putting doctors of any kind in authority over any body or thing, under the cry of medical freedom, the homeopathic, eclectic and practitioners of other schools were gravely informed that we were to be given absolute control of families and homes and that even religious liberty was at stake.

### THE OPPOSITION IDENTIFIED

It soon became known that back of all this clamor were the "patent-medicine" people, food adulterators and other interests naturally at enmity with pure drugs, pure food and honesty and decency of method in all such matters, organized into an unholy, corrupt, but futile conspiracy to mislead the people and to break down the profession.

More important was an opposition due to a conflict of interest between the bureaus and divisions directly affected by the proposed transfer to the new health department, about which there might well be honest difference of opinion. This occasioned much anxiety to the friends of the legislation, and the ablest men in the profession came on to Washington and took part in the negotiations to meet the difficulty. These negotiations were continued here, and I am happy to inform you that, under the sagacious leadership of Doctors Welch and Gorgas, great enough to give proper consideration to every interest, an agreement has been reached, we are to have a health department, commensurate with the powers and resources of our government, and in time, our country is to be put in the front rank in the field of preventive medicine.

### RESOLUTIONS PROPOSED

In accordance with that agreement, and by authority, I now offer the following:

*Resolved*, That the President be, and is hereby, authorized to appoint a committee of seven members, which shall be charged with the duty of framing a bill for a national Department of Health, to be presented to the next session of Congress in December, and that this committee shall consider and determine all matters and policies relating to national health legislation, and may invite the cooperation and cooperate with other organizations having the same purpose in view.

*Resolved*, That the principles of the Owen bill, having for its object the creation of a national Department of Health, now pending in the Senate, and similar bills introduced in the House by Representatives Simmons, Creger and Hanna, be, and are hereby, heartily approved by this Association, and the cordial thanks of the medical profession of the United States, officially represented by it, are hereby tendered to Senator Robert L. Owen, Iriving Fisher and their co-workers for their able and unselfish efforts to conserve and promote the most important asset of the nation, the health and lives of its women, its children and its men, properly understood the greatest economic question now confronting our people.

The members of this Association stand for pure food, pure drugs, better doctors, the promotion of cleaner and healthier homes, and cleaner living for individuals, for the state and for the nation. We believe this to be held as equally true by the reputable and informed physicians of all schools or systems of practice.

We welcome the opposition of the venal classes long and profitably engaged in the manufacture of adulterated foods, habit-producing nostrums and other impositions on the people—to the extent of hundreds of millions of dollars annually—and express our sympathy for the well-meaning men and women who have been misled and worked into hysterics by the monstrously wicked misrepresentations of a corrupt and noisy band of conspirators and who are being used as blind instruments to enable them to continue to defraud and debauch the American people.

Medical science is advancing, especially on its life-saving side, with a rapidity unknown to any other branch of human knowledge. It is known of all men that our members in every community in the United States are unselfishly working day and night, instructing the people how to prevent tuberculosis, typhoid fever and the other diseases from which physicians earn their livelihood. Therefore, we welcome and will wear as a badge of honor the slanders of these unholy interests and their hirelings.

J. N. McCormack, Chairman.

The President stated that if there was no objection this report would be referred to the Reference Committee on Reports of Officers, and as there was none, the report was so referred.

## Invitation from Texas

Under the head of new business the General Secretary read the following telegram from Amarillo, Texas: "The profession of the great Pan Handle joins all Texas in a hearty and cordial invitation to hold the next annual session of the American Medical Association within its borders, where ozone and good fellowship are as free as the howl of the festive coyote and password is stiffiene. E. A. Johnson, D. R. Fly, G. L. Thomas."

On motion, the telegram was referred to the Committee on Transportation and Place of Session.

## Communication from W. C. T. U.

The General Secretary read a communication from the National Woman's Christian Temperance Union, which was referred, on motion, to the Reference Committee on Hygiene and Public Health.

## Resolutions Regarding Coroners

Dr. E. J. Goodwin, Missouri, presented the following resolution, at the request of Dr. R. B. H. Gradwohl, St. Louis, regarding the need for change in the present coroners' system in the United States:

Whereas, The office of coroner, while ancient and honorable, exists to-day as an obsolete relic of what was formerly an office for the holding of property for the crown; and

Whereas, The original intent of holding property for the government has been changed by a slow system of evolution into an office for the determination of the cause of death and responsibility therefor of individuals dying by their own hand, by some one's else hand, by accident and without medical attendance; and

Whereas, The function of the coroner's office to-day is two-fold medical, in so far as determination of the cause of death is concerned, and judicial in so far as determination of the responsibility for this cause of death is concerned; and

Whereas, It is utterly impossible to reconcile these two functions under one heading; and

Whereas, On account of the weird jumble of functions, neither function is properly set out and served; and

Whereas, The functions have been divided, on this account, in some commonwealths, notably Massachusetts, by abolishment of the office of coroner, relegating the medical duties of that office to a medical examiner, and turning over the legal duties to the district attorney's office, resulting in a vast improvement over the older system, with credit to the medical profession, in view of the fact that the medical duties of the office are better performed under this system; therefore, be it

*Resolved,* That this House of Delegates go on record as favoring a system of investigation which will divorce the medical from the judicial functions of the coroner's office, and that the medical examiner system, such as in force in the commonwealth of Massachusetts, may well be imitated in seeking this new system.

On motion of Dr. Alexander R. Craig, Pennsylvania, the preambles and resolution were referred to the Reference Committee on Hygiene and Public Health.

### Committee for Resolution on Dr. Ricketts

Dr. T. D. Tuttle, Montana, called attention to the death of Dr. H. T. Ricketts, who was a martyr to science. Montana had a small number of physicians who had done the best they could to honor Dr. Ricketts' name by establishing in their society a permanent Howard T. Ricketts' prize. He moved that the President appoint a committee of three to draft suitable resolutions in regard to Dr. Ricketts.

The motion was seconded.

Dr. G. B. Young, U. S. P. H. and M.-H. Service, pointed out that Dr. Ricketts was not the only physician who fell a martyr to zeal for scientific investigation in connection with typhus fever in Mexico, as he understood a physician from the State of Ohio had also died from that disease after his return to Ohio. This same physician of the U. S. P. H. and M.-H. Service had previously contracted yellow fever, dengue, smallpox, in Mexico, and this time typhus fever.

The motion was carried.

The President appointed as members of this Committee: Drs. T. D. Tuttle, Montana; Frank Billings, Illinois, and Alexander Lambert, New York.

On motion, the House of Delegates then adjourned until 3:30 p. m. Wednesday.

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## *Fourth Meeting—Wednesday Afternoon, June 8*

The House of Delegates met at 3:30 p. m. and was called to order by the President. The Secretary called the roll. The minutes of the previous meeting were read, corrected and approved.

### Report of the Public Health Education Committee

A resolution was introduced, asking the privilege of the floor for Dr. Rosalie Slaughter Morton, to present the work of her committee. This was granted.

President Welch reminded the House that this committee was not regularly created by the Association and therefore not technically a committee of the Association or of the House of Delegates. He then introduced Dr. Morton, Chairman of the Committee, who presented the following report:

*To the Members of the House of Delegates of the American Medical Association:*

In presenting to you the work of the Public Health Education Committee, created in accordance with a resolution passed unanimously by you on June 10, 1909, and named according to the phraseology of the resolution, we wish you to know that we have realized the great responsibility resting on us to work worthily with you, who represent the vast number of American physicians who are leaders in scientific achievement and medical work for the good of humanity. We have felt it a privilege to do a piece of work which we hoped would be of some service to your many other active committees and fit like a piece of mosaic into the great constructive whole. We understood that we were commissioned to do this work because as members of many organizations we come in contact with large bodies of earnest, public-spirited women who realize the importance to their children of high community standards of health. We have given in the one year of our existence 2,250 lectures free from technicalities and filled with sound teaching regarding public health, and have reached 102,575 people.

#### TIME RIPE FOR THIS WORK

The timeliness of the action taken by the House of Delegates of the American Medical Association is emphasized by the fact that, as Dr. George W. Wagoner of Johnstown, Pa., said lately, in his presidential address before the Medical Society of the State of Pennsylvania: "Doctors are losing the confidence of and receiving criticism from the laity." This is largely due to the fact that throughout the country the public is being exploited by pseudo-scientists who affirm that we, the so-called "drug-doctors," are commercially interested in keeping the people ill, while they are working to prevent disease. The laity is much interested in public health education. The psychologic moment has come, and it would be a serious reflection on our profession if we did not now educate the public to a thorough appreciation of the position of the doctor as the protector of the health of the community. Instead of doing this individually or in isolated groups, through a national movement from within the American Medical Association, we emphasize the fact that this desire to educate the public for the prevention of disease is general among physicians. In presenting to you the work of this committee we ask your hearty cooperation as individuals and as members of the American Medical Association in this work of service to our country.

Another year the work would have wider usefulness, as in many organizations which have sought our cooperation, the general lecture programs for this year were completed before our committee work began. They, however, welcome the opportunity to have practical instruction on public health subjects another year and there are many requests in all parts of the states for a continuation of the work.

In the printed report, copies of which you received yesterday, you will find details of the work which is now well organized and going forward in forty states. You will see that a small leaflet has been used to set forth the object and plan of work, as follows:

#### THE CREATION OF THE COMMITTEE

This plan of work is the result of the following resolution unanimously passed by the House of Delegates of the American Medical Association at their annual meeting held in June, 1909, in Atlantic City, N. J.

WHEREAS, The American Medical Association, not only as one of its declared purposes, but by numerous lines of activity, many of them connected with the Section on Hygiene and Sanitary Science, stands committed to the education of the public with respect to the nature and prevention of disease; and

WHEREAS, The demand for such popular education with respect to tuberculosis, cancer, typhoid fever and other decimating diseases has become urgent; therefore, be it

*Resolved,* That the women physicians, members of the American Medical Association, be, and they are hereby, requested to take the initiative individually in their respective associations in the organization of educational committees to act through women's clubs, mothers' associations and other similar bodies, for the dissemination of accurate information touching these subjects among the people, and that they be requested to submit to the House of Delegates a yearly report of such work, and to elect from among their number a committee to take charge of the same.

#### SUBJECTS DISCUSSED BEFORE THE PUBLIC

In accordance with this resolution, physicians from all over the United States held a meeting in New York City, July 20, 1909, when the Public Health Education Committee of the American Medical Association was formed and officers were elected. Many physicians, both men and women, who have already done a great deal of work individually along these lines have now promised, through this committee, to give gratuitously, from time to time, during the ensuing year, as they may be requested to do so by women's clubs, mothers' and teachers' organizations, young women's Christian associations, church and social settlement clubs, etc., addresses on the following subjects:

1. The cause and prevention of ordinary colds.
2. The value of pure food and the physiology of digestion.
3. The chemistry and economic value of food.
4. The care of the food at home.
5. The relation of pure water to the public health.
6. Water-borne diseases.
7. The value of exercise and rest to the public health.
8. The causes and prevention of nervous exhaustion and prostration.
9. The use and abuse of stimulants and narcotics.
10. The prevention and cure of tuberculosis.
11. The air we breathe and the value of ventilation.
12. The relation of flies, mosquitoes, water bugs and other insects to public health.
13. Pure milk and infant hygiene.
14. The hygienic management of nervous children.
15. The relation of teeth to good health.
16. Prevention of some of the commoner skin diseases.
17. The importance of early diagnosis and treatment of adenoids.
18. The causes and prevention of deafness.
19. The prevention of Fourth of July injuries and tetanus.
20. The prevention of acquired deformities.
21. The causes and prevention of blindness.
22. The causes and results of eyestrain.
23. How to instruct children regarding the origin of life.

24. The responsibility of girlhood to motherhood in the care of the health during the menstrual period.
25. Pregnancy and the menopause.
26. The value of early diagnosis of cancer in women.
27. The responsibility of boyhood to fatherhood.
28. Social hygiene—how parents may protect their sons and daughters from immorality.

### COOPERATION WITH CLUBS

In order to simplify this work it is suggested that each club or organization wishing one or more of the above lectures on the prevention of disease, from a hygiene committee whose duty it shall be to arrange the date, choose the topic or topics and communicate with the Public Health Education Committee, who will on receiving such requests ascertain which of the physicians, who have promised this public service, may be able to arrange their engagements to be free to deliver the address or addresses. As the constant demands of private and charity practice leave the physician little time for outside work, it is hoped smaller clubs will have joint meetings in order that this work, designed to lessen suffering and save life, may be as far-reaching as possible.

Throughout the United States such excellent work has been done to assist many of the boards of health, and also independently, by public-spirited men and women in work for pure milk, clean streets, prevention of tuberculosis, etc., etc., that we hope to have their hearty cooperation in this wider work for the public good.

### CENTRAL COMMITTEE

Hon. Chairman. S. R. A. Dolley, M.D., Rochester, N. Y.
R. S. Morton, M.D., Chairman, New York City.
E. Garrigue, M. D., Secretary, New York City.
A. Gregory, M.D., Treasurer, New York City.
L. H. South, M.D., Kentucky.
S. C. Buckley, M.D., Illinois.
R. T. Bullard, M.D., California.
A. L. Hamilton, M.D., Massachusetts.
M. Holliday, M.D., Texas.
L. L. Liebhardt, M. D., Colorado, State Secretary of the Public Health Education Committee.

We have covered a large field of education and part of the success of the work has been due to the fact; for not only have the topics been presented in a number of states but their multiplicity has made it possible for many physicians to take part in the work, each bringing the prestige of an expert to add to the force of the teaching.

### THE WORK IN NEW YORK AS A SAMPLE

The work in New York City may be taken as a type of the whole. Leaflets were distributed among all club, charity and social organizations, and as a result many requests came from them for a single lecture or a series of lectures; on pages 66 and 67 of our report you will see how wide was the variety of groups who wished this education, from the colored orphan asylum to the most exclusive clubs.

The plan of work was then brought before the Medical Society of the County of New York and a committee of both men and women appointed to cooperate with the American Medical Association committee.

The members are as follows:

Thomas Darlington, M.D.
Henry P. DeForest, M.D.
Norman E. Ditman, M.D.
Caroline S. Finley, M.D.
Alice Gregory, M.D.
Luther H. Gulick, M.D.
H. Seymour Houghton, M.D.
John H. Huddleston, M.D.
Woods Hutchinson, M.D.
Abraham Jacobi, M.D.
Elizabeth C. Jagle, M.D.
John J. Moorehead, M.D.
Prince A. Morrow, M.D.
Grace Peckham Murray, M.D.
William H. Park, M.D.
Angeuette Parry, M.D.
Victor C. Pedersen, M.D.
Godfrey R. Pisek, M.D.
William M. Polk, M.D.
Charles H. Richardson, M.D.
Louis Livingston Seaman, M.D.
Isabelle Thompson Smart, M.D.
Fielding Lewis Taylor, M.D.
Frank Van Fleet, M.D.
Antoine P. Voislawskey, M.D.
James J. Walsh, M.D.
Anua W. Williams, M.D.
John A. Wyeth, M.D.
Grace C. Prior Yankauer, M.D.

And under their auspices a series of 12 lectures have been given, each topic being presented in its different aspects by different physicians, so leaving in the minds of the audience a constructive whole.

The seating capacity of the auditorium was for 300, but adjoining rooms had to be opened on all occasions, and there was scarcely standing room, for the audiences often numbered over 500 persons, representatives of every class and station in life.

A similar course of lectures was given in Brooklyn with equal success, and in many other places the work has gone forward with the cordial and valuable cooperation of the County Medical Societies and the help of many public-spirited individuals.

### RESULTS OF A YEAR'S WORK

The results have been that the laity in many places have come to a more thorough understanding of the regular physician's position, as unselfish advisor and trained scientist, and therefore the prejudice and spirit of opposition which have been aroused by antivivisectionists and others have been lessened.

We have been able to accomplish a great deal because many of our committee members, and also members of women's clubs have organized hygiene committees throughout the United States and are now in touch with 900,000 women. In each locality these committees are under the guidance of a chairman, who is also a member of the Public Health Education Committee of the American Medical Association, in this way forming a most valuable alliance for the prevention of disease between the mothers of America and the physicians who are willing to give their time and strength in teaching these mothers how to protect their children and all who are under their care.

### THE REASONABLENESS OF THIS SERVICE

Since each of us gives an average of 100 hours a year in clinical work for the gratuitous curing of disease, your committee feels that it is reasonable to request that other physicians should be willing to spend from one to four hours a year in gratuitous teaching, for the prevention of disease, and with this small effort on the part of every one the aggregate benefit to humanity will be enormous. Our financial statement and our indebtedness to the Russell Sage Foundation will be found on page 107 and the work we have done in cooperation with other organizations on pages 10 and 11.

There are sixty-eight national organizations for social betterment. The most valuable asset to the nation is health. This is an age of philanthropy; the greatest and most far-reaching benefit is medical philanthropy, and in this committee working at your request we have felt it our duty to you to show the American Medical Association ready to take its place in this important line of the nation's work, for no other organization can be so fitted to lead a campaign for the promotion of the health of American citizens as the noble body of physicians this House of Delegates represents.

Many requests for lectures have come to us from labor unions and other groups of men, especially those in trades leading to pulmonary infection, and as we believe all work for the good of the race is best done by men and women working together; in closing this brief report we wish to request that the men members of the American Medical Association who have been working with us in county medical societies committees, and other American Medical Association men interested in public health education, be permitted to become members of this committee.

Assuring you of the privilege I have felt it to be to have even a small part in the good work which has gone forward under your auspices, this report is respectfully submitted.

Rosalie Slaughter Morton, *Chairman.*

On motion of Dr. Samuel Wolfe, Pennsylvania, the report was referred to the Reference Committee on Hygiene and Public Health.

### APPROPRIATION RECOMMENDED FOR PUBLIC HEALTH EDUCATION

Dr. Samuel Wolfe, Pennsylvania, in connection with the above report, presented the following resolutions:

Whereas, The report of the Public Health Education Committee, formed in response to a resolution passed by the House of Delegates at its last session in Atlantic City, shows a widespread interest in the education of the general public in matters pertaining to health; and

Whereas, Great opportunity for valuable work lies before the Public Health Education Committee; be it

*Resolved,* That a standing committee composed of men and women members of the American Medical Association be appointed by the President to carry on public health education work as outlined by the report of the special Public Health Education Committee; and be it further

*Resolved,* That the Board of Trustees be directed to appropriate a sum of money sufficient to enable this committee to continue and develop its work.

On motion, the resolutions were referred to the Board of Trustees.

## Report of the Reference Committee on Legislation and Political Action

Dr. J. W. Clemmer, Ohio, Chairman, presented the following report of the Reference Committee on Legislation and Political Action:

*To the Members of the House of Delegates of the American Medical Association:*

Your committee has carefully considered the various matters presented to it and respectfully report as follows: We congratulate the Committee on Uniform Medical Practice Act on the gratifying progress made in that matter and recommend that the committee be continued.

We invite the attention of the house to the exceedingly gratifying progress made during the past year in the direction of defeating the optometry bills in five states, a very welcome break in the success which has hitherto followed the efforts of the advocates of the objectionable optometric legislation. A success which has resulted in securing the passage of optometry bills in twenty-two states. We consider that this desirable outcome of the past year's work is an indication of what can be done by an aroused profession and urge our members to increased efforts along this line.

The success of the movement to prevent optometry legislation is a source of greatest satisfaction and reflects the highest credit on the committee having the matter in charge, and especially on Dr. Gay, whose untiring efforts in the preparation and circulation of literature on the subject have been so potent a factor in preventing optometry legislation.

### COMMENDATION OF LEGISLATIVE BUREAU

Your committee especially commends the work done by the Bureau of Medical Legislation in extending its valuable aid to state and other medical bodies, and strongly recommends that this work be still further prosecuted and respectfully urges that the trustees take the necessary steps to secure early pubication of the proposed hand-book of court decisions in regard o medical practice, and similar legislation.

We congratulate the Association and the Committee on the Carroll Fund on the striking success which has crowned their fforts and recommend the continuance of the committee until hey can complete the transfer of their trust.

We congratulate the National Legislative Committee in ecuring the promise of the cooperation of the Civic Federation nd its branches, and that of the state commissions on uniform aws. Their assistance should be a great value in framing and ecuring the passage of proper laws in regard to medical practice and other subjects in which the profession is especially nterested.

As the report of the Committee on Patents and Trade-marks was fully considered at the Atlantic City session in 1909 by oth the Reference Committee and the House of Delegates, we gree in the recommendation of the said committee that the uestion of further action be referred to the Legislative Committee and the special committee discharged.

In regard to that portion of the report of the Legislative ommittee which refers to the National Public Health Legislation, your committee indorses the satisfaction expressed by he Legislative Committee in the great public interest which as been aroused in the matter, and we respectfully recommend hat the proper agencies of the Association take the necessary teps to increase this interest, and to correct the misapprehension, instigated by unscrupulous and venal interests, as to he purposes of national health legislation. In view of the tatement made in the report of Dr. McCormack and the reference of that report to another committee, we do not feel that e are called on to make any definite recommendations in egard to legislation.

As the report of the Board of Instruction on Medical Subjects contains the statement that its work has been largely eld in abeyance awaiting the organization of the Council on ublic Health, Publicity and Legislation, which will prevent uplication of activities and results in economy of administrative effort, and as the report of the committee in regard to his proposed Council has been referred to another committee o recommendation is necessary.

We recommend to the House the passage of the resolution dopted by the Legislative Council at its Chicago meeting, as ollows:

> *Resolved*, That the conference recommends that state food laws e so amended as to provide that advertisements of foods and drug roducts correspond with the labels; and that the drug section of he model pure food laws conform as closely as possible to the ational Food and Drugs Act.

We recommend that the resolutions presented by Dr. Sanders on behalf of the Medical Association of the State of Alabama be referred to the careful consideration of the committee on National Health Department Legislation which we understand is to be appointed by the President.

### PRAISE FOR DR. REED'S WORK

While the personal communication of Dr. Reed, for eight years Chairman of the Legislative Committee, does not come before your Reference Committee for review, the committee feels that the Association should take this opportunity to express its appreciation of the great, untiring, loyal and faithful services of Dr. Reed in promoting the successful work of his committee, services which have involved the greatest sacrifice of both his time and thought, to voice its deepest regret that Dr. Reed feels it impossible to continue to lead in this work, to state that the Association gladly accept his proffered offer of cooperation in legislative activities in the future in some other capacity, and to express to him its sincere thanks for his invaluable services and the loyal spirit which has inspired him.

J. W. Clemmer, *Chairman.*

It was moved that the report be adopted and the recommendations of the committee be concurred in. Seconded.

The report was discussed by Dr. C. S. N. Hallberg, and Dr. G. B. Young, Illinois, after which Dr. Hallberg moved to amend by adding the words, "provided all drugs conform to the standards of the United States Pharmacopeia and the National Formulary."

The amendment was seconded, accepted, and the original motion as amended was carried.

## Report of the Reference Committee on Hygiene and Public Health

The Secretary read the following report of the Reference Committee on Hygiene and Public Health:

*To the Members of the House of Delegates of the American Medical Association:*

### ACTION ON CORONERS DEFERRED A YEAR

Your committee, to which was referred the resolution regarding the need for change in the present coroners system in the United States, has carefully considered the same and begs to report that owing to the necessity of careful investigation of the legal and other phases of this question, it is impossible to make a satisfactory report at this time, and it is recommended that this resolution be referred to the permanent Committee on Medical Legislation with instructions to thoroughly inquire into all points, both legal and medical, which may be related to this subject, and to report on the same at the next annual meeting.

### JOURNAL COMMENDED FOR JULY FOURTH WORK

The Reference Committee on Hygiene and Public Health, to which was referred the resolution commending the statistical and editorial work of The Journal of the American Medical Association in reference to the fatalities and casualties resulting from the present methods of celebrating the Fourth of July, respectfully recommend that the resolution be adopted.

William N. Wishard, *Chairman.*

On motion, the report was adopted.

## Report of Reference Committeee on Reports of Officers

Dr. George W. Guthrie, Pennsylvania, Chairman, read the following report of the Reference Committee on Reports of Officers with reference to the report of the Committee on Organization:

*To the Members of the House of Delegates of the American Medical Association:*

### DEPARTMENT OF HEALTH BILL URGED

Your committee wishes to congratulate Dr. J. N. McCormack and his co-workers on the excellent and efficient manner in which they have conducted the work of organization and education during the past year. We recommend that the work along these lines be broadened and extended; we recommend the adoption of the report of the Committee on Organization, including the resolution embodied therein, as follows:

SPECIAL COMMITTEE AUTHORIZED

*Resolved*, That the President be, and is hereby, authorized to appoint a committee of seven members, which shall be charged with the duty of framing a bill for the National Department of Public Health, to be presented to the next session of Congress, in December, and that this committee shall consider and determine all matters and policies relating to national health legislation, and may invite the cooperation and cooperate with other organizations having the same purpose in view.

George W. Guthrie, *Chairman;*
W. B. Russ.
C. R. P. Fisher,
D. S. Fairchild,
Victor H. Stickney.

At the conclusion of the report Dr. Guthrie moved its adoption.

Seconded.

Dr. Frank Billings, Illinois, moved to amend that the President, Dr. Welch, be named as a member of the committee.

This motion was seconded by several.

The amendment was accepted and the original motion as amended was carried.

### Resolutions Regarding Owen Bill

Dr. Guthrie, Pennsylvania, presented the following resolution, which, on motion of Dr. W. W. Richmond, Kentucky, was unanimously adopted by a rising vote:

*Resolved*, That the principles of the Owen Bill, having for its object the creation of a National Department of Health, now pending in the Senate, and similar bills introduced in the House by Representatives Simmons, Creager and Hanna, be, and are hereby, heartily approved by this Association, and the cordial thanks of the medical profession of the United States, officially represented by it, are hereby tendered to Senator Robert L. Owen, Irving Fisher and their co-workers for their able and unselfish efforts to conserve and promote the most important asset of the nation, the health and lives of its women, its children and its men, properly understood the greatest economic question now confronting our people.

The members of this Association stand for pure food, pure drugs, better doctors, the promotion of cleaner and healthier homes, and cleaner living for individuals, for the state and for the nation. We believe this to be held as equally true by the reputable and informed physicians of all schools or systems of practice.

We welcome the opposition of the venal classes, long and profitably engaged in the manufacture of adulterated foods, habit-producing nostrums and other impositions on the people, to the extent of hundreds of millions of dollars annually, and express our sympathy for the well-meaning men and women who have been misled and worked into hysterics by the monstrously wicked misrepresentations of a corrupt and noisy band of conspirators, and who are being used as blind instruments to enable them to continue to defraud and debauch the American people.

Medical science is advancing, especially on its life-saving side, with a rapidity unknown to any other branch of human knowledge. It is known of all men that our members in every community in the United States are unselfishly working day and night, instructing the people how to prevent tuberculosis, typhoid fever and the other diseases from which physicians earn their livelihood. Therefore, we welcome and will wear as a badge of honor the slanders of these unholy interests and their hirelings.

### Report of the Reference Committee on Miscellaneous Business

Dr. Edwin Walker, Indiana, read the report of the Reference Committee on Miscellaneous Business, as follows:

*To the Members of the House of Delegates of the American Medical Association:*

NEW OFFICIAL BUTTON

The Reference Committee on Miscellaneous Business, to which was referred the report of the Committee on Insignia for the American Medical Association, respectfully reports that it has taken up this question with both committees and thoroughly discussed this matter.

Both committees are unanimous in the opinion that the color of the new emblem should be scarlet and gold and that the emblem should be the knotty rod, entwined with the serpent. We recommend that the button should be circular, one-half inch in diameter, the central portion scarlet enamel, on which shall be placed the serpent, and the knotty rod in gold, this to be surrounded by a band of gold, in which the letters "A. M. A." should appear in scarlet enamel.

T. A. Woodruff,
Edwin Walker,
Ridgely B. Warfield,
E. J. Goodwin.

On motion, the report was adopted.

### Report of the Committee on Awards

Dr. E. E. Southard, Massachusetts, read the following repor of the Committee on Awards:

*To the Members of the House of Delegates of the America Medical Association:*

We recommend the award of a gold medal to Dr. Claude A Smith, Atlanta, Ga., for an exhibit bearing on experimenta researches on hook-worm disease.

We recommend that no medal be awarded for work in clinical surgery.

We recommend that certificates of honor be awarded to th following exhibitors:

1. University of Minnesota.
2. St. Louis University—Exhibit of Research Work.
3. St. Mary's Hospital, Rochester, Minn.
4. St. Louis City Hospital.
5. Indianapolis Department of Public Health.
6. University of Michigan.
7. Monlogos of Skin Disease: Dr. Honwink, St. Louis.
8. Special Committee on Prevention of Blindness, New York.
9. Northwestern University, Chicago.
10. St. Louis Medical History Club.

Respectfully yours,
E. E. Southard.
T. D. Coleman.
H. H. Young,
Committee on Awards for Scientific Exhibits.

On motion, the report was adopted.

### Resolutions on Dr. Ricketts

Dr. T. D. Tuttle, Montana, Chairman of the Committee appointed to draft suitable resolutions in regard to the late Dr. Ricketts, read the following:

Whereas, Howard Taylor Ricketts, a member of the American Medical Association, lost his life on May 3, 1910, from typhus fever, contracted while engaged in an investigation of that disease in the City of Mexico; and

Whereas, He sacrificed himself in the study of a preventable disease and in the interest of the health and lives of the human race: and

Whereas, His masterly attainments as a scientific worker in this and other fields rendered his life of inestimable worth to the medical profession and the world at large; therefore, be it

*Resolved*, That the American Medical Association, in convention assembled, herewith express its high appreciation of the ideals, the efforts and the achievements of this brilliant investigator, and its deep sorrow at the loss of a most brilliant investigator, and its deep sorrow at the loss of a most valued and cherished member; and

*Resolved*, That we herewith express our sorrow in the death of Dr. Conneffe, of Ohio, who lost his life as a result of infection with typhus fever while working with Dr. Ricketts in Mexico City; and

*Resolved*, That these resolutions be spread on the minutes of this Association and published in The Journal.

T. D. Tuttle.
Frank Billings.
Alexander Lambert.

On motion, the resolutions were adopted by a rising vote.

### Associate Members Elected

Dr. J. H. White, Louisiana, presented the following communication from the Section on Preventive Medicine and Public Health:

*To the Members of the House of Delegates of the American Medical Association:*

The officials of the Section on Preventive Medicine and Public Health nominate for associate membership in the American Medical Association John M. Glenn, New York, Director of the Russell Sage Foundation.

Marshall Langton Price, Secretary.
J. N. Hurty, Chairman.

On motion, the nominee was elected to associate membership.

The Section on Pharmacology and Therapeutics recommended that Leonard A. Seltzer, Detroit, be made pharmaceutical member, and on motion, the recommendation was concurred in.

The Section on Pathology and Physiology nominated for associate membership P. B. Hawk, Urbana, Illinois; A. J. Carlson, Chicago, and Leo Loeb, Philadelphia, and, on motion, the nominations were confirmed.

## Resolution on Optometry, Blindness, Etc.

Dr. Chas. Jewett, New York, offered the following resolution:

*Resolved*, That we deem it extremely unfortunate that Columbia University, New York, related as it is to medical education, should have seen fit to establish a school of optometry for opticians, thus virtually giving countenance to the practice of medicine by persons who have not received a medical education.

On motion, this resolution was referred to the Judicial Council.

### RESOLUTIONS FROM THE SECTION ON OPHTHALMOLOGY

Dr. T. A. Woodruff, Illinois, presented the following resolutions from the Section on Opthalmology:

Whereas, In many states examining boards of optometrists have been legalized and are assuming in their examinations of students prerogatives of the medical profession; and

Whereas, In a number of states either the governor or the board of medical examiners has appointed ophthalmologists to serve with opticians in examining candidates for license in the mechanical examination of eyes (so-called optometry); and

Whereas, Such affiliations on the part of medical men are practically endorsements of the optician's claim that laymen without medical education are capable of prescribing for errors of refraction; and

Whereas, These underlying ocular defects can only be diagnosed and corrected by the educated physician, who can appreciate this special work, by functional and objective examination; and

Whereas, This matter assumes importance because in many states the examining optician without medical training or responsibility is seeking legal authority to make diagnosis of and prescribe for ocular defects; therefore, be it

*Resolved*, That the Section on Ophthalmology of the American Medical Association memorializes its House of Delegates with the following petition:

The Section prays: That the House of Delegates express its disapproval of ophthalmologists serving with opticians on boards examining men who have not taken medical courses endorsed by the Association of American Medical Colleges and considers the acceptance of such appointment by ophthalmologists as contrary to the spirit of the code of ethics of the American Medical Association.

That the House of Delegates urge on all members of the American Medical Association, first, that legal recognition of the optician to diagnose the condition of the eye is an infringement on medical practice laws, and therefore should not be sanctioned by any state or institution; second, that referring patients to opticians by a physician should be deprecated because it is not only exposing hem to the risk of incomplete diagnosis and unnecessary suffering, but is aiding and abetting men who have no medical education, in heir acknowledged and open efforts to enter on an important field of special medical practice.

Furthermore, the House of Delegates is memorialized to request he American Medical Association to publish a history of so-called optometry and optometry colleges, and that such pamphlet be sent o officials of state medical societies and medical men interested in defeating the efforts of these men to enter the medical profession by alse pretenses.

The resolutions include the recommendation for the appointment f a committee of two who are members of the Section on Ophthalmology to furnish the necessary data.

### ESOLUTIONS ON TEACHING IN MEDICAL COLLEGES OF INFECTIOUS EYE DISEASES AND OF REFRACTIVE ERRORS

Whereas, The refracting of human eyes is an important part of medical practice;

Whereas, The Section on Ophthalmology of the American Medical Association recommends that "every general practitioner should ave the training in ophthalmology which will enable him to man-ge infectious diseases of the eye and its refractive defects."

*Resolved*, That the House of Delegates of the American Medical Association:

1. Requests its Council on Medical Education to arrange a cur-iculum able to equip medical students with such training, and rec-mmends medical colleges to adopt the same.
2. Approves of the state registration boards, now requiring it for cense; and
3. Advises like action by other state registration boards at an arly date.

### ESOLUTIONS REGARDING THE VISUAL REQUIREMENTS OF PILOTS

The following resolutions were unanimously adopted by the ection on Ophthalmology:

Whereas, Investigation has shown that the visual requirements f pilots in the United States under both federal and state supervisions are vague and inadequate, it is recommended that the American Medical Association, through its President, shall appoint a commission from its body, including members from the Section on Ophthalmology, to confer with the Department Commission of Commerce and Labor, and with the Marine-Hospital Service to unite n establishing proper visual standards and tests to govern these ublic servants; and, further, that the subject under discussion be rought before the House of Delegates with the request that that ody give its official sanction and support to the purposes of the ommission; and, further, that the present chairman of the Section n Ophthalmology be made a member of the commission.

### RESOLUTIONS REGARDING A COMMITTEE ON BLINDNESS

Whereas, The American Medical Association has at present a Committee on Ophthalmia Neonatorum, the purpose of which is the prevention of blindness from this disease; and

Whereas, Trachoma, industrial accidents, intermarriage of the blind and wood alcohol amblyopia are also preventable causes of blindness; therefore, be it

*Resolved*, That the House of Delegates be requested to appoint a "Committee on the Prevention of Blindness," the membership of which shall consist of the chairman of the Committee on Ophthalmia Neonatorum and such other members for the investigation of the above causes of blindness as the President may appoint. This committee shall invite the cooperation of the American Ophthalmological Society and similar organizations.

On motion, these resolutions were referred to the Reference Committee on Hygiene and Public Health.

## Resolution on Year Book

Dr. Alexander Lambert, New York, offered the following:

Whereas, Representatives of the learned societies of the United States of the various professions have met and decided to publish an American Year-Book, in which the advancements in knowledge in all professions shall annually be published; therefore, be it

*Resolved*, That the House of Delegates of the American Medical Association authorizes the Board of Trustees to appoint a member to serve on the supervisory board of the American Year-Book.

On motion, this resolution was referred to the Board of Trustees.

## Report of Reference Committee on Amendments to Constitution and By-Laws

Dr. Alexander R. Craig, Pennsylvania, read the report of the Reference Committee on Amendments to the Constitution and By-Laws.

*To the Members of the House of Delegates of the American Medical Association:*

The Reference Committee on Amendments to the Constitution and By-Laws beg to submit the following report of the House of Delegates on the matters which have been referred to them for their consideration.

In the report of the Committee on Uniform Regulation of Membership and from other sources a number of proposed changes in the Constitution and By-Laws came before this Reference Committee and we recommend the adoption of the appended suggestions. We recommend the substitution of the following change in Article 4 of the Constitution for that offered at the last annual session of the House of Delegates.

Article IV.—Amend the present article to read as follows: State and territorial associations which have or which hereafter may become organized in accordance with the general plan of organization of the American Medical Association, and which have declared by resolution their allegiance to the said American Medical Association and which shall agree with other state and territorial medical associations to the formation and perpetuation of the House of Delegates of the American Medical Association, shall be recognized as constituent associations on acceptance of their application for recognition by the House of Delegates.

### *Amendments to the By-Laws*

### Chapter I.—Membership

Section 1. Classes of Members.—There shall be three classes of members: Members, associate members, and honorary members.

Sec. 2. Members.—Any physician reported as a member in good standing of the constituent association by the secretary of that association, and who shall make application on the prescribed form, and who shall have paid the annual assessment and the subscription to The Journal of the American Medical Association for the current year, shall be a member.

Commissioned medical officers of the United States Army, United States Navy, and the United States Public Health and Marine Hospital Service, shall be members of this Association so long as they retain their connection with their respective service, and shall not be required to pay dues and shall not receive The Journal of the American Medical Association except by personal subscription.

Sec. 3. Tenure of Membership.—Membership in this Association shall continue only so long as the individual is a member in good standing of the constituent association of the state in which he resides. When the General Secretary shall be officially informed by the secretary of the constituent association of the state in which a member resides that he is not in good standing, the General Secretary shall remove his name from the membership roll of the American Medical Association and shall notify him of the action taken, together with the reason therefor.

Sec. 4.—A member who becomes a resident of another state, to retain his membership in the American Medical Association, must become a member in the constituent association of the state to which he has removed within one year following his change of residence.

Sec. 5. Delinquency.—Any member who, for one year, has failed to pay his annual assessment and the subscription to The Journal, shall forfeit his membership thirty days after notice from the General Secretary has been mailed to his last known address.

Sec. 6.—Any former member who complies with Section 2, Chapter 1, shall be reinstated on payment of his current indebtedness.

Sec. 7. Associate Members.—The following may be elected in accordance with Section 4, Chapter VII, to associate membership: Physicians who are members of chartered national medical societies of foreign countries adjacent to the United States; dentists holding the degree of D.D.S. who are members of state or local dental societies; and pharmacists who are active members of the American Pharmaceutical Association.

Sec. 8. Honorary Members.—Physicians of foreign countries may be elected honorary members by the House of Delegates in accordance with Section 4, Chapter 7.

Sec. 9. Invited Guests.—Scientists may be invited by the general officers or by the officers of a Section to attend any annual session and to take part in the scientific work. They shall be designated as invited guests and be entitled to participate in the scientific and social functions.

### Chapter II.—Registration

Section 1.—No member shall be eligible to register at an annual session until he has paid all of his current indebtedness.

No member shall take part in the proceedings of the Association or of any of the Sections until he has registered his name and address in the registration office.

A member on registering shall designate the Section in which he wishes to be enrolled, but no member shall register in more than one Section at any annual session.

### Chapter IV.—Qualifications, Term, Apportionment and Registration of Delegates

Sec. 2. Term.—Delegates and alternates from constituent associations shall be elected for two years. Constituent associations entitled to more than one representative shall elect them so that one-half, as near as may be, shall be elected each year. Delegates and alternates elected by the Section, or delegates appointed from the United States Army, the United States Navy and the United States Public Health and Marine-Hospital Service, shall hold office for one year.

Sec. 3. Apportionment of Delegates.—At the annual session of 1903, and every third year thereafter, the House of Delegates shall appoint a committee of five on re-apportionment of which the President and General Secretary shall be members. This committee shall apportion the delegates among the constituent associations in accordance with Article 5, Section 2, of the Constitution, and in proportion to the membership of each constituent association on April 1 of the year in which the apportionment is made, as shown by the certificates of membership submitted by the secretary of the constituent associations. This apportionment shall take effect at the annual session next succeeding that at which it is made, and shall prevail until the next triennial apportionment, whether the membership of the constituent associations shall increase or decrease.

Sec. 4. Registration of Delegates.—Each delegate before being seated shall deposit with the Committee on Credentials a certificate signed by the secretary under the seal of the constituent association, stating that he has been legally and regularly elected a delegate to the American Medical Association. Each delegate from a Section shall present credentials signed by the chairman and secretary of the Section which he represents. Each delegate from the government services shall present credentials from the surgeon-general of the department which he represents.

Sec. 5. A Delegate Once Seated to Retain His Seat for the Entire Session.—The credentials of a delegate having been accepted by the credentials committee and his name placed on the roll of the house, he shall remain as the duly accredited delegate of the body which he represents until final adjournment of the session and his place shall not be taken by any other delegate or alternate.

### Chapter IV.—Procedure of House of Delegates

Sec. 2. Limit of Time for Introduction of New Business.—No new business shall be introduced into the House of Delegates after the second day of the annual session (third day of the House of Delegates), unless with unanimous consent; and such new business, whether in the form of a motion, a resolution, or a memorial, shall require a two-thirds affirmative vote for adoption.

### Chapter VI.—Meetings of the House of Delegates

Sec. 2. Special Sessions.—Special sessions of the House of Delegates shall be called by the president on a written request of at least twenty-seven members of the last House of Delegates, provided that they represent the majority of the constituent associations. When a special session is called by the president the general secretary shall mail a notice to the last known address of each member of the last House of Delegates at least twenty days before such special session is to be held, in which notice shall be specified the time and place of meeting, and the object of such special session. No other business shall be transacted at the special session than that specified in the call.

### Chapter VII.—Nomination, Election and Installation of Officers, Trustees, Associate and Honorary Members

Section 1. Nominations.—Nominations for office shall be made orally; a nominating speech must not exceed two minutes. The treasurer shall be nominated by the Board of Trustees.

Sec. 2. Method of Holding Elections.—All elections shall be by ballot and a majority of the votes cast shall be necessary to elect. In case no nominee receives a majority of the votes on the first ballot the nominee receiving the lowest number of the votes shall be dropped and a new ballot taken. This procedure shall be continued until one of the nominees receives a majority of all the votes cast, when he shall be declared elected.

Sec. 4. Associate and Honorary Members.—Applications for associate membership from foreign physicians must be approved by the Judicial Council, applications from dentists must be approved by the Section on Stomatology, and from pharmacists by the Section on Pharmacology and Therapeutics.

Nominations for honorary membership shall be made by the Sections and must be submitted to the House of Delegates not later than the second day of the annual session. These applications and nominations shall be referred without debate to the Committee on Sections and Section Work, which shall consider the scientific attainments and professional character of the applicants and report to the House of Delegates.

The election of associate and honorary members shall immediately follow the election of officers. Not more than three honorary members shall be elected in any one year.

Sec. 5. Installation.—The general officers of the Association, except the President, shall assume their duties at the close of the last meeting of the annual session at which they are elected.

### Chapter VIII.—Duties of Officers

Section 1. President.—The President shall preside at the General Meeting and at the meetings of the House of Delegates, and shall perform such duties as custom and parliamentary usage require. On the morning of the first day of the annual session following his election he shall deliver an address at the General Meeting on such matters as he may deem of importance to the Association. He may at any time make suggestions in writing to the House of Delegates or to any special or standing committee.

Sec. 3. Secretary.—The Secretary shall give due notice of the time and place of all annual and special sessions of the Association and of the House of Delegates in The Journal of the American Medical Association. He shall send an official notice of each annual or special session to the secretary of each constituent association and to the secretary of each section. He shall keep the minutes of the House of Delegates. He shall notify members of committees of their appointment and of the duties assigned to them. He shall verify the credentials of the members of the House of Delegates and shall provide a registration book in which shall be recorded the name of each delegate in attendance at each session, together with that of the Association, government service or Section which he represents. He shall prepare a roll of the delegates attending each session to facilitate voting by roll-call. He shall prepare for publication the official program of each session, and shall perform such other duties as may be directed by the House of Delegates or the board of trustees.

### CHAPTER X.

SECTION 1. CLASSIFICATION OF COMMITTEES.—Committees shall be classified as (a) Standing Committee. (b) Reference Committee, and (c) Special Committee. These Committees shall be nominated by the President and elected by the House of Delegates unless otherwise provided for in these by-laws. Any of these committees acting during the interval between the sessions of the House of Delegates shall be subject to the Board of Trustees. In case of vacancies in Committees occurring during the interval between annual sessions the president shall have the power to appoint members to fill the vacancies until the next annual session.

SEC. 2. MEMBERSHIP OF COMMITTEES.—Reference Committees shall be appointed by the President from among the House of Delegates. et' seq.

SEC. 3. STANDING COMMITTEES.—Amend to read as follows: Standing committees shall be the following:

(a) Committee (or Council) on Medical Legislation.
(b) Council on Medical Education.
(c) Committee on Transportation and Place of Session.

SEC. 4. JUDICIAL COUNCIL.—Amend to read as follows: The Judicial Council shall be composed of five members, to be appointed by the President on the first day of each annual session from the delegates present, and to continue in office until their successors are appointed. It shall organize by electing a chairman and a secretary, who shall keep a permanent record of its proceedings. The council shall hold such meetings during the annual session and during the year as it may deem necessary. It shall make an annual report of its proceedings to the House of Delegates. To this council shall be referred all applications for associate membership from physicians resident in foreign countries and all questions, complaints, protests and matters of an ethical nature. When these concern an individual's relations with his local society, they shall be considered by this council only after the same shall have been referred to the Constituent Association concerned or on an appeal from such Constituent Association. Its decisions shall be subject to appeal to the House of Delegates.

SEC. 5. COMMITTEE ON MEDICAL LEGISLATION.—Amend to read as follows:

There shall be a Council on Health and Public Instruction to consist of five members, to be elected by the House of Delegates, on nomination by the President. Those first elected shall serve, one for one year, one for two years, one for three years, one for four years and one for five years, and their respective terms of service shall be determined by lot. Thereafter one member shall be elected annually, on nomination by the President, to serve five years. The Council shall organize and shall elect a chairman from its number. The Board of Trustees shall appoint a secretary on nomination by the Council, and shall fix his salary.

The Council shall adopt such rules and regulations for the government of its actions as it may deem expedient. It shall expend money or contract financial obligations only as shall be authorized in writing by the Board of Trustees. The work of the Council shall embrace the following subjects:

(a) Legislation; (b) Organization; (c) Publicity; (d) Defense of Medical Research; (e) Public Health.

It may appoint committees to carry on the respective purposes of the Council. It shall make an annual report of its work to the House of Delegates. The office of the Council shall be at the headquarters of the Association.

SEC. 6.—Committee on Transportation and Place of Session to remain unchanged.

SEC. 8. REPORTS OF STANDING COMMITTEES.—Reports of Standing Committees, so far as possible, shall be transmitted 30 days before the annual session to the Secretary, who shall have them printed for distribution to the members of the House of Delegates.

Present Section 10 to become Section 9 and to be amended to read: These committees shall serve during the session at which they are appointed.

### CHAPTER XII.—SECTIONS

SECTION 2, page 26.—Officers of Sections.—The third sentence to be amended to read as follows: Each Section shall also elect annually one delegate and one alternate to the House of Delegates of the American Medical Association to serve one year.

SEC. 3, page 27.—Election of Officers.—The first sentence to be amended to read as follows: The election of officers shall be the first order of business of the morning meeting of the Section on the third day of each annual session.

SEC. 5, page 28.—Executive Committee.—Second and third sentences to read: In case of absence of a member of the Executive Committee from an annual session, the vacancy shall be filled by the chairman. The committee shall examine and pass on all papers, etc.

SEC. 6.—Meetings.—Strike out everything after the word "decide."

SEC. 7.—Who May Take Part in Section Work.—Members and associate members only shall have the right to participate in the business deliberations of a Section. Members and associate and honorary members and invited guests may present papers and take part in the scientific discussions.

SEC. 9, page 29.—Times at Which Titles Must Be In.—Titles of papers to be presented to the section must be in the hands of the secretary of the section at least thirty-five days before the first day of the annual session. With the title, the writer shall submit an abstract of the paper not less than thirty or more than one hundred and fifty words in length and an estimate of the time required to read his paper.

SEC. 12.—Can Present Papers Before Only Two Sections.—Amend to read as follows: No member shall present a paper or papers before more than two sections at any annual session. When more than one section is to be addressed, the titles and abstracts of both papers must be submitted to the secretaries of both sections before which the papers are to be read.

### CHAPTER XIII.—PUBLICATION

SECTION 2.—Papers Must Be Ready for Publication.—Page 30 to read as follows: Each author shall hand his paper to the secretary of the section immediately after it is read. The secretary shall endorse thereon that it has been read and shall hand it to the chairman of the executive committee. All papers approved by the executive committee shall be returned to the secretary of the section, who shall at once forward them to the editor of THE JOURNAL.

### AMENDMENTS TO THE CONSTITUTION

In view of the fact that the amendments are important and that the laws of the State of Illinois provide that any constitution of an incorporated body may be amended at any annual session of that organization, the committee recommend the unanimous consent and the adoption of the following changes in the constitution:

### ARTICLE 5.—HOUSE OF DELEGATES

Second sentence to be amended to read as follows: It shall consist of delegates elected by the constituent associations and by the scientific sessions of the American Medical Association, and appointed by the surgeon generals from the medical departments of the Army, Navy and the United States Public Health and Marine-Hospital Service, etc.

### ARTICLE 8.—ANNUAL SESSIONS

The Association shall hold an annual session at a time and place to be fixed by the House of Delegates. The time and place of session may, however, be changed by the unanimous action of the Board of Trustees at any time prior to two months of the time selected for the session. The annual session may be held at any place in the United States.

### ARTICLE 12.—AMENDMENTS

Amend to read:

The House of Delegates may amend any article of this constitution at any annual session, provided that the proposed amendment shall not be acted on until the next annual session following that at which it was introduced and providing that three-fourths of the voting members of the House of Delegates registered at the session at which action is taken vote in favor of such change or amendment.

UNIFORM MEMBERSHIP

Of the recommendations submitted in the report of the Committee on Uniform Regulation of Membership, the Reference Committee recommends the following substitute for your adoption:

*Resolved,* That the report submitted by the above Committee on Uniform Regulation of Membership be referred to the Council on Health and Publicity with the request that these recommendations be submitted to the secretary at each constituent association for criticisms and suggestions and that the Council be requested to report on this subject at the 1911 session. The Reference Committee further recommends that the secretary send a certified copy of the constitution and by-laws of the American Medical Association as amended at this session to the secretary of each constituent association with the request that the changes be brought to the attention of the House of Delegates of the constituent Association.

The Reference Committee recommends that the resolution presented in the name of the Medical Association of the State of Alabama be referred to the Council on Health and Public Instruction for the consideration which the importance of the resolution demands.

The Reference Committee recommends that the word "general" be stricken out throughout the by-laws—when followed by secretary.

A. R. Craig, Chairman.

Dr. W. C. Woodward, District of Columbia, moved that the report of this committee, so far as it undertakes to alter the constitution and by-laws, be printed or mimeographed alongside of the sections which it proposes to alter, and distributed among the members of the House of Delegates for consideration on Thursday.

Seconded and carried.

Dr. Edwin Walker, Indiana, moved that the consideration of the constitution and by-laws be fixed for 10 a. m. Thursday.

Seconded.

Dr. E. J. McKnight, Connecticut, moved to amend that it be made a special order for 10 a. m. Thursday.

The amendment was seconded, accepted, and the original motion, as amended, was carried.

## Resolution on Organization

Dr. Hubert Work, Colorado, presented the following:

Whereas, The plan of organization of the profession carried to its logical conclusion means that every member of a county society should be *ipso facto* a member of the American Medical Association, just as every member of a county society is *ipso facto* a member of a state society, and as it is the ultimate end of the plan that the American Medical Association should be coextensive with the organized profession throughout the land as nearly, if not quite, every state already has adopted the plan so far as making every member of a county society a member of a state society; therefore, be it

*Resolved,* That the President appoint a committee to draw up details for extending the plan to the American Medical Association, and to present this plan to the various state societies for their consideration during the coming year, and to make a report at the next annual meeting of this House.

Dr. Work moved the adoption of the resolution. Seconded.

Dr. Alexander Lambert, New York, moved as an amendment that this resolution be referred to the Board of Trustees because it means a separation of The Journal from the membership in a manner which involves the finances of the Association.

The amendment was seconded, accepted, and the original motion, as amended, was carried.

## Report on Legislation Concerning the Sale of Habit-Forming Drugs

Dr. C. S. N. Hallberg, Illinois, presented the following report from the Section on Pharmacology and Therapeutics:

*To the Members of the House of Delegates of the American Medical Association:*

A resolution introduced by Mr. M. I. Wilbert at the Atlantic City session to the effect that this section request the House of Delegates to recommend to the United States government the passage of a law which should place the sale of certain habit-forming drugs under the control of the Department of Internal Revenue was referred for consideration to the executive committee of this section. Within the past few months a bill has been introduced into the Senate by Mr. Cullom which has an object similar to that desired by Mr. Wilbert. Your committee has carefully studied this bill, and while in a general way they approve of the plan of regulating the sale of these drugs by some sort of federal license, there are a number of features in the Cullom bill which seem to the committee to be objectionable. For instance, there is a uniform tax of a dollar a pound on all substances included under the bill equally for cocain and for coca leaves and for morphin and for crude opium. As cocain is almost one hundred times as costly as coca leaves it is evident that a uniform tax would work a hardship on American manufacturers of the alkaloids and would almost exclude the importation of these crude drugs in favor of the alkaloidal principles.

Whether or not these objections could be obviated by amendments to the bill, the committee is uncertain. The whole subject is so extraordinarily complex that the commitee does not feel justified in making definite statements concerning the subject. We do not, therefore, recommend that the section take any definite action concerning this bill. We feel that the question is one of such great importance, involving as it does not only the question of the physical welfare of a large proportion of the population, but also vast financial interests and complex legal questions that it seems to us very doubtful that any conclusion reached by a single section of the American Medical Association under the conditions which of necessity pertain to the section meetings would have any real value.

M. H. Fussell,
Reid Hunt,
H. C. Wood, Jr.

Respectfully referred, through the House of Delegates, to the Committee on Medical Legislation, American Medical Association, by the Section on Pharmacology and Therapeutics.

Murray Galt Motter, Secretary.

On motion, the resolution was referred to the Reference Committee on Legislation and Political Action.

## Resolution Regarding Branch Associations

Dr. S. S. Crockett, Tennessee, offered the following resolution:

*Resolved,* That our representatives to the House of Delegates of the American Medical Association be instructed to urge said House to endorse existing district associations as branches of the American Medical Association, namely, Southern Medical Association and the South Western Association as existing at present, and that other branches be created in other parts of the United States.

On motion, the resolution was referred to the Reference Committee on Miscellaneous Business.

## Resolutions Regarding Publication of Suicides

Dr. J. H. White, Louisiana, presented the following resolutions from the Section on Preventive Medicine and Public Health:

According to the published reports of the Census Bureau, there has been of late a marked increase in the number of suicides in this country. The death-rate from this cause per 100,000 was as follows: 1902, 12.7; 1903, 13.9; 1904, 14.8; 1905, 16.1; 1906, 14.3; 1907, 16.2, and 1908, 18.5. An increase of practically 50 per cent. in seven years demands investigation and energetic action.

The publication in the secular papers of the details of these unfortunate occurrences can do no good. On the other hand, it is well recognized, by those in a position to judge, that such publication has powerful suggestive effect on susceptible individuals, and it is unquestionably one of the most active causes of this form of death; therefore, be it

*Resolved,* By the Section on Preventive Medicine and Public Health that such publication of accounts of suicides is detrimental to the good of the people of this country; and that we request the House of Delegates to take action in the case by requesting the press of the land to stop such publications; and

*Further,* That the House of Delegates be instructed to further the enactment of a national law forbidding the use of the mails by any paper making such publication; and

*Further,* That the same committee be instructed to assist in the passage of state laws making such publication a misdemeanor, and providing suitable punishment therefor.

RESOLUTIONS REGARDING POPULAR EDUCATION

Whereas, Public health administration is greatly helped by popular education on hygienic matters, and cannot advance far beyond the state of common knowledge; and

Whereas, Our literary colleges and normal schools to-day give practically no instruction of this kind; and

Whereas, Much of the hygienic instruction in the graded schools of the land is based on misinformation;

*Resolved*, By the Section on Preventive Medicine and Public Health that such instruction by lectures or otherwise should be given in every such institution of learning; and

*Resolved*, That the House of Delegates be asked to appoint a committee to promote a course of instruction in all literary colleges and normal schools.

On motion, the resolutions were referred to the Reference Committee on Hygiene and Public Health.

### Communication Regarding Dr. McCormack

Dr. W. E. Anderson, Virginia, read the following communication:

As a representative from Virginia to the American Medical Association, I want to call your attention to the excellent ervice rendered our state by Dr. J. N. McCormack in the ddresses made by him last year. As you know, he spent two weeks with us and gave two talks a day, one to the physicians nd one to the public. He never failed to elicit interest among he physicians in promoting more cordial relations among themelves and a higher standard of ethics and scientific medicine. n his talks to the public he always developed a greater appreiation of physicians and stimulated public health work. We ope to have Dr. McCormack for another two weeks in July.

I am mentioning this to you as Dr. McCormack came to Virinia as the official representative of the American Medical ssociation, and the occasion may arise in the House of Delegates for you to show an appreciation of him in behalf of this tate.

With kind regards, I am, very truly yours,

Ennion G. Williams,
Commissioner of Health.

Dr. Anderson said further: "Commenting on this communiation, I recall with pleasure the remarks made in the House f Delegates at Portland, Ore., meeting of this Association, ommending Dr. McCormack's work, speaking of the influence f continuing the same, inviting him to visit Virginia. He has vice since done this, with the splendid results mentioned in his letter. Virginia appreciates Dr. McCormack and his work, nd on behalf of our delegation I respectfully request this body o let the good work go on."

There being no objection, this communication was referred to he Reference Committee on Reports of Officers.

On motion, the House of Delegates then adjourned until 10 m. Thursday.

## Fifth Meeting — Thursday Morning, June 9

The House of Delegates met at 10 a. m., and was called to der by Third Vice-President Dr. Alexander Lambert, New ork. The secretary called the roll.

The minutes of the previous meeting were read and approved.

### Discussion of Amendments to Constitution and By-Laws

The Chairman stated that the special order at this time was e consideration of amendments to the Constitution and y-Laws.

Dr. T. A. Woodruff, Illinois, moved that the proposed amendments to the Constitution and By-Laws, excepting the amendment relating to the organization of the Council on Public ealth and Public Instruction, to be deferred until next year, d that the Secretary be instructed to have the proposed mendments printed and distributed to the members of the ouse of Delegates for consideration in the meantime, and at we now proceed to take up the amendments with regard the organization of the Council on Health and Public struction.

This motion was seconded by several, and after discussion Drs. Alexander R. Craig, Pennsylvania; Charles S. Bacon, inois, Dr. Bacon moved that the motion of Dr. Woodruff laid on the table. Seconded and carried.

Dr. A. T. McCormack, Kentucky, moved that Sections making changes be considered *seriatim*. Seconded and carried.

Dr. George W. Guthrie, Pennsylvania, moved the adoption the report of the Reference Committee on Amendments to e Constitution and By-Laws as a whole.

This motion was seconded by several, and after discussion Drs. C. E. Cantrell, Texas; E. T. Abrams, Michigan; Edward Jackson, Colorado; Dr. Charles Chassaignac, Louisiana, ved that the motion of Dr. Guthrie be laid on the table. his motion was seconded, but declared lost.

Dr. Chassaignac protested against such action by the House of Delegates, and thought the report ought to be read and carefully considered before adopting it as a whole.

Dr. A. T. McCormack, Kentucky, asked unanimous consent of the House of Delegates that the report be read as a whole, and as this was given, the report was read.

At the conclusion of the reading of the report, Dr. Charles S. Bacon, Illinois, raised the point of order that it was not proper for the House of Delegates to adopt this report as a whole if it meant the adoption of all the amendments to the Constitution and By-Laws. He said that the Constitution provides that amendments to the Constitution and By-Laws shall be adopted by a three-fourths vote of all members, and this could not be determined by simply adopting the report of the committee; therefore, he held that the motion to adopt the report as a whole was not a proper one.

The Chair sustained the point of order.

Dr. Alexander R. Craig, Pennsylvania, said: The committee asked for unanimous consent to permit action on the amendments to the articles of the Constitution, and this unanimous consent being denied, I move to amend Dr. Guthrie's motion to adopt the report as a whole, by taking action on all the report preceding the paragraphs referring to amendments to the Constitution.

This motion was seconded and accepted by Dr. Guthrie, and carried.

Dr. W. C. Woodward, District of Columbia, moved that the proposed amendments to Article IV of the Constitution as recommended by the committee be now adopted. Seconded and carried.

The President stated that the report of the Reference Committee on Amendments to the Constitution and By-Laws was still before the House and the substitute was now up for consideration.

Dr. A. T. McCormack, Kentucky, moved that the proposed amendments to the Constitution be laid over until next year. Seconded and carried.

Dr. McCormack asked further time for the consideration of the rest of the report, which was granted.

Dr. Charles S. Bacon, Illinois, asked unanimous consent that the By-Laws be amended to the effect that the Council on Pharmacy and Chemistry be added to the list of standing committees.

The Chair ruled that this amendment would be referred to the Reference Committee on Amendments to the Constitution and By-Laws.

On motion, the Association adjourned until 2 p. m.

## Sixth Meeting — Thursday Afternoon, June 9

The House of Delegates met at 2 p. m. and was called to order by President Welch. The Secretary called the roll.

The minutes of the previous meeting were read, corrected, and approved.

### Election of Officers

The election of officers being in order, the House of Delegates then proceeded with nominations for President.

Dr. Frank Billings, Illinois, nominated Dr. John B. Murphy, Chicago, for President.

This nomination was seconded by Drs. M. L. Harris, Illinois; Charles Chassaignac, Louisiana; T. A. Woodruff, Illinois, and C. E. Cantrell, Texas.

Dr. Edwin Walker, Indiana, nominated Dr. A. Jacobi, New York City, for President. The nomination of Dr. Jacobi was seconded by Dr. V. C. Pederson, New York City.

The President appointed as tellers Drs. J. Shelton Horsley, C. S. Bacon, A. T. McCormack, and I. C. Chase.

There were 115 votes cast, of which Dr. Murphy received 77, and Dr. Jacobi 38.

Dr. Murphy was declared elected President.

ELECTION OF VICE-PRESIDENTS

The following were then nominated and duly elected Vice-Presidents.

First Vice-President, Dr. E. E. Montgomery, Philadelphia, Pa.; second Vice-President, Dr. R. C. Coffey, Portland, Ore.; third Vice-President, Dr. W. G. Moore, St. Louis; fourth Vice-President. Dr. H. L. E. Johnson, Washington, D. C.

ELECTION OF SECRETARY

Dr. I. C. Chase, Texas: Gentlemen of the House of Delegates, I am not a stranger to organization work in this country. I have been secretary of one of the largest state associations, geographically, for a number of years. I come from a state where the opposition to organized medicine was probably greater than in any other one state in the Union, and that being the case, I may be said to represent, to a certain extent, the voice of the people. I believe that there is no particular reason why we should begin at this time to separate the offices of Editor and General Secretary of the American Medical Association. [Applause.] Those of you who are familiar with The Journal and the Association work are acquainted with the fact that there are great difficulties in the way of having two heads in the work of organization. It is not only not good reasoning but poor judgment at a critical time like this in this great association to change generals at the suggestion of the enemy. [Applause.] I know not what you may think, but I feel that we should not allow the howling coyotes among the enemies of this organization, to spread broadcast over this land the false report that they have urged and have secured changes in the American Medical Association through the character of literature they have distributed all over this country. [Loud applause.]

I take great pleasure, gentlemen of the House of Delegates, in nominating for secretary of the American Medical Association, a man who has never yet failed to sacrifice his own personal interests for the good of this great cause. [Applause.]

I therefore take great pleasure in nominating our former secretary, Dr. George H. Simmons. [Loud and prolonged applause.]

Dr. W. J. Birkofer, Nebraska: It gives me great pleasure to second the nomination of our former colleague from Nebraska, Dr. Simmons. [Applause.]

Dr. J. B. Bullitt, Mississippi: On behalf of the South, I wish to second the nomination of Dr. Simmons for secretary, a man who has done probably more for organization in this Association than any other one man in its ranks.

Dr. B. H. Blair, Ohio: Coming from a state which is perhaps the fourth largest representative state in the Union, whose profession has never faltered or failed, I desire to second the nomination of Dr. Simmons. [Applause.]

Dr. A. L. Wright, Iowa: Iowa unanimously seconds the nomination of Dr. Simmons. [Applause.]

Dr. Mack Rogers, Alabama: I would be derelict in my duty if I did not second this nomination on behalf of the state of Alabama.

Dr. A. R. Mitchell, Nebraska: I have been a fellow-citizen of Dr. Simmons for many years and during all those years and up to the present time there has never been a cloud on his character and as a representative from Nebraska, I take great pleasure in seconding the nomination of Dr. Simmons, and if it is in order I move that the rules of the House of Delegates be suspended and that the President cast a unanimous ballot of this House of Delegates for Dr. Simmons as secretary. [Applause.]

Dr. Stephen C. Glidden, Illinois: I wish to second the nomination of Dr. Simmons.

At this juncture, there were cries of "Speech! Speech!"

Dr. Simmons said: "I appreciate this honor, but I really believe it would be better for me not to accept this office. There is a great deal of responsibility connected with it, and I have realized in the last three or four years that we are not making as much progress in organization work as we should make. I, myself, think that new blood is needed. We are all liable to get into ruts and I am afraid I have gotten into a rut. Nevertheless, after this expression of your appreciation, I will say this, that while personally my own feeling is that I should not accept the position, if you insist that should fill the office another year, I will do it. [Applause.] believe, however, that it would be better for the House t select some one else."

Dr. J. A. Walker, Oklahoma: You have heard representatives of the old states, but I represent a new state. This is matter in which I believe Dr. Simmons has no say. We ar running this. [Laughter.] I think team work is very important, and I look on Dr. McCormack as our pitcher and o Dr. Simmons as our catcher. They have done excellent team work. They have won out. [Applause.] Dr. Simmons is in error when he said that not as much progress has been made in organization work as there ought to have been made. Of course, he has not been in Oklahoma. We have invited him to visit us and I wish to say to you that we have made great advancement in medical organization under Dr. McCormack [Applause.]

We had the pleasure of having Dr. McCormack with us three times and he has revolutionized the practice of medicine in Oklahoma and medical organization, and I believe we are as well organized in that state and are working in as perfect order as they are anywhere in the United States, not excepting Illinois, Indiana, or any other state, and I rise in behalf of Oklahoma to second the nomination of Dr. Simmons. I also wish to extend to the man from Texas, my native home, the hand of fellowship for nominating Dr. Simmons.

Dr. C. E. Cantrell, Texas: On behalf of the delegates of this House, I move we all nominate Dr. Simmons by a rising vote.

It was then moved that nominations be closed and the President be instructed to cast the ballot of the House of Delegates for Dr. Geo. H. Simmons as secretary.

This motion was seconded by several and was carried unanimously.

The President said he took great pleasure in casting the ballot and announcing that Dr. Simmons had been unanimously elected Secretary of the Association. [Loud Applause.]

There were cries of "Speech! Speech!"

Dr. Simmons said: I do not know that I am in a condition to speak. I thoroughly meant what I said in my report. I also meant what I said a few moments ago, that I was ready to step to the front, and especially so long as I realized that there are around me and back of me the best element of the medical profession of this country. [Applause.]

In thanking you, I can only say that I will do the best I can in the future as I have done in the past. [Applause.]

ELECTION OF TREASURER

Nominations for treasurer being in order, Dr. M. L. Harris, for the Board of Trustees, nominated Dr. Frank Billings.

The nomination was seconded by Dr. T. D. Coleman, Georgia.

There being no other nominations, Dr. Alexander R. Craig Pennsylvania, moved that the rules be suspended and the Secretary be instructed to cast the ballot of the House for Dr. Billings as treasurer.

This motion was seconded by several, and carried. The Secretary cast the ballot and Dr. Billings was declared duly elected treasurer of the Association.

TRUSTEES ELECTED

The following trustees were then elected:

*Trustees.*—Dr. W. W. Grant, Denver; Dr. Frank J. Lutz, St. Louis; Dr. C. E. Cantrell, Greenville, Texas.

COMMITTEES APPOINTED

The President then made the following appointments, which were confirmed by the House of Delegates:

*Council on Medical Education.*—Dr. George Dock, St. Louis, to succeed Dr. E. E. Southard, Boston, to serve until 1915.

*Council on Health and Public Instruction.*—Dr. H. M. Bracken, Minneapolis, to represent public health; Dr. W. B. Cannon, Boston, to represent defense of medical research; Dr. Henry B. Favill, Chicago, to represent public instruction; Dr. J. N. McCormack, Bowling Green, to represent organization, and Dr. W. C. Woodward, Washington, D. C., to represent legislation.

### Report of the Reference Committee on Sections and Section Work

Under this head Dr. J. E. Weeks, New York, Chairman, read the following report of the Reference Committee on Sections and Section Work:

*To the Members of the House of Delegates of the American Medical Association:*

ELECTION OF HONORARY AND ASSOCIATE MEMBERS

The Reference Committee on Sections and Section Work, to which was referred the recommendation of the Section on Nervous and Mental Diseases that Dr. Alfred Saenger, of Hamburg, Germany, be elected an honorary member of this Association; the recommendation of the Section on Ophthalmology that Mr. J. Herbert Parsons, F.R.C.S., be elected an honorary member of this Association; also the nomination by Dr. Frank Billings of Dr. James H. Honan, of Berlin, Germany, for election to honorary membership in this Association, desires to report favorably in regard to these recommendations.

J. E. Weeks, Chairman.

On motion of Dr. A. T. McCormack, Kentucky, the Secretary was instructed to cast the ballot of the House for the election of these honorary members, which he did, and they were declared duly elected.

Dr. Graham Lusk, New York City, was nominated for associate membership by the Section on Pathology and Physiology, and on motion, the nomination was confirmed.

A report from the Section on Stomatology was read, recommending that the following gentlemen be made associate members:

L. P. Bethel, Columbus, Ohio.
S. S. Chilcott, Bangor, Maine.
H. Logan Geary, Seattle, Wash.
F. W. Stiff, Richmond, Va.
J. P. Gray, Nashville, Tenn.
H. F. Cassel, St. Louis.

On motion, the recommendation was concurred in.

### Resolutions on Sex-Hygiene

By unanimous consent of the House, Dr. Thomas D. Davis, Pennsylvania, presented the following preamble and resolution, from the American Federation for Sex-Hygiene, with the request for their formal adoption. They were referred to the Council on Health and Public Instruction.

Whereas, The necessity daily appears more imperative of protecting innocent American women and children against infection by the social diseases, syphilis and gonorrhea; and

Whereas, There is ample evidence of a belief deeply grounded among the laity that sexual indulgence is necessary to the health of the normal man; and

Whereas, There exist, in consequence, widely differing and double standards of morals and of physical health for the male and female sexes, that lead directly to the disease and death of many of our women and children; be it

*Resolved,* That the American Medical Association, through its House of Delegates, hereby presents for the instruction and protection of the lay public the unqualified declaration that illicit sexual intercourse is not only unnecessary to health, but that its direct consequences in terms of infectious disease constitute a grave menace to the physical integrity of the individual and of the nation.

Robert N. Willson, Secretary Pro Tem.

### Report of the Board of Trustees

Dr. M. L. Harris, Chairman of the Board of Trustees, presented the following report:

*To the Members of the House of Delegates of the American Medical Association:*

The Board of Trustees respectfully returns to the House of Delegates the report of the Committee on Davis Memorial, which was referred to it, for the reason that the committee is a committee of the House of Delegates, and the Board of Trustees has no power to accept resignations of its members, nor to fill vacancies.

M. L. Harris, Chairman.

On motion of Dr. Edward Jackson, Colorado, the resignations of the Chairman and Treasurer of the Davis Memorial Committee were accepted, and the President instructed to appoint their successors.

### Special Journals to Be Established

Dr. Harris, speaking for the Board of Trustees, said that as is known, there is published at The Journal office the *Archives of Internal Medicine.* This was done at the request and petition of members of the Section on Practice of Medicine of the American Medical Association, and the Board of Trustees had been petitioned by two other sections to publish similar journals for their benefit, namely, a journal devoted to surgery and a journal devoted to pediatrics. While the Board of Trustees has full authority under the By-Laws to do this, the board would like the approval of the House of Delegates before undertaking the extension of this work. These journals would not interfere in any way with The Journal of the American Medical Association. They would be journals of an entirely different character. These journals would not be issued immediately, but, as soon as the Association had facilities in its new building, the matter would be taken up.

Dr. Frank Billings, Illinois, moved that the Board of Trustees be empowered, as soon as the printing facilities of the Association would permit, to publish these two special journals.

This motion was seconded by several.

Dr. Edwin Walker, Indiana, moved to amend by adding the words, "provided there shall be no expense to the Association."

The amendment was seconded and accepted.

Dr. C. E. Cantrell, Texas, speaking for the Board of Trustees, said it looked as though these journals would be self-sustaining, and he did not think the House of Delegates should bind the Board of Trustees too closely in beginning the publication of such journals.

Dr. Edwin Walker, Indiana, did not think the Board of Trustees should go into a publishing enterprise which might cause the Association to lose money.

Dr. J. Riddle Goffe, New York City, agreed with Dr. Walker, and said he had found from his experience in medical journalism that medical journals did not pay very well. He thought the Board of Trustees, before entering into such an arrangement, should be guaranteed by the Sections against loss from the publication of these journals.

Dr. M. L. Harris, Illinois, said the Association had not lost anything yet. One of the objects of the Association was to publish things which were for the benefit of the profession, and the Board of Trustees had been asked to do this for the benefit of the profession.

Dr. Mack Rogers, Alabama, asked whether the publication of the *Archives of Internal Medicine* had been a success.

Dr. Harris replied that it had been successful in every way.

Dr. A. T. McCormack, Kentucky, said he had had some experience in medical journalism recently, and those who had been engaged in the practice of medicine for a long time had realized for many years, owing to the varied character of the advertisements carried by most medical journals, and the dangerous character of the advertisers, that financial losses were frequent, because the profession failed to support and appreciate those journals. In recent years many medical journals had not carried those advertisements. These two proposed journals would carry none, and every physician interested in surgery or pediatrics could no more fail to have such journals in their offices than men who were engaged in original research would fail to take the *Archives of Internal Medicine.* For this reason the Board of Trustees should be empowered to publish such medical journals without advertising, if they saw fit to do so. He favored the publication of clean cut, scientific journals of the class under consideration.

Dr. C. R. Woodson, Missouri, then moved as a substitute that the matter be referred to the Board of Trustees, with full power to act.

Seconded.

The President asked Dr. Simmons to speak on the subject. Dr. Simmons said: "There is nothing we can spend our money for to better advantage, if it is necessary, than in putting out the class of literature that is intended by the publication of the two journals mentioned. Those of you who take the *Archives of Internal Medicine* realize that it publishes a class of literature that no private publisher would think of undertaking in the form in which it is published. The Association has now a splendid printing plant and is able to do that work much cheaper than any private publisher could think of doing it. These two proposed journals, one devoted to surgery, and the other to pediatrics, would be high-class in every way. The argument is made that there are no journals, such as the German journals, in the English language that can be regarded as high-class which will publish long and exhaustive scientific articles devoted exclusively to surgical and pediatric subjects. I believe we can do nothing that will help scientific medicine in this country so much as the publication of high-class scientific journals that private publishers cannot publish, even though it may be done at a loss. It is not fair to say that the Trustees shall not start those journals unless they succeed. They will not succeed financially the first few months, and cannot possibly succeed unless payments are demanded in advance and are guaranteed. You cannot expect these journals to pay for the first year, but there is nothing which will help scientific medicine more than the publication of such journals as have been mentioned.

Dr. Edwin Walker withdrew his amendment with the consent of the seconder.

Dr. Woodson then renewed his motion, which was put and carried.

### Selection of Los Angeles as Next Meeting Place

Dr. I. C. Chase, Texas, moved that the regular order of business be set aside, and that the House of Delegates proceed immediately to consider the place of meeting for next year.

Seconded and carried unanimously.

Dr. M. L. Harris, Chairman of the Committee on Transportation and Place of Session, said the Committee had received invitations from Atlantic City, N. J.; Chattanooga, Tenn.; Buffalo, N. Y.; Los Angeles, California, and Louisville, Ky., but as there was not a majority of the members of the Committee present, the members present were not able to make any recommendation as to the next place of session, and thought it would be best for the House to decide.

Dr. Alexander R. Craig, Pennsylvania, moved that Los Angeles and Buffalo be placed in nomination, and a ballot taken.

Seconded and carried.

There were 119 votes cast, and of this number Los Angeles received 61, and Buffalo 58.

Los Angeles was declared to be the next place of session.

### Report of the Reference Committee on Amendments to the Constitution and By-Laws

Dr. Alexander R. Craig, Pennsylvania, Chairman, presented the following report of the Reference Committee on Amendments to the Constitution and By-Laws:

The Reference Committee on Constitution and By-Laws begs leave to submit the following supplementary report:

Since the presentation of its former report, the Committee has received the advice that the suggestion of the establishment of the Committee on Uniform Regulation of Membership originated with the Association of State Secretaries and Editors.

The Reference Committee, therefore, recommend that the Council on Health and Public Instruction be requested to continue the Committee, with such changes in its personnel as will fill the Committee with secretaries of constituent associations.

The Reference Committee considered the resolution offered by Dr. Dowling:

> WHEREAS, There are old and distinguished doctors in various states whose careers have adorned the profession;
>
> *Resolved*, That those who have been elected to honorary membership in the component state association shall be entitled to membership (honorary) in this Association on recommendation of the house of delegates of the component state association, bearing the signature of the president and secretary and the seal of the state association, provided the said doctor is a member of the Association in good standing, of not less than 10 years, and has been engaged in active practice for not less than 25 years.

They recommend that this resolution be referred to the Council on Health and Public Instruction.

The Committee recommends that authority be given the members of this Reference Committee to renumber chapters and sections in the By-Laws, as amended, should that prove necessary, and to correct any grammatical or typographic errors.

The Committee further recommends that Article 9, of the Constitution, be amended by striking out of Section 1 "and a treasurer." This amendment awaits the action of the House at the next annual session.

The Committee recommends that the House reconsider the action of this morning, in so far as to enable the change of the title of the Council on Health and Publicity to the title of the Council on Health and Public Instruction.

A. R. Craig, Chairman.

On motion, the report was adopted.

### Report of the Reference Committee on Reports of Officers

Dr. George W. Guthrie, Pennsylvania, Chairman of the Reference Committee on Reports of Officers, presented the following report:

Your Committee, to which was referred the communication of Dr. Williams, beg to report that commendation of the work of Dr. McCormack was embraced in a previous report of the Committee, advising that the good work go on.

George W. Guthrie, Chairman.

The President stated that no action was necessary on this report.

### Report of the Reference Committee on Hygiene and Public Health

Dr. C. S. Sheldon, a member of the Reference Committee on Hygiene and Public Health, read the following report:

*To the Members of the House of Delegates of the American Medical Association:*

#### OPTOMETRY DEPRECATED

The Reference Committee on Hygiene and Public Health, to which was referred a recommendation of the Optometry Committee of the Section on Ophthalmology, of last year, which resolutions deprecate the multiplication of optometry boards in the different states, and the appointment of non-medical and unqualified persons thereon, and which resolution further recommends the publication of the history of so-called optometry and optometry colleges, and the dissemination of such information, in regard to these so-called optometry colleges, and especially the furnishing of such information to medical societies and state medical boards, advise that these be approved.

#### FORM COMMITTEE ON PREVENTION OF BLINDNESS

The Reference Committee on Hygiene and Public Health, to which was referred a resolution of the Section on Ophthalmology, recommending the appointment of a "Committee on the Prevention of Blindness," recommends that the name of the present Committee on Ophthalmia Neonatorum be changed to that of the Committee on the Prevention of Blindness; and that the scope of said committee's work be correspondingly enlarged.

#### DISCOURAGE SUICIDE PUBLICITY

The Reference Committee on Hygiene and Public Health, to which was referred the resolution of the Section on Preventive Medicine and Public Health, in reference to publication by newspapers of the details of suicide, begs to report that the recommendation contained in the resolution seems, in some respects, inadvisable, at this time, and your Committee recommends the following resolution as a substitute:

> *Resolved*, That it is the sense of the House of Delegates of the American Medical Association that the publication of the details of suicide by newspapers is one of the potent causes of other suicides by the suggestive influence of such published details; and it is, therefore, recommended to the public press that the details of suicide be omitted from publication.

The Reference Committee on Hygiene and Public Health, to which was referred the resolution of the Section on Preventive Medicine and Public Health, which recommends the appointment of a committee to promote instruction in all literary colleges and normal schools on matters of public health, begs to commend the purpose of this resolution, and to recommend that it be referred to the Council on Health and Public Instruction.

#### VISUAL STANDARDS ADVISED

The Reference Committee on Hygiene and Public Health, to which was referred the resolution of this Section on Ophthalmology, which recommends that the American Medical Association, through its President, shall appoint a committee to confer with the Department of Commerce and Labor, and with the Marine Hospital Service, with a view of "establishing proper visual standards and tests to govern these public servants," recommends that the resolution be approved.

The Reference Committee on Hygiene and Public Health, to which was referred the recommendation of the Section on Ophthalmology for 1909, in reference to the formulation of a curriculum to better equip medical students and practitioners with a knowledge of "infectious diseases of the eye and its refractive defects," respectfully recommend the consideration of the work contemplated by this resolution be referred to the Council on Health and Public Instruction.

Respectfully submitted.

William N. Wishard, Chairman.

On motion the report was adopted.

### Report of the Reference Committee on Miscellaneous Business

The following report was presented:

*To the Members of the House of Delegates of the American Medical Association:*

The Reference Committee on Miscellaneous Business, to which was referred the resolution from Dr. S. S. Crockett, of Tennessee, asking endorsement of the Southern Medical Association as a branch of the American Medical Association, begs to report that while the committee is in sympathy with the request, we suggest, because sufficient data did not accompany the resolution, that this matter be deferred until a more formal application be presented, accompanied by the constitution and by-laws of the petitioning society.

Respectfully submitted.

T. A. Woodruff, Chairman.
Edwin Walker,
Ridgely B. Warfield,
E. A. Hines,
E. J. Goodwin.

On motion, the report was adopted.

### Report of Reference Committee on Legislation and Political Action

Dr. J. W. Clemmer, Ohio, Chairman of the Reference Committee on Legislation and Political Action, reported that only one item had been referred to the Committee, and this related to legislation on habit-forming drugs. This is a very important matter, requiring a great deal of time, attention and technical information. For this reason, the Committee recommended that the matter be submitted to the Council on Health and Public Instruction.

On motion, the report was adopted.

### Expressions of Thanks

Dr. Hubert Work, Colorado, introduced the following:

The House of Delegates, in behalf of the American Medical Association, desires to express its cordial appreciation and thanks to the Missouri State Medical Society for its hospitality and the cordial welcome extended to the Association in the masterful address of its President and to Dr. Moore;

To His Excellency, Governor Hadley, for his scholarly address, in which he showed himself conversant with and appreciative of the aims, desires and purposes of twentieth century medicine;

To Dr. Dorsett and his Committee on Arrangements;

To Mayor Kreismann for his official courtesies;

To the Committee on Ladies' Entertainment, which contributed so intelligently to the enjoyment of our lady guests;

To the press of the city and thousands of others who have contributed their quota toward the sum total of our happiness while guests in this city.

St. Louis has again demonstrated her world-wide reputation for hospitality to the stranger-guest, a reputation which was established beyond dispute at her World's Fair a few years since.

To the retiring officers of this Association the thanks of the House of Delegates are especially tendered. Their services have been intelligent, earnest, and at all times loyal to the best interests of the Association, to public health and to the elevation of scientific medicine.

This was unanimously adopted by a rising vote.

Dr. Alexander R. Craig moved that a vote of thanks be extended not only to the retiring officers, but to the officers who had conducted the meetings of the House of Delegates with so much impartiality and decorum. Seconded and carried.

Dr. H. G. Wetherill, Colorado, moved that a rising vote of thanks be extended to Dr. W. B. Dorsett, Chairman of the Local Committee on Arrangements. Seconded and carried unanimously.

Dr. Dorsett thanked the members of the House of Delegates for their words of praise and vote of appreciation.

As there was no further business to come before the meeting, on motion, the House of Delegates adjourned *sine die*.

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## *Members of the House of Delegates in Attendance*

ALABAMA—3
Mack Rogers.....Birmingham
W. H. Sanders...Montgomery

ARIZONA—1
Wm. V. Whitmore.....Tucson

ARKANSAS—2
E. Carson Hay...Hot Springs
Joseph T. Clegg..Siloam Spgs.

CALIFORNIA—3
H. Bert Ellis....Los Angeles
G. MacGowan....Los Angeles
Jos. L. Milton.......Oakland

CANAL ZONE MEDICAL ASSOCIATION—1
W. C. Gorgas..........Ancon

COLORADO—2
Edward Jackson.......Denver
Hubert Work..........Pueblo

CONNECTICUT—2
D. Chester Brown....Danbury
E. J. McKnight.....Hartford

DELAWARE—1

DISTRICT OF COLUMBIA—1
W. C. Woodward..Washington

FLORIDA—1

GEORGIA—2
Dunbar Roy ........Atlanta
Thos. D. Coleman....Augusta

HAWAII—1

IDAHO—1

ILLINOIS—9
C. S. Bacon.........Chicago
William F. Grinstead...Cairo
E. W. Weis..........Ottawa
J. L. Wiggins..East St. Louis
Stephen C. Glidden..Danville
John E. Allaben.....Rockford
Frank Billings........Chicago
W. E. Shallenberger...Canton
A. L. Brittin.........Athens

INDIANA—4
W. N. Wishard...Indianapolis
Edwin Walker......Evansville
A. C. Kimberlin..Indianapolis
C. H. McCully.....Logansport

IOWA—3
A. L. Wright.........Carroll
D. S. Fairchild.......Clinton
H. C. Eschbach........Albia

KANSAS—2
C. C. Goddard...Leavenworth
L. L. Uhls.......Osawatomie

KENTUCKY—4
W. W. Richmond.....Clinton
A. T. McCormack..........
.............Bowling Green
B. F. Van Meter..Lexington
J. W. Kincaid....Catlettsburg

LOUISIANA—2
Oscar Dowling ...Shreveport
C. Chassaignac..New Orleans

MAINE—1
A. D. Sawyer...Ft. Fairfield

MARYLAND—2
H. H. Young.......Baltimore
Ridgely B. Warfield.Baltimore

MASSACHUSETTS—6
J. B. Blake...........Boston
Horace D. Arnold.....Boston
Homer Gage........Worcester
O. J. Brown....North Adams

MICHIGAN—3
F. W. Robbins........Detroit
E. T. Abrams.....Dollar Bay
Wilfred Haughey.Battle Creek

MINNESOTA—2
Arthur Sweeney.....St. Paul
C. F. McComb........Duluth

MISSISSIPPI—2
J. W. Young........Granada
J. B. Bullitt.......University

MISSOURI—5
E. J. Goodwin......St. Louis
W. B. Dorsett......St. Louis
A. W. McAlester..Kansas City
J. D. Brummall.....Salisbury
C. R. Woodson.....St. Joseph

MONTANA—1
T. D. Tuttle.........Helena

NEBRASKA—2
W. J. Birkofer....Gottenburg
A. R. Mitchell........Lincoln

NEW HAMPSHIRE—1
John Z. Shedd..North Conway

NEVADA—1
O. P. Johnstone........Reno

NEW JERSEY—3
L. M. Halsey..Williamstown
C. R. P. Fisher..Bound Brook
W. F. Ridgway..Atlantic City

NEW MEXICO—1
G. K. Angle......Silver City

NEW YORK—11
J. Riddle Goffe.New York City
W. H. Thornton......Buffalo
V. C. Pedersen.New York City
J. E. Weeks...New York City
D. H. Murray......Syracuse
John O. Roe.......Rochester
Charles Jewett......Brooklyn
W T. Mulligan.....Rochester
E. H. Bartley......Brooklyn
Chas. Stover......Amsterdam
J. E. Sadlier....Poughkeepsie

NORTH CAROLINA—2

NORTH DAKOTA—1
Victor H. Stickney..Dickinson

OHIO—7
J. H. J. Upham.....Columbus
J. W. Clemmer.....Columbus
J. A. McCullam..Uhrichsville
Robert C. M. Lewis..Marion
E. O. Smith.......Cincinnati
B. H. Blair.........Lebanon

OKLAHOMA—2
L. A. Hahn...........Guthrie
J. A. Walker........Shawnee

OREGON—1
C. J. Smith........Pendleton

PENNSYLVANIA—9
Thomas D. Davis...Pittsburg
W. T. Williams...Mt. Carmel
Samuel Wolfe....Philadelphia
David S. Funk....Harrisburg
A. R. Craig......Philadelphia
G. W. Guthrie...Wilkes Barre
John B. Lowman..Johnstown
Wendell Reber....Philadelphia

PHILIPPINE ISLANDS—1

RHODE ISLAND—1

SOUTH CAROLINA—2

John L. Dawson...Charleston
Edgar A. Hines.......Seneca

SOUTH DAKOTA—1

R. D. Alway........Aberdeen

TENNESSEE—3

L. A. Yarbrough...Covington
S. S. Crockett......Nashville
B. D. Bosworth.....Knoxville

TEXAS—5

E. H. Cary...........Dallas
W. B. Russ......San Antonio
I. C. Chase.......Fort Worth
Frank Paschal...San Antonio

UTAH—1

A. A. Kerr....Salt Lake City

VERMONT—1

J. N. Jenne.......Burlington

VIRGINIA—3

W. E. Anderson....Farmville
J. Shelton Horsley..Richmond
T. C. Firebaugh.Harrisonburg

WASHINGTON—2

C. N. Suttner....Walla Walla

WEST VIRGINIA—2

C. S. Hoffman........Keyser
C. A. Wingerter.....Wheeling

WISCONSIN—3

Karl Doege.........Marshfield
C. S. Sheldon.......Madison

WYOMING—1

J. J. Monahan...Encampment

PRACTICE OF MEDICINE—1

Joseph A. Capps.....Chicago

OBSTETRICS AND DISEASES OF WOMEN—1

H. G. Wetherill, Denver, Colo.

SURGERY—1

Edward H. Ochsner...Chicago

OPHTHALMOLOGY—1

Thos. A. Woodruff....Chicago

LARYNGOLOGY AND OTOLOGY—1

D. B. Kyle......Philadelphia

PREVENTIVE MEDICINE AND PUBLIC HEALTH—1

J. H. White..New Orleans, La.

NERVOUS AND MENTAL DISEASES—1

H. H. Hoppe..Cincinnati, O.

STOMATOLOGY—1

G. V. I. Brown...Milwaukee

DISEASES OF CHILDREN—1

Chas. Douglas.........Detroit

DERMATOLOGY—1

Wm. Allen Pusey.....Chicago

PHARMACOLOGY AND THERAPEUTICS—1

C. S. N. Hallberg....Chicago

PATHOLOGY AND PHYSIOLOGY—1

W. L. Bierring..Iowa City, Ia.

U. S. P. H. AND M.-H. SERVICE—1

Surgeon G. B. Young..Chicago

U. S. NAVY—1

Surgeon James C. Pryor...
........Washington, D. C.

U. S. ARMY—1

Major M. W. Ireland......
........Washington, D. C.

# *Addenda*

The following reports of committees and officers were omitted because of limitations of space in The Journal, June 11, 1910, pages 1979, 1986, etc., from the report of the second meeting, Monday afternoon, June 6.

## Report of the Board of Public Instruction on Medical Subjects

*To the Members of the House of Delegates of the American Medical Association:*

The report of the Board of Public Instruction is brief. Plans for the systematic institution of a progressive scheme of instruction on topics relating to public health have been held in abeyance until the report is before you of a Committee on the Organization of a Council on Public Health, Publicity and Legislation under the chairmanship of Dr. C. A. L. Reed. The report of this committee will deal with the centralization and coordination of several committees under a specially organized council, which will eliminate the duplication of activities along similar lines as well as greatly reducing the expenditures for this work. The Board of Public Instruction on medical subjects also feels that a central bureau should be a constituent part of the central administration offices of the American Medical Association. From this center matters of great public interest could be disseminated. This board therefore, heartily concurs with the concentration plan to be suggested by the committee under the chairmanship of Dr. Reed.

In deference to the wishes of the Board of Trustees the work of the Board of Public Instruction on Medical Subjects has been held under advisement until this concentration plan shall have been considered and acted on by the House of Delegates. For this reason our program for the past year has been abbreviated. Two popular articles have been prepared and are now in press, one on "The Venereal Peril," the other on "Typhoid Fever." We are pleased to note, however, that there has been a general and most creditable endeavor on the part of several committees appointed by the House of Delegates, as well as that of the state organizations, to place before the lay world many topics of great educational value. Also many timely articles have appeared in the current magazines which have created widespread interest, and in one instance at least a large endowment was created for the study of hookworm disease, thus popularly exploited. Unfortunately, much of the initiative in the great progressive health movements has come from the lay public, the physician occupying the position of an aid rather than an originator.

The recent tendencies, however, for physicians to participate, within ethical bounds, in matters of public interest has been most creditable and we believe that a most optimistic forecast is justifiable as to the progress of this work. Careful organization and systematic endeavor are necessary to bring it to the best issue. Respectfully submitted,

John G. Clark, Chairman.

## Report of the Committee on Nomenclature and Classification of Diseases

*To the Members of the House of Delegates of the American Medical Association:*

Your Committee on Nomenclature and Classification of Diseases beg leave to submit the following report, which, it must be confessed, is hardly more than a report of progress. It seems impossible to do more at present, for at the time of our last report we had reached a point in our work where it was necessary to wait for the revision of the International Classification of Causes of Death. It was confidently expected that the French version would reach the Bureau of the Census last October, but it was not received there until some time in January. Dr. Wilbur, the bureau's chief statistician for vital statistics, at once began the labor of translation, but he encountered points of uncertainty which made it necessary for him to correspond with M. Bertillon; hence further delay. It was not until April 21 that a copy of the translation was received by the undersigned, and it was incumbent on him to return that copy to Dr. Wilbur within a few days. Only during the week which is to end on May 7 did he obtain a copy that he could keep—manifestly too late for him to consult his colleagues with regard to it. This unfortunate delay is in no sense to be imputed to Dr. Wilbur, who, indeed, deserves the thanks of the profession for the excellence of the work which he has produced.

Your committee are more than ever inclined to recommend the adoption of the Bellevue Nomenclature. It was carefully revised about a year ago, and it is now again in process of revision, the numerals of the revised International Classification being assigned to its titles. A Latin list seems necessary in addition, and it is our opinion that, with very slight changes, the excellent list now employed by the Bureau of Medicine and Surgery of the Navy will supply that want. The adjustment, however, will require considerable work. In addition, a list of injuries according to their nature, regardless of the mode of their production (which is all that the International Classification takes cognizance of), will have to be prepared. Respectfully submitted,

Frank P. Foster, Chairman.

On motion, the report was referred to the Reference Committee on Miscellaneous Business.

## Report of the Director of Post-Graduate Study

*To the Members of the House of Delegates of the American Medical Association:*

I herewith submit a report of the progress of the work of the course of post-graduate study for the year just closing.

On account of unavoidable delay on the part of the Director, the manuscript for the outline for the third year of the course was somewhat late in getting into the hands of the printer. But with the aid of the efficient assistant to the General Secretary, and of The Journal press, outlines were distributed to the waiting societies the latter part of September. Many of the societies that had taken the preceding year's course, as well as a large number of new societies, were ready to begin active work for the year.

Quite a number of societies begin the year's work the first of the calendar year, just after the election of officers. We noted at that time a rather marked increase in the demand for outlines, many of the new officers trying in this manner to arouse an interest and enthusiasm in their societies.

THE JOURNAL press printed two thousand outlines in blank form, the remainder of the supply for the year, four thousand, being the program of the Warren County (Kentucky) Society. The Warren county programs were used again this year, as the experience of the preceding years showed that the plans and purposes of the course of study were more readily understood by those not familiar with the work by using this program than through the outlines in blank form.

The outline for each weekly meeting has been printed in THE JOURNAL begining the first of September as was done last year. The value of this is apparent, for many of the requests state that the outline had been seen in THE JOURNAL.

Some of the societies that had tried the course the first or second year have given it up on account of the difficulty in getting the members to attend regularly, but on the other hand a very much larger number have taken up the work this year, showing for the year a marked increase in the number of societies. In most societies they also report that a much larger percentage of the members attend regularly the weekly and monthly meetings, indicating that the number of members has increased materially during the year.

The large number of states included in the list of societies shows that the interest in the course is rather widespread, but we are still convinced by the large number of requests coming in from the states and counties visited by Dr. McCormack that the man who knows the work from practical experience is best able to show to others the value of the course of study and arouse in them an interest in it.

One of the general topics for discussion this year is "Pharmacology and Therapeutics." In the program for this month one of the weekly meetings is devoted to a study of the organization, objects and rules of the Council on Pharmacy and Chemistry of the American Medical Association. In the Warren county program we also planned a meeting with the local pharmaceutical society, discussing the Admissions and Rejections to the U. S. P. We have also distributed with the outline the report of the Committee on Revision of the U. S. P., requesting each society to discuss these topics with the druggists. Reference is also made to the publications of THE JOURNAL press on these kindred subjects.

We see that in many of the state and private medical journals during the year, and in the meetings of the county secretaries of some of the state societies, the value of a systematic course of study has been discussed. These facts, in addition to the large number of letters received from the secretaries and members of the societies following the course, show the wonderful increase in the interest and enthusiasm in the course of study and its practical application to the needs of a large number of societies both in the smaller towns and in the larger cities.

The outline for the fourth year will be printed and ready for distribution by the first of August, permitting all who desire to begin the work on the last year of the cycle by the first of September.

The very frank statements from a large number of county society officers as to the value of the course of study in bringing doctors together and causing them to adjust in a satisfactory way their little personal differences, in addition to the value in a professional way derived from the actual study and thought given the medical topics, show that this has been by far the most successful year of the course of study.

Very respectfully,
JNO. H. BLACKBURN, Director.

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## Report of the Council on the Defense of Medical Research

During the past year the Council on the Defense of Medical Research has in the main been carrying out the program suggested by the work of its first year. This program has consisted in furthering the adoption of rules in medical laboratories, the publication of papers, and the distribution of information regarding the work of the Council and the data collected by it.

The regulations concerning the care of animals in laboratories have now been formally adopted by the faculties of 52 schools, including all of the large institutions, out of 77 schools that have reported the use of animals for experimental purposes. In several states all of the medical laboratories within their borders are now governed by these regulations. It is probable that soon they will be adopted everywhere in laboratories in which animal experimentation is carried on.

During the past year the following papers showing the relations between animal experimentation and practical medicine and surgery have been published in THE JOURNAL of the American Medical Association and reprinted as pamphlets for general distribution:

Vaccination and Its Relation to Animal Experimentation. Jay Frank Schamberg.
Animal Experimentation and Tuberculosis. E. L. Trudeau.
The Rôle of Animal Experimentation in the Diagnosis of Disease. M. J. Rosenau.
Animal Experimentation and Cancer. James Ewing.
The Ethics of Animal Experimentation. James Rowland Angell.
Animal Experimentation. The Protection it Affords to Animals Themselves and Its Value to the Live-Stock Industry of the Country. Veranus A. Moore.
The History, Prevalence and Prevention of Rabies and Its Relation to Animal Experimentation. Langdon Frothingham.
The Importance of Animal Experimentation in the Development of Our Knowledge of Dysentery, Cholera and Typhoid Fever. Mark Wyman Richardson.
Animal Experimentation in Relation to Our Knowledge of Secretions, Especially Internal Secretions. S. J. Meltzer.
Animal Experimentation in Relation to Protozoan Tropical Diseases. Harry T. Marshall.
Modern Antiseptic Surgery and the Rôle of Experiment in Its Discovery and Development. W. W. Keen.

Two other papers of general interest, one by Dr. Charles W. Eliot, entitled, "The Fruits of Medical Research with the Aid of Anesthesia and Asepticism," and another by Dr. W. W. Keen, entitled, "What Vivisection Has Done for Humanity," have been reprinted in pamphlet form for general distribution.

The collection of papers given above does not complete the series which the Council has arranged to have published. When the series is finished it will form a unique collection of data which have never been so thoroughly gathered together before. In most instances the statements are the testimony not only of experts in their several fields, but of the original observers to whose work constant reference is made. The scholarly character of the papers assures them, therefore, permanent value. The data thus collected should be serviceable for many years wherever agitation against animal experimentation may arise.

The work of the Council and the information collected in these papers have been given publicity in the daily press. The education of interested people is doubtless the next stage in the effort of the Council to develop an intelligent attitude toward animal experimentation. In this connection the formation of a society of laymen for the promotion of medical research has been discussed; during the coming year such a society will probably be further considered and possibly brought into organization.

Agitation is now most active in the State of New York. The Council has aided in meeting this agitation both by applying methods of publicity and by cooperation of the members of the Council with the New York medical organization. Since a larger number of legislatures meet next year than have met this year the chances are in favor of more attempts at hostile legislation than have this year appeared. The plans of the Council to control animal experimentation within professional lines will do much, it is believed, to offset the demands of the agitators for legislation which provides for meddlesome interference by uninstructed laymen.

W. B. CANNON, Chairman.
JOSEPH A. CAPPS,
DAVID L. EDSALL,
SIMON FLEXNER,
HARVEY CUSHING,
REID HUNT,
HERBERT C. MOFFITT.

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## Report of the Committee on Patents and Trade-Marks

*To the Members of the House of Delegates of the American Medical Association:*

Your Committee, created at the Chicago meeting in 1908 to study the question of process and product patents on materia medica products and the advisability of securing the enactment of a bill to prohibit the patenting of materia medica products and also to prevent the registration of names of medicines as trademarks, reported last year at Atlantic City its conclusions—that the abolition of product patents on materia medica products was impracticable for reasons given in the report. It was recommended, however, that a committee be continued to keep track of legislation on the subject of patents, and if necessary, cooperate with bodies like the American Bar Association who are interested in the improvement of patent laws, and to attempt to secure court decisions against the improper use of names of medicines as trademarks by manufacturers if such action should seem advisable to the Committee and to the Trustees of the Association. In accordance with this recommendation, the original committee was continued.

During the year, your Committee has kept itself informed of measures proposed and introduced in Congress to change the present patent laws, but nothing has developed that has called for action by your Committee. No doubt changes will be proposed in the future, and all legislation on this subject should be carefully watched. This matter, however, is properly the function of the Committee on Legislation and we recommend that this subject in the future be referred to this Committee.

In our report last year, we referred to some of the questions relating to trademarks that are still in a state of confusion in the court decisions. As bearing on the right of manufacturers and owners to retain the use of names of products that have ceased to be brands, one decision of great importance has been rendered by the Supreme Court during the year in the case of Saxlehner versus Wagner, denying the claims of the petitioner to the exclusive use of the name "Hunyadi." The respondents manufacture a bitter water in Cincinnati and label it "W. S. Wagner's Sons Carbonated Artificial Hunyadi, Conforming to Frescenius' Analysis of Hunyadi Janos Springs." The petitioners sought an injunction against the use of "Hunyadi." The Court says that "there was no unfair competition and no fraud. The plaintiff had no patent for the water and the defendants have a right to reproduce it as nearly as they can. They have the right to tell the public what they are doing and to get whatever share they can in the popularity of the water by advertising that they are trying to make the article and think that they succeed. If they do not convey, but on the contrary, exclude the notion that they are selling the plaintiff's goods, it is a strange proposition that when an article has a well-known name that they have not a right to explain by that name what they imitate. By doing so, they are not trying to get the good will of the name but the good will of the goods. Although the application is different, the principle seems to be similar to the rule that when a patent has expired, descriptive words or even an arbitrary or personal name by which it has become known may be used if sufficient precautions are taken to protect the public from being deceived."

It would follow that a mixture whose composition is secret or a product on which the patent has expired could be imitated and described by the use of a name that has become identified with it, provided that the public is not deceived as to origin of the article.

While this decision does not fully cover the important question referred to last year as to the right of the manufacturer to trademark a catchy name which he then tries to identify with his product so that it may become in reality specific, it does show the tendency to the court to prevent any such evasion of the general principles of trademark rulings.

Your committee remains convinced of the correctness of the conclusions presented last year that the evils of trademarked names are to be remedied by the courts rather than by the enactment of new laws. However, it did not seem advisable to the Trustees of the Association that we should take the initiative in a suit for the purpose of getting a decision on these questions and no cases have arisen that have required our cooperation. This work must be done in the future and can properly be left to the Committee on Legislation, or to the Council on Legislation, etc., which has been proposed as a substitute for the present Committee. We therefore recommend that this subject also be so transferred and that the Committee be discharged.

Respectfully submitted,
C. S. Bacon, Chairman,
O. T. Osborne,
A. B. Cooke,
P. M. Jones,
H. C. Wood, Jr.

## Report of the Committee on the Davis Memorial Fund

*To the Members of the House of Delegates of the American Medical Association:*

This is the first time the chairman of your committee ever appeared before a representative body of his profession with a sad heart. Each of the years since the appointment of this committee he has sought to actively interest its members in a project which seemed to him simple, comparatively insignificant and easy of execution. His plan of operation advised was to ask the profession of each state to obtain from its State Society or Association the appropriation of half the sum which seemed sufficient, dependent on the state member of this committee to raise an equal amount by private solicitation. This plan worked so well in his own state that he was encouraged to urge its adoption, especially since in this way every member of the profession in the United States could be considered as sharing in a voluntary offering of remembrance to the great founder of the American Medical Association. For reasons which need not be referred to here, Massachusetts had little sympathy and gave little support to our Association for much the larger part of its existence, yet my plan worked so well that it was easy to secure nearly double the amount of money which was thought to have been her share. For years New York was torn asunder by contentions which made the great body of the profession of the state indifferent to or in opposition to the Association. Yet through the kindly offices of Dr. Bryant and Dr. Wyeth a few members of the profession in New York City gladly contributed five hundred dollars. An equal sum will probably be appropriated by the state organization. Your committee had every right to expect the State of Illinois, and especially the great city of Chicago, the home of the Association and the almost life-long center of Dr. Davis' public activities, would furnish much more than its quota in commemoration of, in many respects, its first citizen. Great as Dr. Davis was as a medical practitioner, teacher and leader in his profession, many have felt that his public services to his city and state warranted the independent action of its citizens in commemorating him in imperishable bronze looking out on the lake, the waters of which, largely through his foresight and energy, have been given in ample and permanent supply to the thirsty city. It was supposed easy to raise $15,000 in Chicago alone for this purpose. Your treasurer will tell you that beside his own generous gift, that of Dr. Quine, and the Davis Memorial Service Fund, almost nothing has been done where most was expected.

The first year that your committee was appointed was marked by the unprecedented disaster to the great city of San Francisco, and it was felt that every effort should be made by our profession to relieve its suffering. Although very many wealthy members of our profession in San Francisco were utterly ruined financially, they, for the most part, heroically refused assistance, and the $5,000 voted by our Association for this purpose was refused with thanks. The last contribution received for the Davis memorial was from Dr. R. F. Rooney, member of our committee from California, in the sum of $130, regretting that this amount was so little, owing to the great calamity which had befallen them. Dr. Anders, member of our committee from Pennsylvania, makes report of progress with a contribution of about $400. Dr. Jepson of Iowa reports that his state society this year proposes to contribute $300. At the last meeting of the Association it was voted to furnish $5,000 of a total of $25,000.

At the beginning of this year I asked for a renewed effort of our committee to finish the work so long delayed. I reinforced the appeal by writing to each one of the presidents of the state societies and associations for a cooperative effort, with the request that all the funds so raised should be sent directly to our treasurer and not to me. I have asked Dr. Billings for a statement to be incorporated in this report, which is appended.

I must confess to a great disappointment. No man could present a more worthy object, not so much for the solicitation of funds as the request for the privilege extended to a great profession of making a public recognition of its really great and worthy founder. This no one questions. Again, no one holds more highly than myself the honor and generous attributes of the medical profession, which largely under the leadership of Dr. Davis' co-association work has placed America in the acknowledged front rank of medical attainment in the world. The medical journal of this Association, largely established by Dr. Davis' untiring effort, who without compensation for years was its first editor, is the acknowledged leader in national and international medical journalism.

A brief analysis of our treasurer's report shows that only six states have made contribution to the fund. This House of Delegates, representatives of all the states, subscribers to the *Journal*, numbering over fifty thousand, the great army of our profession which is in excess of one hundred thousand in the United States—all know that this neglect is little less than a disgrace.

The inevitable conclusion to which the chairman of your committee has arrived is that, notwithstanding his persistent and continued efforts, he is unfitted for the position to which you elected him and in which he has gladly served. He recognizes that it would have been far more fitting to have had the initiating of the movement arise in the great city which Dr. Davis so well represented. He regretfully tenders to you his resignation with the request that some leading member of the profession in Chicago may be carefully selected to complete the work which in his hands has been, if not a failure, a bitter disappointment.

## REPORT OF THE TREASURER OF THE N. S. DAVIS MEMORIAL FUND

FRANK BILLINGS, Treasurer

| | | |
|---|---|---|
| Aug. 1, 1906—Amount deposited in the Northern Trust Company Savings Department | | $ 192.50 |
| Interest at 3 per cent. to Jan. 1, 1907 | | 2.40 |
| Interest at 3 per cent. to July 1, 1907 | | 2.91 |
| July 1, 1907—Deposited following contributions: | | |
| Henry O. Marsh, Sherman, Tex | | 100.00 |
| J. M. Anders, Philadelphia, Pa | | 165.84 |
| Philip Mills Jones, California | | 5.00 |
| Aug. 3, 1907—Deposited: | | |
| R. C. Cabot, Boston | | 10.00 |
| Treasurer of Massachusetts Medical Society | | 300.00 |
| H. L. Burrell | | 25.00 |
| James B. Ayer | | 10.00 |
| C. J. Blake | | 10.00 |
| Thomas E. Cunningham | | 10.00 |
| Joel E. Goldthwaite | | 10.00 |
| F. B. Harrington | | 10.00 |
| J. J. Putnam | | 10.00 |
| M. H. Richardson | | 10.00 |
| F. C. Shattuck | | 10.00 |
| Edward H. Stevens | | 10.00 |
| J. C. Warren | | 10.00 |
| J. A. Gordon | | 5.00 |
| R. W. Lovett | | 5.00 |
| J. E. Somers | | 5.00 |
| A. O. Squier | | 5.00 |
| Theobald Smith | | 5.00 |
| George B. Shattuck | | 5.00 |
| W. D. Swan | | 2.00 |
| E. G. Cutler | | 5.00 |
| A. P. Clark | | 5.00 |
| A. T. Cabot | | 5.00 |
| J. C. Monroe | | 10.00 |
| George G. Monks | | 10.00 |
| Henry O. Marcy | | 100.00 |
| Morton Prince | | 5.00 |
| Aug. 6, 1907—Balance from the Chicago Davis Memorial Service Fund | | 367.00 |
| Sept. 4, 1907—W. G. Mixter | | 5.00 |
| Interest at 3 per cent. to Jan. 1, 1908 | | 17.84 |
| May 14, 1908—Dr. W. E. Quine | | 100.00 |
| Texas State Medical Association | | 17.75 |
| May 29, 1908—Joseph D. Bryant | | 250.00 |
| May 30, 1908—J. M. Anders | | 223.47 |
| June 1, 1908—Frank Billings | | 100.00 |
| Interest at 3 per cent. to July 1, 1908 | | 23.70 |
| July 11, 1908—Dr. John Wyeth | | 250.00 |
| Contributed by: | | |
| W. M. Brickner | $ 3.00 | |
| F. Tilden Brown | 15.00 | |
| F. E. Beal | 5.00 | |
| H. S. Houghton | 5.00 | |
| H. Heiman | 5.00 | |
| H. J. Boldt | 10.00 | |
| I Adler | 15.00 | |
| W. Meyer | 25.00 | |
| J. E. Janvrin | 5.00 | |
| W. H. Luckett | 5.00 | |
| W. Van V. Hayes | 5.00 | |
| J. A. Bodine | 5.00 | |
| C. H. Chetwood | 5.00 | |
| Robert Abbe | 20.00 | |
| A. E. Davis | 5.00 | |
| J. A. Fordyce | 25.00 | |
| R. T. Morris | 5.00 | |
| Edwin Beer | 5.00 | |
| J. J. McPhee | 5.00 | |
| H. Holbrook Curtis | 5.00 | |
| Dr. Alfred Meyer | 5.00 | |
| Total | $183.00 | |
| To balance | 67.00 | |
| Check | $250.00 | |
| Interest at 3 per cent. to Jan. 1, 1909 | | 32.70 |
| Interest at 3 per cent. to July 1, 1909 | | 33.19 |
| Sept. 17, 1909—J. M. Anders | | 7.59 |
| Interest at 3 per cent. to Jan. 1, 1910 | | 37.46 |
| May 12, 1910—Deposited | | 130.00 |
| May 12, 1910—Oklahoma State Medical Society | | 100.00 |
| Total | | $2,771.35 |

The following letter is herewith transmitted to the House of Delegates:

May [illegible], 1910.

DR. HENRY O. MARCY,

Chairman of the Davis Memorial Fund, Boston, Mass.

*Dear Sir:*—I herewith present you, as chairman of the Davis Memorial Fund, my resignation as treasurer. I desire my resignation to take effect at the time of the meeting of the American Medical Association at St. Louis in June. I shall be ready to transfer the fund of the memorial to my successor as soon as he shall have been elected.

Very truly yours,
FRANK BILLINGS.

Respectfully submitted.
HENRY O. MARCY,
Chairman.

May 10, 1910.

## Report of the Committee on Insignia

*To the Members of the House of Delegates of the American Medical Association:*

Your special committee which was instructed at the Atlantic City meeting in June, 1909, to devise a suitable insignia for the Association to take the place of the present one, begs leave to submit the following report:

1. It is perfectly apparent that it is desirable, if not necessary, to change the present insignia which contains a Red Cross. In 1906, representatives from the different civilized governments of the world met at Geneva for the purpose of amending the original article of the Geneva Convention for the amelioration of the condition of the wounded in the armies in the field. The United States was represented at this convention and is one of the signatory powers.

Article 27 of this Convention provides that "the signatory powers whose legislation may not now be adequate engage to take or recommend to their legislatures such measures as may be necessary to prevent the use, by private persons or by societies other than those upon which this convention confers the right thereto, of the emblem or name of the Red Cross or Geneva Cross, particularly for commercial purposes by means of trademarks or commercial labels."

There is no law in the United States under which an organization which was using the Red Cross as an insignia can be compelled to discard it, but it is believed that this powerful organization should be one of the first to assist the government in carrying out its obligations. It is also believed that any action this Association may take in discarding the Red Cross in conformity to the 1906 Geneva Convention will be a powerful factor in encouraging other organizations to do likewise. During the present session of congress a bill was introduced, and will probably become a law, attaching a penalty to any unauthorized organization using the Red Cross. While a paragraph may be inserted in this bill exempting organizations from its penalty which used this insignia prior to 1906, it is hardly believed the American Medical Association desires to avail itself of this section.

2. In getting up a new insignia your committee believes that it should convey a definite meaning both in colors and design. It was easy to determine that Scarlet and Gold have been the medical colors since ancient times, and your committee is in harmony that these colors should be the basic ones of the insignia.

3. It was also determined by your committee that the true ancestral symbol of the healing art is the Knotty Rod and serpent of Æsculapius.

4. There has been some disagreement by the members of your committee in assembling the Knotty Rod and serpent and Scarlet and Gold colors into a suitable insignia. One member of the committee, Dr. Cantrell, believes that the Eagle should play an important part in this insignia, while the other four members of the committee, Drs. Gerhard, Wolfe, Taneyhill and Ireland, believe that the insignia should be constructed without the Eagle.

Samples of both designs have been distributed and the question of deciding which shall be adopted is left to the members of the House of Delegates with the recommendation of the majority of the committee that the insignia without the Eagle be accepted.

M. W. IRELAND,
G. LANE TANEYHILL,
SAMUEL WOLFE,
SAMUEL P. GERHARD,
C. E. CANTRELL.

## Report of the Committee on Relief Fund and Tuberculosis Sanatorium for Physicians

*To the Members of the House of Delegates of the American Medical Association:*

The profession of medicine exists to assist those who need the help of others; and to conserve whatever of comfort and usefulness is possible for impaired lives. Now that those engaged in each craft or profession generally acknowledge the tie of a common occupation as binding them to organizations for the assistance of their less fortunate comrades, it is appropriate that the American Medical Association should carefully consider what can be done for the unfortunate and disabled members of the medical profession.

At a time when the whole people is being aroused to a campaign against tuberculosis, it is also proper that the American Medical Association consider with care what may be done to help the recovery of physicians stricken with this disease; to remove even a suspicion of danger that the diseased physician may be a carrier of the disease, and to establish a center for investigation and education with regard to tuberculosis that may make the whole profession more efficient in its warfare against this plague. Your Committee therefore asks the careful attention of the House of Delegates, and of the Association at large, to the questions it has been considering.

To secure such data as were available to throw light on the existing situation with regard to the relief of indigent and disabled members of the profession, and those dependent on them, and to collect data regarding the prevalence of tuberculosis in the profession, the following circular letter was sent to each state medical society, and to the medical journals published by such societies:

*To the Secretary of Each State and County Medical Society, and Other Interested Members:* At the last meeting of the American Medical Association at Atlantic City the following report of the Committee on Miscellaneous Business was adopted:

> "The committee recommends that the President of this Association appoint a committee of five members to inquire into the desirability and practicability of establishing under the auspices of the American Medical Association a fund for the assistance of physicians disabled by sickness, and for a sanatorium for the treatment of such members of the Association as may be afflicted with tuberculosis or similar diseases; such committee to report to the House of Delegates at the next annual meeting of the Association."
>
> As basis for wise action the committee urges that the officers of state and county medical societies, and others interested in the subject, should at the earliest possible date forward to the secretary of the committee, Dr. A. C. Magruder, Colorado Springs, Colo., answers to the following queries, with some account of any special cases that seem to illustrate the special need for provision for disabled members of our profession:
>
> 1. Is there any provision by your state medical society, or local society, for the care of destitute and disabled physicians and those dependent on them? If so, how is such care provided?
> 2. What number of instances of special need for such assistance (or sanatorium treatment), have arisen in your locality within the last five years, and what number of your members need such assistance now?
> 3. About how many members of your county medical society are at present afflicted with tuberculosis or similar diseases; or have, within the last five years, died or withdrawn from professional work on account of such disease?
>
> It is earnestly requested that this matter be brought before each county and state society at its next regular meeting, and that the desired information be furnished our committee at the earliest possible date.

Compared with the number of state and county medical societies the number of replies has been meager, but they represent 17 states scattered in all parts of the country from Massachusetts to Nevada, and from North Dakota to Texas. They include such information as is obtainable from the local organizations in our largest cities, as well as reports from some of the small county societies of country districts. While, with longer time at our disposal, a larger correspondence might have secured a greater mass of material, it is not likely that this would have given a different, or much more definite, impression with reference to existing conditions than is now available. As has been pointed out by some of our correspondents, there exist no records on which complete returns could be based.

From the data now at our disposal it appears: Except in three of our largest cities there are no organizations anywhere in this country to care for destitute and disabled physicians and those dependent on them; or which have at their disposal permanent funds devoted to that purpose.

In the cities alluded to the organizations, which have been in existence for periods of thirty to fifty years, have accumulated considerable funds, the interest of which is fully employed in affording the relief for which the associations were organized. One of these has invested funds amounting to $30,000, and has given assistance to fourteen beneficiaries and two annuitants. In one case the assistance given the widow of a physician amounted to $200 per year for fifteen years.

The replies from several isolated localities show that cases of need, so urgent as to appeal strongly to the sympathies of colleagues of the local profession, occur in every part of the country. The average is about four reported instances to each ten county societies.

The responses to the third question of the committee show, after excluding parts of the country sought for the climatic treatment of tuberculosis, that in ten county societies seven instances of tuberculosis are reported as now existing, or known to have occurred in the recent past, among the members. But it should be noted that none of the larger county medical societies attempts to answer this question. The statement is made that no data exist on which an intelligent answer could be based.

As bearing upon the frequency of tuberculosis among physicians, the secretary of your committee recently attempted to ascertain the number of physicians who had come to Colorado on account of tuberculosis. Of 504 who replied to his inquiries 86, or over 17 per cent., had removed to that state on account of tuberculosis affecting themselves. Inquiry of three of the larger sanatoriums in Colorado, which are under strictly medical control, showed that among 2,391 male patients treated for tuberculosis, 31 were physicians, or one in every 77.

If we take the conservative estimate of one in every 350 physicians incapacitated for their work by tuberculosis, it would appear that there are constantly 100 of our members who need the help of a sanatorium. They would have an increased chance for recovery, an improved expectation of life by sanatorium treatment under the best climatic conditions. And in the total medical profession of the country there would be about 300.

The prolonged course of tuberculosis, the delusive hope cherished by consumptives of a speedy restoration, the tendency to premature confidence, taking beginning improvement for practically complete cure, the demoralizing influence of self-treatment on most physicians affected with this disease, make it extremely important that the physician stricken with tuberculosis should have the opportunity and the discipline of a sanatorium, supported and administered by the medical profession. And this need is quite irrespective of the ability of the patient to pay for his care and maintenance.

In the great cities or among the scattered population of remote country districts, wherever men suffer from the accidents of mines or machinery, or women face the ordeal of childbirth; wherever acident, epidemic influence, or the unfavorable conditions of daily life entail mutilation, suffering, illness and death, are members of our profession, giving their first thought and their best effort to the assistance of the sick, rather than to provision for the emergencies which may overtake themselves.

If altruism, the broader application of a spirit of brotherhood, have any worthy place in the life of a civilized people, it is in providing for those stricken by accident or disease in the performance of their duty; who have been too much engrossed in taking care of others to provide for themselves. We encounter no finer characters than are sometimes found among physicians of good ability, complete training, and great industry, who have given their best efforts to help those who could do little or nothing in return, and persisted in them until the helper could no longer help. The medical profession can ill afford to neglect those whose character gives it the highest standing in the eyes of the world. The public can ill afford to ignore the claims of those who wear themselves out, or die, in its service—who do what is to be done without first stopping to demand security for compensation. To pension the soldier, the fireman, the teacher, the faithful servant of the corporation, and neglect the physician would show a low sense of the relative value of faithful services rendered.

We are convinced that if a responsible, widely-known, representative organization will undertake the care and administration of funds collected for this purpose, little difficulty will be found in obtaining from the more fortunate members of the profession, and from grateful patients and liberal laymen, all the money necessary for the relief of the comparatively few medical men rendered unable to meet the more severe emergencies of life. It is clear that the instances in which the physician must depend on financial assistance from others are so exceptional that in large parts of our country permanent funds for meeting these emergencies cannot be established and kept up, either by the local profession or the county or state medical societies.

What is needed is a central fund by which the needy physician in any locality can be afforded relief. The relief can be given through a local relief organization, or a county medical society, and safeguarded by requiring that a certain percentage of the amount expended shall be raised by the local medical organization. But many localities, many state societies, cannot establish relief funds; and no state society can guarantee the permanence and proper administration of such a fund so well as can the American Medical Association. The sanatorium care of the tuberculous is also impracticable for isolated local or state medical societies. It can best be carried out under the most favorable climatic conditions, where the extent of country served will give a comparatively constant number of patients.

We therefore recommend: That the House of Delegates authorize the appointment of a committee with adequate appropriation for the performance of its duty, to draw up and report to the House, a plan for the organization of a corporate body to receive and administer funds for the relief of physicians disabled by disease, or accident, or those dependent on them; and to establish a sanatorium for the treatment of physicians suffering from tuberculosis; such plan to conform in a general way to the following:

A. A majority of its governing body (trustees) to be chosen by the American Medical Association, a portion each year for overlapping terms. A minority of the governing body may be chosen by contributors to the funds.

B. The income should be derived from funds entrusted to the corporation for that purpose, rather than by a fixed tax on the members of the American Medical Association.

C. The funds to be expended with the cooperation of local organizations, under sufficient guarantee and on proper vouchers.

D. A sanatorium to be established for the treatment of physicians afflicted with tuberculosis where those able to pay for such treatment will be expected to do so; but where those unable to pay for it shall receive the same assistance.

E. Such sanatorium to be situated where favorable climatic conditions prevail, and equipped for the thorough scientific study and treatment of tuberculosis and allied diseases.

Edward Jackson, Chairman,
Jefferson R. Kean,
A. T. Bristow,
H. B. Ellis,
A. C. Magruder, Secretary.

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## Report of the Committee on Uniform Regulation of Membership

*To the Members of the House of Delegates of the American Medical Association:*

This committee was created at the Chicago meeting in accordance with a recommendation made by the General Secretary. At the Atlantic City Session in 1909, the committee presented a lenthy report consisting mainly of tabulated data regarding the regulation of membership in the various state associations. The committee recommended that all of the state associations be requested to make their fiscal year conform to the calendar year and to request their component county societies to adopt the same rule, that the committee be continued, that it be increased by the addition of four state secretaries and that it be instructed to continue its work of securing uniform regulation of membership by county and state societies.

The House of Delegates in addition to the work originally assigned to this committee, also referred to it the resolution of Dr. W. H. Sanders of Alabama, regarding the revision of the constitution and by-laws and instructed the committee to report to the House of Delegates in 1910 such amendments as it might deem advisable. In addition, the question of uniform regulations for the disciplining of members was also referred to the committee. We therefore beg to submit the following report, which is presented in three sections:

(1.) Recommendations for amendments to the constitution and by-laws.

(2.) Recommendations for amendments to the model constitution and by-laws for county and state societies regarding the disciplining of members.

(3.) Additional material, discussion and recommendations regarding the uniform regulation of membership.

## I

## RECOMMENDATIONS FOR CHANGES IN THE CONSTITUTION AND BY-LAWS OF THE AMERICAN MEDICAL ASSOCIATION

### CONSTITUTION

#### Article 4.—Constituent Associations

Amend present article to read as follows:

State and territorial medical associations which have or which hereafter may become organized in accordance with the general plan of organization of the American Medical Association, and which have declared by resolution their allegiance to the said American Medical Association, and which shall agree with other state and territorial medical associations to the formation and perpetuation of the House of Delegates of the American Medical Association, shall be recognized as constituent associations on presentation of evidence that they have complied with the above conditions and on acceptance of their application for recognition by the House of Delegates.

#### Article 5.—House of Delegates

Second sentence to be amended to read as follows:

It shall consist of delegates elected by the constituent associations and by the Scientific Sections of the American Medical Association, and appointed from the medical departments of the Army, Navy, and from the United States Public Health and Marine-Hospital Service, etc.

#### Article 12.—Amendments

Amend to read:

The House of Delegates may amend any article of this constitution at any annual session, provided that the proposed amendment shall not be acted on until the annual session next following that at which it was introduced and providing that three-fourths of the voting members of the House of Delegates registered at the session at which action is taken vote in favor of such change or amendment.

### BY-LAWS

Amend chapters 1, 2 and 3 to read as follows:

#### Chapter 1.—Membership

Section 1.—Classes of members.—There shall be four classes of members: Regular members, associate members, ex-officio members, and honorary members.

Sec. 2.—Regular members.—Any physician reported as a member in good standing of the state association and of the constituent association of the state in which he resides by the secretary, who shall make application on the prescribed form and who shall pay the annual dues and the subscription to The Journal of the American Medical Association for the current year shall be entered as a member.

Sec. 3.—Tenure of Membership.—Regular membership in this Asssociation shall continue only so long as the individual is a member in good standing of the constituent association of the state in which he resides. When the general secretary shall be officially informed by the secretary of the constituent association of the state in which a member resides that he is not in good standing the general secretary shall remove his name from the membership roll of the American Medical Association and shall notify him of the action taken, together with the reason therefor. It shall be the duty of every member of this Association to maintain his good standing as a member of the constituent association of the state in which he resides in accordance with the by-laws thereof.

Sec. 4.—Removal of Members.—A member removing from one state to another shall become a member of the constituent association of the state to which he removes within one year after his removal. He shall retain his membership in the constituent association of the state from which he removes until he has acquired membership in the constituent association of the state to which he removes. Failing to comply with either of these requirements, he shall be dropped from the roll of members of this Asssociation.

Sec. 5.—Delinquency.—Any member who fails to pay his annual dues and the subscription to The Journal for one year shall be dropped from the roll of members, provided due notice from the general secretary shall be previously mailed to the last known address of the member.

Sec. 6.—Reinstatement.—Any member dropped for either non-membership in his state association or for non-payment of dues shall, if he desires reinstatement, comply with the provisions of Section 1 of this Chapter, the same as a new applicant, except that members dropped for non-payment of dues, and who apply for reinstatement within one year, may be reinstated by paying all indebtedness, including dues and the subscription to The Journal for the current year.

Sec. 7.—Associate Members.—The following shall be eligible to associate membership: Teachers of sciences allied to medicine; physicians engaged in teaching or laboratory work, not eligible to regular membership; dentists holding the degree of D.D.S. who are members of state or local dental societies; pharmacists who are active members of the American Pharmaceutical Association. Associate membership shall be limited to residents of the United States.

Sec. 8.—Election of Associate Members.—Applications for associate membership shall be endorsed by the officers of a section and approved by the same section. The application shall then be sent to the general secretary for confirmation by the House of Delegates. Applications from dentists shall be referred to the Section on Stomatology; applications from pharmacists shall be referred to the Section on Pharmacology and Therapeutics. Associate members shall have the same privileges and be subject to the same conditions as regular members. The general secretary shall, between annual sessions, accept applications for associate membership endorsed by the chairman and secretary of the section through which application is made such acceptance to be subject to confirmation by the House of Delegates at the annual session following.

Sec. 9.—Ex-Officio Members.—Commissioned medical officers of the United States Army, United States Navy and the United States Public Health and Marine-Hospital Service shall be ex-officio members of this Association so long as they retain their connection with their respective services. Resignation or dismissal from the service shall be equivalent to resignation of membership in this Association. Ex-officio members shall not be required to pay dues and shall not receive The Journal of the American Medical Association except by personal subscription.

Sec. 10.—Honorary Members.—Physicians of foreign countries may be elected as honorary members by the House of Delegates on nomination of a section. Nominations from sections shall be submitted to the House of Delegates on the afternoon of the second day of the annual session. Not more than three honorary members shall be elected in any one year.

Sec. 11.—Invited Guests.—Teachers, students of sciences allied to medicine and distinguished physicians of foreign countries may be invited by the general officers or by the officers of a section to attend an annual session and to take part in the scientific work. They shall be designated as invited guests and shall hold their connection with this Association until the close of the annual session to which they are invited. They shall be entitled to participate in the scientific and social functions of the Association.

Sec. 12.—Members from Foreign Countries.—The House of Delegates may provide for membership under proper restriction from the members of recognized medical societies of foreign countries.

### Chapter II.—Registration

Section 1.—No member shall take part in the proceedings of the Association or of any of the sections until he has registered his name and address in the registration office and has paid all dues and subscriptions for the current year.

Sec. 2.—Section Affiliation.—A member on registering shall designate the section in which he wishes to be enrolled, but no member shall register in more than one section at any annual session.

### Chapter IV.—Qualifications, Term, Apportionment and Registration of Delegates

Section 2 to read as follows:

Delegates Elected for Two Years.—Delegates from constituent associations shall be elected for two years. Constituent associations entitled to more than one representative shall elect their representatives so that one-half, as near as may be, shall be elected each year. Delegates elected by the sections or appointed from the United States Army, Navy and United States Public Health and Marine-Hospital Service shall hold office for one year.

Sec. 3.—Apportionment of Delegates.—At the annual session of 1903, and every third year thereafter, the House of Delegates shall appoint a committee of five on reapportionment, of which the president and the general secretary shall be members. This committee shall apportion the delegates among the constituent associations in accordance with Article 5, Section 2, of the Constitution, and in proportion to the membership of each constituent association on April 1 of the year in which the apportionment is made as shown by the certificates of membership submitted by the secretaries of the constituent state associations. This apportionment shall take effect at the annual session next succeeding that at which the apportionment is made and shall prevail until the next triennial apportionment whether the membership of the constituent associations shall increase or decrease.

Sec. 4.—Registration of Delegates.—Each delegate from a constituent association before being seated shall deposit with the Committee on Credentials a certificate signed by the president and secretary of his constituent association stating that he has been legally and regularly elected a delegate to the American Medical Association for a definitely stated term. Each delegate from a section shall present credentials signed by the chairman and the secretary of the section which he represents. The delegates from the government services shall present credentials from the surgeon-general of the department which he represents.

Sec. 5.—A Delegate Once Seated to Retain His Seat for the Entire Session.—The credentials of a delegate having been accepted by the credentials committee and his name placed on the roll of the house, he shall remain as the duly accredited delegate of the body which he represents until final adjournment of the session and his place shall not be taken by any other delegate or alternate.

### Chapter V.—Procedure of House of Delegates

Sec. 2.—Limit of Time for Introduction of New Business.—No new business shall be introduced into the House of Delegates after the third day of the annual session, unless with unanimous consent; and such new business, whether in the form of a motion, a resolution, a memorial, or otherwise, shall require the unanimous vote for adoption.

### Chapter VI.—Meetings of the House of Delegates

Sec. 2.—Special Sessions.—Special sessions of the House of Delegates shall be called by the president on a written request of 27 members of the last House of Delegates, provided that they represent the majority of the constituent associations. When a special session is called by the president the general secretary shall mail a written or printed notice to the last known address of each member of the last House of Delegates at least twenty days before such special session is to be held, in which notice shall be specified the time and place of meeting, and, in general terms, the object of such special session. No other business shall be transacted at the special session than that specified in the call.

### Chapter VII.—Nomination, Election and Installation of Officers, Trustees, Associate and Honorary Members

Section 1.—Nominations.—Nominations for office shall be made orally, but no nominating speech shall exceed two minutes in length. The treasurer shall be nominated by the board of trustees.

Sec. 2.—Method of Holding Elections.—All elections shall be by ballot and a majority of the votes cast shall be necessary to elect. In case no nominee receives a majority of the votes on the first ballot the nominee receiving the lowest number of the votes shall be dropped and a new ballot taken. This procedure shall be continued until one of the nominees receives a majority of all the votes cast, when he shall be declared elected.

Sec. 4.—Associate and Honorary Members.—Nominations for associate and honorary membership from the sections shall be referred without debate to the Committee on Sections and Section Work, which shall report its recommendations to the House of Delegates. The election of associate and honorary members shall immediately follow the election of officers.

Sec. 5.—Installation.—The general officers of the Association, except the president, shall assume their duties at the close of the last meeting of the annual session at which they are elected.

### Chapter VIII.—Duties of Officers

Section 1.—President.—The president shall preside at the general meeting and at the meetings of the House of Delegates, and shall perform such duties as custom and parliamentary usage require. On the morning of the first day of the annual session following his election he shall deliver an address at the general meeting not exceeding forty minutes in length on such matters as he may deem of importance to the Association. He may at any time make suggestions in writing to the House of Delegates or to any special or standing committee.

Sec. 3.—General Secretary.—The general secretary shall give due notice of the time and place of all annual and special sessions of the Association and of the House of Delegates in The Journal of the American Medical Association. He shall send an official notice of each annual or special session to the secretary of each constituent association and to the secretary of each section. He shall keep the minutes of the House of Delegates. He shall notify members of committees of their appointment and of the duties assigned to them. He shall verify the credentials of the members of the House of Delegates and shall provide a registration book in which shall be recorded the name of each delegate in attendance at each session, together with that of the association, government service or section which he represents. He shall prepare a roll of the delegates attending each session to facilitate voting by roll-call. He shall prepare for publication the official program of each session, and shall perform such other duties as pertain to his office or as may be directed by the House of Delegates or the board of trustees. The general secretary's salary shall be fixed by the board of trustees.

### Chapter IX.—Board of Trustees

Sec. 2.—Trustees to Control Sessions.—Last two sentences of the section to read as follows: It shall also have control of all exhibits. The board of trustees, in its discretion, may appoint a local committee of arrangements, which shall be at all times under the control of the board of trustees.

### Chapter X.—Committees

Section 1.—Classification of Committees.—Amend by adding to the section the following: In case of vacancies in committees occurring during the interval between annual sessions the president shall have the power to appoint members to fill the vacancies until the next annual session.

Sec. 2.—Membership of Committees.—Reference committees shall be appointed by the president from among the members of the House of Delegates............etc.

Sec. 3.—Standing Committees.—Amend to read as follows: Standing committees shall be the following:

(a) Committee (or Council) on Medical Legislation.
(b) Council on Medical Education.
(c) Committee on Transportation and Place of Session.

Strike out section 4.—Judicial Council.

Sec. 5.—Committee on Medical Legislation to become Sec. 4 and to be replaced by new Section to be reported by the Committee on Reorganization of Standing Committees.

Sec. 7.—Council on Medical Education—to become Sec. 5.

Sec. 6.—Committee on Transportation and Place of Session to remain unchanged.

Present Section 8 to be stricken out.

Present Section 9—Reports of Standing Committees—to become Section 7 and to read as follows:

Sec. 7.—Reports of Standing Comittees—Reports of Standing Comittees shall, so far as possible, be transmitted 30 days before the annual session to the General Secretary who shall have them printed for distribution to the members of the House of Delegates.

Present Section 10 to become Section 8.

Present Section 11 to become Section 9. Last sentence to be amended to read: These committees shall serve during the session at which they are appointed.

Page 24, paragraph 6, to read as follows: A Committee on Amendments to the Constitution and By-Laws to which shall be referred all proposed amendments to the constitution and by-laws.

Paragraph 9 to read as follows: A Committee on Miscellaneous Business to which shall be referred all business not otherwise provided for.

Sec. 10.—Appeals from Decisions of State Associations.—Questions involving the ethical conduct or the membership rights of individual members shall be considered by the House of Delegates only on an appeal from the decision of the constituent association and then only in case some portion of the constitution of this Association is involved; except that in case of a dispute between two or more constituent state associaions, the House of Delegates of the American Medical Association shall have original jurisdiction. Appeals from members, or protests, or complaints from constituent associations shall be referred without debate to a special committee of five elected by the House of Delegates, no member of which shall be a delegate from the constituent state association interested n the case. The Committee shall consider the case, giving at east twenty-four hours' notice of the time and place of the hearing to all the parties involved. The Committee shall report ts findings and recommendations to the House of Delegates which shall consider the report in Committee of the whole House. Vote on the adoption of the report of the Committee hall be by ballot and the decision of the House of Delegates hall be final.

### Chapter XII.—Sections

Sec. 2, page 26.—Officers of Sections.—The third sentence to e amended to read as follows: Each Section shall also elect nnually one delegate and one alternate to the House of Deleates of the American Medical Association to serve one year.

Sec. 3, page 27.—Election of Officers.—The first sentence to be mended to read as follows: The election of officers shall be he first order of business of the morning meeting of the Secon on the third day of each annual session.

Sec. 5, page 28.—Executive Committee.—Second and third entences to read as follows: In case of absence from a session f a member of the executive committee, the vacancy shall be illed by the chairman. The executive committee shall examine nd pass on all papers.......................etc.

Sec. 6.—Meetings.—Strike out everything after the word decide."

Sec. 7.—Who May Take Part in Section Work.—Section to ad as follows: The right to present papers before a Section, take part in its discussions and to participate in its business and scientific deliberations shall be limited to members.

Sec. 9, page 29.—Time at Which Titles Must Be In.—Titles papers to be presented to the Section must be in the hands the Secretary of the Section at least thirty-five days before e first day of the annual session. With the title, the writer all submit an abstract of the paper not less than thirty or ore than one hundred and fifty words in length and an estiate of the time required to read his paper.

Sec. 12.—Can Present Papers Before Only Two Sections.—mend to read as follows: No member shall have the right to esent a paper or papers before more than two Sections at y annual session. When more than one Section is to be addressed, the titles and abstracts of both papers must be submitted to the secretaries of both the Sections before which the papers are to be read.

### Chapter XIII.—Publication.

Sec. 2.—Papers Must be Ready for Publication.—Page 30 to read as follows: Each author shall hand his paper to the secretary of the Section immediately after it is read. The secretary shall endorse thereon that it has been read and shall hand it to the chairman of the executive committee. All papers approved by the executive committee shall be returned to the secretary of the Section who shall at once forward them to the editor of The Journal.

### Chapter XVI.—Amendments to the By-Laws

Page 32 to read as follows: These by-laws may be amended by a three-fourths vote of the House of Delegates, provided that no amendment shall be acted on until the day following that on which it is introduced, except that the Board of Trustees may, by unanimous vote, make such changes and such changes only in the By-laws as may be required to adapt them to the rules and regulations of the United States postal authorities.

## II

## RECOMMENDATIONS REGARDING AMENDMENTS TO THE CONSTITUTION AND BY-LAWS OF COUNTY, STATE, AND AMERICAN MEDICAL ASSOCIATIONS, COVERING THE DISCIPLINING OF MEMBERS

### COUNTY SOCIETIES

Amendment to take the place of Section 7, Chapter 1, page 7, model constitution and by-laws for county societies:

Sec. 7.—A member who is guilty of a criminal offense or of gross misconduct either as a physician or as a citizen, or who violates any of the provisions of this constitution and by-laws, shall be liable to censure, suspension or expulsion. Charges of any of the above offenses or of unethical or unprofessional conduct may be preferred by any member against any other member. Such charges shall be made in writing and shall specify the exact nature of the offense charged, as well as the time, place and circumstances of the offense. Written charges and specifications shall be filed with the secretary of the county society to which the member accused belongs within two years of the date of the offense charged. Specifications and names of witnesses to be summoned shall be filed with the charges which shall be signed by the member making the charges.

On receipt of properly prepared charges against a member, the secretary shall immediately transmit them to the chairman of the Board of Censors and shall at the same time furnish a copy of the charges to the accused. The Board of Censors shall set a time for hearing the charges of which due notice shall be sent both to the accuser and to the accused but no hearing shall be held nor any action taken by the Board of Censors within ten days of the presentation of the charges to the accused. The accused may be represented by any other member of the society but not by a non-member. He shall be allowed to introduce witnesses and documentary evidence and to cross-examine the witnesses of his accuser. The accused shall also be allowed to testify in his own behalf if he so desires. The Board of Censors shall have the right to examine the witnesses presented by either side but shall not have the right to summon witnesses.

The attendance at the hearing of the case shall be limited to the Boards of Censors, the two principals, and their representatives and witnesses. If the accused so desires, however, the hearing shall be public.

The Board of Censors within five days after the termination of the hearing shall prepare a report stating (1) that the charges are not sustained, or (2) that the charges are sustained and that the accused be (a) censured, (b) suspended for a definite period, or (c) expelled. Censure or suspension shall require a two-thirds vote of the members present and voting. Expulsion shall require a three-fourths vote of those present and voting. The report of the Board of Censors shall not be considered except at a regular meeting or at a special meeting called for this purpose and in either case, due notice that the report will be presented and voted on at the meeting shall be sent by the secretary to each member of the society. No action shall be taken by the society in any case until at least six weeks have elapsed since the filing of the charges.

A member found guilty of charges preferred against him may appeal to the Council of the state society provided his appeal is filed with the secretary of the Council within three months after the meeting of the county society at which his case was decided. Such an appeal shall only be made on the grounds of the method of procedure of the Board of Censors of the county society in deciding the case and shall not involve the hearing of the original case. In appealing to the Council of the state society, the member making the appeal shall specify exactly what are his grounds of complaint and shall present extracts from the proceedings of the Board of Censors of the county society as a part of his appeal.

### STATE ASSOCIATIONS

Amendment to the model constitution and by-laws of state associations to take the place of Section 3, Chapter VII, page 18.

Sec. 3.—The Council shall be the Board of Censors of the state association. It shall hear and decide all questions involving the right and standing of members and all questions of an ethical nature on which an appeal is taken from the decision of the component county society. Appeals must be filed in writing with the secretary of the Council within three months after the meeting of the county society at which the case was decided. Appeals shall be limited to questions involving the manner in which the trial was conducted by the Board of Censors of the county society or by the county society itself. The appeal shall state specifically the grounds on which the appeal is taken and shall be accompanied by properly certified extracts from the proceedings of the Board of Censors or of the county society. The Council of the state association shall consider the appeal at the first regular meeting held after the appeal is filed. A member appealing from the decision of his county society may present his case in person or may be represented by any other member of the state association. The Council shall have the authority to call for the original records of the case and after proper hearing may (1) affirm the finding of the county society; (2) return the case to the county society for a rehearing; (3) reverse the decision of the county society. The decision of the Judicial Council of the state association shall be final on all questions relating to individual conduct or the rights of individual members.

In cases involving the constitution of the American Medical Association, the member concerned may appeal from the decision of the Judicial Council of the state association to the House of Delegates of the American Medical Association.

### AMERICAN MEDICAL ASSOCIATION

(See recommendations for changes in the constitution and by-laws of the American Medical Association, Part 1 of this report, Chapter X, Section 10.)

## III

## RECOMMENDATIONS REGARDING THE UNIFORM REGULATION OF MEMBERSHIP

1. In its report for 1909, the Committee recommended that all state associations be requested to make their fiscal year conform to the calendar year and that component county societies be requested to adopt the same rule. The adoption of this recommendation by all component county and constituent state organizations will give us a uniform fiscal year coinciding with the calendar year, and running from January 1 to December 31. This recommendation is renewed and its importance urged on state associations.

2. It is further recommended that rules be adopted by all county and state organizations providing that membership shall be good only for the year for which dues are paid; that is, that the roll for each county and state association be made up each year to include as members in good standing only those who have paid their dues on or before a certain date. This is necessary in order to prevent the confusion caused by the rules existing in many societies, whereby a physician once a member is regarded as a member until he is formally dropped. In some states, a member cannot be dropped until he is at least three years in arrears. This causes much confusion as a member who has not paid his dues for the current year is not in good standing and yet is still a member. Under such conditions, we have three classes: 1. Members in good standing. 2. Members not in good standing, but under suspension. 3. Non-members. It is the second class which causes the trouble, as they have not the rights of members, yet are still members. As the rules regarding suspension and the length of the period of suspension differ in the various state associations, it is necessary in order to pass on such cases, to keep the local variations constantly in mind in order to be able to know the exact standing of each member. If the entire system of suspension were abolished, we would then have only two classes: Members and non-members, and a physician would only be a member of his society in case he had paid his dues before a certain date. As soon as members become accustomed to this plan, it will be found that the collection of dues and the sending in of reports from county societies will be greatly simplified and facilitated.

As far as the exact period is concerned, various dates have been suggested. For county societies, it has been suggested that reports be made on February 1, March 1, or April 1, allowing the county secretary one, two, or three months in which to collect the dues from the members. Probably, in the beginning, it would be advisable to be as liberal as possible and to allow county secretaries three months in which to collect dues from members, calling for reports from each county society for the year on March 1. The state secretary could then make up the roll of the state society for the current year by combining the reports received from all the county societies. In this way, the state secretary's roll would be made up anew each year, the old one being entirely discarded. A complete roster could then be prepared and a copy sent to the General Secretary on April 1, thus permitting the entire membership records of the Association to be revised by May 1 so that the exact status of each member would be known before the annual meeting of the Association.

3. Members Joining During the Year.—Any one becoming a member of a county society during the year could be reported to the state secretary on a uniform report blank and the amount of his per capita assessment forwarded with the stub receipt. His name could then be included in the next monthly report from the state secretary to the General Secretary.

4. A most important practical point is that of pro-rating the dues of members joining during the year. If the state per capita assessment is $2.00 and a new member is admitted to the county society in June or July, should he be required to pay the entire amount of the state assessment? Or, should the state assessment be pro-rated for the unexpired portion of the year? While at first thought, it may seem unjust to ask a member to pay the year's assessment for half a year's membership, it seems best, for practical considerations, not to pro-rate the dues. The state per capita assessment is levied on each member for the expenses of the state society during the year and each member should pay his share, regardless of when he becomes a member. The plan of pro-rating involves a number of difficulties in bookkeeping and constant calculating as to the exact amount due from each society, as well as from each member.

5. Methods of Registration and Reporting.—During the past winter, letters were sent to many fraternal, benevolent, and labor organizations, asking for copies of all blanks, reports, etc., used by the secretary of the national body in his dealings with state and local organizations.

The secretaries of these bodies responded most cordially to the request for information and sent in a large amount of material, which has been gone over carefully with a view to securing suggestions from other organizations that would be of value to us. From all of the available material, the following plan is submitted for criticism:

### COUNTY SOCIETY RECORDS

The American Medical Association can prepare books of blanks. [This sample form is omitted from THE JOURNAL. In the Handbook for the House of Delegates it showed the two sides of the blank, the private postal card being the back of the individual member's pocket card, and the small blank headed "This side for state secretary's use" being the back of the middle stub headed "State Secretary."] These blanks are planned to print on standard size cardboard stock, so as to trim without loss and would be of the size and shape shown on the proof. They comprise: 1. Combination individual pocket card and receipt for each member, filled out and signed by the county secretary as the member pays his dues. This blank is both a receipt and a membership card and has on the back a private mailing card blank so that the secretary can detach it, address it to the member, place a one-cent stamp thereon and mail it without having to write a letter. The card is of convenient size to go in a pocketbook and can be retained by the member during the year as evidence of membership. The pocket card plan is used not only by the American Medical Association but also by the Chicago Medical Society, St. Louis Medical Society, Indiana State Medical Association, and a number of others. It has the advantage of giving the member tangible evidence of membership and of the fact that he has paid his dues. The amount of the state per capita assessment is printed in so that it will be the same in all counties in the same state and is added to the amount of the local society dues which vary in different counties. These blanks can be put up in books of 25, 50, 75 and 100 for use in county societies of various sizes and will constitute practically all the books which the county secretary will need to keep. When a member pays his dues, this card will be filled out and given to him. At the same time, the stub for the state secretary will be filled out and the third stub which will be bound into the book, will be retained by the county secretary. A glance at this book will consequently show in every case how many members have paid their dues for the current year and who these members are. It will also show how many assessments have been forwarded to the state secretary and how many are still to be sent him. By looking over the stubs, the secretary can tell in a few minutes just how much has been paid him for dues during the current year or the total footings can be carried forward on the back of each stub.

One of the most essential features of any plan of membership regulations is that it admit of easy and positive identification both of the individual and of the society through which he holds his membership. To accomplish these two points, the following plan is suggested:

(a) Blank receipt books for different years to bear a letter of identification which will appear on all of the blanks, as: 1911(A), 1912(B), 1913(C), etc. The single letters of the alphabet will thus provide for the next twenty-six years. At the expiration of that period, a new combination can easily be devised, as: 1938(XA), 1939(XB), 1940(XC), etc., thus enabling the blank for the current year to be identified at once.

(b) All blanks printed by the Association for county societies can be given a series of numbers corresponding approximately to the number of members in the state, a sufficient margin being left for all possible additions for the year.

By attaching a numbering device to the press on which these cards are printed, the number can be printed at the same time and can be automatically changed with each blank. In preparing these books, the secretary of the Illinois State Medical Society, for instance, would be notified that number 12,001 to 20,000 had been reserved for his state and would be asked to specify how many receipt books his county societies would need, indicating the number of books of 25, 50, 75, or 100 cards. Each member on paying his dues would receive a pocket card, which pocket card would bear the letter for the year and the serial number for his county and state. For instance, a member paying his dues in Chicago would receive pocket card (A) 13,527. The same serial number would appear on the stub sent to the state secretary and on the stub retained by the county secretary. A record would be kept in the General Secretary's office of the books sent out. If, now, the Chicago member holding the above card should go to California or Florida for his health and if any question should be raised regarding his membership, he would be called on to report the number of his pocket card. If he said he held pocket card (A) 13,527, it would indicate at once that he held his membership in Cook County and in Illinois and had paid his dues for the current year and was consequently a member in good standing. It would furthermore serve as a positive means of identifying the individual in California or Florida with the individual who had formerly been in Chicago. It would also afford a constant check both for the state secretary and the General Secretary on the county society membership.

At the end of the year, each county secretary would return his receipt book to the state secretary. The number of pocket cards remaining intact and the number of stubs would show at once whether the reports of the county secretary were correct or not and would also afford the state secretary a further check on the county secretary's report. After checking up these stubs, the book could, if necessary, be forwarded to the General Secretary's office and would serve as a further check on the General Secretary's records.

6. Compensation for County Secretaries.

Probably the weakest point in our organization to-day is that the county secretary, the executive officer of the organization which is the foundation of the entire body, is in most of cases, not compensated, and is consequently asked to do work at a considerable sacrifice. Practically all successful fraternal, benevolent, and labor organizations have an arrangement by which local secretaries are paid, either by the local organization or by the general society. Most of the county societies at present only collect a sufficient amount of dues from members to pay the annual running expenses of the society, and as much of the clerical work demanded of the secretary is for the benefit of the state and national organizations, it would probably be difficult to secure the adoption of any uniform law for the compensation of county secretaries by the county society. The folowing suggestion is therefore submitted for the consideration of the House of Delegates: Each county secretary at the end of the year to return the book of stubs and unused receipts to he state secretary as suggested above, the state secretary to heck them up and forward them to the general Secretary of he American Medical Association. Each secretary who eturns his check book to receive as compensation from the American Medical Association, 25 cents per member, to be emitted as soon as the stub book is received and verified.

Adoption of the plan outlined above would be entirely voluntary with each state society. If it wished to adopt such a plan, it could do so; if it preferred to retain its own plan, it could do so, but the general conduct of the organization would be along the lines outlined above and the majority of state associations would probably soon find that it was more convenient to conform to the uniform plan than to retain individual variations thereof. County secretaries would only be compensated in case the state society adopted the proposed plan and in case they sent in their reports at the end of the year. Probably for several years, only a part of the state associations would adopt it. Even if eventually all the state associations with an aggregate membership of 70,000 were to adopt such a plan, the total expense involved would amount to only about $17,500, while the resulting gain in business methods, postage, stenographer and clerk hire, loss through unpaid dues, disaffected members, etc., would far more than make up this amount as far as the entire organization is concerned.

### STATE ASSOCIATIONS

The secretary of the state association would receive on the first of April (?) a report from each county secretary enclosing the stub for each member who had paid his dues up to date. These stubs could either be arranged as an index or the names could be transferred to a separate card index, as the state secretary saw fit. From all the county society reports, a complete roster of members for the year could then be made up, a copy of which could then be forwarded to the General Secretary when completed. Additional members joining from time to time, could be reported by the stubs, accompanied in each case by the per capita assessment.

### OFFICES OF SECRETARY AND TREASURER TO BE UNITED

It has been suggested by a number of members of the Committee that an essential and important reform should be inaugurated as far as county society officers are concerned, in combining the offices of secretary and treasurer. Uniting these two positions will obviate the necessity of keeping two sets of records, as well as the possibility of errors through transmitting names from one official to another. The average county society has a membership of 34. To handle the business affairs of a body of this size certainly does not require two officers and there is no reason why the time of two men should be employed when on man can look after the business affairs of the society more effectively. Exception to this might be made in some of the large city societies where the work is heavier but in probably 95 per cent. of county societies a single officer is sufficient for these two positions.

The question of recommending the union of secretary and treasurer for state associations has also been raised and is submitted for consideration. Is there any practical necessity of having two officers, generally located in different towns with two sets of records? Could not the business affairs of the state association be better transacted by one man, with a saving of expense and labor?

### RECOMMENDATIONS

Your committee realizes the importance of the work assigned to it and the impossibility at this time of presenting a final report on the many and complex matters before it for consideration. Constructive work in any organization is necessarily and advisedly slow. This is especially the case when distance and other duties make it practically impossible for the committee to meet and when all the work must be done by correspondence. Your committee makes the following recommendations:

(1) That the committee be continued and that the president be authorized to appoint active secretaries in place of those who have retired, if he deems this advisable.

(2) That the recommendations regarding disciplining of members if approved by the House of Delegates, be transmitted to the secretaries of the various state associations and that they be also printed in the *American Medical Association Bulletin* and the attention of county societies be called to them.

(3) That the committee be instructed to submit its recommendations regarding the uniform regulation of membership to the secretary of each constituent state association for criticisms and further suggestions, and that the committee be further instructed to submit to the House of Delegates at the 1911 session a complete system for the use of county and state societies and the American Medical Association for the regulation of membership, including all blanks, forms, files and regulations needed to put the proposed plan in operation, for the further consideration of the House of Delegates.

(4.) That the committee be instructed to revise the standard constitutions for county and state societies in accordance with the constitution and by-laws of the American Medical Association as adopted at this session. Respectfully submitted,

THOMAS MCDAVITT, Chairman,
WALTER R. STEINER,
J. H. J. UPHAM,
B. R. SCHENCK,
A. W. MCALESTER, JR.,
I. C. CHASE,
FREDERICK R. GREEN, Secretary.

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## Report of Committee on United States Pharmacopeia

*To the Board of Trustees of the American Medical Association:*

Your committee on the Pharmacopeia reports as follows:

The U. S. Pharmacopeia is at present the exclusive property of the United States Pharmacopeial Convention; it is the privilege of this convention and of this alone to determine what the Pharmacopeia shall be. The convention is composed of representatives from the medical and pharmaceutical professions; about two-thirds of those eligible under the present constitution belong to the former and one-third to the latter. It seemed to your committee that the most useful work the committee could do would be to collect information which would be of assistance to the medical delegates to the convention. The phase of the Pharmacopeial Revision in which the medical profession is chiefly interested is the scope of the book, and there has been an almost unanimous expression of opinion to the effect that the medical delegates should, to a large extent, determine this, and the Chairman of the Committee on Revision for 1900-1910 has formally requested the American Medical Association to prepare lists of drugs for admission to or deletion from the U. S. P.

In view of the many drugs of interest chiefly to practitioners in certain fields it was believed that the most valuable information as to admissions would be obtained from members of the various sections of the American Medical Association. Accordingly each Section of the Association was requested to appoint a committee on the Pharmacopeia. Five of the committees, those of the Sections on Practice of Medicine, on Ophthalmology, on Stomatology, on Pathology and Physiology and on Obstetrics and Diseases of Women have reported; the reports have been published and commented on in THE JOURNAL of the American Medical Association (Sept. 4, 1909, pp. 791, 793, 796; Oct. 30, 1909, pp. 1491, 1500; April 23, 1910, p. 1389 and April 30, 1910, p. 1457). Similar reports by the Sections on Dermatology, Laryngology and Otology, and Nervous and Mental Diseases, and probably from other Sections also, will be presented at the St. Louis session and will then be available for the Committee on Revision.

It was believed that much valuable information could also be obtained from the professors of materia medica and therapeutics and pharmacology in the medical schools entitled to representation in the convention. About 50 per cent. of all the delegates to the convention and about 75 per cent. of the medical delegates are appointed by the medical schools and no one connected with these is in such a favorable position to speak as to the wishes of the schools as are these professors. A letter was therefore addressed to them with the request that they express an opinion not only on the general principles to be followed in revising the Pharmacopeia but also on the desirability of retaining each of the 957 titles in the present Pharmacopeia.

Replies were received from all parts of the United States. Many of those replying stated that they had prepared their replies only after extensive consultation with their colleagues and alumni, careful examination of hospital records, etc. It is believed that these replies represent accurately the present attitude of medical schools toward the Pharmacopeia, and as the medical schools have, according to the present constitution of the Pharmacopeial Convention, a larger ownership in the Pharmacopeia than any other group of members, it is believed that these replies merit very careful consideration on the part of the convention. From 131 replies received the following figures were obtained:

### AS TO FUNCTION

Should the Pharmacopeia of the United States be a book of minimum standards designed mainly for the regulation of commerce in drugs and chemicals and the restriction of adulteration and fraud?

*Yes—17. No—54. Uncertain—4.*

Or should the Pharmacopeia be a compilation of acceptable standards for desirable medicaments and designed, primarily, for the protection of the public health?

*Yes—98. No—5. Uncertain—4.*

### SCOPE

Should the Pharmacopeia embody standards for all of the 50,000 or more drugs and preparations that have been or are used as medicine for man or other animals?

*Yes—2. No—84. Uncertain—3.*

Or should the Pharmacopeia include all of the widely used drugs and preparations, irrespective of their medicinal value, and thus practically all of the titles now found in the U. S. P., the N. F., and the present edition of N. N. R.?

*Yes—1. No—83. Uncertain—3.*

Or should the Pharmacopeia continue to be, as is at present attempted, the standard for medicaments of recognized value and established use and, therefore, be restricted rather than extended in number of titles?

*Yes—102. No—2. Uncertain—4.*

### GENERAL PRINCIPLES TO GOVERN ADMISSIONS AND DELETIONS

Should drugs that possess no well-recognized medicinal value be included in the Pharmacopeia?

*Yes—5. No—106. Uncertain—9.*

Should the duplication of drugs having essentially the same medicinal action be encouraged?

*Yes—21. No—93. Uncertain—15.*

When the medicinal properties of a drug are fully represented by an active principle, should both the drug and the active principle be retained?

*Yes—35. No—48. Uncertain—26.*

Should substances that are largely affected by commercial conditions, such as foods (figs and prunes, for example) and beverages (brandy and whisky, for example), be retained in the list of pharmaceutical articles?

*Yes—8. No—83. Uncertain—20.*

Should substances that have no direct therapeutic value and are primarily used as solvents or reagents be relegated to the Appendix?

*Yes—113. No—7. Uncertain—9.*

Should the now frequent duplication of pharmaceutical preparations, such as wines, vinegars, syrups, tinctures, and fluidextracts of the same drug, be discouraged?

*Yes—104. No—12. Uncertain—13.*

Should fixed formulas for mixtures be discouraged?

*Yes—85. No—30. Uncertain—13.*

Should all formulas for preparations that can be made extemporaneously be deleted from the Pharmacopeia?

*Yes—75. No—38. Uncertain—15.*

Should all complex preparations be relegated to the National Formulary, and the Pharmacopeia itself retained as a standard for simples and simple preparations?

*Yes—92. No—23. Uncertain—12.*

Should the Pharmacopeia endeavor to comply with well-established international nomenclature and standards for drugs and preparations?

*Yes—125. No—0. Uncertain—2.*

Should compounds or mixtures that are permanently controlled, either by secrecy or proprietary rights, be admitted to the Pharmacopeia?

*Yes—7. No—104. Uncertain—5.*

Should the Pharmacopeia be the accepted standard for medicinal prescribing?

*Yes—120. No—1. Uncertain—5.*

Has it been your experience that, in the eyes of medical students and practitioners, Pharmacopeial recognition of a drug implies, in a general way, an endorsement of its usefulness in therapeutics?

*Yes—87.* *No—29.* *Uncertain—8.*

Of the articles now contained in the Pharmacopeia practically no objections were made to the following:

Acacla
Acetanilidum
Acetphenetidinum
Acidum Benzoicum
Acidum Citricum
Acidum Boricum
Acidum Hydrochloricum Dilutum
Acidum Salicylicum
Acidum Tannicum
Aconitum
Tinctura Aconiti
Adeps Benzoinatus
Adeps Lanæ Hydrosus
Æther
Alcohol
Aloinum
Alumen
Ammonii Carbonas
Ammonii Chloridum
Amylis Nitris
Antimonii et Potassi Tartras
Antipyrina
Apomorphinæ Hydrochloridum
Aqua Destillate
Aqua Ammoniæ
Aqua Aurantii Florum
Aqua Camphoræ
Aqua Cinnamomi
Aqua Hydrogenii Dioxidi
Aqua Menthæ Piperitæ
Aqua Rosæ
Argenti Nitras
Argenti Nitras Fusus
Arseni Trioxidum
Liquor Potassii Arsenitis
Asafœtida
Oleoresina Aspidii
Atropina
Atropinæ Sulphas
Balsamum Peruvianum
Balsamum Tolutanum
Syrupus Tolutanus
Tinctura Belladonnæ Foliorum
Extractum Belladonnæ Foliorum
Tinctura Bezoini
Betanaphthol
Bismuthi Subcarbonas
Bismuthi Subnitras
Caffeina
Caffeina Citrata
Calcii Carbonas Præcipitatus
Calcii Chloridum
Calx Chlorinata
Camphora
Aqua Camphoræ
Spiritus Camphoræ
Tinctura Opii Camphorata
Linimentum Saponis
Cantharis
Tinctura Cantharidis
Ceratum Cantharidis
Capsicum
Tinctura Capsici
Chloralum Hydratum
Chloroformum
Spiritus Chloroformi
Linimentum Chloroformi
Chrysarobinum
Cinchona
Tinctura Cinchonæ
Cocainæ Hydrochloridum
Codeina
Codeina Sulphas
Colchicina
Collodium
Collodium Flexile
Copaiba
Creosotum
Cresol
Creta Præparata
Cubeba
Oleoresina Cubebæ
Cupri Sulphas
Digitalis
Infusum Digitalis
Tinctura Digitalis
Elaterinum
Elixir Aromaticum
Ergota
Fluidextractum Ergotæ
Extractum Ergotæ
Eucalyptol
Fel Bovis Purificatum
Massa Ferri Carbonatis
Pilulæ Ferri Carbonatis
Tinctura Ferri Chloridi
Ferri Sulphas
Ferrum Reductum
Gentiana
Tinctura Gentianæ Composita
Glandulæ Suprarenales Siccæ
Glandulæ Thyroideæ Siccæ
Glycerinum
Suppositoria Glycerini
Glycyrrhiza
Guaiacol
Guaiacolis Carbonas
Hexamethylenamina
Homatropinæ Hydrobromidum
Hydrargyrum cum Creta
Massa Hydrargyri
Unguentum Hydrargyri
Hydrargyri Chloridum Corrosivum
Hydrargyri Chloridum Mite
Hydrargyri Iodidum Flavum
Hydrargyri Iodidum Rubrum
Hydrargyri Oxidum Flavum
Hydrargyrum Ammoniatum
Hyoscinæ Hydrobromidum
Hyoscyamus
Iodoformum
Iodum
Tinctura Iodi
Ipecacuanha
Fluidextractum Ipecacuanhæ
Syrupus Ipecacuanhæ
Pulvis Ipecacuanhæ et Opii
Jalapa
Resina Jalapæ
Liquor Ammonii Acetatis
Liquor Calcis
Liquor Magnesii Citratis
Liquor Plumbi Subacetatis
Liquor Potassii Arsenitis
Magnesii Carbonas
Magnesii Oxidum
Magnesii Sulphas
Massa Ferri Carbonatas
Massa Hydrargyri
Menthol
Methyl Salicylas
Morphina
Morphinæ Hydrochloridum
Morphinæ Sulphas
Nux Vomica
Extractum Nucis Vomicæ
Tinctura Nucis Vomicæ
Oleum Amygdalæ Expressum
Oleum Lini
Oleum Morrhuæ
Oleum Olivæ
Oleum Ricini
Oleum Theobromatis
Oleum Tiglii
Oleum Caryophylli
Oleum Cubebæ
Oleum Eucalypti
Oleum Gaultheriæ
Oleum Limonis
Oleum Menthæ Piperitæ
Oleum Picis Liquidæ
Oleum Rosæ
Oleum Santali
Oleum Terebrinthinæ Rectificatum
Opii Pulvis
Tinctura Opii
Tinctura Opii Deodorata
Tinctura Opii Camphorata
Extractum Opii
Pulvis Ipecacuanhæ et Opii
Opium
Pancreatinum
Pepsinum
Petrolatum
Petrolatum Album
Petrolatum Liquidum
Phenol
Phenylis Salicylas
Physostigminæ Salicylas
Pilocarpinæ Hydrochloridum
Pix Liquida
Plumbi Acetas
Liquor Plumbi Subacetatis
Podophyllum
Resina Podophylli
Potassii Acetas
Potassii Bicarbonas
Potassii Bitartras
Potassii Bromidum
Potassii Chloras
Potassii Citras
Potassii Iodidum
Potassii Nitras
Potassii Permanganas
Potassii et Sodii Tartras
Syrupus Pruni Virginianæ
Pulvis Ipecacuanhæ et Opii
Quinina
Quininæ Bisulphas
Quininæ Hydrochloridum
Quininæ Sulphas
Ceratum Cantharidis
Resina Jalapæ
Resina Podophylli
Resorcinol
Rhamnus Purshiana
Fluidextractum Rhamni Purshianæ
Extractum Rhamni Purshianæ
Rheum
Saccharum Lactis
Salicinum
Santoninum
Scilla
Scopolaminæ Hydrobromidum
Senna
Fluidextractum Sennæ
Serum Antidiphthericum
Sodii Benzoas
Sodii Bicarbonas
Sodii Boras
Sodii Bromidum
Sodii Chloridum
Sodii Citras
Sodii Iodidum
Sodii Nitris
Sodii Phosphas
Sodii Salicylas
Sodii Sulphas
Sparteinæ Sulphas
Spiritus Ætheris Nitrosi
Spiritus Ammoniæ Aromaticus
Spiritus Camphoræ
Spiritus Chloroformi
Spiritus Glycerylis Nitratis
Strophanthinum
Strophanthus
Tinctura Strophanthi
Strychinina
Strychninæ Sulphas
Sulphonethylmethanum
Sulphur Lotum
Unguentum Sulphuris
Suppositoria Glycerini
Syrupus Aurantii
Syrupus Ferri Iodidi
Syrupus Ipecacuanhæ
Syrupus Pruni Virginianæ
Syrupus Tolutanus
Terebenum
Terpini Hydras
Thymol
Thymolis Iodidum
Unguentum
Fluidextractum Uvæ Ursi
Fluidextractum Viburni Prunifolii
Zinci Chloridum
Zinci Oxidum
Unguentum Zinci Oxidi
Zinci Stearas
Zinci Sulphas
Zingiber
Tinctura Zingiberis
Syrupus Zingiberis

A majority of those voting expressed themselves in favor of deleting from the list of medicaments in the Pharmacopeia the following:

Syrupus Acaciæ
Pulvis Acetanilid Compositus
Acetonum
Acidum Camphoricum[1]
Acidum Hypophosphorosum
Acidum Stearicum
Acidum Sulphurosum
Acidum Tartaricum
Fluidextractum Aconiti
Æther Aceticus
Æthylis Carbamas
Tinctura Aloes et Myrrhæ
Pilulæ Aloes et Ferri
Pilulæ Aloes et Masticheś
Pilulæ Aloes et Myrrhæ
Extractum Colocynthidis Compositum
Pilulæ Rhei Compositæ
Althæa[1]
Alumini Hydroxidum
Alumni Sulphas
Amygdala Amara
Emulsum Amygdalæ
Anthemis[1]
Apocynum
Fluidextractum Apocyni
Aqua Fœniculi
Argenti Cyanidum
Argenti Oxidum
Arnica
Liquor Sodii Arsenatis
Emulsum Asafœtidæ
Auri et Sodii Chloridum
Benzaldehydum
Benzinum
Benzinum Purificatum
Beriberis[1]
Bismuthi Citras
Bismuthi et Ammonii Citras
Bromum
Calamus[1]
Fluidextractum Calami
Calcii Bromidum
Emulsum Olei Morrhuæ cum Hypophosphitibus
Calcii Sulphas Exsicattus
Calendula[1]
Tinctura Calendulæ
Fluidextractum Calumbæ
Ceratum Camphoræ
Fluidextractum Capsici
Carbonei Disulphidum
Carum
Cassia Fistula[1]
Cataplasma Kaolini
Ceratum Resinæ Compositum
Chimaphila[1]
Fluidextractum Chimaphilæ[1]
Chirata[1]
Chondrus
Chromii Trioxidum
Cimicifuga[1]
Tinctura Cimicifugæ[1]
Fluidextractum Cimicifugæ[1]
Extractum Cimicifugæ[1]
Cinchoninæ Sulphas[1]
Cinnaldehydum
Tinctura Gambir Composita
Vinum Opii
Vinum Cocæ
Oleatum Cocainæ[1]
Coccus
Conium
Fluidextractum Conii
Convallaria
Coriandrum
Trochisci Cubebæ
Cusso
Cypripedium[1]
Fluidextractum Cypripedii[1]
Elastica
Trituratio Elaterini
Eriodictyon
Fluidextractum Eriodictyi
Fluidextractum Eucalypti
Eugenol
Euonymus[1]
Fluidextractum Euonymi[1]
Extractum Euonymi[1]
Eupatorium[1]
Fluidextractum Eupatorii[1]
Fel Bovis
Mistura Ferra Composita
Pilulæ Aloes et Ferri
Ferri Sulphas Granulatus
Vinum Ferri
Ferri et Ammonii Sulphas
Ferri et Ammonii Tartras
Ferri et Potassii Tartras
Ferri et Quininæ Citras
Vinum Ferri Amarum
Ferri et Strychninæ Citras
Ficus
Tinctura Gallæ
Tinctura Gambir Composita[1]
Trochisci Gambir[1]
Geranium[1]
Fluidextractum Geranii[1]
Trochisci Glycyrrhizæ et Opii
Glycyrrhizinum Ammoniatum
Gossypii Cortex
Guarana
Fluidextractum Guaranæ
Hæmatoxylon
Extractum Hæmatoxyli
Hamamelidis Folia
Fluidextractum Hamamelidis Foliorum
Hedeoma[1]
Humulus
Emplastrum Hydrargyri
Vinum Ipecacuanhæ
Cataplasma Kaolini
Krameria[1]
Tinctura Krameriæ[1]
Fluidextractum Krameriæ[1]
Extractum Krameriæ[1]
Syrupus Krameriæ[1]
Trochisci Krameriæ[1]
Lactucarium
Tinctura Lactucarii
Syrupus Lactucarii
Lappa[1]
Fluidextractum Lappæ[1]
Leptandra
Fluidextractum Leptandræ
Extractum Leptandræ
Limonis Succus
Liquor Ferri Tersulphatis
Liquor Hydrargyri Nitratis
Liquor Sodii Arsenatis
Liquor Zinci Chloridi
Lupulinum
Mangani Sulphas
Manna
Infusum Sennæ Compositum
Marrubium[1]
Mastiche
Pilulæ Aloes et Masticheś
Matico[1]
Fluidextractum Matico[1]
Matricaria[1]
Mel
Mel Depuratum
Mel Rosæ
Mezereum[1]
Fluidextractum Mexerei
Fluidextractum Sarsaparillæ Comp.
Mistura Ferri Composita

Mistura Rhei et Sodæ
Moschus
Tinctura Moschi
Myristica
Mistura Ferri Composita
Pilulæ Aloes et Myrrhæ
Pilulæ Rhei Compositæ
Tinctura Aloes et Myrrhæ
Oleatum Atropinæ[1]
Oleatum Cocainæ[1]
Oleatum Quininæ
Oleatum Veratrinæ
Oleum Erigerontis[1]
Oleum Hedeomæ[1]
Oleum Sabinæ[1]
Acetum Opii[1]
Vinum Opii
Emplastrum Opii
Pilulæ Opii
Trochischi Glycyrrhizæ et Opii
Pareira[1]
Fluidextractum Pareiræ[1]
Phytolacca[1]
Fluidextractum Phytolaccæ[1]
Pimenta[1]
Piper
Piperina[1]
Plumbi Iodidum
Plumbi Nitras
Pilula Podophylli, Belladonnæ et Capsici
Potassii Cyanidum
Potassii Dichromas
Potassii Ferrocyanidum
Unguentum Potassii Iodidi
Prunum
Fluidextractum Pruni Virginianæ
Pulvis Acetanilidi Compositus[1]
Pulvis Morphinæ Compositus
Pulvis Rhei Compositus
Pyrethrum
Pyroxylinum
Fluidextractum Quassiæ
Extractum Quassiæ
Quercus
Flüidextractum Quercus
Oleatum Quininæ
Glyceritum Ferri Quininæ et Strychninæ Phosphatum
Ceratum Resinæ Compositum
Pilulæ Podophylli, Belladonnæ et Capsici
Mistura Rhei et Sodæ
Pulvis Rhei Compositus
Pilulæ Rhei Compositæ
Rosa Gallica
Confectio Rosæ
Fluidextractum Rosæ
Mel Rosæ
Rubus[1]
Fluidextractum Rubi[1]
Rhus Glabra[1]
Fluidextractum Rhois Glabræ[1]
Syrupus Rubi[1]
Sabal[1]
Fluidextractum Sabal[1]
Sabina
Fluidextractum Sabinæ
Salvia[1]
Fluidextractum Sanguinariæ
Tinctura Sanguinariæ
Fluidextractum Sarsaparillæ
Fluidextractum Sarsaparillæ Compositum
Sassafras
Sassafras Medulla
Mucilago Sassafras Medullæ
Acetum Scillæ
Scopola
Fluidextractum Scopolæ
Extractum Scopolæ[1]
Scutellarial
Fluidextractum Scutellariæ[1]
Infusum Sennæ Compositum
Confectio Sennæ
Serpentaria
Sodii Arsenas Exsiccatus
Liquor Sodii Arsenatis
Trochisci Sodii Bicarbonatis
Sodii Pyrophosphas
Spiritus Frumenti
Spiritus Juniperi
Spiritus Juniperi Compositus
Spiritus Menthæ Viridis
Spiritus Vini Gallici
Staphisagra[1]
Fluidextractum Staphisagra[1]
Stillingia[1]
Fluidextractum Stillingiæ[1]
Styrax
Sulphur Præcipitatum
Sulphur Sublimatum
Sulphuris Iodidum
Sumbul
Fluidextractum Sumbul
Extractum Sumbul
Syrupus Ferri, Quininæ et Strychininæ Phosphatum
Syrupus Krameriæ
Syrupus Lactucariæ
Syrupus Rosæ
Syrupus Rubi
Tamarindus
Taraxacum
Triticum
Fluidextractum Tritici
Mucilage Ulmi
Vanillinum
Oleatum Veratrinæ
Unguentum Veratrinæ
Vinum Rubrum
Xanthoxylum[1]
Fluidextractum Xanthoxyli[1]
Zea
Zinci Iodidum
Oleoresina Zingiberis
Pulvis Rhei Compositus
Fluidextractum Aromaticum

There were a number of preparations, including several recently introduced into the Pharmacopeia, on which many did not express a direct opinion.

The committee did not deem it wise to make specific recommendations as to the revision of the Pharmacopeia except to express the opinion that if the recommendation of the Board of Trustees of the Pharmacopeial Convention that an advisory Committee on Revision of fifty be selected is approved, the latter should be composed equally of delegates from medical and pharmaceutical organizations and that the nominating committee should be instructed to submit the names of 25 medical and of 25 pharmaceutical delegates; such a request seems reasonable in view of the fact that about two-thirds of the organizations entitled to representation in the convention are medical organizations.

Respectfully submitted.

George Dock.
Robert A. Hatcher.
Reid Hunt.
Edward E. Hyde.
W. S. Thayer.

Exceptions:—Dr. S. Solis Cohen takes "exception to the form of the questions on the scope of the Pharmacopeia, especially the last question, because the 'therefore' which is included in that question does not follow" and also because "the question of basic drugs is one thing and the question of preparations included in the N. F., etc., quite another." He also thinks "a large proportion of the uncertain answers received on this [there were 3 uncertain and 84 positive answers.—Chairman] and other questions is due to the bad form of the questions." He also takes exception to the form of the question relating to the admission of "compounds or mixtures that are permanently controlled either by secrecy or proprietary rights" considering it to be "doubly misleading in that it confounds compounds and mixtures (concerning one of which the answer might be 'yes' and the other 'no'); and again confusing secrecy and proprietorship (concerning one of which the answer could only be 'no,' while concerning the other there is considerable room for debate, and an honest 'yes' would doubtless be given by many who have answered 'no' to the full question, were this particular issue separated). The question if separated would in part read: 'Should drugs having a definite and known chemical composition, but monopolized by virtue of patent rights, be excluded from the Pharmacopeia?' This question has not been put distinctly from other issues, and therefore has not been answered." [The question related only to *permanently* controlled articles; the question of articles controlled by "patent rights" in which the proprietorship is limited, was not raised.—Chairman.]

### Officers of Sections

The newly elected officers of sections are given in this issue in the General News Department.

## *Society Proceedings*

### AMERICAN GYNECOLOGICAL ASSOCIATION

*Thirty-fifth Annual Meeting, held in Washington, D. C., May 3-5, 1910*

*(Concluded from page 1995)*

### Fibroid Tumor Complicating Pregnancy and Rendering Natural Labor Impossible

Dr. B. F. Baer, Philadelphia: Early in my medical career I saw two cases of pregnancy complicated with fibroid tumor, in one of which rupture of the uterus occurred during labor, followed by death of both the mother and child. In the other case, death resulted from septic peritonitis in consequence of injury of the soft parts following instrumentation for dystocia caused by complicating fibroid. The child perished during the labor. The first patient was attended by a midwife. In the other case I was an assistant. This experience impressed on me the fact that pregnancy complicated with fibroid tumor was a most serious condition. I will report briefly six cases. The first was one of multiple fibroid tumor. of the uterus complicating pregnancy, with hemorrhage and miscarriage; myomectomy and oöphorectomy; recovery. In the second, I resorted to supravaginal hysterectomy for fibroid tumor complicating pregnancy and rendering labor impossible; recovery. The third case was one of fibroid tumor complicating pregnancy, hemorrhage and miscarriage, in which supravaginal hysterectomy was done; recovery. In the fourth, a fibroid tumor in the posterior wall of the uterus complicated pregnancy. Pelvic incarceration rendered the continuance of pregnancy dangerous and labor impossible, and supravaginal hysterectomy was done at the fifth month, followed by recovery. In the fifth, pregnancy was complicated with fibroid and ovarian tumor; supravaginal hysterectomy was done, followed by recovery. In the sixth case, pregnancy was complicated with fibroid tumor in the lower zone and broad ligament, blocking the pelvis and rendering natural labor impossible. Abdominal hysterectomy was done at the seventh month; recovery. These cases show the importance of operating on tumors interfering with the natural delivery of the child.

DISCUSSION

Dr. I. S. Stone, Washington, D. C.: A distinction ought to be made between the disappearance and reduction in size of fibroids. I do not believe in the disappearance of fibroids unless degeneration sets in, or unless necrosis takes place and a submucous abscess forms and discharges. A fibroid may disappear in that way or by twisting of the pedicle, getting separated from the uterus and disappearing. But I take no stock in the idea that fibroids will disappear after pregnancy.

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[1] Also recommended for deletion by Section Committees of the American Medical Association.

**Dr. Charles M. Green**, Boston: In one case I found the pelvis of a woman filled with a fibroid tumor, so that nothing else could be felt. During transmission to the hospital the fibroid pulled out of the pelvis, and when I saw the woman I could reach the os and found a breech presentation. I gave her further time, the fibroid ascended out of the way, the woman was delivered of a living child, and made a normal convalescence. When she became pregnant again I watched her through pregnancy, and nothing occurred in the size of the fibroid. She went through that pregnancy, delivered herself and there was no perceptible increase in the fibroid.

**Dr. Edward Reynolds**, Boston: Two or three years ago I saw a young pregnant woman with a fibroid in the uterus. She miscarried. I determined the position of the fibroid with fingers inside the uterus and hand outside. I operated on her for other causes about a year ago, and found at the site of the fibroid no tumor whatsoever, but a white, comparatively bloodless area in the uterine wall, which evidently represented complete disappearance of the tumor. I do not believe such cases are exceptionally rare. In the general question of fibroids during pregnancy, we should discriminate carefully between fibroids of the fundus and fibroids in the lower segment of the uterus. Fibroids of the fundus, especially if pedunculated, can be removed safely during pregnancy and complicate labor comparatively little.

**Dr. Willis E. Ford**, Utica, N. Y.: I have one very remarkable case to report of a girl whom I saw before her marriage with an intramural fibroid which reached half way up to the umbilicus. I was called to see her after marriage when she was pregnant at the fifth month. This was 14 years ago. I got ready to do a Porro operation. Fortunately nothing happened. She was delivered in the normal way. The other day I examined her and found that this fibroid tumor has entirely disappeared, as far as I am able to judge.

**Dr. Richard C. Norris**, Philadelphia: I have seen tumors situated in the lower segment of the uterus retract themselves, these tumors being drawn out of the way by the action of the longitudinal fibers, and disappear when I was about ready to perform Cesarean section, and the woman be delivered spontaneously. It is my conviction that myomectomy should be more restricted during pregnancy than at other times.

**Dr. George T. Harrison**, New York: It is well known that in negro women myomata are much more common than in those of the white race. The exhaustive paper of Hofmeier demonstrates conclusively that the position of a myoma is not a bar to conception, and the proof is found among the negro race. A number of years ago I reported a case in which myomectomy was performed on a woman when she was several months pregnant, and she was carried to full term. A fibroid tumor had grown in the meantime in the pelvis which necessitated Cesarean section, followed by hysterectomy; unfortunately the woman had sepsis and died from it.

**Dr. B. F. Baer**: If a woman has a fibroid complicating pregnancy, and she has not borne any children, but desires to have one child, she should have that privilege, and pregnancy allowed to go on in the presence of the fibroid, but it is our duty to advise her as to the dangers of this fibroid.

### Extrauterine Pregnancy of Eleven Months

**Dr. E. C. Dudley**, Chicago: I operated in this case July 20, 1909, two months after term. The mass was posterior and to the left of the uterus. The incision was made in the median line. The tumor was almost universally fixed by adhesions or by continuity of development. The adhesions were intestinal, uterine, parietal, and omental; in fact, they existed between the mass and all adjacent structures, especially to the anterior abdominal wall and the sigmoid flexure. The mass, about eleven inches in diameter, was separated from its adhesions and shelled out unruptured. The resulting raw surfaces were equal approximately to a surface not less than twelve inches square. An incision was made back of the uterus into the posterior vaginal fornix, and through this incision a continuous gauze drain was introduced from above downward into the vagina. The upper part of this drain consisted of gauze packing sufficient to fill the field of operation and to prevent oozing. This packing was then covered in by stitching together the peritoneal surfaces above it in such a way as to cut off completely the field of operation from the remaining portion of the abdominal cavity, and to cover all with normal peritoneum. This suturing across the pelvis from side to side involved extensively intestinal structures, and especially the sigmoid flexure, which was stitched to omental, parietal, bladder and other visceral peritoneum wherever possible to bring the parts together in order to quarantine the field of operation from the general peritoneum. The abdominal wound was closed without drain and healed promptly. A slight fecal fistula subsequently discharged through the vagina, but closed spontaneously in a few days. Such extensive enucleation of so large a mass due to ectopic pregnancy ordinarily would not be undertaken. The fact that success followed this operation does not necessarily influence me in recommending the procedure as a routine in similar cases. I report the method with the suggestion that it might be considered more surgical than the conventional operation of incision and drainage, but although more surgical, it perhaps may with subsequent experience prove to be more dangerous.

#### DISCUSSION

**Dr. Edwin B. Cragin**, New York: I have operated in four cases of ectopic gestation at full term. Two of the women were delivered of living children at the operation. The question of operation revolves around the point whether the sac and its contents shall be removed at the single sitting, or the sac opened and the cavity drained. In one of the four cases I was able to ligate the vessels supplying it and able to enucleate the sac, but was obliged to take the uterus with it. This gave me primary union of the abdominal wall, without drainage, and a short convalescence. It is exceptional, judging from my small experience, that one can with safety ligate the nutrient vessels and remove the sac *en masse*. In the other three patients the placenta was adherent to the structures at the floor of the pelvis, and to have attempted to ligate the vessels supplying the placental sac would have killed the woman. In these three cases a wiser procedure was to leave the sac open, to separate the placenta gradually, and then let the wound heal by granulation. This was done. All the patients recovered, but this was only one of the four cases in which I was able to follow anything like the procedure reported by Dr. Dudley of complete enucleation.

**Dr. E. E. Montgomery**, Philadelphia: About fifteen years ago I operated on a woman, who was 15 months pregnant. The uterus was in front of the sac. After opening the abdomen it was found that the small intestines were so intimately related to the sac that it was impossible to attempt its removal. We removed the fetus, and made a communication between the sac and the abdominal wall, and packed with iodoform gauze. While the patient had a stormy convalescence, she recovered.

**Dr. Herman J. Boldt**, New York: I do not believe that one can lay down a hard and fast rule as to the procedure which must be pursued in any given case. I have had four cases of ectopic gestation at or near term, and in only one instance was it possible to remove the sac without rupture. In the others I resorted to a procedure similar to that described by Dr. Cragin. I lost one case.

**Dr. A. Lapthorn Smith**, Montreal: I have had two cases of tubal pregnancy at term. One of the women refused operation and is alive to-day. In the other I removed the child, and when I attempted to enucleate the sac the hemorrhage was so profuse that I stopped, and closed the wound. While she had no rise of temperature, she died in eight days from exhaustion. I would favor leaving the placenta in cases in which profuse hemorrhage is likely to follow its removal. One of my colleagues attempted to remove the placenta in such a case and the woman died on the table from hemorrhage.

**Dr. E. W. Cushing**, Boston: I had one of these cases many years ago in which I waited until the child died. It seemed a safer thing to wait about a month, which I did, then opened the abdomen. The sac was thin, and the child was found loose in the abdominal cavity. The woman recovered without trouble.

**Dr. G. B. Miller**, Washington, D. C.: About five years ago I had a case of ectopic gestation in which I operated, delivering a living child at term. The placenta was attached to the tube and broad ligament, with firm pedicle, so that it was easily removed. The sac was adherent over the anterior abdominal wall and to the omentum which gave rise to some hemorrhage. The whole sac with placenta was removed, and the woman recovered. The child unfortunately died of hemorrhage following ligation of the cord by the nurse, to whom the baby was turned over at the time of the operation.

Dr. Joseph Taber Johnson, Washington, D. C.: I had a case of ectopic gestation about ten years ago. The woman was supposed by those who saw her before I did to be twelve months pregnant. The nature of the case was not clearly understood and at the operation doubt was expressed as to whether there was pregnancy or not, but there was a large tumor on the side of the uterus. This was enucleated without breaking the sac, which was found to contain a full-grown fetus, weighing nine pounds. The abdomen was closed without drainage, as there was nothing to drain. The patient made a good recovery.

### Report on Vaccine Therapy in Gynecology and Obstetrics

Dr. J. Whitridge Williams, Baltimore; Dr. Edwin B. Cragin, New York, and Dr. Franklin S. Newell, Boston, constituted the committee that made this report. The evidence at present available seems to justify the following tentative conclusions concerning the value of vaccine therapy in gynecology and obstetrics:

1. Opsonins undoubtedly play a part in the production of active immunity. On the other hand, the determination of the opsonic index is technically very difficult, and is subject to such variations that it is not available as a diagnostic or prognostic guide, and even among trained bacteriologists there is considerable skepticism as to its practical value.

2. Immunization by means of vaccines is a well-established prophylactic measure against certain infectious diseases, notably typhoid, cholera, plague and dysentery. Vaccine therapy is undoubtedly a valuable remedial agent in local infections due to the tubercle bacillus or staphylococcus, less so in local infections due to other pathogenic bacteria, while there is considerable doubt as to its efficiency in acute general infections.

3. In chronic gonorrheal arthritis and urethritis it is a valuable adjunct to other treatment, and occasionally may lead to cure alone. It appears to be useless in the acute infections, while it is more efficient in the treatment of vulvovaginitis of children than any other means, but even here it does not always result in cure.

4. In infections of the urinary tract, especially those due to the colon bacillus, it sometimes results in symptomatic cure, but rarely relieves the bacteriuria. The scanty reports concerning the pyelitis and the pyelonephritis of pregnancy indicate that vaccine therapy is no more efficient than the usual treatment by rest in bed and the administration of salol or hexamethylenamin, as in neither does the bacteriuria disappear until after the termination of pregnancy.

5. In certain cases of endometritis it appears to reinforce the curative influence of curettage. The reports concerning its use in pelvic inflammatory diseases are too scanty to justify conclusions, but it would seem that it may be of value only in chronic postoperative cases with sluggish fistula formation.

6. As the ordinary localized puerperal infections, irrespective of the nature of the offending bacteria, tend to spontaneous cure, the field for vaccine therapy is practically limited to acute general infections, whereas they unfortunately appear to be of little value, and the most that can be said from the reports thus far available is that their employment does no harm.

## *Medical Economics*

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

### How "National Leagues" are Organized

The following editorial from the Joliet (Ill.) *Weekly News* is interesting in connection with the recent campaign of newspaper advertising and spasmodic publicity directed against the public health bill introduced by Senator Owen. No doubt many of the names of the so-called "directors" of the local organizations inspired by this league have been secured through misrepresentation or without the signers knowing the significance of the organization which they were endorsing:

PUBLIC HEALTH

A surprising opposition to the proposed department of public health is being sprung on the congressmen. At first the source of the many letters and telegrams was unknown, but later developments revealed that it is a concerted effort on the part of the new schools of medicine or healing—osteopaths, mental healers, Christian scientists and other enthusiastic opponents of regular medicine.

Those who make a discovery in healing, though it is but a cure for a boil or a sore thumb, become very enthusiastic and apply their method to every form of affliction from consumption to a broken neck, and are impatient with those who hold to other methods. It is not only so in medicine, but it is true of all lines of skill and science. The new brooms are enthusiastic.

A young man came to the *News* office recently and asked the editor to join in a movement for public economy, the curtailment of extravagance, abolition of graft, but being somewhat interested in those lines for a number of years, and believing that present methods were doing at least something, the editor held aloof. The young man added this postscript: "Well, to be frank about this matter, I suppose this organization has a purpose to defeat the movement for a department of public health now before congress. You know it provides another place for politicians and grafters."

"Now, surely, I cannot see my way clear to join your lodge," said the editor. "For many years I have felt that our greatest waste in natural resources was the waste of the man himself. With all of our present-day knowledge and boastful enterprise, we permit people to run these streets afflicted with diseases more deadly than leprosy. We permit conditions in public conveyances that scatter other contagious diseases. We eat tainted food and drink tuberculous milk, and, in short, waste human life more than we have wasted our forests or soil.

"At this office we are thorough believers in the preservation of our natural resources, our forests, streams and soil, and believe in their improvement, but above all we believe in the preservation and improvement of man himself. For years we believed there was something wrong in the plan of government that permitted these things and we looked to the general government for a remedy. We need the aid of the government to check the bubonic plague. For ten years, San Francisco, with the assistance of the government, has held the plague at bay. The government discovered the source of yellow fever and malaria and now it is after the hook worm and pellagra. The government is doing well, but it should do better.

"Young man, when you came to the *News* office with a scheme to defeat the government in the greatest work of the century, you got into the wrong box."

### Senator Owen's Speech on the Public Health Bill

The *Congressional Record* for May 25 contains a short statement made by Senator Robert L. Owen on that day in the United States Senate regarding the public health bill. Senator Owen's statement is so concise and conclusive that it is printed entire for the information of those of our readers who may not have access to the *Congressional Record*. The attack through the newspapers of the country on the Owen bill on the ground that it has any bearing whatever on the licensure of physicians can be the result only of ignorance or mendacity, since any intelligent person knows that the licensing of physicians, like the regulation of any profession or trade, is a function of the state and cannot possibly be assumed by the national government. Equally foolish was the statement made before the Senate Committee on Public Health by one Frederick A. Bangs, who stated that he represented the "Voters and Tax-Payers' Association," which organization under questions from the committee proved to have been organized in the last ten days for the sole purpose of opposing the Owen bill. Mr. Bangs said that "behind this bill lies the power of the United States, if it is passed, to compel them (the people) to take any kind of medicine the regular doctors may insist that they shall take." Following this surprisingly illuminating statement, Senator Martin, chairman of the committee, said, "I am amazed that any intelligent man would intimate for a moment that there is anything in this bill that would compel anybody to take any medicine at all." Such was the exhibition of ignorance before the committee on the part of the opponents of the bill that its chances of passage have been greatly improved by the last hearing.

Senator Owen's speech follows:

## DEPARTMENT OF PUBLIC HEALTH

Mr. President, I have been amazed, and I suppose that every Senator on this floor has been, to receive many telegrams from "homeopaths," "osteopaths," "eclectics," "chiropractics," and practitioners and believers in Christian Science and suggestive therapeutics, and from other good citizens, protesting against a department of public health apparently on the unfounded notion that the bill introduced by me (S. 6049) proposed or made possible some interference by the federal government with the practice of medicine and constituted a possible invasion of the medical freedom of the citizen to employ whom he pleased when sick. None of the protests point out the language of the bill by which this could possibly happen, and for the obvious reason that no such language exists in the bill. None of these protests suggest any amendment to correct either an error of omission or commission in the bill. They simply protest against an interference with the medical freedom of the citizen, with which the bill contemplates no interference, with which the federal statutes cannot interfere within any state.

I understand that during the last week a large number of so-called "taxpayers' and voters'" associations have been organized with many members in several states of the union for the purpose of opposing a department of public health.

I am informed that the sudden and surprising interest of the "taxpayers and voters" of the United States who are organized in this artificial manner and the active interest alleged or manifested of the "homeopaths" and of the "osteopaths" and of the "eclectics" and of the great variety of those who have special views with regard to the various methods of healing the sick has taken place within seven days, and like a flash of lightning telegrams are coming in from Maine to California. The chairman of the Committee on Public Health and National Quarantine of the senate received a very large number of them. Such sudden universality of disapproval of a department of public health on such an unsound theory is astounding; it is more, it is extremely suspicious; it is obviously artificial; it is perfectly apparent that somebody is spending a very large amount of money on this sudden propaganda; it can hardly be doubted that somebody, in gross error, is advising the "homeopaths," the "osteopaths," the "eclectics" that their right to practice medicine is about to be invaded by the federal government.

The agency through which this propaganda is being carried on against a department of public health is carrying the flag of "medical freedom."

And an active and authorized representative of this organization in the *Washington Post* is quoted as saying (Friday morning, May 20, 1910):

> I believe the creation of a federal department of health would mean the abridgment of long-cherished rights of the people, which would mean the taking away of the enjoyment of one of the most sacred rights for which man has had to contend—the right to select the practitioner of his choice in the hour of sickness. If such a bill became law, hundreds of practitioners would be thrown out of practice, men who have succeeded in curing persons who have been given up by physicians. It would particularly affect Christian Science healers and osteopaths. In their line, both these classes of practitioners undoubtedly have done a world of good, and they should not by unfair legislation be outlawed. It should make no difference whether we believe in Christian Science, osteopathy or any other practice, the people should have the privilege of choosing their own practitioners. They should not be prohibited from so doing by legislation.

This is an astonishing and utterly impossible interpretation of the bill which I introduced in the senate of the United States proposing a department of public health.

The bill itself merely brings the various bureaus affecting the public health in one body, under one head, without changing the character of the activities or authorities of such existing bureaus, to wit:

> All departments and bureaus belonging to any department (excepting the army and navy) affecting the medical, surgical, biological, or sanitary service, or any questions relative thereto, shall be combined in one department.

The greatest of these bureaus dealing with the public health is the Bureau of Public Health and Marine-Hospital Service, but various public hospitals, the Bureau of Chemistry and of pure foods and drugs, and bureau of meat inspection, including some 16 laboratories of the federal government, are to be transferred to one department by this proposed bill.

Nobody has heretofore protested against the existence of these bureaus or their functions.

Nobody has declared them unconstitutional.

Nobody has charged that they in any wise have interfered with the homeopaths, osteopaths, eclectics, Christian Scientists, or any other school of healing.

Nobody has contended that they would do so, or has desired that they should be abolished for fear that they would interfere with the local practitioners in the gentle art of healing.

No man who has any knowledge of constitutional law would believe it possible that the federal government could invade the police powers of the state, or in any way interfere with the liberties of the citizen or of the local practitioner.

The Supreme Court has repeatedly passed on this question, and held that the states, under their police powers, exclusively control such matters. All lawyers are familiar with these principles. The leading cases I insert in the *Record* for the convenience of those who may not be familiar with the matter:

> United States. *v.* De Witt (9 Wall., 41); Slaughterhouse cases (16 Wall., 36); United States *v.* Reese (92 U. S., 214); United States *v.* Cruikshank (92 U. S., 542); Munn *v.* Illinois (94 U. S., 113); Civil Rights case (19 U. S., 3).

All citizens know that the states exclusively control the issuance of licenses to practice medicine.

Nobody ever heard of the federal government considering such a matter or pretending to have any interest in it.

Every member of the Senate and the House of Representatives knows that the federal government has nothing to do with the local practitioner or the hostilities which may exist between different schools of medicine, if any such do exist.

I wish, however, to put in the *Record* my assurances to the members of the medical profession, of whatever school of healing, a few facts which I trust may abate any apprehension on this score.

First. Senate bill 6049, proposing a department of public health, was drawn by me without the knowledge of any school of medicine or of any medical association. I was greatly pleased to find that many members of the various medical schools and associations, including homeopaths and eclectics, approved the bill.

I have been pleased to observe the wholesale cordial support of osteopaths and men of all schools of healing for a department of public health. The bill contains no provision either directly or indirectly interfering with any school of healing, whether osteopaths, homeopaths, eclectics, Christian Scientists, or in those who reject all medicine. It could not accomplish such a purpose if it had the intent, as the federal government has no such police powers within the state, the states alone issuing licenses to control the practice of medicine and religious and personal freedom being a constitutional right in which everybody believes.

As the author of this bill I wish to say that I believe the more a man knows about the laws of health the less drugs he takes. I have employed homeopaths and osteopaths and allopaths as well to treat myself and the members of my family. I have studied the doctrine of suggestive therapeutics and of Christian Science with great interest and respect, and cordially indorse Horace Fletcher as the best doctor of them all. I stand firmly for medical freedom and for the right of the citizen to select his own medical or spiritual adviser.

The department of health, proposed by me, has for its object the prevention of sickness, and therefore taking business away from all doctors.

The members of the profession whose hearts are constantly wrung by the grief and sorrow at the bedside of sickness and death naturally desire to prevent bad health and illness, even if it be to their financial loss, as it evidently is, and every member of the noblest of professions will stand for the department of health when its purposes and its constitutional limitations are well understood.

The absurd theory that any medical association could, by any possibility, take charge of the health activities of the government of the United States and interfere with the medical freedom either of citizen or practitioner is preposterous.

It is to the honor of all the members of this sympathetic and self-sacrificing profession that they are so largely interested in preventing disease and thus diminishing the need for their own employment. All disciples of every school of healing, I should think, should engage in a generous rivalry to put an end to disease and prevent tuberculosis, typhoid and yellow fevers, bubonic plague, pneumonia, and the many diseases which are known to be preventable.

This is about all a department of health can hope to assist in, and it can only do this by cooperating with the states on constitutional lines in educating the people on the elementary laws of health and well-ascertained facts relating to the prevention of the wholesale sickness and death of our people.

It is beyond belief that any of our good citizens engaged in curing the sick would seriously oppose the reasonable exercise of either the state or national activities within their constitutional limits for the prevention of the illness and death of our people.

# Medicolegal

## Doctrine of Privileged Communications—Commenting on Not Calling Physician as Witness Not Allowed—Definition of "Physician"—Persons Not Prohibited from Making Disclosures

The Supreme Court of Indiana says, in William Laurie Co. vs. McCullough (90 N. E. R. 1014), a personal injury case brought by the latter party, that it is provided by the Indiana statute that: "The following persons shall not be competent witnesses. . . . Fourth. Physicians, as to matter communicated to them as such by patients, in the course of their professional business, or advice given in such cases." The statute was designed to subserve the good of society, and to promote a full disclosure of all facts and conditions necessary to a correct diagnosis and proper treatment of human ailments, by securing the patient against involuntary disclosure of information given in confidence. The prohibition of the statute is absolute in its terms, yet its provisions were made for the protection of the patient, and the privilege of secrecy granted may be waived by the one directly concerned. It is manifest that in many instances the physician may acquire, by virtue of his office, only such information as might, with propriety and without embarrassment to the patient, be published to the world; while in other cases a disclosure would be revolting to the sensibilities of the public, and injuriously affect the business and social standing of the patient in the community, without any countervailing good results. It is obvious, therefore, that the patient may with good reasons be clothed with a discretion to waive the privilege of secrecy. The purposes of this statute are broader than the exigencies of any given lawsuit, and in the legislative judgment the considerations of public policy and general advantage to mankind from the establishment of inviolable confidence between physician and patient outweigh the private interests of any particular litigant.

In electing not to call his physician as a witness it is clear that a party may have motives and potent reasons in no way involving the suppression of evidence prejudicial to his interests in the case on trial. The law grants to a patient the unqualified right to exclude the testimony of his physician as to facts acquired in confidence, and the exercise of this privilege cannot be impaired by allowing opposing counsel in argument to impugn his motives or charge him with suppressing important and relevant evidence. The general rule, authorizing an inference from withholding of important and material evidence on the matter in issue, that such evidence if heard would be prejudicial to the cause of the party having it in his power to produce the same has no application to privileged communication which the law excludes on ground of public policy. The court in this case properly denied counsel for the defendant company the right to comment on the plaintiff's failure to call a physician, who had treated her, as a witness in her behalf, and in directing the jury to disregard the statement made on the subject, when in the course of his argument to the jury he asked why did she not have the physician there to testify, if she did not have curvature of the spine. The holding in the case of City of Warsaw vs. Fisher, 24 Ind. App. 46, to the effect that adverse counsel have a right to comment on the failure of a party to avail himself of the testimony of his physician is disapproved.

But, prior to the time of receiving the injuries for which she sued in this case, the plaintiff, on the advice of a physician, took treatment, consisting of gymnastic exercises, of a superintendent of a gymnasium and orthopedic institute. The defendant introduced him as a witness, and offered to prove by him that he knew of the plaintiff's physical deformity and infirmities, both from his own examination and from what she told him while under his care. The superintendent had never applied for or received a physician's license, and was not a physician as defined by the Indiana statute. The offered evidence was excluded as privileged under the provisions first quoted, excluding physicians as witnesses "as to matter communicated to them, as such, by patients, in the course of their professional business." This was error. "The word 'physician' is defined to mean a person who has received the degree of doctor of medicine from an incorporated institution; one lawfully engaged in the practice of medicine." 30 Cyc. 1544. It is made unlawful for any one to practice medicine in Indiana without first obtaining a license so to do; and practicing medicine without license is punishable as a misdemeanor. Information gained by a physician while in attendance on his patient was not privileged at common law, and the state statute, being in derogation of the common law, is not to be enlarged by intendment. It manifestly relates to general practitioners and those only whose business as a whole comes fairly within the definition of "physician." By the terms of the statute in some of the states the ban of secrecy is extended only to information given to persons "authorized" to practice physic or surgery; but, as we have seen, the word "physician" includes those only who are "lawfully" engaged in the practice of medicine, and therefore duly authorized to pursue that vocation. This is the sense in which it is used in the Indiana statute. It will not be presumed that this exceptional privilege was intended to apply to transactions between citizens and charlatans or impostors, whose business is conducted in violation of the law, nor can it be extended by construction to persons employing other curative processes not coming within the ordinary meaning of the term "practicing medicine."

It has been held that a statute prohibiting any person authorized to practice physics or surgery from disclosing any information acquired while attending in his professional character had no application to dentists, or to a druggist furnishing medicines to a person applying for the same, or to a veterinary surgeon. The statute of Colorado excludes the testimony of physicians authorized under the laws of that state, and the evidence of physicians authorized to practice in another state was held competent. The New York courts hold that when a party seeks to exclude evidence under a statute similar to that of Indiana, the burden is on him to bring the case within its purview. The superintendent referred to was not a "physician" within the meaning of that word as used in the Indiana statute under consideration, and made no claim to be such, and the information which he acquired while giving the plaintiff a course in gymnastic exercises was not privileged.

## Death of Injured Hay-Fever Patient Right After Administration of Antitetanus Serum

The Supreme Court of Minnesota says, in the case of Gardner vs. United Surety Co. (125 N. W. R. 264), that the insured, while in a stable, was kicked by a horse. His thigh was cut, and the evidence indicated that he was thrown and struck his head against some part of the barn. After the accident he appeared to be in great distress, and a physician was summoned, who, after dressing the wound, suggested, as stables were fruitful breeding places of tetanus germs, it might be well to administer an injection of antitetanus serum, although expressing the opinion that there was not one chance in a million that tetanus would ensue. The man consented, and toward the evening of the following day the physician injected the serum. Immediately after the man was seized with a fit of sneezing, and died within a few minutes. A postmortem examination disclosed that his lungs and bronchial tubes had been completely filled through regurgitation. It also disclosed some injury to the head, which it was claimed was severe enough to have produced concussion of the brain.

The beneficiary suing to recover the insurance, which was against injuries through "external, violent and accidental means," introduced evidence tending to support her claim that the injury received was sufficient to cause a shock, impairing the nervous system to such an extent that the regurgitation of the contents of the stomach ensued, causing death by suffocation, and, further, that the injection of the serum was the proper treatment indicated after the accident, and, even if such treatment caused the filling of the lungs, death was still by suffocation, of which the accident was the proximate cause. The company, on the other hand, contended that death resulted solely from the injection of the serum, which treatment was not necessarily indicated by the injury received, but was at most because of a possible infection of the wound which the attending physician deemed it prudent to guard against; that such treatment was improperly administered to the insured, who was afflicted with hay fever, and that the injection of the serum was the proximate cause of the death, and was not external, violent or accidental within the meaning of the policy.

The court does not agree with the contention that death from suffocation is in every case, except where such result is intended, to be regarded as produced by external, violent and accidental means. But the appeal must be determined by considering whether the injuries received were the proximate cause of death on the following day; that is, was the administration of the serum an independent supervening cause of death, or was it to be considered one of the possibilities within the contemplation of the parties at the time the contract of insurance was entered into? The parties contemplated that the individual injured would act as an ordinary normal person, and that a physician would be called, whose judgment would be relied on for the treatment to be administered; and where, as in this case, a reputable member of the medical profession was called, and his treatment was regular, ordinary, and in accordance with the teachings of his profession, there can, it seems to the court, be no escape from the conclusion that the treatment administered was a natural and anticipated result of such injury, and that although death might not have resulted, had no injection of serum been made, the original injury, confessedly received under conditions within the terms of the policy contract, must be held to be the proximate cause of death.

The evidence did not conclusively show that, even if the insured was afflicted with the disease known as "hay fever," the injection of the serum would be fatal; and it followed that the jury were properly instructed that the plaintiff was entitled to recover if the treatment given was rendered necessary and proper by the injuries, and that death resulted solely from the injuries and the injection of the serum.

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# Current Medical Literature

## AMERICAN

Titles marked with an asterisk (*) are abstracted below.

### New York Medical Journal

*June 4*

1 *The Relation of the Nervous System to Diseases of the Skin. J. A. Fordyce, New York.
2 A Possible Method of Infection in Acute Poliomyelitis. N. M. Shaffer, New York.
3 *The Glycyl Tryptophan Test for Carcinoma of the Stomach. W. G. Lyle and P. A. Kober, New York.
4 Skiagraphy of the Stomach. J. Rudis-Jicinsky, Cedar Rapids.
5 Open Operation for Congenital Luxation of the Femur. B. M. Ricketts, Cincinnati.
6 The Home as a Factor in the Medical Inspection of School Children. J. Sobel, New York.
7 Remarkably Large Vesical Calculus Attached to Catheter in the Urethra, Successfully Removed by the Suprapubic Method: Unique Specimen. H. W. Austin, Stapleton.
8 The Surgeon's Responsibility in Anesthesia. R. H. Greene, New York.
9 Enumeration of Spermatozoids. A. L. Benedict, Buffalo.

1. **The Nervous System and Skin Disease.**—Fordyce summarizes the rôle of the nervous system in the production of skin diseases by the statement that from the higher centers in the brain to the peripheral distribution of the nerves the skin may reflect circulatory or trophic disturbances some of which are typical and others only suggestive of a relationship. In the one case the etiologic factor is single and specific and in the other the rôle of a nervous influence is only contributory in a complicated causation which our present knowledge does not permit us to interpret in an exact manner.

The nervous system is directly concerned in sensory disturbances, as the hyperesthesias, anesthesias, and paresthesias. The posterior root ganglia and their analogues the Gasserian and geniculate ganglia, together with the peripheral nerves are concerned with the most characteristic skin lesions due to primary nerve involvement. Next to these are the skin lesions of syringomyelia, the changes which follow disease of the peripheral nerves in leprosy, and other forms of neuritis, or after division, partial or complete, of nerve trunks.

The nervous system may act as a predisposing or contributory cause in eczema, dermatitis herpetiformis, lichen planus, pemphigus, etc., by lowering the nerve tone. Psychic shock, mental strain from anxiety, grief or overwork are states which are often invoked in such conditions.

Hysteria leads to self-mutilation—the so-called feigned eruption—sensory disturbances, and possibly to spontaneous bullous affections and gangrene. The nervous system through the sympathetic, the adrenals and other chromaffin tissue related to the sympathetic, may be concerned in pigmentary and leucodermatous changes.

3. **Glycyl-Tryptophan Test.**—The authors applied the test in 21 cases in 11 of which the value of the test was shown at operation. In 5 of these 11 cases the test was negative, although the clinical history was positive, and at operation the stomach was found normal, the carcinoma or other condition being situated elsewhere. Of the remaining 10 cases, not operated, 3 gave a positive test. Two were cases of pernicious anemia and one was a case with stomach symptoms, which was lost sight of. In two cases diagnosed as carcinoma and two of possible carcinoma, the test was negative. In a case of cerebral syphilis, one of neurasthenia and one with stomach symptoms the test was negative. A repeated negative reaction is regarded as most valuable. However, when the test is positive, the complication of a regurgitation of trypsin must be thoroughly investigated.

### Boston Medical and Surgical Journal

*June 2*

10 *Graves' Disease. J. G. Mumford, Boston.
11 Tonsillectomy with Special Reference to Recent Points in Technic. O. A. Lothrop, Boston.
12 The Therapeutic Value of Lactic Acid Bacteria. L. S. Medalia, Boston.
13 *Treatment of Emphysematous Gangrene Due to *Bacillus Aerogenes Capsulatus*. R. H. Gilpatrick, Boston.

10. **Graves' Disease.**—Mumford reviews both the medical and surgical methods of treatment and summarizes his article as follows: 1. Graves' disease is due to abnormal activity of the thyroid gland; 2, in advanced Graves' disease, degenerative changes in the thyroid gland may lead to a shifting symptom-complex ending at last in the positive signs of myxedema; 3, the histology of the gland in Graves' disease indicates shifting, advancing and retrograding symptoms; 4, an enlarged thymus is nearly always found post-mortem in patients dead of Graves' disease; 5, advanced Graves' disease may exist without the presence of all the classical symptoms; 6, Graves' disease can nearly always be cured if taken early; 7, the sera of Rogers and Beebe cure a goodly percentage of cases; 8, through hydrobromate of quinin (neutral), as used by Forchheimer and by Jackson, a large percentage of improvements and of cures was found; it is a pity so few cases have been reported; 9, the great and increasing experience of qualified operators is showing that more than 70 per cent. of Graves' disease patients are now being cured by partial thyroidectomy, and the percentage of such cures is rising; 10, treat the cases seen early by rest, by sera and by hydrobromate of quinin; if no improvement results in two months, operate by thyroidectomy, and always regard the operation as the surest one.

13. **Emphysematous Gangrene Due to Bacillus Aerogenes Capsulatus.**—After a review of the literature, Gilpatrick gives his experience with lactic acid milk and draws the following conclusions: 1. Lactic acid milk when prepared at home from tablets is unreliable as to taste and bacterial contents. 2. The objection to the use of the tablets in their dry state is their unreliable bacterial content, the loss of viability of organisms in their dry form, and the high price. 3. Buttermilk, pure and simple, when obtained from the dairyman, varies considerably as to taste (at times very sour, sometimes bitter) and bacterial content and is, therefore, unreliable. It is also deprived of the principal nourishing elements of milk. (The buttermilk as obtained from the dairyman is a side product with him, is the watery fluid left after churning the butter and as such probably not much attention is paid to its keeping, handling, etc.) 4. The Bulgarian lactic acid bacillus (*B. bulgaricus* so highly recommended by Metchnikoff produces too much acid, which taste is not tolerated by most patients. For this reason Metchnikoff is advocating now the use of the paralactic organism mixed with the *B. bulgaricus* in order to obtain a better tasting soured milk. Which of these two organisms is responsible for the good results cannot be definitely determined, as the *B. bulgaricus* does not grow readily at room tempera-

ture and is, therefore, outgrown by the paralacticus, which grows most readily at room temperature. It might be safe to say that the beneficial results are apparently due to the latter. 5. A good, clean soured milk can be obtained by means of any lactic acid organism in pure culture implanted in sterilized but not boiled milk. The palatability, however, being an important factor, makes it necessary to choose the organism best suited for this purpose. 6. The therapeutic value of soured milk depends chiefly on the lactic acid organisms it contains as well as on the fact of its being a good food article, and not on any particular kind or variety of the lactic acid organism. Any clean, palatable milk properly soured would answer the purpose. 7. A good tasting buttermilk can be prepared at home from sterilized milk with a "starter" of lactic acid organisms. One starter will last for several weeks or months if the directions for the preparation described in the article are carefully followed. A new starter should be obtained on the first sign of contamination detected in taste or in change in the manner of curdling. 8. The *B. bulgaricus* in pure culture in dextrose bouillon as a therapeutic application in infectious processes, although of benefit in certain conditions as a good local antiseptic, is not a cure-all and must be used with caution. In the oral cavity it should be used with great care, if at all, because the action of the lactic acid on the enamel may give rise to caries. 9. Public safety demands that the various buttermilks or soured milks in the market should be thoroughly inspected by the health and pure food authorities.

### Lancet-Clinic, Cincinnati

*May 21*

14 The Appendix in Inguinal Hernia. F. W. Bailey, St. Louis.
15 Tumor of the Pons. P. Zenner, Cincinnati.
16 Case of Extrauterine Pregnancy. F. M. Barden, Hamilton, Ohio.

### Kentucky Medical Journal, Bowling Green

*May 15*

17 Eye, Ear, Nose and Throat Work in Europe. W. J. Leach, New Albany, Ind.
18 Surgical Diagnosis. J. W. Price, Jr., Louisville.

### Pennsylvania Medical Journal, Philadelphia

*May*

19 *The Problem of the Public School from the Medical Point of View: Studies and Their Effects on the Nervous System. L. M. Hartman, York.
20 *School-Houses and School Habits, and the Physical Development of the Body. T. G. Simonton, Pittsburg.
21 *Medical Oversight of Public Schools. H. H. Herbst, Allentown.
22 *The Knowledge of Most Value to School Children. G. W. Wagoner, Johnstown.
23 *A Method of Implanting Ovarian Tissue in Order to Maintain Ovarian Function. W. L. Estes, South Bethlehem.
24 *Conservative Treatment of Pyosalpinx. J. W. Luther, Palmerton.
25 *Causes, Symptoms and Differential Diagnosis of Pyosalpinx. B. M. Anspach, Philadelphia.
26 *Successful Experience in the Immediate Operation for Ruptured Extrauterine Pregnancy. G. E. Shoemaker, Philadelphia.
27 Mine Injuries Affecting the Eye. J. B. Corser, Scranton.
28 Intestinal Parasites. J. M. Swan, Watkins, N. Y.
29 The Extent of Prevalence, the Etiology and Treatment of Amebic Dysentery. J. A. Nydegger, U. S. P. H. and M.-H. S.

19 to 22. Abstracted in The Journal, Oct. 16, 1909, p. 1322.

23 to 26. Abstracted in The Journal, Nov. 13, 1909, pp. 1672, 1673.

### Southern Medical Journal, Nashville

*May*

30 Phases of the Diagnosis and Treatment of Non-Malignant Prostatic Obstruction. B. Lewis, St. Louis.
31 *Subphrenic Abscess. A. B. Cooke, Nashville.
32 Transposition of the Viscera. R. W. Billington, Nashville.
33 The Higher Mission of the Doctor. J. L. Crook, Jackson, Tenn.
34 *A New and Efficient Suture, Useful in Appendectomy. G. S. Foster, Manchester, N. H.
35 Pellagra, with Points on Prognosis. J. H. Randolph and R. N. Greene, Chattahooche, Fla.
36 A Plea for Legislation Having for Its Object the Prevention of Ophthalmia Neonatorum. H. H. Martin, Savannah, Ga.
37 Tuberculous Arthritis. A. G. Nichol, Nashville.
38 The Treatment of Chronic Aural Discharges. P. Calhoun, Atlanta, Ga.
39 Medical Education in the South. C. Tompkins, Richmond, Va.
40 Prostatic Calculi. F. C. Walsh, San Antonio, Texas.

31. Abstracted in The Journal, May 7, 1910, p. 1573.

34. **An Efficient Suture in Appendectomy.**—During the entire operation, so far as the appendix, cecum and mesenteriolum are concerned, but one suture is needed. This in itself is certainly a marked advantage. Foster's preference for material used is either medium-sized linen or intestinal silk. The needles should be very small, with a tri-cutting edge point and a short curve. The suture should be about sixteen inches in length, with a needle threaded at each end, the thread secured by a single knot. One of the needles is passed through the mesenteriolum as near the proximal end of the appendix as possible. This suture is then tied, while the assistant holds the attached hemostat in the left hand and lifts the free margin of the meso-appendix, by the aid of tissue forceps, held in the right hand. Following the tying of this suture, the assistant releases the mesenteriolum from the tissue forceps, still keeping the appendix taut by the use of the hemostat in the left hand. The operator then gently grasps the suture in his left hand and with scissors in his right hand cuts the appendix loose from its meso-attachment. Near the base a dry sponge replaces the scissors and the appendix is easily freed fom all meso-attachment. The appendix crusher is then applied to the base of the appendix and after removal of the former the latter is firmly tied with a No. 2 chromic catgut, thus preventing any bleeding from this locality. A fine pointed artery forceps is then made to grasp this catgut ligature as near the appendix as possible, the loose end of the ligature being cut off close to the artery forcep. The needle on one end of the linen suture is then passed just beneath the artery on the meso side of the base of the appendix. The needle is then turned in the opposite direction and encircles one-half of the cecum base about half an inch distant from the base of the appendix, picking up the peritoneal covering of the cecum at intervals of a quarter of an inch until a point is reached on the other side of the appendix, just opposite the meso-attachment. The needle on the other free end of the linen suture encircles the peritoneal covering of the cecum in the same way, but on the opposite side of the appendix base. This part of the suture is continued until it meets and just overrides the end of the half of the same suture coming from the other side. The appendix base is surrounded by a clean, dry sponge and the former crushed twice just above the catgut ligature. The appendix is then amputated, the assistant supporting the stump by the artery forcep attached to the catgut ligature. The appendix stump may be cauterized or not, according to the will of the operator, after which the sponge is removed. The assistant inverts the appendix stump by the use of the hemostat attached to the catgut ligature, while the operator ties the linen suture. Just before the linen suture is completely tightened the assistant loosens the hemostat and withdraws the same, leaving the appendix stump well buried. A second knot is then tied in the linen suture and the latter cut. The operation is then completed, except for closing the abdominal wall incision.

### Ohio State Medical Journal, Columbus

*May*

41 The Progress of Alienism. C. S. McDougall, Athens.
42 Treatment of "Choked Disc": Special Reference to Decompressing Trephining. A. R. Baker, Cleveland.
43 Angioneurotic Edema. Report of Two Interesting Cases. R. A. Bolt, Cleveland.
44 Huntington's Chorea. F. W. Langdon, Cincinnati.
45 Pruritus Ani: Special Reference to Its Treatment with the Roentgen Rays. W. I. Le Fevre, Cleveland.
46 Differential Cutaneous Tuberculin Reactions in the Diagnosis and Treatment of Tuberculous Lesions by Methods of Prof. C. von Pirquet and D. L. Detre. A. M. Crane, Marion.
47 Seminal Vesiculitis and Appendicitis. A. W. Nelson, Cincinnati.
48 The Genesis of the Non-Infectious Chronic Diseases of Middle and Later Life from Early Microbic Infection. J. B. Ballinger, Bradford.
49 Phosphatic Casts of Unknown Origin, Complicating Gonorrhea. F. A. Oakley, Cleveland.
50 Congenital Malformation of the Sigmoid with Angulation Due to Adhesions to and Behind the Left Broad Ligament. B. M. Ricketts, Cincinnati.
51 New Method of Gastroenterostomy. E. A. Hamilton, Columbus.

### Military Surgeon, Washington, D. C.

*May*

52 Factors Essential to the Efficiency of Medical Officers in Active Simulated Campaign. A. N. Stark, U. S. Army.
53 Postgraduate Instruction. E. Quintard, New York.
54 Conditions Influencing Service of Militia Medical Officers. J. H. Ford, U. S. Army.
55 The Study of Cases of Mental Disease from the Standpoint of the Military Surgeon. R. L. Richards, U. S. Army.
56 Varicocele: Its Pathology with Reference to the Soldier and a New Operation for Its Relief. G. M. Blech, Chicago.

57 The Bacteriology of Excrement Used as Medicine. G. W. McCoy, U. S. P. H. and M.-H. S.
58 A Dispensary Ambulance. R. M. Blanchard, U. S. Army.
59 Measurements of the Chest with Tape Measure and Spirometer. L. J. Owen, U. S. Army.
60 Adenoid and Tonsillar Hypertrophies in Recruits. L. T. Lewald, U. S. Army.
61 Opinion Based on History and Progress of Case as to Cause of Disability, and Whether or Not Incurred in Line of Duty. G. H. Richardson, Washington, D. C.
62 The Fahrenheit Hydrometer as a Urinometer. N. Roberts, U. S. P. H. and M.-H. S.

### Archives of Internal Medicine, Chicago

*May*

63 *Bacteriology of Acute Infections of the Respiratory Tract in Children: Special Reference to Influenza. L. E. Holt, New York.
64 *A Modified Method for the Clinical Estimation of Pepsin. W. C. Rose, New Haven, Conn.
65 The Influence of the Ductless Glands on the Pancreas. R. Pemberton and J. E. Sweet, Philadelphia.
66 *The Blood-Pressure in Epidemic Cerebrospinal Meningitis. G. C. Robinson, Philadelphia.
67 Postural or Orthostatic Albuminuria. D. R. Hooker, Baltimore.
68 *Paratyphoid Cholecystitis. R. L. Cecil, New York.
69 Infantilism with Absence of Thyroid and Tumor of Pituitary. I. T. Lemann and R. M. Van Wart, New Orleans, La.
70 Trichinosis, with Recovery of Parasite from the Blood and Muscle. W. H. Mercur and J. H. Barach, Pittsburg.

63. **The Influenza Bacillus in the Respiratory Tract.**—Holt holds that the use of the term influenza should be limited to an inflammation or infection excited by Pfeiffer's bacillus. It is of great importance in all infections of the lower respiratory tract, especially during the cold weather. It has very much less to do with acute nasopharyngeal catarrhs and their complications, otitis, adenitis, etc. It may cause severe general symptoms with few or no local symptoms, even of the respiratory tract; but general blood infection with this organism is very rare. While in most patients the influenza infection causes acute symptoms only, recurrences are exceedingly common, and in some patients the attacks are prolonged, persisting for months. The *B. influenzæ* may be harbored in the secretions of apparently healthy persons for a considerable period, certainly for several weeks; whether such persons may spread the disease is not yet determined. If properly made, cultures are of great value for diagnosis, but the bronchial secretion should be secured.

64. **Clinical Estimation of Pepsin.**—In the Jacoby-Solms method the stomach contents are not neutralized, the estimations are not made under like conditions of acidity. Rose has modified the method in this respect and makes all digestions in a solution whose total acidity is 0.2 per cent. of hydrochloric acid. By this means one determines, not the digestive power of the gastric fluid, but the relative amount of pepsin present. The necessity of knowing whether or not the gastric juice in question is normal in respect to acid before diluting is also avoided.

66. **Blood-Pressure in Epidemic Meningitis.**—Robinson found that heightened intracranial tension appears to be an almost constant phenomenon in epidemic cerebrospinal meningitis. Heightened blood-pressure of a moderate degree, he says, is not infrequently seen in the early acute stage of the disease, when exacerbations of symptoms occur, late in the disease, or when the malady takes on a chronic aspect. The blood-pressure seems to bear some relation to the severity of the disease, being higher when the symptoms are severe, and low during convalescence. The withdrawal of cerebrospinal fluid by lumbar puncture has no constant effect on the blood-pressure, although there is usually a fall of blood-pressure synchronous with this procedure. Robinson concludes that his series of observations affords no definite evidence that heightened intracranial tension causes an increased blood-pressure in meningitis, unless it is late in the disease, when internal hydrocephalus may develop as a result of blocking of the foramina of the fourth ventricle.

68. **Paratyphoid Cholecystitis.**—Interesting features in connection with Cecil's case are the following: (1) The absence of a history of typhoid or paratyphoid fever. Two hypotheses may be advanced in explanation of this: The attack of fever was a very mild one or the case was one of primary paratyphoid infection of the gall-bladder. The marked agglutinative power of the patient's serum. In a dilution of 1/200 there was complete agglutination of her own organism at the end of one hour. The agglutinations were also specific, the serum having little or no effect on the typhoid or paratyphoid bacillus, Type B, but acting readily on other strains of the A type. The agglutination reactions were also positive and specific in the other cases of paratyphoid cholecystitis, to which he has already referred. No paratyphoid bacilli were found in the feces when it was examined 17 days after the operation. Unfortunately no examination was made before the operation or immediately after it. The patient, however, had most probably been a paratyphoid carrier.

### Archives of Pediatrics, New York

*May*

71 Importance of Pediatrics. D. L. Edsall, Philadelphia.
72 Circulatory Failure in the Acute Infections of Children: Causes and Treatment. J. Howland, New York.
73 Education of the Crippled Child. C. Wallace, New York.
74 *A New Sign in Rheumatism of Childhood. J. R. Clemens, St. Louis.
75 Meningitis Complicating Pneumonia. A. Hymanson, New York.

74. **Rheumatism of Childhood.**—Clemens has frequently noticed the enlargement of the thyroid gland in the rheumatic diseases of childhood and now claims for it a place as a sign of rheumatism in the rheumatic series. The time when the thyroid enlargement was first noticed varied. In some cases thyroid enlargement preceded all other manifest signs of rheumatism. Again it has appeared as the fourth or fifth link in the rheumatic chain, and at other times it has been found to persist in association with chronic endocarditis after all other rheumatic manifestations have disappeared. The degree of enlargement of the thyroid gland, while not great, is sufficiently pronounced to give an unnatural fulness to the neck when inspected from the front. When viewed laterally the sharp contour of the gland is unmistakable.

### Denver Medical Times and Utah Medical Journal

*May*

76 Alcohol an Efficient Assistant in the Production of Tuberculosis and Pneumonia. J. M. Shaller, Denver.
77 Eye Strain. D. H. Cover, Denver.
78 Observations and Demonstrations on Spinal Anesthesia. A. W. Morton, San Francisco.
79 Pneumonia. R. J. Smith, Colliston, Utah.

### Providence Medical Journal

*May*

80 Contributions of Medical Men to General Literature. J. H. Davenport, Providence.
81 The Providence City Hospital. D. L. Richardson, Providence.
82 Tuberculosis in Children. P. Williams, Providence.

### Journal Michigan State Medical Society, Detroit

*May*

83 The Value of the Orthodiagraph. J. G. Van Zwaluwenburg, Ann Arbor.
84 Placenta Prævia. E. T. Abrams, Dollar Bay.
85 The Enormous Waste of Human Life. G. H. Cunningham, Detroit.
86 Animal Experimentation and Blood-Vessel Surgery. R. E. Balch, Kalamazoo.
87 The Urgent Need of Operating in All Cases of Hernia. E. B. Smith, Detroit.
88 *The Diagnostic Value of the "Hemolytic Test" in Cancer and Tuberculosis. F. Smithies, Ann Arbor.

88. **Hemolysis.**—The results of Smithies' work comprise observations on 158 cases affected with various ailments and clinically well. The summary shows that of the 158 cases, 26, or 16.4 per cent., revealed positive reaction. Of these 26 cases more than half were cases of malignant disease. The majority of the remainder were syphilitic and tuberculous. The disease conditions generally giving positive reaction were those associated with more or less marked anemia, and in many instances with loss of weight. Of the 158 cases tested, 94, or about 60 per cent., were negative, while 27, or about 17 per cent., were classed as undetermined. Some of these so classed might have been called positive by a more experienced worker. Eleven cases showed "reverse hemolysis." The greater number of these were tuberculous—moderately advanced cases with anemia—but a fair proportion of "reverse hemolysis" was obtained in the cases of malignant disease. Certain facts are brought forward prominently. It seems that in the blood serum of some cases of malignant disease—those generally associated with anemia and loss of weight—there exists a hemolytic property for alien red cells. It also appears that

while this phase is interesting and may be of value in certain individual cases, similar manifestations are possible from the sera of patients non-cancerous. It will be noted, however, that the conditions where this direct hemolysis is obtained are those frequently associated with anemia, loss of weight and cachexia. The reaction of reverse hemolysis mentioned by Crile as occurring in 92 per cent. of cases of tuberculosis is characteristic. It occurs occasionally, but is by no means characteristic inasmuch as it also occurs in malignant disease, syphilis and other diseases.

### Journal of Nervous and Mental Diseases, Lancaster, Pa.

*May*

89 The Sensory Functions Attributed to the Seventh Nerve. C. K. Mills, Philadelphia.
90 The Psychoanalytic Method of Treatment. E. Jones, Toronto.

### The Therapeutic Gazette, Detroit

*May*

91 The Treatment of Chronic Cystitis in the Male. H. M. Christian, Philadelphia.
92 The Treatment of Chronic Suppuration of the Middle Ear by the General Practitioner. F. R. Packard, Philadelphia.
93 The Dosage of Gonococcic Vaccine and the Remedial Measures to be Used with It. W. R. Jamieson, Torreon, Mexico.
94 The Practical Utility of the Cystoscope for the General Practioner—Difficulties Encountered in Its Use. B. A. Thomas, Philadelphia.

### Southern California Practitioner, Los Angeles

*May*

95 Surgery of the Thoracic Cavity. W. W. Beckett, Los Angeles.
96 Medical Education. R. N. Looney, Prescott, Ariz.
97 Early Diagnosis of True Gastric Lesions. H. H. Lissner, Los Angeles.
98 Celiac Parotitis. R. Brown, Santa Bàrbara, Cal.

## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### British Medical Journal, London

*May 21*

1 Abdominal Emergencies. E. S. Bishop.
2 The Treatment of Gastric and Duodenal Ulcer. E. L. Spriggs.
3 *Does Gastrostaxis Exist as an Independent Disease? C. Bolton.
4 *Implantation of the Ureters into the Rectum by the Sacral Route. R. L. Knaggs.
5 Intracranial Tumor Relieved by a Decompression Operation. R. Kennedy.
6 Cultural Characteristics of the Microbacillus of Acne. E. H. Molesworth.
7 Achondroplasia. O. Eichholz.
8 General Suppurative Peritonitis: Recovery. H. Cooper.

3. **Gastrostaxis.**—According to Bolton the evidence that gastrostaxis exists is threefold, namely: (1), that at certain post-mortem examinations of patients who have died of hematemesis no lesion has been found in the stomach to account for the bleeding; (2), that at certain operations performed on such patients, an ulcer has not been found; (3), that gastrostaxis possesses a definite clinical history. However, the natural conclusions to which one is driven from a consideration of the condition is that gastrostaxis, as an independent disease, is not yet indisputably proved to exist; and on the other hand, that acute gastric ulcer is a most important and very common malady, and one which is worthy of more consideration than appears to be given to it.

4. **Implantation of Ureters.**—Knaggs reports a case of inveterate vesicovaginal fistula in which the left ureter was implanted and the right kidney removed successfully. One year after the operation the patient was alive and well.

### Lancet, London

*May 21*

9 The Evolution of the Pelvic Floor in the Non-Mammalian Vertebrates and Pronograde Mammals. R. H. Paramore.
10 The History of Injections of Solutions of Sodium. L. Wickham and M. Degrais.
11 The Systematic Investigation of Chronic Affections of the Stomach and Intestines. G. Herschell.
12 *Maternity Cases in the Liverpool Workhouse Hospital. W. Alexander.
13 The Action of Liquid Kolynos on the Bacillus of Influenza. J. F. Beale.
14 *The Treatment of Spasmodic Asthma by the Hypodermic Injection of Adrenalin. B. Melland.
15 *Desiccated Culture Media. E. T. Thompson.
16 The Aims of Medical Education. A. C. Geddes.

12. **Maternity Cases in Liverpool Workhouse Hospital.**—The total number of women admitted during 1907, 1908 and 1909 was 1,330; married, 761; single, 539; primiparæ, 455. Residing in the workhouse for variable times before confinement, 382; admitted direct from town when in labor, 926; admitted from the workhouse lock ward, 22. Of maternal mortality there were six cases due to nephritis, phthisis, pneumonia, syncope and signs of edema of the lungs, sepsis, abscess found in broad ligaments, pus in uterus, probably previous pyosalpinx and eclampsia. Infantile mortality: Mature, dying soon after birth, 22; mature, stillborn, 15; premature and immature, 78; premature and decomposed, 82. Of the mature, the causes of death were debility, cyanosis, syphilis and apnea, but in most of the cases debility was the cause. Of the mothers admitted during 1909, 19 had suffered or were suffering from syphilis. In 6 cases syphilis was suspected, but the grounds for suspicion were not conclusive. Children born: males, 704; females, 653; twins, 27. Presentations: head, 1,272; transverse, 11; breech, 46; knee, 1; foot, 23; face, 4; shoulder, 1; and with cord, 17. Operations: forceps, 57; versions (podalic), 14. Complications: eclampsia, 3; albuminuria, 32; pneumonia, 4; hemorrhage, 45 (accidental 26, unavoidable 15, postpartum 4); adherent placenta, 4; adherent membranes, 5; retained placenta, 1; ophthalmia in infants, 13 (neonatorum 4, catarrhal 9).

14. **Treatment of Spasmodic Asthma.**—Melland claims that the effects from the treatment of the paroxysms of asthma by the hypodermic injection of epinephrin is marvelous. He gives only one injection, 10 minims of a 1 in 1,000 solution. The injection may be repeated if other attacks supervene.

15. **Desiccated Culture Media.**—The preparation of small quantities of culture media is always a tedious process and usually attended with unsatisfactory results. It occurred to Thompson that many of the culture media might be dried and reduced to a powder containing all the requisite solid constituents which would remain indefinitely in an unaltered condition. The culture media under investigation were nutrient gelatin, nutrient agar-agar, nutrient beef broth, and MacConkey's neutral-red bile-salt lactose-agar. These were all evaporated to dryness and when made up to their original volumes with distilled water and dissolved at 100 C., were quite clear, the gelatin, the agar-agar and bile-salt-agar solidifying with their original firmness on cooling. The reaction of the broth before drying, which was + 15 acid to phenolphthalein, remained unaltered after treatment. The agar-agar, gelatin, and broth were each distributed into test-tubes and sterilized; they were then inoculated with several of the pathogenic, saprophytic and chromogenic bacteria, respectively, and without exception vigorous and typical growths were obtained.

The neutral-red bile-salt-agar was distributed in Petri dishes and allowed to dry in the usual manner and then inoculated on the surface with a mixture of *B. typhosus*, *B. coli*, *B. subtilis*, and *B. megatherium* by means of a bent glass rod. No difficulty was experienced in rubbing the surface with the glass rod; in fact, the rubbing was performed a little more vigorously than necessary in order to test the texture of the medium, but it remained unbroken. After 48 hours incubation at 40 C., typical colonies of *B. coli* and *B. typhosus* had developed, the coli colonies being red and the typhoid colonies being colorless. The *B. subtilis* and *B. megatherium* had not grown. Thompson claims that these experiments show that the typical reactions may be obtained with this medium after desiccation and that its inhibitory properties are in no way impaired.

### Medical Press and Circular, London

*May 4*

17 Milk Albumin in the Feeding of Infants. P. A. Bickel and H. Roeder.
18 Ten Years Anesthetic Practice in the Incorporated Dental Hospital of Ireland. T. P. C. Kirkpatrick.
19 The Management and Treatment of Chronic Bright's Disease. T. R. Bradshaw.
20 The Greater Frequency of Stillbirths and Deaths under a Year Among Males than Females. A. S. Dutton.

### Clinical Journal, London

*May 4*

21 Fibrosis of the Abdominal Muscles. G. R. Murray.
22 Medicine on the Continent. H. Campbell.
23 *Two Common Errors in the Administration of Anesthetics. J. D. Mortimer.

23. **Errors in the Administration of Anesthetics.**—The errors referred to by Mortimer are (1) failure to appreciate the importance of choosing an anesthetic suitable to the patient and to the operation; and (2) a failure to appreciate the importance of maintaining a free air way.

24. **Spleno-medullary Leukemia Treated by X-Rays.**—In Hayes' case only temporary improvement was effected by Roentgen-ray treatment.

### Dublin Journal of Science

*May*

24 *Spleno-medullary Leukemia Treated by *X*-Rays. M. R. J. Hays.
25 Glycosuria and Graves' Disease. W. A. Winter.
26 *A New Pancreatic Extract for the Treatment of Diabetes. W. M. Crofton.
27 The History of the Prevention of Smallpox. T. P. C. Kirkpatrick.

26. **Treatment of Diabetes.**—The extract used in the case reported by Crofton consisted of the expressed juice of fresh pig's pancreas. The juice is kept heated for three hours at 80 C. (176 F.) to precipitate all proteins and to destroy all ferments. The filtrate is then mixed with 25 per cent. of glycerin. The patient gained in weight and improved generally, but the sugar excretion was not affected in any way.

### Presse Médicale, Paris

*May 14, XVIII, No. 39, pp. 361-368*

28 *Treatment of Genital Prolapse in Elderly Women by Bridging the Vagina. (Traitement du prolapsus génital chez la vieille femme par le procédé de cloisonnement du vagin. Opération de Le Fort.) E. Juvara.
29 *Clinical Diagnosis of Cancer of the Testicle. M. Chevassu.

*May 18, No. 40, pp. 369-376*

30 *Duration of Chronic Nephritis. G. Schreiber.

28. **Treatment of Genital Prolapse by Bridging the Vagina.**—Juvara has applied Le Fort's technic in six cases, the patients all elderly women, and he comments on the simplicity and ease of the technic and the very satisfactory results. He gives ten illustrations of the technic and the outcome in a typical case. The flaps are taken from the front and rear walls of the vagina, the outer edges sutured together, bridging it across and making the lumen smaller, forming a solid support, at the same time leaving a space each side of the bridge for escape of secretions.

29. **Cancer of the Testicle.**—Chevassu reviews the early manifestations of malignant disease in the testicle as he has encountered them in a number of cases. In one case there was merely a slight increase in the size of the gland, the lower two-thirds were abnormally hard and tender with slight irregularity of the surface at the rear. In 3 other cases the testicle was the size of a large egg, the surface smooth or slightly knobby, the consistency elastic and fluctuating or harder above and elastic below, with tenderness above or below, the spermatic cord apparently normal or a little larger and less flexible than its mate. In all these cases the diagnosis long wavered between hematocele, syphilis and cancer of the testicle, until examination of the epididymis showed that this was still intact, which confirmed the assumption of cancer. With other lesions the epididymis is almost certain to be early involved. When hesitating between the diagnosis of hematocele and cancer, he adds, it is well to bear in mind that the chances are nine to one in favor of the latter. A syphilitic lesion may simulate cancer of the testicle, but specific treatment soon clears up the diagnosis. If no benefit is derived from a week of daily mercurial injections, operative treatment is indicated without further delay. In the first case the cancer was removed in an early stage with every prospect of complete cure, but the patient, a young soldier, succumbed in 18 months to glandular metastasis in the abdomen. This and similar experiences suggest the necessity for systematic removal of the aortico-lumbar glands as the indispensable supplement to castration for malignant tumor in the testicle.

30. **Duration of Chronic Nephritis.**—In the case reported the patient, a woman of 62, developed mitral stenosis after acute rheumatism at the age of 20; this was followed five years later by symptoms of nephritis from lead poisoning. Albuminuria persisted for 33 years before serious symptoms from the nephritis developed, although there was no attempt at restriction of the diet during these years. Schreiber cites a number of instances on record in which the nephritis existed in a continuously latent form for many years, the patient surviving after differentiation of the disease for from 20 to 43 years. Such cases suggest that strict dietetic measures are not always necessary for patients with mild chronic nephritis.

### Semaine Médicale, Paris

*May 18, XXX, No. 20, pp. 229-240*

31 *Accouchement of the Pygopagus, Rosa-Josepha Blazek. C. Truneček.
32 Teratologic Study of the Pygopagus, Rosa-Josepha Blazek. M. Baudouin.

31. See Vienna Letter, May 14, page 1624.

### Archiv für Kinderheilkunde, Stuttgart

*LIII, Nos. 1-3, pp. 1-240. Last indexed April 16, p. 1343*

33 *Physiology of Infant Feeding. (Beiträge zur Physiologie der Ernährung des Säuglings.) A. Schlossmann.
34 "Salt Fever" in Infants and Elimination of Chlorids. (Untersuchungen über das sogen. Kochsalzfieber und über die Chlorausscheidung beim Säugling.) R. Frieberger.
35 Proportion of Hemolytic Normal Amboceptors in Infant's Blood. (Ueber den Gehalt des Säuglingsblutes an hämolytischen Normalambozeptoren.) J. Bauer and K. Neumark.
36 Behavior of the Leucocytes in Measles. (Verhalten der Leukocyten bei Masern.) K. Neumark.
37 Diphtheria as a Complication of Measles. O. Lade.
38 Experiences with the Tuberculin Skin Reaction and the Local Reaction to the Subcutaneous Test. (Erfahrungen mit der v. Pirquetschen Cutan- und der Stich- [Depot] reaction.) H. Nothmann.
39 *Chronic Primary Progressive Polyarthritis in Children. J. Stargardter.

33. **Physiology of Infant Nutrition.**—Schlossmann thinks that in striving to avoid overfeeding of infants physicians are apt to go to the other extreme, and the result is an *atrophia e medico*, unless the mothers supplement the ordered ration. He protests against determining the proper amounts by comparison with the weight, saying that this leads to erroneous conclusions; the surface area, rather than the weight, should be considered, and when this is done, it is seen that the progress of the child—as evidenced by the elimination of carbon dioxid and consumption of oxygen—parallels the increase in surface area. He tabulates the details in a number of cases, and also emphasizes the importance of refraining from giving too much fluid on account of the danger of demineralization from continued excessive intake of water; it requires unnecessary expenditure of energy, taxing the heart, kidneys, etc., to pass it through the body and eliminate it. No more fluid should be given than corresponds to that of breast feeding.

39. **Chronic Primary Progressive Polyarthritis in Children.**—All the articles in this number of the *Archiv* issue from Schlossmann's clinic for children's diseases at Düsseldorf. Stargardter closes the list with a case of this rare disease. The patient was a child, a little over 10, who lived in a damp house. The joint affection developed at the age of three but no acute phase was ever observed. The joints showed nodular enlargement at various points. By the age of 10 the jaws, spine, right hip and shoulders were the only joints not affected. The trouble was insidious and progressive and the muscles showed extreme atrophy. No benefit was derived from any treatment. Stargardter has found 66 other cases on record in children from 2 months to 14 years old. He discusses the differentiation and the unfavorable prognosis, and remarks in conclusion that the etiology of the disease is as obscure as treatment is powerless.

### Berliner klinische Wochenschrift

*May 2, XLVII, No. 18, pp. 813-868*

40 *The Talma Operation. B. Credé.
41 Experimental Research on Importance of the Thymus for the Animal Organism. C. Hart and O. Nordmann.
42 Tests for Effectiveness of Steam Sterilization. (Brauchbarkeit des Torggler-Müller'schen Papiers und der Sticher'schen Kontrollröhrchen zur Prüfung der Dampfsterilisation.) K. H. Kutscher.
43 *Action of Cod Liver Oil in Rachitis and Spasmophilia. (Zur Wirkung des Lebertrans auf Rachitis und spasmophile Diathese.) I. Rosenstern.
44 Unilateral Orthostatic Albuminuria. (Einseitige orthostatische Albuminurie.) K. Vorpahl.

45 Albuminuria Resulting from Constipation. (Zur Kenntnis der Obstipationsalbuminurie.) Roubitschek.
46 Autoinhibition of Human Serums. (Eigenhemmung menschlicher Sera.) H. Hecht.
47 Specific Characteristics of Milk Albuminoids. (Artcharakter der Milcheiweisskörper.) J. Bauer.
48 Latest Experiences and Views on Scalp Diseases. (Trichophytieerkrankungen.) C. Bruhns.

40. **Omentopexy.**—Credé has found about 120 cases in the literature in which the Talma operation has been performed during the twelve years since it was introduced in treatment of ascites from obstruction of the reflux of blood through the portal vein. Ascites of other origin is scarcely amenable to this measure, although there is a case on record of cure from it in malarial splenomegaly and in a case of Banti's disease. The number of cures in the total 120 cases is only 40 and the cure proved permanent in only 20. He discusses the cause of so many failures with this logical and promising operation, and reports 5 cases in which he has applied it himself. The result in these cases has convinced him that the ordinary technic is not extensive enough and that greater benefit can be derived when the development of more and larger collateral vessels is insured. He accomplishes this by making a raw surface over the front of the greater omentum, over an area as large as the hand, snipping it with scissors, detaching the peritoneum from the muscles and then suturing; the procedure is thus more radical than Talma recommended. The outcome was a permanent cure in the case related in detail; the ascites has not recurred since the operation, six months ago, although previously up to 11 liters of fluid had been withdrawn at a time and the patient had required frequent tapping.

43. **Action of Cod Liver Oil in Rachitis and Spasmophilia.**—Rosenstern reports from the children's asylum at Berlin in charge of Finkelstein that extensive experience is confirming the specific curative action of cod liver oil in rachitis. In 5 cases with pronounced craniotabes, of which the details are tabulated, remarkable benefit followed administration of 25 gm. of cod liver oil daily for three to six weeks. In the spasmophilic diathesis cod liver oil also displayed marked efficacy. The results were so conclusive that Rosenstern affirms that this method of treatment may be counted on to cure in the majority of cases of spasmophilia, especially when phosphorus is combined with the cod liver oil. Phosphorus in ordinary oil or in an emulsion displayed no influence on the spasmophilia. His dosage is 0.01 part phosphorus to 250 parts of cod liver oil for the severest cases, a teaspoonful five times a day. Cod liver oil without phosphorus seems to have the same effect if given in larger doses. The clinical research reported confirms in every respect Schabad's conclusions, based on study of the metabolism, in regard to the specific action of cod liver oil on rachitis and spasmophilia. Rosenstern estimates the severity of the rachitis by the extent of the craniotabes, representing it by a square that comprises the extreme limits of the softening of the bones, noting how this square grows smaller during the course of the cod liver oil treatment. The severity of the tendency to convulsions or allied phenomena—spasmophilia—is estimated by the electric irritability of the nerves, especially the cathodal opening contraction. This is proving a very accurate index of the severity of the spasmophilic diathesis, especially when the response is compared with the Chvostek sign and other spasms.

### Deutsche medizinische Wochenschrift, Berlin

*May 12, XXXVI, No. 19, pp. 873-920*

49 Diagnosis and Treatment of Extrauterine Pregnancy. A. Martin. Commenced in No. 18.
50 Needle Healed in the Heart. (Zur Kasuistik der Fremdkörpereinheilung im Herzen.) W. Risel.
51 *Operative Treatment of Congenital Spasmodic Paralysis. (Zur operativen Behandlung der angeborenen Gliederstarre—Littlesche Krankheit—mittels Resektion hinterer Rückenmarkswürzeln: Foerstersche Operation.) J. Hevesi.
52 Aeroparasthesias. R. Trespe.
53 *Emotions as Cause of Mental Disturbances. (Ueber psychische Ursachen geistiger Störungen.) K. Birnbaum.
54 Percussion of the Apices of the Lungs. F. Klopstock.
55 Technic for Determination of the Tubercle Bacillus. (Tuberkelbazillennachweis.) W. Telemann.
56 *The Pain of Deforming Arthritis. P. Ewald.
57 Edible Clays in Therapeutics. (Essbare Erden und ihre Verwendung als Heilmittel.) Martini and Grothe.

51. **Operative Treatment of Spastic Diplegia.**—Hevesi has applied Foerster's operation, that is, resection of the roots of the posterior spinal nerves, in a very severe case of Little's disease and the surprising benefit confirms all that Foerster claims for the operation. Nature herself points the way to treatment in this line; when tabes develops during disturbances due to interruption in the course of the pyramidal tracts, all the symptoms of exaggerated reflex excitability vanish at one stroke. This is the result of interrupting the reflex arc, and in case of imperfect development of the pyramidal tracts all that is necessary is to sever the connection by resection of the posterior roots. Hevesi's patient was a child of 11 who had never been able to walk without aid. After laminectomy and resection of the posterior lumbosacral spinal roots, 3 or 4 on each side and each for from 2 to 6 cm., the wound healed by primary intention and by the seventh week the patient was able to walk alone. This rapid benefit surpasses even that reported by Foerster who did not commence exercises in standing or walking until after four months. No special sensory disturbances were noted nor ataxia. None of the other measures advocated for Little's disease attacks the true cause; this "rhizectomy" alone accomplishes.

53. **Psychic Causes of Mental Disturbances.**—Birnbaum comments on the way in which the assumption that emotions can develop psychoses is being more and more abandoned. Such causes are able to develop a psychosis only in peculiarly predisposed individuals, especially those of a hereditary degenerative type, and the forms of the psychosis are those that develop on this basis. The psychic impetus may be comparatively trifling.

56. **The Pain of Arthritis Deformans.**—Ewald insists that deforming arthritis may develop without infectious or toxic influences, purely from static disturbances, throwing the joint out of gear. A disturbance of this kind in the foot may react on a joint above, and many are the cases of supposed sciatica that have been cured merely by the use of a flat-foot insole. The joint affection does not cause pain until the synovial membrane becomes irritated, as he shows by three typical examples. The Roentgen rays may show lesions of deforming arthritis for years without pain or functional disturbance, but then pain may suddenly develop from some slight trauma to which a deformed joint is peculiarly exposed. The resulting synovitis causes pain and interferes with the use of the joint, and the inflammation is much harder to conquer than a similar disturbance in a previously sound joint. Weeks of massage and superheated air and passive exercises may be necessary before the patient can use the limb again. These measures do not influence materially the osteoarthritis but they restore the functional use of the limb. The process in the bones may exist without pain for years, but it prepares the soil for the later painful synovitis. He adds in conclusion that deforming arthritis after infectious processes and nervous arthropathies may possess a static factor, and the proliferating process may be regarded as reparatory in its nature.

### Deutsche Zeitschrift für Chirurgie, Leipsic

*April, CIV, Nos. 5-6, pp. 425-632*

58 Causes of Altered Chemistry in Stomach with Gastric Cancer. (Zur Kenntnis des Magencarcinoms.) H. Matti.
59 Torsion and Incarceration of Omentum. (Ueber Netztorsion und Netzeinklemmung.) M. Litthauer.
60 *Influence of Epinephrin on Paralysis of the Vasomotors. (Ueber Infusion von Suprarenin-Kochsalzlösungen bei peritonitischer Blutdrucksenkung und über unsere derzeitigen Kenntnisse von der Wirkung des Suprarenin bei infektiöser Vasomotorenlähmung.) L. Heidenhain.
61 Case of Telangiectasia of the Tongue. H. Meerwein.
62 *Postoperative Psychoses. E. Schultze.
63 *Five Cases of Direct Transfusion of Whole Blood. (Ueber Bluttransfusion beim Menschen.) G. Hotz.

60. **Epinephrin in Collapse from Paralysis of the Vasomotor Center.**—Heidenhain quotes many authors to confirm his own experience that in case of collapse from weakness of the vasomotor center, such as is liable in pneumonia, diphtheria and peritonitis, good results may be obtained with a suprarenal preparation injected into a vein, or, diluted with salt solution, injected subcutaneously. In conclusion he reports a case of uncomplicated ileus in which by this means it proved possible to tide the apparently moribund patient past the danger stage after two days of fecal vomiting, and thus permitted a successful operation.

62. **Postoperative Psychoses.**—Schultze reports 12 cases of postoperative psychoses to emphasize the importance of autointoxication, inanition and weakness, feeble circulation, etc., as factors in the development of postoperative psychoses. Eliminate these factors and the psychoses become rare indeed. The practical conclusion is evident that every effort should be made to strengthen the patient before attempting the operation. The prognosis is generally good; only a few of the patients on record were left with a permanent psychosis. The nature of the operation seems immaterial. In all the cases the mental disturbance improved proportionately to the improvement in the physical condition.

63. **Direct Transfusion of Blood.**—Hotz reports five cases in which severe losses of blood were compensated by direct transfusion of the whole blood from the artery of another person sutured directly to the median vein of the patient. A near relative is the best for the purpose, as there is presumably less difference in the composition of the blood. The details of each case are given, the results on the whole being very encouraging.

### Medizinische Klinik, Berlin

*May 8, VI, No. 19, pp. 731-770*

64 *So-called Muscular Rheumatism. A. Schmidt.
65 Spontaneous Gangrene in the Young. H. O. R. Schmiz.
66 Bismuth Intoxication. Windrath.
67 Venesection Indispensable in Medicine. (Der Aderlass, ein unentbehrliches Heilmittel in der Medizin.) O. Burwinkel.
68 Influence of Sea Climate on the Blood Picture. (Einfluss des Seeklimas auf das Blutbild.) O. Hellwig.
69 Practical Importance of Geology for Balneology. A. Leppla.

64. **Treatment of Muscular Rheumatism.**—Schmidt is convinced that the pain in muscular rheumatism is of the nature of neuralgia, and he suggests treating it with injections of physiologic salt solution at the painful points. Peritz has advocated this, and Schmidt's own experience has confirmed the great benefit liable to be derived from injection of 5 or 10 c.c. directly into the muscle at the most painful points. This, he adds, is no etiologic treatment, for the seat of the trouble is certainly not in the muscle itself, but it relieves the pain and that is the main thing. In very old or especially violent acute cases he would not hesitate to do lumbar puncture, following with spinal anesthesia if necessary. Even the puncture alone has given great relief in some cases; in others the effect was only transient. He regards lumbar puncture as harmless under proper precautions, and thinks that a trial of it is justified in severe cases.

### Monatsschrift für Geburtshülfe und Gynäkologie, Berlin

*May, XXXI, No. 5, pp. 547-686*

70 Origin of Accessory Mammae and Ductless Axillary Mammary Glands in Puerperæ. (Kasuistischer Beitrag zur Frage der Genese der Mammae accessoriae und der sogenannten Achselhöhlenbrüste ohne Warze und Ausführungsgang bei Wöchnerinnen.) A. Knaebel.
71 Treatment of Placenta Prævia. E. Hauch.
72 Cause of Obstetric Vulvar Hematoma. (Zur Entstehung des Haematoma vulvae in Geburt und Wochenbett.) M. Hirsch.
73 Transperitoneal and Extraperitoneal Cervical Cesarean Section: 15 Cases. (Zur Frage des suprasymphysären Kaiserschnittes.) M. Lange.
74 *Heating the Pelvis Through by Electric Means: Thermopenetration. (Die elektrische Durchwärmung des Beckens als Heilmittel.) H. Sellheim.
75 *Three Cases of Acute, Non-Puerperal Peritonitis in the Puerperium. (Drei Fälle von nichtpuerperaler, akuter Peritonitis im Wochenbett, durch Operation geheilt.) H. Kritzler.

74. **Thermopenetration.**—Sellheim describes the technic and results of the application of electricity to heat the pelvis evenly throughout. The technic for this thermopenetration, as it is called, permits the passage of the heat without injury of the parts in contact. One electrode is introduced into the vagina or rectum with the other electrode parallel on the abdomen above. By changing the position of the second electrode it is possible to send the heat through all parts of the pelvis. With a current of one ampere the region between the electrodes can be heated to a constant temperature of over 40 C. (104 F.); no by-effects were observed in any case.

75. **Non-Puerperal Acute Peritonitis in the Puerperium.**—In the three cases described the acute peritonitis was conquered by surgical measures as under other conditions. The peritonitis was due to torsion of an ovarian cyst in one case and to appendicitis in the others.

### Münchener medizinische Wochenschrift

*May 10, LVII, No. 19, pp. 993-1056*

76 Growth and Aging of the Large Arteries and Their Relation to the Pathology of the Vascular System. (Wachstum und Altern der grossen Arterien und ihre Beziehung zur Pathologie des Gefässsystems.) R. Rössle.
77 Course and Treatment of Serpentine Ulcer of the Cornea. (Ulcus corneæ serpens.) R. Schneider.
78 New Colorimeter and its Application in Determination of Hematin, Iron, Indican and Creatinin. (Eine neues Kolorimeter und dessen Verwendung zur Bestimmung von Blutfarbstoff, Eisen, Indikan und Kreatinin.) W. Autenrieth and J. Koenigsberger.
79 *Constancy of Lymphocytosis in Exophthalmic Goiter. (Ueber die Lymphozytose bei Basedowscher Krankheit und bei Basedowoid.) M. Bühler.
80 *Deviation of Complement with Pseudoleucemia. (Komplementablenkung bei Hodgkinscher Krankheit.) A. Caan.
81 Experimental Research on Acute Overexertion of the Heart. (Tierexperimente zur Frage der akuten Herzüberanstrengung.) T. Schott.
82 Differential Diagnosis Between Hernia of the Diaphragm and Eventration. (Differentialdiagnose zwischen Hernia und Eventratio diaphragmatica.) Beltz.
83 Insignificant Influence on the Growth of the Eye of Iridectomy in Infancy: 2 Cases. (Zur Frage der Verminderung des Augenwachstums nach Iridektomie in früher Jugend.) L. Schomberg.
84 Hemorrhagic Exanthem in Typhoid: 3 Cases. (Hautblutungen im Verlaufe von Typhus abdominalis.) A. Huber.
85 Technic of Percussion of the Lungs. W. Hildebrandt.
86 Bicentennial of the Charité Hospital at Berlin. (Aus der Geschichte des Charité Krankenhauses zu Berlin.) K. Sudhoff.

79. **Lymphocytosis in Exophthalmic Goiter.**—Bühler has examined 20 patients with pronounced exophthalmic goiter and 70 patients with an incomplete form of the disease, and found a relative lymphocytosis pronounced in nearly every case. He regards this as an important differential sign of a thyroid toxic origin for the symptoms observed. Examination of the blood thus may prove of great value in aiding in the differentiation of exophthalmic goiter, although negative findings are not conclusive.

80. **The Wassermann Reaction in Pseudoleukemia.**—Caan obtained positive findings in four cases of pseudoleukemia, although there was nothing to indicate syphilis in the antecedents. These findings speak against the absolute specific nature of the Wassermann reaction, while at the same time they suggest that the pseudoleukemia may be due to some spirochete action, possibly supplemented by other etiologic factors.

### Wiener klinische Wochenschrift, Vienna

*May 12, XXIII, No. 19, pp. 685-722*

87 *Tests of Kidney Functioning. (Die funktionelle Nierendiagnostik.) V. Blum.
88 *Treatment of Tuberculosis Along Lines Utilizing Nature's Processes. (Neue Ausblicke auf die natürlichen Heilwege der Tuberkulose.) F. Tutsch.
89 Immunity in Active Tuberculous Infection. (Zur Frage der Tuberkuloseimmunität.) R. Kraus and R. Volk.
90 Epinephrin Technic for Determination of Leucocytes in Tissues. (Leukozytendarstellung im Gewebe durch Adrenalin.) C. Kreibich.

87. **Tests of Kidney Functioning.**—Blum reviews the basis for and the technic of various functional tests and their value for internal medicine and surgery. The sound kidney is able to adapt itself to varying demands within a wide range, and this is the basis of the dilution test which, he remarks, is the only means yet at our disposal for estimating the latent reserve force of the kidney. The patient drinks two or three glasses of mineral water, after which the ureters are catheterized and the onset, the amount and the duration of the polyuria thus induced determined; the change in the freezing-point is an index of the functional capacity of each kidney. He says in regard to the indigo-carmin test that this drug is eliminated by the kidneys alone, the sweat, saliva, bile and stools showing no trace of the stain; that it is non-toxic and harmless, and that it passes through the body without forming derivatives; it behaves like any other sodium salt and its elimination is analogous to the excretion of the urinary salts, so that this test is peculiarly important, as it approximates so closely physiologic conditons. (The technic was described in THE JOURNAL, Jan. 2, 1904, page 69.) He does not approve of the phloridzin test. It has been his experience that with old, chronic nephritis the difference between the kidneys does not surpass that under normal conditions. Parenchymatous disturbance interferes very slightly with elimination of water and salts.

88. **Natural Factors in the Healing of Tuberculosis.**—Tutsch has examined several hundred animals in respect to the size of the vital organs and has found that those species which are distinguished by greater resistance to tuberculosis are always those in which the heart, spleen and liver are comparatively much larger in proportion to the size of the animal than in other species. The richer the body in spleen and liver cells and the more oxyhemoglobin these cells produce, the more energetic the processes of oxidation in the body and the greater the resistance. The biochemical basis of natural immunity is thus the greater oxidation going on, and therapeutic and other measures to increase the oxidations are the natural. fundamental indications for treatment of tuberculosis.

### Zeitschrift für Urologie, Berlin

*April, IV, No. 4, pp. 241-320*

91 *Traumatic Hydronephrosis and Pseudohydronephrosis. H. Wildbolz.
92 *Study of 334 Cases of Hypertrophy of the Prostate. A. Götzl.
93 *Action of "Prostate Toxin" in Prostatitis and Incipient Hypertrophy of the Prostate. J. Sellei.

91. **Traumatic Hydronephrosis.**—Wildbolz reports a case of true traumatic hydronephrosis, the ureter having evidently been crushed by the accident, with resulting circumscribed necrosis and probably minute perforation. A small hematoma and collection of urine at the point gradually induced changes in the region, leading to compression of the ureter and the kidney above had to be removed. From his industrial insurance the man was allowed 30 per cent. indemnity for the assumed resulting impairment of his earning capacity, but Wildbolz remarks that this is scarcely enough. The Swiss authorities exclude from industrial insurance persons who have had one kidney removed. Any injury, even comparatively slight, of the remaining kidney is liable to prove fatal. When the collection of blood and urine is large and the process develops entirely outside the kidney, the resulting pseudohydronephrosis may be cured by shelling out the encapsulated collection or making a permanent fistula to drain the cyst. In two cases reported this was successfully done. One patient was a woman who had been trampled by a cow; in the other case the patient had slipped on ice and fell sitting. In the latter case the kidney had to be removed with the cyst, as the ureter had evidently been torn out by the accident. There were no severe disturbances at first. Not until after nearly a month were there attacks of pain. They resembled some attacks which she had had a few months before that had been attributed to an inguinal hernia and had subsided after the herniotomy. Their recurrence later suggested that the kidney had probably been responsible for them in the first place, and thus had not been sound at the time of the accident.

92. **Hypertrophy of the Prostate.**—Götzl reviews his experience with 334 cases of hypertrophy of the prostate. He operated in only 11 per cent. of the cases on the prostate alone, but in over 17 per cent. an operation was undertaken on account of complications. In 24 cases the patients were under the age of 50. He found it possible by hygienic and dietetic measures to keep the first phase of the hypertrophy stationary for many years. Cystitis heals entirely if the amount of residual urine is not excessive and if the bladder wall is sound. Under other conditions the cystitis persists, refractory to all measures, even when the mechanical obstacle has been removed. Stagnation of the residual urine was responsible for development of stones in 71 per cent. of his cases. With patients complaining of severe gastrointestinal disturbances, frequent thirst and desire to urinate, a prostatic affection in an advanced stage should always be suspected. He adds that the suprapubic operation is winning constantly more adherents while palliative operations are losing ground. He lost one patient from postoperative pulmonary embolism; Riedl has called attention to the peculiar liability to this with thrombosis in the prostatic region.

93. **Organotherapy in Prostatitis and Incipient Hypertrophy of the Prostate.**—Sellei reports surprisingly favorable results from injection of the patient's own or an alien prostatic secretion in the effort to induce a kind of immunization against abnormal conditions in the prostate. The resulting development of autoprostatotoxin or isoprostatotoxin seems to have a curative influence on prostatitis and incipient hypertrophy of the prostate. He also found it possible to enhance this action by injection of specific cytotoxic serum from "prostatics" given preliminary treatment of this kind, their serum evidently acquiring increased proportions of cytolysins. His article is based on experiences with 18 cases.

### Zentralblatt für Chirurgie, Leipsic

*May 14, XXXVII, No. 20, pp. 705-736*

94 *Technic for Chondrotomy. (Zur Technik der Freund'schen Emphysemoperation.) G. Axhausen.
95 *Technic for Temporary Laminectomy. (Eine einfache Art der temporären Laminektomie.) C. Hofmann.
96 Epidural Injections for Surgical Anesthesia. (Ueber die Verwertung der Sakralanästhesie für chirurgische Operationen.) A. Läwen.

94. **Technic of Chondrotomy.**—Axhausen obviates the regeneration of the perichondrium by stroking the inner surface lightly with the actual cautery.

95. **Temporary Laminectomy.**—Hofmann pushes back the muscles and makes the flap of the periosteum, bone, and interspinous ligament to obtain access to the dura. The whole operation took scarcely half an hour in a case in which he resected the spinal nerve roots to relieve tabetic gastric crises, and the patient was able to be up in a week.

### Zentralblatt für Gynäkologie, Leipsic

*May 14, XXXIV, No. 20, pp. 657-688*

97 *Chloroform in Obstetrics. (Chloroformhalbschlaf oder Suggestivnarkose.) J. Eisenberg.
98 *Technic for Surgical Hemostasis in the Bladder. (Fall von Stillen einer lebensgefährlichen Blutung aus der Blase mittels Gazetamponade durch Kellyspekulum eingeführt.) C. D. Josephson.

97. **Chloroform in Obstetrics.**—Eisenberg describes the method of using a little chloroform in normal deliveries as practiced in America and England, stating that it is far superior to the scopolamin-morphin "twilight sleep," and urging its general adoption.

98. **Hemostasis in the Bladder.**—Josephson reports a case in which there was serious hemorrhage from the stump after removal of a polyp in the bladder of a woman of 41. He tamponed the spot with gauze introduced through a Kelly speculum, and was thus able to arrest the bleeding. The case warns against summarily snipping off a polyp in this way.

## Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

The Practical Medicine Series. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School, and Charles L. Mix, M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Cloth. Price, $2 net. Pp. 615, with 191 illustrations. Chicago: The Year-Book Publishers.

Transactions of the Fifteenth Annual Meeting of the American Laryngological, Rhinological and Otological Society. Held in Atlantic City, N. J., June 3-5, 1909. (Secretary, T. J. Harris, 117 E. Fortieth St., New York City.) Cloth. Pp. 557, with illustrations. Published by the Society, 1909.

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# SURGICAL CONSIDERATIONS IN THE TREATMENT OF CHRONIC SUPPURATIVE NEPHRITIS*

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CLINTON, IOWA

During the past twenty years a good many cases of affections of the kidneys attended with pus in the urine almost, if not quite, as a constant condition, have come under my observation. The symptoms have not usually been severe, but persistent, and have incapacitated the patient for active employment. Some of these cases have been attributed to trauma and were studied primarily on account of claims against corporations. Others were supposed to be cases of renal calculi; but exploration of the kidney demonstrated the absence of stone but the presence of a chronic suppurative, interstitial nephritis which was relieved by a decapsulation or by incision and drainage. Patients have come under my care following some infectious disease, particularly pneumonia. For instance, a few years ago a patient was referred to me, by a physician of considerable skill and ability as a diagnostician, for the removal of a tuberculous right kidney. The patient was under my care in the hospital for two weeks. It was before the days of satisfactory cystoscopic examinations. The segregator appeared to show that both kidneys were involved in a suppurative process, the left more than the right. Specimens from both kidneys contained pus in which were germs identified by thoroughly competent bacteriologists as being *Bacillus tuberculosis* and ordinary pus-forming bacteria—staphylococcus, the number of tubercle bacteria being rather small and probably accidental. The kidneys were explored; neither showed any evidence of being tuberculous. One kidney was incised and drained, the other decapsulated. The pus gradually disappeared and in two months the urine was clear and normal. The patient fully recovered her health. This patient had suffered an attack of pneumonia six months before coming under my care, had recovered so far as her lungs were concerned but her health remained impaired because of the infection of her kidneys. The marked improvement immediately following the operation and the rapid recovery left no doubt in my mind as to the beneficial effects of the surgical procedure.

The infection no doubt, in many cases, travels up from the lower urinary tract and is often probably primarily of gonorrheal origin and may assume first a pyelitis, which in a considerable proportion of cases subsides with or without medical treatment, but in a certain per cent., the infection extends beyond the pelvis and becomes a pyelonephritis which continues an indefinite time.

The nature of the disease especially referred to in this paper is a mild hematogenous infection, which does not result in destructive changes or lead to abscess formation, unless through some accession of germ activity or some serious interference with kidney drainage from obstruction of the ureter.

The effect on the kidney itself is generally not serious at least for a considerable time. The organ is hyperemic and swollen, and later a proliferation of connective tissue may be expected. Some kidneys show an uneven cortical surface as from the contraction of connective tissue, as in scar formation.

The eliminating power of the kidney is not seriously impaired except on occasions, as from exposure or when an increased burden is thrown on them. Under these circumstances a rise of temperature may be observed attended by some of the symptoms generally attributed to uremic toxemia. The urine is decreased in quantity and the amount of pus is considerably increased. These symptoms, often of a serious character, subside after ten days or two weeks and the kidneys if both are diseased, resume their former condition. The pus still persists in the urine. Provided the ureter does not become occluded, the constant drainage saves the kidney from abscess formation. In a certain percentage of cases, the infection reaches the organ through the circulation, as in post-typhoid and post-pneumonic conditions. The kidney drains through the ureter for a considerable time—a year or more perhaps. The patient's health is impaired but there are no very urgent symptoms. If, however, some process develops in the ureter whereby it becomes blocked, more or less completely, single or multiple abscesses may be expected to result. Either in consequence of this or of the kind and severity of the infection, a nephrectomy becomes necessary.

It is not uncommon for the kidney to become infected secondarily from some more remote focus. When this occurs, the embolic nature of the process is likely to determine one or more abscess formations. In such cases it is not uncommon for the abscess to drain into the pelvis of the kidney and thus be discharged intermittently with urine; although pus may be found in the urine as an almost constant condition.

If the ureter is permeable, the kidney may remain without any material change for some time and may even recover without any operative procedure. In the event of a blocking of the ureter the kidney may become practically destroyed by the advancement of the suppurative process.

I have met a considerable number of mild infections of the kidney secondary to infected wounds, as compound fractures and more or less extensive skin infections associated with wounds. I have likewise met embolic processes following the same conditions involving abscess formations which required nephrotomy and sometimes nephrectomy.

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* Read in the Section on Surgery of the American Medical Association, at the Sixty-first Annual Session, at St. Louis, June, 1910.

It is not the purpose of this paper to discuss the severe infections but the mild, in many cases of which the patients recover under proper dietary regulations and rest.

I trust it will be taken for granted that I am not confusing pyelitis with a suppurative process which has invaded the connective tissue structures of the kidneys extending along the tubular system. It is admitted, however, that an ascending infection may have at first involved the pelvis, and when limited to this part of the kidney, subside without any radical treatment being employed.

Patients afflicted with these milder infections of the kidneys do not, as a rule, suffer from severe symptoms unless subject to exposure or to conditions very materially increasing the work thrown on these organs, but there is an impairment of health which ranges from a moderate indisposition to confinement to the house, as illustrated briefly by a few cases.

Case 1.—A locomotive engineer who had pus constantly in his urine and had been unable to perform any part of his duties, attempted to run his engine a hundred miles. Before completing his run, he was taken with vomiting and severe pain in the abdomen. The same night he was seized with a chill followed by a temperature of 104 F. and soon afterwards, by some uremic symptoms. The quantity of the urine was greatly reduced and loaded with pus. Elimination by the skin and bowels gradually brought about an improvement, and in two or three weeks he had regained his former condition except that the amount of pus in the urine was materially increased for two months or more. He would not submit to operative treatment and at least for five years more the condition remained unchanged.

Case 2.—A railway conductor who for a year had declined in health and was able to work only at intervals, came under my care. Pus was found in urine. The right kidney was tender to pressure and somewhat enlarged. After three months of general treatment without improvement, the patient submitted to an operation. The organ was exposed and found suppurating but no distinct abscess existed. The kidney was freely incised and allowed to drain. Pus soon disappeared from the bladder urine but was found for some time on the dressings. The wound finally closed with complete recovery.

Case 3.—Another patient had an inflammation involving the right kidney which had persisted for several months. He began to suffer from chills, which recurred every two or three weeks followed by a temperature of 102 to 104. Pus was constantly present in the urine but attending each of these attacks the quantity was very considerably increased. In five or six days the temperature would reach the normal, and the pus in the urine would very materially decrease in quantity. Finally, following one of these attacks, the secretion of urine nearly ceased and uremic delirium supervened. The kidney was exposed; abundant evidence of long-standing inflammation appeared but no pus accumulation was found. Notwithstanding this, the kidney was incised from one pole to the other. It was allowed to drain without the use of any tube or tissue in the kidney wound. All the conditions promptly improved. Pus rapidly disappeared from the bladder urine but continued on the dressings for some time.

The surgical treatment I have employed in the form of kidney lesion referred to in this paper is decapsulation or incision. It is true the operation of decapsulating the kidney has fallen into considerable disfavor, but I cannot avoid the belief that the procedure has considerable merit after all, not perhaps in some of the forms of disease for which it has been advocated from time to time; but in many of the kidneys now under consideration, it is certainly curative in its effects. It very obviously would not be a rational procedure for the purpose of drainage of infected kidneys.

I have in mind certain patients in poor health in whose urine pus had been present for a considerable time, one kidney or the other or both, being affected. Ordinary treatment having no good effect, the organ was exposed and found hyperemic and swollen; incision not seeming indicated, decapsulation was resorted to, not quite so extensively perhaps as has been recommended, but sufficiently to release tension and allow, theoretically at least, an improvement in nutrition and thereby an increased resistance to morbid processes. However this may be, I am certain of the curative effect of the undertaking. With the patients whose symptoms and whose kidneys show a more marked influence of the infection, a more radical course is necessary; the kidney should be incised and allowed to drain. No drainage material whatever has been introduced into the kidney incision unless an abscess exists. The wound in the loin has been partly closed and two or three cigarette drains extending down to the kidney.

A consideration of my own cases and many in which treatment by decapsulation was employed some years ago with much apparent success, which also unfortunately led to the extension of the operation to impossible conditions involving degenerative changes, leads me to believe that if the procedure had been confined to cases of infections of the organ, this treatment would not have fallen into discredit. It cannot be doubted that many of the large congested and sometimes mildly infected kidneys that were anchored by means of a detached flap or even by a more liberal use of the capsule, were benefitted more by releasing the tension than by the fixation itself, whereby the circulation and nutrition were improved. It may be noted in this connection that the fixation of a normal kidney which is subject to even rather wide excursions carries with it no advantage to the patient unless the mobility causes distinct pain.

I have already attempted to say that a more serious and widely extended infection not referring to abscess formation—needs incision, for only in this way can drainage be affected, but in milder types, decapsulation is generally sufficient, placing, as I believe, the kidney in a vastly better condition for recovery.

## ABSTRACT OF DISCUSSION

**Dr. A. H. Ferguson**, Chicago: I cannot see the use of decapsulation of the kidney for chronic inflammation of that organ. There are other and better methods of treating such a kidney. In cases of extensive abscess, one can do a nephrotomy and drain. In cases of a milder nature nephrotomy is not indicated. Washing out the pelvis of the kidney, drainage of the pelvis without opening the kidney, treatment by vaccination, are methods we should resort to before undertaking capsulation. If all these fail, and the kidney is much destroyed, we must do a nephrectomy. I have seen two or three cases in which there was pus in circumscribed areas here and there in the kidney, but simple excision of the abscesses effected a cure, the kidney itself remaining untouched.

**Dr. D. S. Fairchild**, Clinton, Ia.: I did not intend to convey the idea that I treated suppurating kidney by decapsulation. I referred to cases of mild infection in which decapsulation might bring about a beneficial result by relieving tension and allowing an improved condition of nutrition. In all cases of suppuration of the kidney in which pus is distributed throughout the organ, the kidney ought to be excised. I think that Dr. Ferguson was much given at one time to decapsulation for various conditions, but in my paper I stated distinctly that in cases of mild infection in which we do not want to do a very radical operation decapsulation, if the capsule is tense, is indicated. In cases of severe infection excision is the only thing. Of course we do not want to remove the kidney if a good result may be obtained in any other way.

# THE PROPER TREATMENT OF INTRAPERITONEAL ABSCESS IN THE LOWER ABDOMEN

## WITH SPECIAL REFERENCE TO RECTAL DRAINAGE IN PELVIC ABSCESS*

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ST. PAUL, MINN.

The successful treatment of any intraperitoneal accumulation of pus depends on proper drainage. In women it is a well-established fact that drainage through the vagina is at times better than draining through the anterior abdominal wall. Mr. Pollard has said that occasionally in his experience drainage through the rectum has been better even than vaginal drainage because it reaches a lower point in the peritoneal cavity. In dealing with an accumulation of pus in the peritoneum the proper method to pursue is to treat the rectovesical or recto-uterine pouch as though it were always infected, for even though it does not contain pus in the early stages of localized peritonitis, it is very likely to become infected later, as we all have seen in a great many instances. The extension of pus to near-by peritoneum, and especially to the bottom of the pouch, is not a dangerous accident if proper drainage is provided. Van Buren Knott has very pertinently put it: "Why should we be afraid of general peritonitis? To-day we know how to deal with and cure this disease"; and if we see the cases early enough and establish proper drainage at once, our general peritonitis patients will usually recover." Proper drainage when combined with the Fowler position, is the most important point in effecting a cure. Dr. Knott's experience in over 160 consecutive cases of appendiceal abscess, in every one of which he has broken up the abscess walls and removed the appendix, with but two deaths, is very convincing. His plan, which I believe to be founded on sound surgical principles, is always to drain the bottom of the rectovesical or recto-uterine pouch with a large-sized split rubber tube, carrying a wick of gauze through the anterior abdominal wall just above the symphysis. I believe that if this plan is pursued the necessity for vaginal or rectal drainage will in the future be very much reduced. The older methods of drainage of abscess cavities and removing the appendix only when it presented itself and could be reached easily have resulted in many later accumulations in the pouch.

A good plan of procedure, and one which I have followed a great many times, is first to open an accumulation of pus in the pouch either through the vagina or through the rectum, to put in a winged rubber tube and then immediately proceed to open the abdomen above and to deal with the pathologic condition according to general surgical rules. By this method the amount of pus is considerably reduced and other, often unsuspected abscesses are found and evacuated.

The purpose of this paper is to show that rectal drainage is no more dangerous to the patient than vaginal drainage, and that a very useful addition to our operative measures and occasionally a life-saver. Two years ago I presented a short paper[1] on rectal drainage to the American Surgical Association and recited the histories of five successful cases in which pelvic abscess had been opened and drained into the rectum; all of these were cases of men or boys and the drainage was used in the same manner that we have been in the habit of using vaginal drainage in women. I wish now to offer my further experience, and to speak of the few comments which have been made on this subject in the English and American medical press.

The five cases already reported were all due to perforative appendicitis, in which the abscess cavity had originally been opened through the anterior abdominal wall. These cases had progressed favorably for several days and then gradually began to do badly, showing return of fever and pelvic pain. A rectal examination several days after the primary operation demonstrated a collection of pus in the rectovesical pouch with bulging of fluid against the anterior rectal wall. Opening these abscesses through the rectum and drainage with a winged rubber tube yielded most satisfactory results. At that time I also advised overdistention of the sphincter so that there would be no back pressure from the rectum into the abscess cavity. Whether this last procedure is of any value or not I cannot say; but it has the negative virtue of doing no harm.

Belfield,[2] says, that the statement which I had made, namely, that all pelvic abscesses in men were due to perforative appendicitis, is certainly erroneous; in which he is entirely correct. Suppurations from the prostate or seminal vesicle are true pelvic abscesses and they are most apt to point in the perineum, and consequently should be opened at that point. What I should have said was that practically all intraperitoneal abscesses were due to perforation of the appendix and that abscesses in the rectovesical pouch should be opened into the rectum. The objection has been made that because the normal intra-abdominal pressure is approximately 16 pounds to the square inch, postural drainage is not needed; that ordinary drainage is all that was necessary. This is no doubt true in the majority of cases; but every surgeon knows that it is not always true; that dependent drainage with intraperitoneal pressure is much better than ordinary uphill drainage under the same condition. When the intestinal coils and omentum become adherent to each other, the intra-abdominal pressure becomes decreased, and under these circumstances a suprapubic drain only allows the escape of the overflow and the pouch is never emptied.

Mr. Archibald Cuff in the London *Lancet,* a few months ago, in speaking of the treatment of appendiceal abscess says, "One advocate of rectal drainage whose zeal would seem to be based on a slender and unsatisfactory experience, admits on one occasion opening the bladder by accident." This sounds as though the accidental opening of the bladder in this case was a very serious matter, while, as my first report states, the patient had not the slightest trouble, not even discomfort as a result, and recovered perfectly in spite of this accident, which ought not to have occurred. In this case to make sure that I had really opened the bladder I introduced my finger into the bladder so that I could feel the prostatic opening of the urethra. I made no attempt to close the opening, but proceeded to open the abscess behind the bladder. That same night the man passed bloody urine normally and did not even develop a cystitis. This accident happened before I had perfected a line of procedure to be followed in this operation, and when the rectovesical pouch was opened practically by the sense of feeling and without the operator's being able to see where it was best to make the opening.

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* Read in the Section on Surgery of the American Medical Association, at the Sixty-first Annual Session, at St. Louis, June, 1910.

[1] Surg. Gynec. and Obst., June, 1908, p. 671.

[2] Belfield, W. T.: Prog. Med., December, 1908.

In a different vein is the article by Mr. Bilton Pollard,[3] surgeon to the University College Hospital. Mr. Pollard says that he was just about ready to publish an article on rectal drainage when my paper[1] appeared. He reports one case of diffuse septic peritonitis with a large intraperitoneal pelvic abscess of three weeks' duration, in which rectal drainage was the only operative procedure, with perfect recovery. Of accumulations of pus in the pelvis following an ordinary laparotomy for appendicitis, he says that he has opened several through the rectum and always with success. When I wrote my paper two years ago I had not operated in any case of pelvic abscess just like this one, but I mentioned this kind as particularly suitable, and expressed my intention of operating in the first one which presented itself.

As already mentioned, the five cases reported two years ago were cases of pelvic abscess following intraperitoneal operations for appendicitis, in which several days after the primary operation accumulations of pus in the rectovesical pouch were opened and drained by rectal section, and all of these patients recovered.

## REPORTS OF CASES

Sixth Case.—One week after Dr. Pollard's report was published in England, I operated, in a precisely similar case, on a boy aged 14, sent from Canby by Dr. J. S. Kilbride. The patient was profoundly septic, the perforation having taken place ten days before. Every one was agreed that the boy was growing rapidly worse. The abscess apparently was not adherent to the anterior abdominal wall but bulged markedly in the anterior wall of the rectum. At least a pint of thick, very offensive pus was evacuated by rectal puncture and a rubber tube was put in; the next day the patient's temperature and pulse were practically normal. On the second day he was "cured." On the sixth day the tube was removed, and on the twelfth day the patient went home. He has been perfectly well ever since.

Seventh Case.—This was one of the typical non-operative cases of Ochsner in which the abscess was probably going to rupture back into the free peritoneal cavity before the eighth day. In this kind of case on several occasions I have seen the patient suddenly die on the fifth or sixth day. The patient in this case, a little girl, aged 7, was desperately sick; perforation had occurred five days before; temperature was 104; pulse 130 to 140, and of a very bad character; there was general abdominal distention; and excessive bulging through the rectum. One-half pint of pus was evacuated through the rectum. The patient did well until the fifth day after the operation. On the seventh day anterior abdominal section was made, and a large abscess about the appendix, containing gas, was opened. The patient died on the tenth day. This child should have had abdominal section either the same day as the rectal section or not later than forty-eight hours after. I believe that in this case the rectal section prolonged life, even if it did not save it.

Eighth Case.—The patient, a boy aged 7, who had been sick for ten days, was seen with Dr. Buckley of St. Paul. This was much the same kind of case as the one just preceding. Temperature was 99; pulse 120. There was decided bulging of the anterior rectal wall, which was first opened and a half of a pint of thin watery offensive pus let out. The patient was much better for two or three days; on the fifth day he was worse again. Temperature was then 101; pulse 120. There was a mass in each loin; these were opened and drained in front, and the appendix, which was a long one and ran over the brim of the pelvis, was removed. The patient then promptly recovered.

Ninth Case.—The patient, a boy, was sent by Dr. Campbell of South St. Paul. The case was one of ordinary appendiceal abscess, seen first on the seventh day. The abscess was opened above behind a gauze tampon, and one ounce of thick pus was let out. I could not distinguish the appendix or find an enterolith. After closing the wound and putting in a drain, and just before I sent the patient from the operating room, I made a rectal examination to find a separate pelvic abscess containing fully three ounces. This separate abscess, not discovered in the earlier stages of the operation, was opened into the rectum. The boy made a perfect recovery and has been well ever since.

Tenth Case.—The patient, a boy, aged 6, was sent by Dr. Boothby, Hammond, Wis.; he had suffered from perforation of the appendix eight days before. Pathologic condition was one of acute, suppurative, perforative, gangrenous appendicitis. On July 19, 1909, the appendix was removed after the abscess was opened; a drain was put through a stab just outside the wound; on the seventh day the patient was found not doing well; temperature was 101. That night the patient was uncomfortable, crying most of the time from distress in the rectum. Rectal examination showed fluid in the rectovesical pouch. On the eighth day a rectal section was made, and half a pint of clear serous pus, followed by two drams of thick pus, was evacuated, a small rubber drainage-tube was inserted in the opening in the rectum. The following day the boy felt much better; on the third day after the second operation the tube came out and was not replaced. The patient recovered, and has been perfectly well ever since.

Eleventh Case.—The patient was a young man, aged 25, suffering from a first attack which had begun five days before; he was able to work until two days previous to the operation, when he began to suffer very intense pain and was confined to his bed. Temperature was 100; pulse 90. There was general rigidity of all abdominal muscles and intense pain. Pathologic condition was one of general septic peritonitis, due to gangrenous perforative appendicitis, pelvic abscess and an accumulation of fluid in right loin. Rectal section was first made; one-half pint of turbid, very offensive serum was evacuated and a tube was put in; when the abscess was almost emptied the fluid became true pus. This was immediately followed by laparotomy and removal of appendix and a suprapubic drain was put into a stab wound over the symphysis; a gauze drain was put through the wound into the right loin. The man was put in the Fowler position. On the third day the suprapubic drain was removed; on the thirteenth day the rectal tube was removed. This patient recovered and has been well ever since.

Twelfth Case.—The patient, Mr. C. of Detroit, Minn., aged 30, was sent by Dr. Charles Greene of St. Paul. There was a mass in the right side and fluctuation in the rectum. The pathologic condition was one of acute suppurative, perforative appendicitis with abscess pointing toward the rectum. Operation was performed on the sixth day of the first attack. Rectal section was first made, and four ounces of offensive pus evacuated; a drain was put through the anus into the abscess cavity, and this was immediately followed by laparotomy. The adhesions were so dense that I could not reach the abscess cavity, even after deep dissection; the drain had to be put through stab outside of wound. This patient returned three months later and had his appendix removed.

Thirteenth Case.—C. A., patient of Dr. Rider of Shakopee, was operated on by my partner, Dr. Ritchie, in his second attack, seven days after perforation. The appendix could not be found; the abscess was opened and drained. On the ninth day after operation the patient began to have pelvic distress and a sense of pressure in rectum. Rectal section was made and a pint of very offensive pus was evacuated through the rectum and the abscess drained. Three months later the appendix was removed. The patient recovered and is now perfectly well.

Fourteenth Case.—F. A., aged 6, patient of Dr. Rudolph of Ellsworth, Wis., suffered with several mild attacks of colic lasting about half a day each. The present attack began with very severe pain and vomiting seven days before I saw the case. The pathologic conditions were acute, suppurative appendicitis; localized pelvic abscess, fluctuating through the rectum; localized collection of pus just outside of McBurney's point; eight ounces of thick offensive pus; no enteroliths. The operation consisted: first, of rectal section, which let out four ounces of thick offensive pus; a drainage-tube was then put in and this was immediately followed by laparotomy. The abscess to the outer side of the cecum was opened, and drained with two cigarette drains through stab just outside of the wound.

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[3] Pollard, B.: Brit. Med. Jour., July 25, 1908.

One month later the patient came back with another attack of appendicitis; this time the appendix was removed; the patient promptly recovered and has been perfectly well ever since.

Fifteenth Case.—J. S., aged 20, patient of Dr. Breed, Rock Elm, Wis., had suffered previously from several attacks. The present attack commenced eight days before the patient was seen; he had suffered with constant pain in the rectum from the very first of this attack up to the present time. The pathologic condition was one of acute suppurative, perforative appendicitis. The abscess was well walled off; there was a large accumulation, fully half a pint of thin serous pus in the rectovesical pouch; and another accumulation of thick pus in the right loin. Rectal section was first made. This was followed by a cross-muscle incision in McBurney's point. The abscess in the loin was opened, which showed no apparent connection with the pelvic abscess cavity. The rectal drainage-tube was removed on the fourth day. The patient promptly recovered, and has had no further trouble.

### METHOD OF PROCEDURE

The position used is the exaggerated position (Pryor), the one usually used in making examinations of the female bladder with the cystoscope. The most important part of this position is the use of straps over the shoulder, fastened to the uprights holding the feet, to prevent the shoulders from slipping away when the head of the table is dropped. I have found that a weighted vaginal speculum will expose the anterior wall of the rectum fully as well as it exposes the vault of the vagina in the similar operation for vaginal section.

One long-bladed retractor for the anterior wall is necessary to hold the bladder out of the way. The bladder having been catheterized to prevent accident (a thing I omitted to do in the case related), the rectum should be irrigated until fecal matter is removed, and then sponged out with alcohol. After the rectum has been well cleaned and the bulging anterior wall well located, the abscess should be opened with long, sharp-pointed scissors, used as a dilator. After the rectovesical or recto-uterine pouch is opened and the fluid let out the dilator should be kept in place until a quarter-inch, winged rubber tube can be passed well up into the cavity; then the sphincter should be dilated.

There are comparatively few vessels in the posterior vaginal wall, but as has been shown[4] there is some danger of hemorrhage following rectal section, more, I am sure than in vaginal section, so that I am inclined to believe that in these cases the lesser procedure of rectal puncture would be the operation of choice.

Vaginal puncture I do not like; it is too blind and does not give sufficient room for further exploration, but in these cases, all that is necessary is an opening through which to pass a drainage-tube.

It has been a great pleasure to see the relief and comfort which these patients have received from rectal drainage, and to note the rapid drop of temperature and pulse which followed this very insignificant operation.

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### ABSTRACT OF DISCUSSION

Dr. J. M. Baldy, Philadelphia: It is exceedingly unfortunate that we should have to discuss the subjects of this paper, but as some cases—fortunately, an exceedingly limited number—makes its discussion necessary, it is fitting that we give it careful consideration. The existence of such cases, in the present state of modern surgery, is a disgrace; it implies that there is gross neglect on the part of the physician who referred the case to the surgeon primarily, and the grossest possible neglect on the part of the surgeon to whom such cases are sent, for not dealing with them properly.

In the women it is a very simple matter. No one would think of taking such steps in a woman to secure drainage. The vagina would naturally suggest itself, for more reasons than one, as the place through which to make an opening into the abscess. If the case occurred in a man, it would imply that the surgeon would first go into the abdomen, clear up the nucleus of infection, and then deal with the opening secondarily. All we would have to do in that case with the condition in the pelvis would be simply to drain for a day or two, and that would be the end of it. In men, of course, if such cases do occur they must be rare in the hands of a good surgeon. Then it may be justifiable to open the rectum. But one would question the skill of the surgeon who had done the primary operation. There ought to be such a small proportion of these cases that it should really be unnecessary for us to consider them; but if they do occur from neglect of clinicians or of immature surgeons, the thing to do is to open the rectum, secure free drainage and permanent drainage until the condition is cleared up, then close the opening, and that is all there is to be done.

Dr. Maurice H. Richardson, Boston: Long ago, in the early days of appendicitis, when everybody waited for the abscess to form, nearly every case of appendicitis was fatal. The cases came to us—cases of abscesses of this kind—and many times we observed an abscess opening into the rectum, which would perhaps break under the pressure of the finger. I also observed in many cases that if we had twenty-four hours to watch the case before the operation, the abscess would break into the intestinal canal, and the patients would recover. This is Nature's way of doing things, and it seemed rational to operate through the rectum. Years after the appendix was removed through the abdomen. It seems to me, of course, that the only cases of this kind that we see now come to us through ignorance, perhaps on the part of the patient, or—but very rarely—on the part of the physician. But some methods of treatment—for example, the treatment of walling off a local peritonitis so that it will not become general, if not done properly, or if done by one who does not understand the physical signs of abscess, will cause just that kind of a case. I have seen this happen in a few cases of pointing into the rectum in appendicitis.

I see cases of appendicitis frequently in which the pus connects with the tubes in the female, and the result is an undesirable one. As Dr. MacLaren has said, these are the cases in which the abscess will open through the rectum, and the original focus of infection can be sought for with great safety afterward. This is a distinctly advantageous method of treating these few deplorable cases which through many grave dangers have come to rectal opening.

Dr. A. MacLaren, St. Paul, Minn.: These cases occur in the hands of every man who does a great deal of this work, and while they are undesirable cases, there must be some way for taking care of them, and it is for this purpose and none other that I presented this paper.

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**Daily House-to-House Visitation of Non-immunes in Campaign Against Yellow Fever.**—A Veracruz daily paper has recently published in full the address on this subject read at the meeting last October at Richmond of the American Public Health Association by Dr. C. M. Garcia, in charge of the work at Veracruz. In addition to the usual prophylactic measures, screening, isolation of patients, etc., the Mexican National Board of Health sends inspectors to every person known to be not an immune, whether they are residing in or merely passing through the old yellow fever zone. This is done daily regardless of whether or not the disease is epidemic. By thus keeping the non-immunes under constant medical supervision, the first onset of possible disease is recognized at once, and the authorities are able to apply isolation and disinfection from the start. The Journal described in detail, March 23, 1907, page 1048, the successful campaign against yellow fever in Mexico, commenting especially on its eradication in Veracruz which for centuries was one of the principal hotbeds of the disease.

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[4] Case 4, Surg. Gynec. and Obst., June, 1908, p. 671.

# HOW SHALL THE STOMATOLOGIST BE EDUCATED?

EUGENE S. TALBOT, M.D., D.D.S.

CHICAGO

It is a popular idea that "the dentist on graduation is better equipped for practice than the physician." This is misleading, not only to the dental graduate, but also to the physician and the laity. The statement was tenable seventy years ago when the first dental college was established and dental mechanics only were practiced, but modern research has shown us that many incipient diseases first show themselves in the mouth by their effect on the mucous membrane, alveolar process, jaws and teeth. These conditions frequently become serious.

In conversation with some of the members of the Council on Medical Education, in regard to the medical education of the dentist, they were surprised to know that further education was necessary. They were under the impression, that the graduate of dentistry had received a full and complete education; that is, all that was necessary to fit him for his special branch of medicine.

There are a few dentists who, after they have been in practice a short time, realize that they know little of the treatment of diseases of the mouth, so necessary at the present time. Some are willing and able to take a medical course to prepare themselves thoroughly to become stomatologists. Others would like to do so but circumstances will not permit it.

### NO CREDIT FROM THE MEDICAL SCHOOLS

The medical school does not give credit for any part of the course of the dental graduate (and rightfully), because he has scarcely a smattering of the fundamentals of medicine. It is necessary for the dentist to take a medical course of four years, over and above the three years spent in the dental school. In the best dental schools, the Dean will tell you the dental students sit in the same room, hear the same lectures, and stand the same examinations as the medical students. All know the dental student is not required to have the close marking required of the medical. What a disgrace for the dental graduate after a three years' course in one department of a university to have so vague a knowledge of the fundamentals of medicine that he cannot get one year's credit in another department in the same university although he has been sitting on the same seat, in the same room and hearing the same teacher on the same subject. Teachers on the fundamentals of medicine have informed me many times that dental students did not need the same serious consideration of the subject as the medical students required, and therefore their examination was not so severe; hence, the dental student is allowed to slip through on a lower average than the medical student.

The dental student on graduation knows little or nothing of the fundamentals of medicine, no matter how well he may have been taught. The reason is that the dental student on matriculation, is immediately put to work on the mechanics of his profession. The entire environment and atmosphere of the school is mechanics. The contrast between the mechanic and the biologic is so great that the student immediately asks the question. "What is the advantage of all this study of anatomy, physiology, pathology, chemistry and therapeutics when the care of the teeth is all I require?" Thus the atmosphere of the school itself makes the student a mechanic rather than a broadly educated man.

### THE DEGREE OF D.D.S.

Some thinkers are trying, or rather expecting to raise the standard of the D.D.S. to equal the M.D. degree, and thus to an honorable position. To my mind, it can never be accomplished. The D.D.S. will always be considered an inferior degree. To make the degree equal to the medical the student must study the same number of years. Then, why not confer the medical degree? The student will not tolerate an inferior degree. Present methods of dental teaching will not improve the student's mentality though a six-year course be required for graduation.

### STOMATOLOGY AS A SPECIALTY

There can be no question that men proficient in the mechanics of dentistry (to repair and restore lost parts), and men to treat diseases of the mouth (which includes the jaws and alveolar precesses), are essential. Shall the specialty be divided and the dentist confine himself solely to the mechanics of the teeth and the stomatologist to the diseases of the mouth, or shall the student be so educated as to combine both?

If the specialty is to be divided, dental schools are wasting time and money in even attempting to teach the fundamentals of medicine. There are, in the United States, fifty-four well-equipped schools to teach the mechanics of dentistry, and they are all that can be desired in this direction. The stomatologist, on the other hand, is losing time in not acquiring a better foundation for the practice of his specialty. He should matriculate in the medical school and obtain a thorough medical education, since modern research has demonstrated that not a single disease of the mouth, jaws and teeth but has a systematic relationship. Personally, I am of the opinion that the two departments, pertaining to all operations in the mouth, cannot readily be separated. The question is then, "How Shall the Future Stomatologist be Educated?"

### INTERNATIONAL ASSOCIATION OF STOMATOLOGY

In August, 1907, there was organized in Paris, France. The International Association of Stomatology. The delegates to that meeting all held medical degrees from universities and colleges in the various countries from which they came. Nearly every country was represented. The object of this organization is to urge a medical education alike in all countries for those practicing diseases of the oral cavity.

At this meeting, two questions were settled: First, That a complete medical education must be required of every dentist. Second, the word "stomatology" was defined as meaning the science that treats of diseases pertaining to the mouth; the "stomatologist" is one who treats diseases of the mouth.

### THE QUESTIONS TO BE SETTLED

At the second meeting of the A.S.I., held at Budapest, August 1909, the following paper by me, "How Shall the Stomatologist be Educated?" was discussed. The thoughts therein expressed were incorporated in a report prepared for universal discussion. These questions are to be sent to members in the various countries for careful study, and are here presented for your consideration. They are as follows:

*a*. When is it best to begin the special studies; during the time of the general medical studies or immediately after these?

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* Read in the Section on Stomatology of the American Medical Association, at the Sixty-first Annual Session, at St. Louis, June, 1910.

*b.* Advantages and disadvantages of each.

1. Special studies begun during the special medical course.

2. Special studies begun immediately after the general medical course.

*c.* Length of time required for special studies of each system.

*d.* Details of the special studies of each system.

It is necessary that these questions be seriously considered by the members of this section, since they must serve as the foundation for future dental education in many, if not all, the countries, and also for the lengthy discussion before the A.S.I. at its next meeting in Paris, 1911. It will be necessary also to publish this discussion in full in the Bulletin for 1910, Volume III, from the JOURNAL of the American Medical Association, in order that it may appear some months previous to that meeting, so that an intelligent understanding of the subject may be presented from each country.

The fathers of American medicine, the late Drs. N. S. Davis, Gross, Sayre, Flint, Toner, Pancost and many others, believed that diseases of the mouth, including oral hygiene, the most important study of the human body. Stomatologists are of the same opinion. This being the case, should not this specialty require the same method and the same length of study as the lesser specialties of medicine? The dental profession have not yet awakened to the seriousness, importance and scope of their calling.

The main point and first to be considered is, how can the stomatologist be educated and not lose time, but have all his studies count for future work. At the present time, there are two methods of studying medicine in the United States, hence the education of the stomatologist must be based on these methods, subject to more modern improvements. Both medical and dental students, at the present time, must possess a high school diploma or its equivalent; therefore, they start their chosen profession on an equal footing. In some medical schools, the high school graduate is allowed to matriculate, pursue a four years' course and graduate with an M.D. degree. The other method has been worked out by Dr. John Milton Dodson[1] as follows:

> "With the last decade there has developed a plan in several American universities under which a student takes, during the junior and senior years, those sciences which constitute the first two years of the medical curriculum. Credit for the successful completion of the work in these branches is permitted to count both toward a baccalaureate degree in the collegiate department and toward the degree of M.D. in the medical school. The student is thus able to secure the baccalaureate degree and the degree of M.D. in from six to seven years after his completion of the high school course and his matriculation in the university. The plan has extended rapidly, it being now in operation in over thirty American universities. It is believed by many educators to be the best solution yet offered of the problem of how to provide a good many students with a fairly adequate premedical training, and to induct them into the study, and later, the practice of medicine at a reasonably early age."

This method of teaching will, no doubt, become universal in this country. By either method the dental student must pursue the fundamentals of medicine in physics, zoology, chemistry, anatomy, physiology, embryology, bacteriology, pharmacology and the principles of pathology.

The first two years of medical studies should be conducted in the university proper since they are better equipped than the average medical college for this work. The stomatologist should continue the course to this point with the medical class and obtain credit. He should not come in contact with patients during the first two or three years of study. Laboratory work and the use of the microscope has given him considerable experience in finger manipulation. The finger manipulation cannot be more delicate than that required in the laboratory and dissecting room of a university or medical school. To offset this objection, if it can be considered one, it is essential that the student should be required to obtain as much of his professional education as possible before coming in contact with the commercial side of his specialty, which is so demoralizing to his future welfare by the present methods of teaching.

One strong argument put forth against a medical education for the dentist is the early requirement of finger skill which is supposed to be lost later in life, the student being too old after a medical education to acquire the skill necessary to perform operations in the mouth.

To ascertain the ages of entrance into the best schools in the country, I wrote to eight, requesting them to send me a report of the ages of matriculation for the past five years. Deans Koch, of the Northwestern University Dental School; Smith, of Harvard University Dental School; Kirk, of the University of Pennsylvania Dental School, and Hoff, of University of Michigan Dental School, responded.

TABLE 1.—AGES OF STUDENTS OF NORTHWESTERN UNIVERSITY DENTAL SCHOOL AT THE TIME OF ENTRANCE

| Age. | 1904 | 1905 | 1906 | 1907 | 1908 | 1909 | Total Students. | Total Years. |
|---|---|---|---|---|---|---|---|---|
| Eighteen | 13 | 24 | 8 | 6 | 4 | 6 | 61 | 1,098 |
| Nineteen | 19 | 23 | 8 | 8 | 11 | 13 | 82 | 1,558 |
| Twenty | 22 | 23 | 14 | 15 | 18 | 21 | 113 | 2,260 |
| Twenty-one | 22 | 34 | 6 | 19 | 14 | 27 | 122 | 2,562 |
| Twenty-two | 20 | 32 | 13 | 15 | 11 | 23 | 114 | 2,508 |
| Twenty-three | 21 | 24 | 13 | 8 | 6 | 17 | 89 | 2,047 |
| Twenty-four | 13 | 24 | 12 | 7 | 11 | 10 | 77 | 1,848 |
| Twenty-five | 15 | 12 | 6 | 12 | 4 | 11 | 60 | 1,500 |
| Twenty-six | 10 | 9 | 7 | 7 | 6 | 7 | 46 | 1,196 |
| Twenty-seven | 8 | 6 | 3 | 6 | 6 | 6 | 35 | 945 |
| Twenty-eight | 4 | 9 | 1 | 5 | 2 | 2 | 23 | 644 |
| Twenty-nine | 8 | 8 | 2 | 4 | 2 | 3 | 27 | 783 |
| Thirty | 2 | 3 | 3 | 3 | 7 | 4 | 22 | 660 |
| Thirty-one | 2 | 4 | 1 | 4 | 1 | 1 | 13 | 403 |
| Thirty-two | .. | 3 | 1 | 1 | 1 | 3 | 9 | 288 |
| Thirty-three | .. | 1 | .. | 4 | .. | .. | 5 | 165 |
| Thirty-four | 1 | 1 | .. | 3 | 2 | 1 | 8 | 272 |
| Thirty-five | 1 | 2 | .. | 1 | 1 | 1 | 6 | 210 |
| Thirty-six | 2 | 1 | 1 | 1 | 2 | .. | 7 | 252 |
| Thirty-seven | .. | 2 | .. | .. | 2 | 3 | 7 | 259 |
| Thirty-eight | 1 | 1 | .. | .. | .. | 1 | 3 | 114 |
| Thirty-nine | .. | 2 | .. | .. | .. | .. | 2 | 78 |
| Forty and over | .. | .. | 2 | .. | .. | .. | 2 | 80 |
| Total | 184 | 248 | 101 | 129 | 111 | 160 | 933 | 21,730 |

Average 23.29.

TABLE 2.—AGES OF STUDENTS OF HARVARD UNIVERSITY DENTAL SCHOOL AT THE TIME OF ENTRANCE

| Age. | 1905 | 1906 | 1907 | 1908 | 1909 | Total Students. | Total Years. |
|---|---|---|---|---|---|---|---|
| Sixteen | .. | 1 | .. | .. | .. | 1 | 16 |
| Seventeen | 1 | 4 | .. | 1 | 1 | 7 | 119 |
| Eighteen | 3 | 2 | 9 | 2 | 6 | 22 | 396 |
| Nineteen | 7 | 6 | 5 | 9 | 14 | 41 | 779 |
| Twenty | 9 | 9 | 13 | 11 | 15 | 57 | 1,140 |
| Twenty-one | 12 | 11 | 7 | 11 | 15 | 56 | 1,176 |
| Twenty-two | 17 | 4 | 4 | 6 | 5 | 36 | 792 |
| Twenty-three | 8 | 7 | 4 | 3 | 7 | 29 | 667 |
| Twenty-four | 3 | 4 | 7 | 4 | 6 | 24 | 576 |
| Twenty-five | 2 | 2 | 2 | 4 | 2 | 12 | 300 |
| Twenty-six | 5 | 4 | 3 | 2 | 2 | 16 | 416 |
| Twenty-seven | 2 | 2 | 2 | 3 | 1 | 10 | 270 |
| Twenty-eight | 2 | 1 | 3 | 1 | 5 | 12 | 336 |
| Twenty-nine | 3 | 4 | .. | 3 | 2 | 12 | 348 |
| Thirty | 1 | 1 | 2 | 2 | 4 | 10 | 300 |
| Thirty-one | 4 | 1 | .. | 1 | 2 | 8 | 248 |
| Thirty-two | 2 | 1 | .. | 1 | 2 | 6 | 192 |
| Thirty-three | 1 | 1 | 2 | .. | .. | 4 | 132 |
| Thirty-four | .. | 1 | .. | 1 | .. | 2 | 68 |
| Thirty-six | 1 | .. | .. | .. | .. | 1 | 36 |
| Thirty-seven | .. | .. | .. | .. | 1 | 1 | 37 |
| Thirty-eight | 1 | .. | .. | .. | .. | 1 | 38 |
| Thirty-nine | 1 | .. | .. | .. | 1 | 2 | 78 |
| Forty | .. | 1 | 1 | 1 | .. | 3 | 120 |
| Forty-one | .. | .. | 1 | .. | .. | 1 | 41 |
| Forty-two | .. | .. | .. | .. | 1 | 1 | 42 |
| Forty-four | .. | .. | 3 | .. | .. | 3 | 132 |
| Total | 85 | 67 | 68 | 66 | 92 | 378 | 8,795 |

Average 23.29

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1. THE JOURNAL A. M. A., Sept. 6, 1902, and May 22, 1909.

TABLE 3.—AGES OF STUDENTS OF UNIVERSITY OF PENNSYLVANIA DENTAL DEPARTMENT AT THE TIME OF ENTRANCE

| Age. | 1905 | 1906 | 1907 | 1908 | 1909 | Total Students. | Total Years. |
|---|---|---|---|---|---|---|---|
| Seventeen | 3 | 3 | 3 | 2 | 2 | 13 | 221 |
| Eighteen | 13 | 17 | 22 | 16 | 21 | 89 | 1,602 |
| Nineteen | 25 | 40 | 40 | 26 | 26 | 157 | 2,983 |
| Twenty | 30 | 21 | 26 | 38 | 25 | 140 | 2,800 |
| Twenty-one | 31 | 33 | 29 | 23 | 28 | 144 | 3,024 |
| Twenty-two | 17 | 22 | 28 | 9 | 14 | 90 | 1,980 |
| Twenty-three | 11 | 13 | 23 | 12 | 7 | 66 | 1,518 |
| Twenty-four | 14 | 13 | 9 | 5 | 3 | 44 | 1,056 |
| Twenty-five | 9 | 8 | 6 | 5 | 4 | 32 | 800 |
| Twenty-six | 3 | 7 | 6 | 5 | 3 | 24 | 624 |
| Twenty-seven | 4 | 5 | 2 | 6 | 2 | 19 | 513 |
| Twenty-eight | 3 | 3 | 8 | 3 | 2 | 19 | 532 |
| Twenty-nine | 1 | 2 | 1 | 2 | 2 | 8 | 232 |
| Thirty | 2 | 1 | 1 | 1 | 1 | 6 | 180 |
| Thirty-one | 4 | 2 | 1 | .. | .. | 7 | 217 |
| Thirty-two | 2 | 1 | 1 | .. | .. | 4 | 128 |
| Thirty-three | .. | .. | .. | 1 | .. | 1 | 33 |
| Thirty-four | .. | .. | 1 | .. | 1 | 2 | 68 |
| Thirty-five | .. | .. | 1 | .. | .. | 1 | 35 |
| Thirty-six | .. | .. | 1 | .. | 1 | 2 | 72 |
| Thirty-eight | .. | .. | .. | .. | 1 | 1 | 38 |
| Forty | .. | .. | 1 | .. | .. | 1 | 40 |
| Forty-four | .. | .. | .. | .. | 1 | 1 | 44 |
| Total | 172 | 191 | 210 | 154 | 144 | 871 | 18,740 |

Average 21.53

TABLE 4.—AGES OF STUDENTS OF THE UNIVERSITY OF MICHIGAN DENTAL SCHOOL AT THE TIME OF ENTRANCE

| Age. | 1905 | 1906 | 1907 | 1908 | 1909 | Total Students. | Total Years. |
|---|---|---|---|---|---|---|---|
| Eighteen | 4 | 1 | 5 | 2 | 3 | 15 | 270 |
| Nineteen | 3 | 4 | 11 | 8 | 10 | 36 | 684 |
| Twenty | 3 | 5 | 8 | 4 | 10 | 30 | 600 |
| Twenty-one | 7 | 1 | 8 | 9 | 9 | 34 | 714 |
| Twenty-two | 5 | 2 | 9 | 8 | 4 | 28 | 616 |
| Twenty-three | 1 | 2 | 3 | 4 | 9 | 19 | 437 |
| Twenty-four | 4 | 1 | 4 | 2 | 1 | 12 | 288 |
| Twenty-five | 5 | .. | 1 | 3 | .. | 9 | 225 |
| Twenty-six | 3 | 1 | .. | 3 | 1 | 8 | 208 |
| Twenty-seven | .. | .. | 1 | .. | .. | 1 | 27 |
| Twenty-eight | 1 | 2 | 4 | 1 | 2 | 10 | 280 |
| Twenty-nine | 1 | 1 | .. | 1 | .. | 3 | 87 |
| Thirty | .. | 1 | .. | 2 | 1 | 4 | 120 |
| Thirty-one | 2 | .. | .. | .. | 1 | 3 | 93 |
| Thirty-two | .. | .. | 1 | 1 | .. | 2 | 64 |
| Thirty-three | 1 | .. | .. | .. | .. | 1 | 33 |
| Thirty-four | .. | .. | 1 | .. | .. | 1 | 34 |
| Total | 40 | 21 | 56 | 48 | 51 | 216 | 4.780 |

Average 22.12

## WHAT THE TABLES SHOW

The reports are interesting since they show the youngest to be 16 and 17 and the oldest 44, with an average in Harvard and Northwestern of 23.29, and in the University of Pennsylvania 21.53. I have known students to matriculate in the dental school as late as 54 years of age. The ages of matriculation in all the other dental schools must range in a similar manner. The fallacy of this argument must, therefore, fall to the ground.

In the university medical schools, the average is lower than in the regular medical schools. Thus in Harvard and Johns Hopkins the average is about twenty, while in the schools not connected with universities the average is from twenty-two to twenty-four. Students leave the high school in this country usually at eighteen to twenty years of age. The same is true of the gymnasium in Germany and the institutes of France.

The reason that medical and dental students matriculate late in life in schools not departments of universities is that most of these students have started out pursuing other avocations. Not making a success in their chosen calling or having a taste for the professions they have sought new fields for livelihood. Few of these men have taken a high school course or have even passed successfully through the grammar school. Every year the people are becoming more exacting in regard to the education of students for the professions. This will necessitate the students entering the profession direct from the high school, thus reducing the age of matriculation to a minimum. Students of dentistry entering the medical school at twenty can graduate with both medical and dental degrees at twenty-six, which is early enough for any man to begin the practice of a profession.

The stomatologist, having finished his two or three years of the fundamentals of medicine, now has the choice of two methods. He can finish his full course in medicine before taking up his specialty, or he can take three months in the summer for his clinical work and finish in one or two extra years, thus cutting off one year in his special course and adding one to his medical course. In either case he has spent only six years as against the seven or eight for other specialties. This is certainly not too much to expect of a department of medicine recognized by medical practitioners as the most important specialty.

## THE ELECTIVE SYSTEM

The elective system in medicine, as recommended by ex-President Eliot, of Harvard, is meeting with much favor. There is so much detail in each medical specialty that no one student can master the subjects sufficiently to enter into a general practice of all. Special teaching is necessary even after the graduate has finished his hospital training.

A full and thorough course of two or three years should be required of all students in the major branch of medicine, and a satisfactory examination should be required, after which the student should select the specialty he desires to practice and with the aid of the Dean select such other branches as will fit in with those of his specialty. His special training in the stomatologic hospital (dental clinic) can be continued in the schools, which are now so well equipped for special work. The courses in both general and special medicine should continue throughout the year, divided into four quarters. By this method, the student can better select the course best adapted to each year's curriculum.

## SPECIAL DEGREES FOR SPECIAL WORK

Should the elective system eventually be adopted, then all the "ologies" would specialize after the second or third year of medical study. This would simplify matters and the stomatologist would then stand on an equal footing with the other specialists. It would not be a bad plan also to confer the special degree of D.D.S. on such students as become proficient in special work. The specialties should be pursued as they are at the present time. Having finished his medical course, his special teaching should be shortened one year at least. The details of special instruction can only be worked out in the dental hospital on those students who have acquired a medical course. The student's special instruction should continue until he has become proficient in the different departments and has come up to a given standard. In other words, merit should be recognized, whether it be six months or three years. The standard of requirement should be established by a committee consisting of one delegate from each university stomatological department, or still better, by the state board of dental examiners.

## REGISTRATION OF SPECIALISTS

The state board of medical examiners should register the graduate of medicine and the particular specialty he has become proficient in. The law should require him to practice that specialty. Should he find later that he is better adapted to practice some other specialty, he should pursue studies along that line, stand another examination before the state board of medical examiners and be licensed to practice that specialty.

It is to be hoped that the Council on Medical Education and the Association of American Medical Colleges will soon consider the return of the prodigal son to the mother profession, and not only make provision for his welcome back into the household, but also provide for the other brothers (specialists) that the fatted calf may be distributed equally to all children so that they may all eat and drink of the knowledge of medicine and make merry.

103 State Street.

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# HOW SHALL THE STOMATOLOGIST BE EDUCATED?*

JAMES E. POWER, M.D.
PROVIDENCE, R. I.

In discussing the subject "How Shall the Stomatologist be Educated?" I am conscious of the fact that true science aims at the attainment of truth; honest criticism and honest discussion are the only factors that will or can assist in the accomplishment of her aim. I do not assume an attitude of criticism; I am simply responding to a call which I consider to be the duty of every member of that profession which has greater possibilities for the future than any of her sister professions, socalled.

That there are branches of pathology, or I might say of pathologic physiology, which have never been explored, is a fact too obvious for discussion here. It is an accepted fact that dentists and dentistry have, in the services which they have rendered, accomplished facts which are only short of marvelous. If we read the history of dentistry and reflect on the strides which have been made in the preservation of the teeth, we may indeed point with pride to a noble record. But we must be honest with ourselves, and if we are to assist in placing this profession in that place which it should rightly occupy among the other professions we cannot content ourselves with the fact that it is so much better than it was twenty or thirty years ago; we must ask ourselves, in consideration of the number of the thousands of men and women who are going into the profession of dentistry—as well as those who have been practicing it for years, and in consideration of the number of dental colleges which exist to-day. Does this profession occupy the position that it should occupy at present? We all know the answer, and unless enthusiasm or deceit replace honest judgment and honest opinion, the answer spells, No. Now we must submit to a little self-examination and determine whether or not the fault lies with us as individuals or as a profession, or whether or not we are doing the best we can with the training which we have received at our dental colleges. It is reasonable to believe that most of us are doing all we can to make our profession the greatest in the world. Then to continue to reason along logical lines, the only conclusion is that our education is confined too much to the mechanical or artistic department of our profession.

## WHAT DENTISTRY COMPREHENDS

Before proceeding further, let us here understand whether we consider that dentistry comprises merely the making of artificial dentures, extracting teeth and insertion of fillings, or whether it comprehends something more; for instance, whether it has a direct relation to histology and physiology; whether it should have a part in the interpretation of physiologic and pathologic metabolism; whether it should have a complete knowledge of those factors which preserve health and breed disease, not only of the teeth, but of the mucous membranes from the mouth through the whole alimentary canal, with all its adjacent and component parts? If we accept the former definition, then I say that we are highly trained technicians, and yet not as highly trained or as well developed in the manipulative skill as are some of our colaborers, who are not considered by us to belong to a profession at all.

If we accept the latter, then I say that our education is inadequate, and that in order to fit ourselves to fulfill the obligations which are expected of us, and to make our profession all that our fathers intended it should be, we are obliged to call for a change in the teaching of the future students of dentistry. Let us agree to stop asking for recognition, from a profession which many of us believe is only to be our equal, namely, the medical profession. There never was and there never will be either an individual or a profession that need call for recognition. Recognition is that indefinable something which is always thrust on the individual when that individual occupies the position which is deserving of such recognition. The world is the judge and the world gives the recognition as soon as we deserve it. No sooner, no later.

## FOUNDATIONS IN DENTISTRY AND MEDICINE

That the foundation on which the dental graduate is sent into the world is greatly inferior to the corresponding foundation of the graduate in medicine is a well-known fact to all who have taken the time and patience to investigate the educational advantages of each. The dental graduate will tell you that he studied the same subjects as did the medical student. This is true, but the question is, Did he study them as thoroughly, or rather, was the standard for him and his medical brethren equal? In a large majority of cases he is laboring under a delusion if he believes that he knows as much, or even if he thinks he was given the same advantages in learning pathology, bacteriology, biological chemistry, or even anatomy, or physiology as was his medical brother. And now let me anticipate your question. Why? Because this branch of the science is taught by the professors of medicine, and in some instances the members of the dental faculty, who were graduated twenty-five or thirty years ago, do not seem to understand the importance of a proper medical education. We are apt to become subjects, if not indeed victims, of our environment, and the dental student is no exception to the rule. He breathes an atmosphere while on the dental side of the college, which may give his mind a bias. This condition of mind is not always correct, and when the student comes under the instruction of the professors of medicine, the men who are spending their lives in fitting the candidate for dental honors (for that seems to me the most important part of their life's work), the mind of the dental student is apt to be antagonistic to their teachings. If the mind was directed by the dental educators (the men who first meet the students) along the proper channels, it would be receptive and instead of leaving these departments with a superficial, or I might say an artificial knowledge, they would have a foundation on which they could and would develop the future of our profession.

## WHAT THE COURSE SHOULD COMPRISE

I am firmly convinced that a complete medical education is absolutely necessary for the proper practice of what the profession of dentistry means to me. In replying to the first question, "When is it best to begin the special studies; during the time of the general medical studies or immediately after these?" I will state that the studies of the dental specialist should be postponed until after the medical education is completed. I do not believe that there should be introduced into the medical course any of the special studies of the dentist except those which are already recognized as belonging to the department of medicine. If we introduce any of the special studies during this time we are destroying that which we are trying to accomplish, a complete medical training and the mind of the student is again diverted from the direct pathway. The special studies of the dentist should commence after his medical education is completed and should consist of certain branches of prosthetic dentistry, certain parts of crown and bridgework, the fundamental principles which govern the correction of irregularities of the teeth, and oral surgery. One year should be sufficient for the above named studies. The operative dentistry should consist of a practical teaching of filling teeth, and a theoretical teaching of the composition of the various filling materials. The prosthetic dentistry should consist of how to make artificial dentures, and a theoretical knowledge of the material, eliminating all the antiquated methods of making artificial dentures, leaving this for the dental historians. The crown and bridgework course should be carried along the same lines as the prosthetic course, viz., eliminating the antiquated methods of doing this work, as well as its history.

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* Read in the Section on Stomatology of the American Medical Association, at the Sixty-first Annual Session, at St. Louis, June, 1910.

Have men in charge in these departments who can and will teach the short methods of doing this work. Orthodontia can be taught as it is taught now. I am confident that one year would be sufficient for the proper teaching, as well as the proper understanding of the special studies required of the dentist. I realize that some may say it is unreasonable to believe that one year is sufficient to teach that which at the present time takes three years to teach. In replying I will state that there must be a revolution in the present teaching, and with a medical education the student has already learned all the material, which is now but poorly taught in the dental courses. His mind is more highly developed, as well as his powers of interpretation, not only of pathological, but of all conditions pertaining to the practice of a specialty, and the time required for a proper understanding would, of course, be shorter.

To me it seems impossible that a person can learn pathology without a microscopic study of all diseased tissue. How can we understand bacteriology without studying micro-organisms, both in culture media and under the lens of the microscope? How can we understand the subject of immunity and apply the vaccines and sera to the diseases which come under our specialty if we do not understand thoroughly that subject which is already revolutionizing the treatment of disease? There is not in reality, and there should not be in name, dental pathology, dental materia medica, dental neurology and dental hygiene, and numerous other dental subjects which are really a part of the great subjects themselves and are included in them. It is agreed that a great deal of time is wasted in the attempt to teach these subjects, and the shame of it all is that they are taught imperfectly. If we eliminate these subjects and revise the teaching of the dental subjects, then we will have the same amount of time for the dental subjects as we have now, only we have a better foundation on which to base this work, which at most could be accomplished in one year

### THE DAILY SCHEDULE

Saturday morning could be devoted to the orthodontia clinic and Saturday afternoon to the oral surgery, this branch including the extraction of teeth; Monday morning to be devoted to the crown and bridgework clinic; every other morning to be devoted to the practical prosthetic work, and every afternoon, Saturday excepted, to the teaching of practical operative dentistry (filling of teeth, etc.). The treatment of the orthodontia patients subsequent to the visit at the clinic Saturday morning could be carried on during the latter part of the afternoon of the operating days, because it requires in the vast majority of cases, but a few minutes work. The lecture on operative dentistry, crown and bridgework, prosthetic dentistry, and orthodontia could be given at the first morning exercise, which could be easily arranged at 8:30. Commence the practical work at 9:30 and continue it till 1 o'clock. Resume the afternoon studies at 2 and continue till 6 o'clock.

### CONCLUSIONS

Let us make up our minds to have more of the real, and less of the make-believe. Let us agree on the position we are assuming. If we are highly trained technicians, then reduce the hours of study by eliminating the make-believe part of our course. If we are highly trained scientific physicians of special diseases, then let us substitute the make-believe for the real; let us pursue the same course as do other specialists. Why hesitate to add our names to the honor roll, to follow the footsteps of the men who have already spent more time than I have outlined to get that medical education which seems an essential equipment for us to explore those regions which are now darkened by ignorance. The value of the medical education is already proved by the fact that most of the truly scientific discoveries are made by the men and women who have supplemented their dental knowledge with a medical education.

In conclusion let me add those words of Hunter which inspired Jenner to make one of the greatest discoveries in modern medicine, namely, vaccination: "Don't think; but try; be patient; be accurate."

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# HOW SHALL THE STOMATOLOGIST BE EDUCATED?*

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The question of medical education for the dentist has been under discussion for many years, and it will probably continue to be a subject of discussion for many years to come. At the first meeting of the International Association of Stomatology, held in Paris, August, 1907, that body settled to its own satisfaction these two points, first, that a complete medical education must be required of every dentist; second, that the word stomatology was defined as meaning diseases pertaining to the mouth. A stomatologist is one who treats diseases of the mouth. In consideration of these two settled principles, the following series of questions was formulated and discussion requested:

(a) "When is it best to begin the special studies; during the time of the general medical studies or immediately after these?"

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* Read in the Section on Stomatology of the American Medical Association, at the Sixty-first Annual Session, at St. Louis, June, 1910.

(b) "Advantage and disadvantage of each."
    (1) "Special studies begun during the general medical course."
    (2) "Special studies begun immediately after the general medical Course."
(c) "Length of time required for special studies of each system."
(d) "Details of special studies of each system."

As the words dentist and stomatologist, whether intentionally or not, are accepted in the statements as meaning the same, they will be used synonymously by the writer.

If the first settled statement be correct, that "A complete medical education must be required of every dentist," it demands that, in order to become a practitioner of dentistry or stomatology, a man must have a partial or full college education, depending on the medical school he enters, must attend a four year medical course, and according to some authorities he must serve as intern in some good general hospital for one and a half to two and a half years. This constitutes a "complete medical education" according to our leading medical authorities. It is very doubtful if such an education should be required of a dentist. But suppose only the four year course in a medical school be demanded; then the student in this country will have to spend three additional years in a dental school, unless he be allowed one year for his medical education. The best dental schools are advocating four years for the dental education; if this should take place then the student would have another year before he would be allowed to take his examination for a license to practice dentistry. According to this ruling a student must devote six or seven years to his professional studies after he leaves college to qualify for practice. By combining or overlapping the work of the two courses, the time spent can be reduced to six and occasionally five years when the two schools of medicine and dentistry are in the same university.

### BEGINNING SPECIAL STUDIES

With these remarks the writer will endeavor to answer (a) and will assume that the two schools belong to the same university. If a student wishes to obtain the two degrees in less than seven years, he so announces it to the deans of both schools and arrangements are made accordingly. At the institution with which I am connected, for the past fifteen years the majority of students combining the two courses have entered both dental and medical schools, and the first year have had the same instruction as those studying medicine alone, viz, the fundamental branches of medical science such as chemistry, anatomy, physiology and pathology, together with some dental technics. In the second year a similar plan is followed, with an increase of dental work, and if a student has the ability he can complete the first two years of both courses, though he will not be up to the highest standard of those taking single courses in either school. The third year is devoted exclusively to completing his dental course, and he receives the degree D.D.S. at the end of it.

(b) Observe now what happens. It is an important point in the discussion, constituting a great objection to complete medical training, under the present conditions, for a dentist.

(1) The last two years of the student's time are spent entirely in the medical school and are occupied chiefly in clinical work. He has not time for anything outside of this. He is thus drawn away from dentistry for at least two years. Not only does he suffer from failure to keep up with new dental methods, but his attention is riveted on the wide field of general medicine. All his surroundings are medical. Even in leisure and social hours he is surrounded by medical associates, joins medical societies, etc. By the time he graduates he finds his classmates taking intern service in leading hospitals, and he naturally desires to do the same. The student drops his dentistry with his D.D.S. and becomes a medical man. Case after case can be cited in which this has happened and but few can be mentioned during the last ten years in which a student who has obtained his dental and medical degrees in the institution spoken of, has practiced dentistry or has made a specialty of oral surgery.

Thirty-six years ago the M.D. and the D.D.S. degrees could be obtained from our leading schools in two years and a half. As the course of instruction in the medical and dental schools lengthened, naturally it required longer time to obtain each degree. Fifteen years ago, and even later, a graduate in dentistry from a reputable school was allowed one year on his medical course. But times have changed; a dental graduate to-day must spend four years in the medical school even if he be a graduate of the same institution, provided he has not combined his studies and taken his work as before mentioned, with that previous understanding.

With this experience, I cannot advocate the plan of taking up dentistry first and finishing with medicine, or of combining the two full courses in any way.

### AFTER MEDICAL COURSE

(2) The second question to be considered is "Shall the student begin immediately after the general medical course?" If a student has a college education and has taken a four-year-course in a first-class medical school, it is doubtful if he can afford the time or will have the inclination to spend two or three years in a dental school, as his M.D. will allow him to practice any specialty of medicine which includes the diseases of the mouth. However, from experience, the writer does not believe that this finished (?) product would be best equipped to undertake the work of the stomatologist.

(c) Length of time required for special studies of each system. It is difficult to answer these questions which are based on the assumption that "A complete medical education must be required of every dentist," as I am not in favor of this plan as settled by the A. S. I.

In my opinion it is almost useless to discuss this subject unless we can get the cooperation of medical and dental schools. The medical schools of this country have settled, for the present, on certain definite rules by which they give a complete medical education, and are not likely to change their methods for the few dental students who wish a complete medical education. With the exception of the fundamental branches of chemistry, anatomy, physiology, pathology and bacteriology the teaching of the two schools is quite different, and cannot be given by the same teachers.

### SUBJECTS MUST BE SEPARATED

In many conversations with teachers of medicine and dentistry, I find it generally considered that a student should not undertake these studies jointly. If he is to study medicine he must do so with all his faculties concentrated in that direction. If he is to study dentistry his mind during his study hours must be occupied solely with dentistry; otherwise he will be second to other students who devote their full time to one object.

If a man wishes to become a specialist in any branch of medicine, whether it be surgery, gynecology or ophthalmology, it is admitted by all medical teachers that that student must take the general course of instruction first. Then after graduation if he decides to become a specialist he can take special work in the branch he selects. In other words, he must be a doctor first. Now, if stomatology is to become a branch of medicine and require the M.D. degree, the student under existing conditions should enter the best medical college possible and take its full teaching. After graduation if he has not changed his mind, he must take up the special work of the dental profession, which will require at least two years, and for most students it should be three; for there is a very large amount of special work connected with dentistry or stomatology.

The plan of the A. S. I., proposing complete medical education of the stomatologist, can only be carried out by leaving the mechanical work of the dentist to persons trained especially for this work. For stomatology to become a specialty of medicine it would have to be given a place in the regular curriculum of medical schools as all the other recognized specialists are, instead of being left to a separate school of dentistry as at the present time; this would mean a complete revolution in dentistry. The training of the stomatologist would extend his field so much that he would be unable to give time to prosthetic or operative work. He would have full charge of medical and surgical cases affecting the mouth and jaws; not only diseases of the teeth and mouth itself, but constitutional diseases having manifestations in the mouth, such as syphilis and gout, also deformities such as harelip and cleft-palate, malignant growths of the jaws and tongue, injuries of the jaws, diseases of the maxillary sinus and associated pneumatic spaces.

Such work as the filling of teeth and dental prosthesis and the making of regulating appliances would be turned over under the stomatologist's direction, or subject to his prescription, to a man specially trained for each division of this work. His relation to this mechanical associate would be analogous to that of the oculist to the optician, the orthopedic surgeon to the maker of braces, the general practitioner to the druggist.

This idea is being carried out even at the present time to a certain extent by leading dentists proportionately as they extend their own fields. Many men have their extraction, prosthetic and regulating work, etc., done by associates under their direction, although in most cases the stomatologist still attends to the filling of teeth; but even this would be dropped if the idea of stomatology as a specialty of medicine were carried out completely.

### SUMMARY

My views summed up are as follows:

The primary object in the study of stomatology or any other profession is not the obtaining of this or that degree, but of gaining that special knowledge which will best equip the student for the practice of his profession. To illustrate this point, many examples may be cited of men of high standard in the dental profession who have the M.D. degree, and also those who have not. Both have done and are doing great work for the advancement of dentistry, not because they have this or that degree, but because they have knowledge and the ability to impart it to others and to use it in practice for the good of humanity.

The full medical course is not at present designed to educate students thoroughly in any specialty of medicine. It is impossible to give the student more than a speaking acquaintance with the specialties.

To properly train a student for the practice of stomatology, a special curriculum should be devised consisting of the essential features of both the medical and dental curricula, with the non-essential subjects of both eliminated.

*a.* To begin with, the student must have a good general education and should have considerable mechanical inclination. If he has not the latter he will never make a dentist or stomatologist.

*b.* A period of at least two years should be devoted to the fundamental branches of stomatology comprising chemistry, anatomy, physiology and bacteriology essentially the same as the first two years of a medical course, and in addition, instruction in dental technics and other matters leading to the next period.

*c.* A period of at least two years devoted entirely to the study of the mouth including all branches of clinical dentistry and oral surgery. The latter would comprise all diseases relating to the teeth, jaws and associated parts. In this course there would be besides the lectures on oral surgery, ward classes and clinics in a general hospital. At the end of his time the student would receive a degree denominating qualifications to practice stomatology.

*d.* If the student desires to become an oral surgeon he should then have at least one year as resident stomatologist in a large general hospital, affording practical experience not only in operative and prosthetic dentistry, but also in treatment in diseases of the mouth and jaws, such as tumors, necrosis caused by syphilis, phosphorus and tuberculosis, cleft palate and hairlip, fractures, diseases of the maxillary sinuses and associated pneumatic spaces.

With such a course as has been outlined the graduate in stomatology would be fully qualified to practice his specialty and would have sufficient knowledge of the fundamental principles of medicine to recognize and discuss intelligently with medical men the relation of diseases of the oral cavity to general pathological conditions and *vice versa.* This plan as regards oral surgical work has been carried out to a large extent for the past nine years by the combined dental schools of Philadelphia in connection with the Philadelphia General Hospital. This hospital has an oral surgical staff consisting of visiting surgeons from the various dental schools and two graduates in dentistry as internes. A clinic is given once a week by a visiting member of the staff, cases of interest to stomatologists are shown and operations on the face and jaws are performed. The clinic is open to graduates and students of medicine and dentistry, many of whom come from all parts of the world, and has the largest attendance of any clinic in Philadelphia. The internes serve from twelve to eighteen months each and have full charge of all cases in which the face, mouth and jaws are involved. They gain experience not only in their specialty, but by coming daily in contact with medical men and studying general pathologic conditions. their views are broadened and they become ideal members of the profession of stomatology.

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## ABSTRACT OF DISCUSSION

### ON PAPERS OF DRS. TALBOT, POWER AND CRYER

**Dr. J. N. Farrar**, New York: A complete medical college course of instruction is necessary to success in any branch of medicine. The time needed for such education is the incubating period preparatory to any spcialty. No specialty should be attempted without a complete course of medical instruction. Especially is this true in stomatology, if the deeper physiologic lines of the science and art of highest orthodontia are to be well understood.

**Dr. Arthur R. Dray**, Philadelphia: There was a time when the medical man was required to gather herbs, etc., and to make his own medicines. To-day, with few exceptions, he has neither time nor qualification to do the work of the pharmacist and druggist. So also to-day we find the dentist, compelled by the many calls on his time, to give much of his work to the mechanic. To-morrow the dentist will cease altogether to splash about with plaster of Paris and flasks, to burn his fingers pouring zinc dies or to smash his thumbs swaging gold plates in an effort to satisfy the patients' needs. The strictly mechanical man, not needing any medical knowledge whatever, will satisfy all these wants, leaving the dentist free to treat diseases and conditions. What does this mean? Why, that the dental student of to-day who spends three or five hours out of every ten in the laboratory, could put this time at the disposal of medical studies and operative work. In the best dental colleges of the United States to-day ten to fifteen hours or more a week of the schedule periods of the student's roster are spent in the mechanical laboratory learning a trade—a trade that could be better followed by a man devoting his whole time to it, who never need see a patient or operating chair. If in the medical curriculum of any reputable medical college the strictly dental specialties are inserted in place of the strictly medical specialties we have a good working idea of the studies which the dental student would have to take to qualify himself as a dental specialist of medicine. By strictly medical subjects I mean such subjects as orthopedics, gynecology, ophthalmology, obstetrics, mental diseases, medical jurisprudence, pediatrics, etc. The dental subjects should be taught in conjunction with the medical course, being focused on with special effort as the final years are reached.

Four years is not too long a period to spend in preparation for a lifelong work. Five or more years would be a better term. By suggesting the curtailment of the time spent on the strictly medical subjects I do not for one moment wish to imply that they should be altogether slighted, for my belief is and always will be that dentistry is a specialty of medicine and should not be followed until a medical qualification has been received. Let our dental schools of to-day give a special course if they wish, granting a special license and a special degree in mechanical dentistry, this course confining itself entirely to mechanics, lasting but two years; but let them not make an effort to work against impossibilities by teaching medicine and mechanics to the same student in less time than it takes to get a medical degree.

**Dr. Eugene H. Smith**, Boston, Dean of Harvard University Dental School: To my mind there are but two practical methods of educating young men for dentistry. One method is so to shape their education from the beginning that it will lead directly to the specialty of dentistry; the other is first to give them a general medical education leading to the degree in medicine, and to follow this with two years of special training. In either case the preliminary training should not be less than that obtained in a four years' graded high school, which fits students to pass the entrance requirements to our leading colleges.

By the first method, if we are training students for a dental degree alone, the first year should be devoted to the fundamentals of medicine, namely: histology, physiology, bacteriology, and physiologic and dental chemistry. General chemistry should be required for entrance. The first-year medical studies should be planned to give special and advanced training on subjects that especially concern the dentist. The second and third years should be spent in a dental hospital. The clinical work should be carried on in conjunction with lectures, and he students should be taught to make application of the medical work of their first year to the cases they treat in the hospital. I think it a mistake for a dental student to have training in special dental work during his first year of study.

The second method of training a student in dentistry is to enter him as a regular student in a first-class medical school and have him obtain the M.D. degree, after which he should enter on a two years' course in a dental school leading to a dental degree.

Modern dentistry has become so extensive a profession in itself, and modern medicine so vastly different from the medicine of a few years ago, that it is a serious question in my mind whether a student can be properly educated in medicine and in dentistry in less than six full years. If I could be sure that the combined medical and dental training that I have outlined would produce skilled men as well as scientific men I should be strongly in favor of such training. I think, however, that there should be two degrees indicating this training, rather than to have dentistry practiced under the one degree of medicine. We must never lose sight of the fact that in a specialty in which so much technical skill is required it will always be necessary so to shape our courses as to produce skilled practitioners, even though we may do it at an expense of scientific men, using the term "scientific" in its broad sense.

**Dr. M. H. Fletcher**, Cincinnati: I am in thorough accord with the idea that many dentists, if not all, should have a complete medical education in addition to their mechanical training, since it fits one most satisfactorily for the practice of stomatology. In fact, I do not see how one can be fitted for the practice of stomatology without a full medical education, any more than one can be prepared as an oculist or throat and nose specialist without medical training. No dental college of which I have any knowledge so fits a student, since the dental courses in anatomy, physiology and pathology are decidedely inadequate. The average dental operation can be well performed without much knowledge of the laws of health and disease of the tissues, but the successful treatment of diseased tissues in the mouth and their systemic effects requires a knowledge such as can be attained only by taking a complete course in medicine and surgery.

My own judgment is that we should have stomatologists and dentists; let the dentists stop where they do now, but a student in stomatology should first take his work in the mechanics of dentistry and follow this by special medical work, the two overlapping in the middle of the course, for instance the mechanical overlapping the medical in the later part of the second year or the beginning of the third, ending the course with the medical work in the fourth or fifth year according to the length of the course. In a five-year course (which I think is short enough) the first two years should be devoted to dentistry, the medical studies beginning in the third year while the dental work is being finished. The last two years should be devoted to a medical course and hospital work such as is now required of medical graduates in the average American medical college with clinics and practice in higher dentistry, oral surgery and treatment of the diseases of the mouth.

The difficulty about the practical working of this or any plan requiring dentists to take a full medical course is that, if one spends the time and energy to take a medical course, he is almost sure to practice medicine and not dentistry nor stomatology, for the reason that the returns in medicine, both intellectual and financial, are greater than they are in dentistry or stomatology.

To be a perfectly fitted stomatologist requires greater versatility and training than does either dentistry or medicine alone, for a stomatologist must be first a skilled mechanic and artist, then a well-posted physician and surgeon. I believe that neither the fees nor the breadth of the scope in this specialty are great enough to attract many to it who have the capacity to do both well, and I imagine that for some time in the future, as in the past, we shall have many dentists and very few stomatologists. I believe that there should be a special degree conferred in certain colleges to distinguish a stomatologist from the average dentist.

**Dr. Stewart L. McCurdy**, Pittsburg, Pa.: As a practitioner of general surgery as well as surgical stomatology, I have observed first, the lack of knowledge on the part of the dentist of the general medical branches, and second, the lack of knowledge on the part of the medical practitioner of oral diseases.

The remedy, it appears to me, would be plain, i. e., more medicine for the stomatologist (dentist) and at least some oral pathology and surgery for the medical student. The physician knows practically nothing of the pathology of the mouth. That the future will have in store for students a four-year course for dentists and a five-year course for medicine is a probability. When this does occur the method of instruction will, no doubt, be for students in both medicine and dentistry, to take the same course for two years. This will leave two years for the stomatologist to complete his course and three years for the student who desires to specialize in medicine to complete his course.

**Dr. J. P. Gray**, Nashville, Tenn., Secretary of the Department of Dentistry, Vanderbilt University: I am not quite sure that I could recommend a full medical course for dental students. I fear that the length of time would prevent a student from first taking a medical course and a dental, and that the majority of students applying for a dental course would not go further after taking the medical. Most men would not have the means to do this extra amount of work. I would require the dental student to take the first two years of the fundamental branches of medicine with the medical students, being required to do all the laboratory work required of the medical student; then I think it would be better—if it could be so arranged with the medical schools—to eliminate some parts of the medical course, and in addition to substitute some studies of the dental course. Some of the work in the dental schools might be eliminated, but most of it should be given in connection with the medical course. There is no reason why gynecology, obstetrics and other medical branches could not be taken out of the medical course for the dental student and yet a degree be given commensurate with the work done by the latter. The dental branches require considerable amount of technic—more than is required in ophthalmology and otology—and a student should have some of this technic in his junior and senior years. By the elimination of the extra branches in medicine and the addition of the dental it seems that a sufficient amount of technic and dental instruction could be imparted, and a student would still have a course equal to that of some other branches of medicine. If we are to give a purely medical course, I should make the students take up the study of the fundamental branches the first two years with the medical students; then I should give the dental course with a few of the medical studies, leaving the technic for the third and fourth year of the school, and add one year more to the completion, making five years.

I have not found in my experience of twenty years as a teacher that medical men coming to us—and we have had quite a number—make first-class operators. It may be that we have received those who have been failures in medicine. I can recall but one man who made a good student and who really was highly benefited by having studied medicine. I think that the medical schools are making a mistake in not allowing some credit to students who have attended dental schools. I know the courses given here in the fundamental branches, such as anatomy, physiology, histology, pathology, materia medica and therapeutics, should give a man at least one year off, if not one and one-half years in the medical school. If they were not satisfied with them after an examination, they might then dismiss the student. The medical colleges could find out the dental schools worthy of recognition. I do not think the course in some dental schools worthy of recognition by the medical schools.

**Dr. N. P. Colwell**, Chicago, Secretary of the Council on Medical Education: No man should pose as a specialist in the treatment of any class of human ailments, whether diseases of the eye, of the stomach, of the nervous system, or of the mouth, unless he has first had a full medical training. Whether every dentist should first have a complete medical training or not is a question which may need considerable discussion. It may certainly be said, however, that there should be some way to distinguish between the dentist who has had a complete medical training and the one who has not. Certain it is that the former is in position to recognize more clearly causes of certain diseases of the teeth and gums than the latter, and, therefore, is enabled to treat such conditions more intelligently.

Suppose, therefore, that all dentists shall first have a complete medical course, followed by the course in dentistry. This would mean, first, that all dentists would have a better preliminary education which would include a training in physics, chemistry and biology; second, they would have more thorough courses in the fundamental medical sciences of anatomy, physiology and the like, which are now only briefly touched on in the usual course in dentistry; third, they would all have a knowledge of the etiology, symptoms, prognosis and treatment of the more common diseases not now possessed by most dentists; fourth, it would mean a higher order of intelligence of those who are to practice dentistry, and last but not least, it would mean more intelligent treatment of patients, more permanent fillings in tooth cavities, more prompt treatment of many diseases of the gums and the prevention of many such diseases and of their sequelæ, such as diseases of the antrum of Highmore, of the frontal and accessory sinuses and the like. Furthermore, if all dentists were so educated there would doubtless be a more effective movement to educate the public to more proper care for the teeth.

The chief objection would be the more prolonged course of study required, but if the dental profession, like medicine, is already overcrowded, then the future should possibly develop fewer but better dentists even as in medicine the demand is for fewer but better doctors, or, as President Faunce puts it, "fewer doctors but more doctor." After the completion of the four-year medical course it would not require an additional three years to complete the course in dentistry, since many of the subjects would already have been completed in the medical course and much more thoroughly studied than in the usual course of dentistry. Anatomy, physiology, chemistry, pathology and possibly over half of the dental course would have been completed. The time for the two courses might be further shortened by allowing the election of certain special courses in dental anatomy, dental physiology, dental pathology, dental surgery and the like, thereby leaving for a fifth year the strictly dental subjects and for clinical courses in the special study of diseases of the mouth. Since many systemic diseases have some of their first symptoms appear in the mouth which would be discovered by the routine examination of the gums and teeth, it is very important that the subject broached in Dr. Talbot's very able paper be given the most careful consideration.

**Dr. Arthur D. Bevan**, Chicago, Chairman of the Council on Medical Education: The problem of the stomatologist's education is certainly a difficult one to solve. It seemed to me that if five years could be devoted to the study of dentistry, the student might put in the first two years in the scientific laboratory branches with the regular medical student, and that he might take one year in general clinical medicine and surgery and two years limited to oral surgery and dentistry. With such a training, I should think that he should receive the same sort of a degree and be recognized as a doctor of medicine limiting his work to stomatology and with just as much right as the men who are limiting their work to diseases of the eye, ear, nose or throat. It would seem to me that such a course would give him a broad training for his work.

**Dr. John M. Dodson**, Chicago, Dean of the Medical Courses, University of Chicago: True stomatology bears the same relation to general medicine and surgery that is borne by ophthalmology, laryngology, gynecology or any of the specialties which have to do with particular organs, or portions of the body. Doubtless dentistry, in its present narrow or restricted form as a mechanical art, has grown up independently of medicine because the purely mechanical side of that vocation—the filling of teeth, the manufacture of artificial substitutes for the teeth, etc.—occupies so large a part of the time of the dental practice.

It seems clear to me, however, that the disease of the mouth and teeth are so intimately related to pathologic states in other portions of the body that they can be intelligently and successfully treated only by one who has been thoroughly educated in medicine. I believe, therefore, that the stomatologist of the future will be, first, a well-educated man, who has secured as the very minimum of preparation for his professional study, the equivalent of four years in high school, plus two years in a literary or scientific college; and, second, an educated physician, which means, at the present time, four years of training in a well-equipped medical school, this to be supplemented by at least a year of training, as an intern, in a general hospital or its equivalent in general practice outside a hospital and, third, a specialist, qualified in the treatment of diseases of the mouth and teeth by at least two sessions (eighteen months) of attendance and training in the dental department of a university. A similar course of training for the other special branches of medicine is now provided in at least one of the university medical schools.

Possibly the individual then adequately prepared for the practice of stomatology will find it of advantage to relegate a considerable portion of the purely mechanical part of his practice, *e. g.*, the manufacture of artificial dentures, of crown and bridges, of gold and porcelain inlays, to artisans who will devote themselves wholly to such work. It is idle to contend that because the fundamental medical sciences (anatomy, physiology, etc.) are included in the curriculum of the dental school, the dental student receives an education in these branches at all comparable to that acquired by the medical student. The medical school was forced to abandon the practice of granting to the dental graduate, advanced standing in these subjects because his preparation in them was found to be wholly inadequate for the intelligent study of clinical medicine. When dentistry or stomatology comes to be generally taught in a thorough and effective manner, then and then only will it be entitled to rank among the recognized special branches of scientific medicine. There are to-day a number of stomatologists of this type—men who are graduates in medicine as well as in dentistry.

**Dr. Frederick B. Noyes**, Chicago: The development of the last ten years has divided medical education into two periods of two years each, the first devoted to the study of the medical sciences, the last to the application of them to the practice of medicine. The stomatologist requires the same training in the medical sciences, but the second period should be given to their application in the treatment of diseases of the mouth. That this will be about the line of progress in the future seems certain to me. It is absurd to suppose that the stomatologist should have the same training in gynecology, obstetrics, amputations, abdominal surgery, or histology, pathology, materia medica, etc., as the medical men.

After fifteen years of teaching in the dental schools, I feel that the greatest fault to be found, at least with the better schools, is the quality of the elementary work, and that this spoils the quality of all the professional studies. This condition is not confined to the theoretical or scientific subjects, but is true also of the technical and mechanical departments. There has been too much crowding for the accomplishment of a large amount of dummy dental operations requiring the construction of a specimen of every new type of bridge or denture, and especially every pet device of the instructor and too little attention to the acquirement of skill. Judged from the standpoint of the fine mechanic, the average dentist is not skilful. There has been too much tendency to despise the mechanical side of dentistry. I believe that at the present time the dental schools fail to make a reasonable percentage of their graduates mechanically skilful, and that those who excel in skill do so because of a training acquired outside of the dental schools.

It seems very desirable that the stomatologist's course should be so planned that it could be begun immediately after high-school graduation, but so as to induce as many men as possible to take more collegiate work before beginning their professional studies. This would be accomplished if two years of collegiate work before the first two years of professional work would give the B.A. or the B.S. degree. But students entering professional work direct would receive only the professional degree. The decision between stomatology and medicine should be made at the beginning of the professional work, or, in the former course general mechanical training should be given, with the fundamental medical science. This should be in the form of applied mechanics of the finest order and designed for the acquirement of skill in the handling of tools. In the last two years the technical training should be in the application of the skill acquired to the performance of dental operations and the pursuit of the medical sciences into the field of stomatology. Finally let me repeat that at the present time failure to do thorough work in the elementary subject, both scientific and practical, is the greatest fault. Three years is too short a time to do what is undertaken in the dental school and, more important than this, dental students are not required to work as hard as students in other departments of the university. The work is arranged for the poorest students. The best students find it is easy to do what is required and have not sufficient incentive to do any more.

**Dr. George V. I. Brown**, Milwaukee, Wis., Professor of Oral Surgery and Oral Pathology in the State University of Iowa: The ideal medical course, one comprehending premedical education leading to a degree in arts or science, then four years of medicine, at least a year of hospital service, and then approximately two years of post-graduate preparation for special or other practice, and at best a few additional years before an independent practice can be acquired, is no longer ideal when one stops to realize the hardships it entails on the less fortunate though often worthy students and the crippling of the best usefulness of many other individuals by destroying the first enthusiasm of youth and postponing the day when they can seek independence, in this day of intensely active business and professional pressure, until they have arrived at a mature age, when such knowledge comes slowly, or at the expense of much hardship if at all.

All this does not imply that these courses should be shortened, for on the contrary they are essentially necessary, but it does mean that there must be reconstruction of the educational system from the primary school up, in order that more advanced or at least better selected work may be done before entrance to college. The gymnasium in Europe accomplishes this. Why not our high schools?

The first year's course as now arranged for dental students in university and the best other schools requires attendance on nearly all of the same classes as the medical students, and in addition thereto a considerable number of hours of special laboratory work. The result is, that students of dentistry cannot as a rule do the thorough work required of students of medicine, and to this extent at least, the educational result is defective; therefore these students are not entitled to full medical credit for this portion of the work. Slight rearrangement of the curriculum by having one freshman branch carried forward to the sophomore year and an equivalent reduction in the number of laboratory hours for operative or prosthetic technics, would enable them to fully qualify in all medical branches taken at this time and yet have the advantage of early manual training. Continuance of this system from year to year would create practically no confusion and in the fourth year which as now arranged in medical colleges is largely devoted to clinical work, the branches carried forward could be completed and dental operatory work begun. An additional year of clinical, surgical, medical and dental operatory work would in five years give better preparation than could be accomplished even in six years if either medicine or dentistry alone were completed and the other taken as a post-graduate course.

The plan of work outlined could, if desired, be inaugurated at the beginning of any term in any high-grade medical college without serious disturbance of courses as now arranged, and is sufficiently elastic to keep pace with any changes in the curriculum that advancing conditions might make necessary without creating disharmony in the schools directly interested.

**Dr. Fred C. Zapffe**, Chicago, Secretary of the Association of American Medical Colleges: I have the highest regard for dentistry, and I would not for a moment have it thought that I disparage the tremendous advances that have been made in that specialty. But dentistry has arrived at the parting of the ways. It must establish itself either as a profession or a trade, an art or a science. It has always seemed to me that dentistry, to be regarded as a profession, should ally itself with the professions. As it is to-day, dentistry is neither a profession nor a trade. It is practicaly in the same class as optometry. Dentistry has extended beyond its original scope—the treatment of diseases of the teeth; it now comprises the treatment of all the diseases, injuries and malformations of the mouth. It is really on a par with ophthalmology, otology, laryngology, etc. And yet, the ophthalmologist, before he can be regarded as proficient in his specialty, must have a medical foundation and from three to five years of special study. Medical educators are keenly alive to the necessity of devoting more time in the college course to general medical education, and less to the so-called specialties in medicine. The specialists insist on thorough preparation in the fundamental and subsequent study in the chosen specialty, because a thorough knowledge of the fundamentals in medicine is a prerequisite to competent and efficient specialization. But note that there must be the preliminary training in the fundamentals. At least half of the course in dentistry to-day is given over to the study of fundamentals, which are the same as those in medicine. Dentistry must properly be regarded as a part of medicine. It is based on a proper comprehension and understanding of the causes and the development of diseases of the mouth and teeth. It is no longer merely a matter of knowing how to prepare a cavity and to fill it with suitable material, or of knowing how to construct an artificial denture. That is the mechanics of dentistry and is on a par with the work of the optician.

The dentist must know why the diseased condition is present; what it means, and how it can best be treated. He must have more than finger training; he must know pathology. To know pathology, he must know anatomy, physiology and chemistry.

He can get such training in the medical school better than anywhere else. Why not, then, elevate the practice of dentistry to the distinctly professional plane? Why not establish it as representing special study? Why not make the dentist in every way a better man professionally and educationally than he is to-day? Let him get his special training after he is well grounded in the fundamentals. The specialty of dentistry will then occupy the same plane as ophthalmology and the dentist will be a graduate in medicine, with special training in the treatment of diseases of the mouth—in other words, a stomatologist.

Just how much special training he should have the stomatologist must determine. Schools of stomatology and stomatologic societies will take care of that. An education in stomatology will not be any more costly than an education in dentistry, and the graduate from such a course will be better equipped, better prepared to practice his specialty and regarded as a professional man and not as a dentist.

Dr. H. A. Potts, Chicago: At the meeting of the National Association of Stomatology, held in Paris, in 1907, it was settled that a complete medical education must be required of every dentist. Granting this, the problem of securing it confronts us.

The dental school which requires a medical degree for entrance will go begging for students, and many who do enter will be those who have made a failure in medicine. On the other hand, the best-equipped dentist will be the one who, after receiving his dental degree, continues his medical studies, finally receiving his medical degree, followed by an internship in the free dental dispensary, much the same as is now required by some medical schools.

One solution of the problem would be, first, to have the dental colleges and medical colleges under university control, with the same requirements for admission to each; second, with the dental college and medical college, belonging to the same university, be situated near each other; third, that the departments of dental histology, dental physiology and dental pathology be established in the medical school; fourth, that the medical students and dental students take the same courses for the first two years; fifth, that the dental students then pursue their clinical dentistry and the medical students pursue their study to completion.

Thus the medical student will have gained more knowledge of dental conditions as they are related to medicine, and the dental student will have acquired some knowledge of medicine, which is sadly lacking under the present régime.

The dental student, and many a graduate as well, looks on a patient with some pathologic condition of the mouth as being "in his line" or "out of his line" of treatment. When he has filled all the carious cavities, he thinks his work is done. He should be able to group the whole pathologic picture and know the relation of conditions in the mouth to other conditions of the body which require medical treatment, in order that he may intelligently call in counsel or refer the patient to some one capable of caring for him. In other words, he must be able at least to make a probable diagnosis of the case in general, just as in medicine, it is not enough that a physician make a diagnosis of pulmonary tuberculosis; he must be able to say how far advanced it is; he must know the condition of the digestive and eliminative organs, what complications exist, whether the patient is a menace to the health of others, or not. Tersely, he must be able to make a complete diagnosis.

The dentist should have courses in physical diagnosis, both clinical and laboratory. His experience in handling patients in the free dispensary of the medical school will be of inestimable value to him in handling his own dental patients. Only by actual work in inspection, palpation, percussion and auscultation on patients suffering from various diseases will he be able to grasp the whole picture and become familiar with the living pathology of the mouth, and see its connection with general pathologic conditions. If he fails in this, his medical degree and the time taken to attain it have been for naught.

Dr. Eugene S. Talbot, Chicago: I am surprised and pleased at the unity of opinion expressed by the able teachers coming from different parts of the country and occupying such varied positions in the teaching world both in medicine and dentistry. On one point all agree and that is all dentists should be stomatologists practicing under a medical degree. All seem to agree that the medical course should be so arranged that the fundamentals of medicine should be the foundation on which to build all specialties. First obtain the medical degree and the specialties studied afterward. This will place all specialties on an equal footing. This method seems reasonable and easy to accomplish.

Like the medical schools in this country, there are more dental schools than can exist. There is no need of more than one school in a state. Let the weaker schools unite with the stronger or disband. About fifty-four medical schools have either given up or joined stronger and better equipped schools in the past five years. Twenty or twenty-five dental schools can go out of existence and never be missed. Let twenty-five of the best schools become actual departments of universities and an ideal specialty can thereby be developed.

# INTERMITTENT CLOSING OF RETINAL ARTERIES *

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Disturbances of the retinal circulation causing loss of vision are exceedingly complex, and are still imperfectly understood. There are unquestionably some conditions which are not due to embolism or thrombosis. Temporary obscurations are not infrequent clinical manifestations of a disturbed retinal circulation, and they often precede permanent, partial or complete blindness.

These attacks of temporary obscuration were formerly attributed to embolism; the plug supposedly at first obstructed the main trunk of the retinal artery, and later lodged in a branch (Graefe, Mauthner, Schnabel and Sachs). This theory was later abandoned, because of the number of recurring attacks without any evidence of the subsequent fate of the embolus (Loring, Wagenmann).

According to Ole Bull,[1] Zehender was the first to draw attention to vessel cramp as a cause for sudden amblyopia and amaurosis. Benson[2] has reported on a case of intermittent obscurations in which he examined the patient during an attack and found the inferior temporal artery to be bloodless. This condition promptly disappeared, and later the ophthalmoscopic examination gave almost negative results. Dr. Benson thought that spasm probably determined the attacks. Wagenmann[3] examined a patient with recurring obscurations

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* Read in the Section on Ophthalmology of the American Medical Association, at the Sixty-first Annual Session, held at St. Louis, June, 1910.

[1] Krankh. d. Retinalgefässe, Leipsic, 1903.

[2] Trans. Eighth Internat. Ophth. Cong., Edinburgh, 1894.

[3] Arch. f. Ophth (Graefe), 1897, xliv, 220.

during an attack and found both arteries and veins contracted. Iridectomy checked the process for seven months; then an attack with permanent blindness supervened. This author believes that the attacks can only be explained by vascular spasm, the local cause being arteriosclerosis. Galezowski has directed attention to the positive existence of vascular spasm of the retinal arteries and its relation to arterial thrombosis. Ole Bull[1] believes that angioneurosis may be as frequent a cause for circulatory disturbances in the retinal vessels as embolism or thrombosis, and that all cases of obscurations are due to cramp, especially as spasm is likely to occur when pathologic vessel changes are present and often leads to a thrombus formation. Osler[4] states that in certain stages of arteriosclerosis arteries are very prone to spasm.

Russell,[5] in a paper on "Intermittent Closing of Cerebral Arteries," suggests the term closing to express this vessel action and describes loss of brain power from intermittent closing of cerebral arteries (temporary paralysis) as it takes part in the production of permanent paralysis. This closing is caused by vessel changes effected by means of the muscular coat; it is partial or complete, producing impairment or complete suspension of function.

As examples of local closing there is the local syncope of Raynaud's disease. Raynaud[6] states that he observed a cramp of the retinal vessels in the sickness which bears his name, but Panas,[7] at Raynaud's request, examined some of his patients and failed to find any difference in the caliber of the vessels during the access of asphyxia. The contraction of retinal vessels in this condition has, however, been found by a number of other observers.

In this group of vasomotor phenomena belong contractions of the retinal artery in epilepsy, malaria, whooping cough and migraine.

As examples of local closing in diseased retinal arteries I wish briefly to report the following cases:

CASE 1.—J. B., male, aged 66, was first seen on Aug. 18, 1909, with acute glaucoma in both eyes. The vision in the right eye was 5/200; in the left m. h. Tension was very much increased in both eyes. The man had suffered from prodromal glaucomatous attacks in the right eye for one year and a gradual contraction of the nasal field in the left eye.

*Treatment.*—He was prepared for operation by eserin, leeches and cathartics. The tension was reduced, and vision in the right eye was 20/70; field normal. In the left it equalled 20/200; the field was contracted to an oval in the temporal half of the field. Iridectomy was performed on both eyes under ether without accident.

*Result.*—At the first dressing the patient claimed that he could not see with his left eye. The condition remained unchanged though the tension in both eyes was normal and the healing smooth. Ophthalmoscopic examination of the left eye revealed an atrophic disc, no cup, no hemorrhage, but the retinal artery was very narrow, with variations in caliber and white sheaths. Vision was reduced to faintest light preception. The right eye sees 20/30; field is slightly contracted nasally and below. The disc is pale; no cup; distinct endarteritis. The patient showed organic cardiac lesions, general arteriosclerosis and senile paraplegia.

In this case the sight in the left eye was lost after an operation through no fault of the operation or treatment. A plausible explanation seems to me to be that the already narrowed blood vessel in the left eye through some nervous or unknown influence became closed for a sufficient length of time to cause permanent loss of sight. It is another example of the interdependence of glaucoma and arteriosclerosis.

CASE 2.—R. B., aged 53, was first seen on Jan. 29, 1910. Eighteen months ago the vision in the left eye failed suddenly, then improved somewhat, though at present there is only light perception in temporal field. Recently, after severe right hemicrania for four weeks sudden loss of sight occurred in the right eye; after one and one-half hours vision returned.

*Examination.*—Right eye: pupil was normal; vision 20/100; field normal; retina edematous. The veins were full; the arteries distinctly narrowed. Left eye: disc white; veins tortuous; arteries very narrow. Urine was normal. There were chronic cardiac hypertrophy (valvular lesions), and arteriosclerosis. Blood pressure was $\frac{\text{V. } 265}{\text{H. } 260}$; pulse $\frac{\text{V. } 76}{\text{H. } 64}$; apex beat 5½ inches to left of middle line in fifth space. Sounds at apex were of equal intensity.

*Subsequent History.*—The patient has been taking nitroglycerin and iodid of potassium. On March 9, 1910, right vision was 20/50; disc normal; veins tortuous, irregular outline; indented; arteries tortuous; often abruptly narrow and nearly invisible; no perivasculitis; one small hemorrhage. Left eye: vision m. h.; disc atrophic; arteries very contracted, often invisible.

Without any periods of obscuration in a patient with general and retinal arteriosclerosis the vision was lost suddenly in the left eye; the condition has remained unchanged. One and one-half years later the vision in the right eye was lost for one hour and a half, and was then regained.

CASE 3.—R. L., aged 32, for many years had periods of obscuration occupying either lower or upper half of field, varying in either eye; only one eye at a time was affected. These attacks would last five minutes. The patient suffers often from headache, nausea and vomiting.

Aug. 20, 1909: Present attack began six weeks ago and loss of vision has persisted. Right eye: lower half of field is defective. Superior retinal artery is very thin, with a faint red line; it resembles a wax cast. At a short distance from the disc the caliber of the artery becomes normal.

Nov. 2, 1909: The patient has had several attacks of temporary obscuration in left eye since right eye was affected. There is apparently no cause for these attacks. The upper half of the field is always involved. The inferior retinal artery is full, rounded, hard; no indentation of veins.

In this patient after periods of obscurations the sight in the lower half of the field in one eye was permanently lost, and there have since been some attacks in the upper half of the field in the remaining eye.

CASE 4.—C. A. L., aged 60, has general arteriosclerosis, and was first seen on Sept. 21, 1909. Recently there was sudden loss of vision in the right eye, which gradually improved. Now vision is 10/200; retina edematous; marked constriction of arteries; veins full; relative defect in nasal field.

October 27: R. 20/40. Five days later, after mental excitement, there was another attack of blindness principally in right nasal field which passed off.

Jan. 5, 1910: R. 20/30. Inferior temporal artery is distinctly obliterated at one point. Both superior and inferior temporal arteries show caliber variations.

The sight was suddenly lost in one eye and then gradually regained. Subsequently after an emotional outbreak vision was again temporarily obscured in the same eye.

CASE 5.—M. S., aged 63, had had no previous obscurations. There was marked general arteriosclerosis.

October 23: After headache and vomiting, was totally blind on awakening. There was no history of having taken any drugs or wood alcohol. Pupils were fully dilated; there was retinal edema. Arteries were small, veins were changed; no pulsation on pressure; no light perception.

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[4] Allbutt's System, Edition 2, vi, 627.
[5] Brit. Med. Jour., Oct. 16, 1909.
[6] Quoted from Dufour, Encyclop. Française d'Ophthal., vi, 117.
[7] Traité des maladies des yeux, i, 619.

October 26: General return of pupillary reaction, light perception in temporal field. Arteries remain very small.

October 30: R. 4/200; L. 2/200; retinal edema; optic discs pale; arteries thin and outlined in white. Gradual deterioration.

December 16: R. 2/200; L. 1/200. Field showed concentric contraction.

January 1: Pupils wide; irresponsive; R. m. h. in temporal field; L. = O.; arteries invisible; optic disc atrophic.

March 1: Patient totally blind; arteries invisible for short distance from disc.

November 1: R. glaucoma T. +.

In this case both eyes were simultaneously affected. There was at first some return of vision, which, however, was completely lost after three months. The ophthalmoscope showed at first retinal edema and narrowed arteries; later optic atrophy with obliterated and sclerosed vessels.

Intermittent closing of healthy retinal arteries may occur without any lasting effect on vision. In diseased retinal vessels this phenomenon is of grave significance, as the vessel may remain obstructed or lead to thrombosis. In subjects with retinal arteriosclerosis, especially if obscurations have been present, a rigid general treatment of the arteriosclerosis should be given, mainly with a view of preventing any of the causes which seem to contribute to closing of the arteries.

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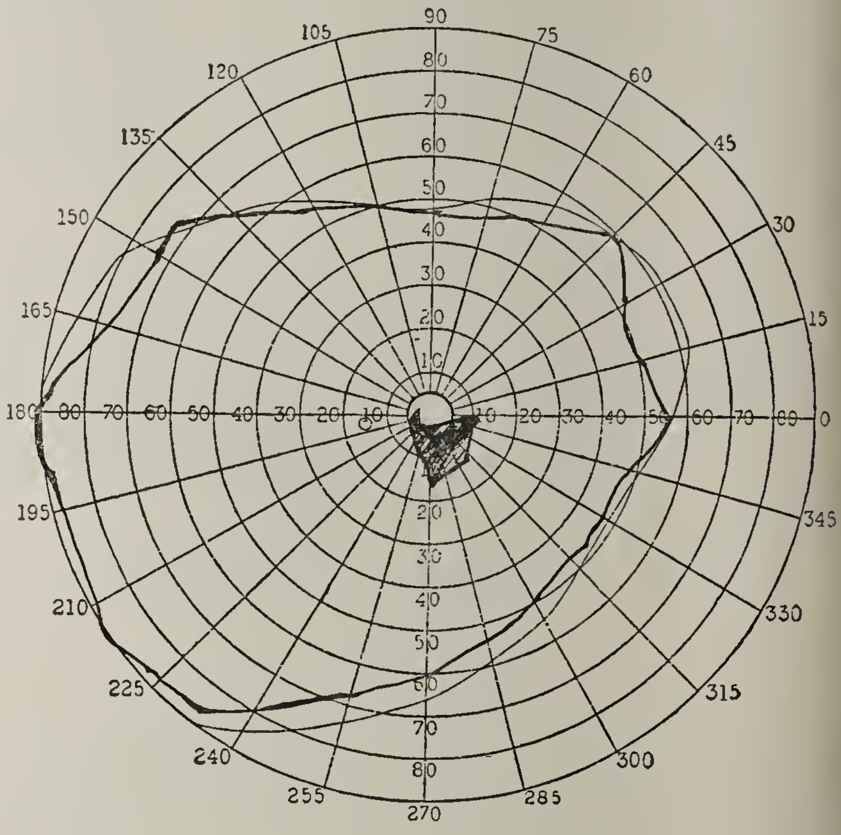
## ABSTRACT OF DISCUSSION

Dr. W. C. Posey, Philadelphia: In a paper entitled "Transient Monocular Blindness," which I read before the College of Physicians in 1902, I reported a series of cases similar to those described by Dr. Knapp. Dr. Knapp states that Ole Bull gives credit to Zehender for being the first to draw attention to vessel cramp as a cause for sudden amblyopia and amaurosis, but fails to mention the date at which this observation was made. As far as I could judge from the study of the literature, Loring, in 1874, was the first to make any extensive communication on the subject of transient attacks of blindness, although Alfred Graefe, Hedaeus, Rothmond, Secundi, and others had reported isolated cases, where this symptom had occurred in connection with excessive reduction in the diameter of the retinal arteries. Loring based his study on the observation of five cases, in all of which symptoms previously ascribed to embolism of the central artery of the retina were present. This origin of the blindness, however, he disputed and concluded that, in the train of symptoms classed under the title of embolism, too much significance had been given to the stoppage of the circulation by the lodgment of a plug formed at a distance from the eye, while not enough stress had been laid on the mechanical actions regulating the supply of the blood within the eye, as well as on the condition of the walls of the vessels themselves and their contents.

I pointed out in my paper that the prognosis in these cases should always be guarded, and cited a case in which a probable thrombosis of the central artery of the retina occurred in an eye which had been the seat of some fifteen to twenty attacks of transient blindness extending over a period of eighteen months.

An observation of very great interest in connection with these cases, both from pathologic and physiologic standpoints, is one made by Leber, of a case of monocular blindness in which there were all the ophthalmic signs of embolus but in which the microscope failed later to reveal any evidence of either embolism or thrombosis. Leber attributed the blindness and the pathologic findings to long-continued spasm pure and simple. The course of this case, until the final attack came and vision was hopelessly lost, was precisely analogous to the apparently innocent group of transient blindness. It is evident, therefore, that the prognosis in all of these cases of transient blindness should be most guarded, as it would appear impossible to predict what the outcome of any one of them might be, whether the blindness be due to spasm and be always transient, whether it be due to a forming embolism which finally destroys the sight by shutting off the blood-supply entirely, or whether the same fatal result is attained as in the case reported by Leber, by long-continued spasm, without microscopic change in the vessel walls.

Dr. E. C. Ellett, Memphis: Four of the patients whose cases are reported in the paper are elderly people with gross vascular disease. Case 3 is in a young person, without vascular disease. These should, it would seem, be taken to represent different conditions, one functional, the other organic in nature. The commoner type, as indicated in the paper, is that seen in old people with arteriosclerosis, and appears under the form usually described as embolism, and about whose exact nature much uncertainty exists. It is significant that complete recovery rarely follows these attacks, as indicated by the ophthalmoscopic changes and visual disturbance which continued to be present in the cases reported. A case, the exact nature of which is not clear to me, has recently come under my notice.



Left eye, Mrs. E., March 15, 1910.

Mrs. E., aged 35, woke on the morning of Jan. 20, 1910, to find that her left eye was blind. I examined her about 8:30, and found the blood current in the arteries interrupted, there being stretches of empty vessels, then a column of blood, and then empty vessel. This affected all the arteries. There was edema of the retina, cherry spot at macula, and slight fullness of the veins. Amyl nitrite was at once administered, with deep massage and later erythrol tetranitrate and small doses of mercury. The vision began to return in twenty minutes, and gradually improved. On April 19 she saw 20/25 p, excubically, and the field was as shown on the attached chart. This patient's general condition is interesting. I have known her from childhood and she is and has always been intensely anemic. She has metrorrhagia due to fibroids, which probably explain her anemia. About a year ago her blood showed a marked grade of chlorotic anemia. At the time of this attack her blood showed 65 per cent. of hemoglobin, 5,200,000 red cells, that is to say chlorosis. She also has mitral regurgitation; hemiopia and other forms of visual obscurity are part of the picture of ophthalmic migraine and temporary obscuration, without headache is more common. I have two cases of the latter type in mind in which I can only speculate as to the cause, since I have never been able to examine either of them in an attack. At other times the vision and eye-grounds are normal.

Dr. L. Connor, Detroit: Three or four years ago I reported some observations on the use of vibratory massage on the eye. One was the following: A man, aged about 50, three months before coming under my care, began to lose his sight. He had been in the hands of one competent oculist after another and the refraction of the eye had been perfectly determined. The only abnormal condition to be found was a cord-like condition of the retinal arteries. I thought that the patient had had everything possible done for him; but I had already demonstrated by the use of the vibratory apparatus in the normal eye that I was able to reduce the size of the retinal artery. The patient's vision for distance in one eye was 12/200 and the other about 8/200. He was unable to read and was incapacitated from work. It occurred to me that what I had learned might have application here. His kidneys, liver and digestion, and every other function, so far as experts could determine, were quite normal. I passed this instrument around the sclerocorneal junction of each eye for a minute and repeated the operation, and within five minutes the patient could read 22/100 with one eye and with the other 18/200. I looked in the eye and found that the size of the arteries was perceptibly larger, and there was the increased vision. So I determined to continue the treatment. There was a progressive improvement in the vision till within a month the patient could read with his corrected glasses, which did not need any change. At the time I saw him last (three years ago) he could read 20/20 and Jager (Yeager) No. 1. He has been able to carry on his business with entire success since. This is perhaps the most marked example I have met, but there are many other cases allied to this that I have been unable to reach in any other way.

Dr. W. Zentmayer, Philadelphia: Five years ago I presented this subject of spasm of the central artery of the retina before this section on the basis of one case which I had seen in consultation. A man had repeated attacks of transsient, monocular blindness, occurring over a period of two or three days. Only on one occasion did it affect both eyes. He had as many as ten or fifteen attacks in an hour. It is now five years since the attack and he has never had a recurrence. Some time afterward Dr. DeSchweinitz read a paper on the results of toxemia, and I thought perhaps that case was caused by toxemia. The study of the blood-pressure, at the time of the attacks, however, showed that it was normal and there was no evidence of arteriosclerosis. The interesting fact in connection with the probable cause was that the only treatment which seemed to relieve the spasm was free purgation.

Dr. J. L. Thompson, Indianapolis: Has anyone ever found this condition in hysterical subjects? We often have it temporarily in these subjects, a day or longer.

Dr. M. Feingold, New Orleans: Dr. Knapp makes a correct distinction in these cases between cases based entirely on spasm and those based on thrombosis or embolism. But I wish to recite a case in which this sharp distinction cannot be drawn. Several months ago a man of 74 called at my office. I had examined his vision and prescribed glasses a year before. He had been sitting at luncheon when he suddenly became blind in one eye. I examined him and found his vision, which was 5/30 a year ago was now 5/12, and he could read only the right end of the line. He could not see the left end. The other changes were practically *nil*, except that the disc in the left was paler than in the right eye. The arteries were distinctly visible, but possibly narrower. The veins were well filled. The eye was practically normal except for the paleness of the disc. Acting on what has been recommended by others I told the patient to go home and take a free purge and come back the next morning. This man has been long under treatment for severe arteriosclerosis. The next morning he could see 5/30, the whole line. I ordered the purgation to continue and ordered sodium iodid, and in the course of four or five days the vision returned to the normal condition, and the left disc became almost of the same color as the right. This is one of those border-line cases which we cannot distinctly define as due to thrombosis or embolism or to spasm simply; because we know thrombosis can be of such a character that it will allow a certain amount of blood to flow through. The circulation in this case was thoroughly reestablished in the course of a few days.

Dr. W. Reber, Philadelphia: I take it that thrombosis can take place without evidence of gross lesion. In the class of cases in which there is no gross lesion we do not and we cannot to-day, except clinically, distinguish between spasm and thrombosis; but in those in which there is no thrombosis and in which there is transient monocular blindness, such as those described, the indications all point to toxemia. And I am firmly convinced that, as Dr. Knapp has said, transient blindness, monocular, is always a grave sign; very much graver in the presence of an altered blood-pressure; grave enough though the blood-pressure may be negative. I should be worried if I were subject to one attack of transient monocular blindness. The treatment is eliminative, as in the two cases cited. Nothing was of any avail until the patients were purged with Epsom salts and water taken by way of the intestine or by way of diaphoresis. The best possible elimination in such cases is none too good.

Dr. W. Haughey, Battle Creek, Mich.:—I should like to report a case I had three weeks ago. The patient is a man of 24, who when a boy was an athlete, always running. He spent some time in the South, where he acquired the habit of smoking to excess and drinking strong black coffee clear. He had a very small refractive error in both eyes, which I corrected about a year ago. Three or four months ago he came to me with a sudden partial blindness in the right eye. He had 22/100 vision. I could see the retina and found dilated vessels of the retina, which were small, and the heart action was about as irregular as any I ever heard. The patient would have missed beats and delayed beats, etc., but no particular valvular difficulty. He had steadily improved under eliminative treatment. This trouble was only in one eye and I found it was toxic from tobacco or coffee. He has discontinued them both, and with strong eliminative treatment he is improving.

Dr. A. Greenwood, Boston: I want to add my testimony to that of Dr. Knapp that these conditions must be looked on as very grave when they occur in patients with high arterial blood-pressure. Some years ago at Atlantic City I read a paper on obstruction of the retinal arteries, and have been interested in them since. I feel very strongly that these cases must be watched with the greatest care, and that everything that can be done must be done to reduce the blood-pressure where it has been raised. It has been my experience that the blood-pressure has been raised in all cases, even in people under 40. In the present day of high living in America there is no question that we find advanced arteriosclerosis even in the younger generation, and I think this condition requires the greatest care on the part of the ophthalmologist and also on the part of the family physician.

Dr. Arnold Knapp, New York: As far as I remember Dr. Ole Bull mentioned this first in 1857. He mentions Raynaud's observations, so that the condition must have been familiar. None of these patients were hysterical. In fact, in hysteria the most important feature has been the normal condition of the eye-ground. The exciting cause of the spasm is an interesting question, but it is complex. I want to emphasize the importance of preventive treatment, because I think treatment after the condition has occurred is nearly always unsatisfactory.

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# ACUTE GONORRHEAL SALPINGITIS

HENRY B. ORTON, M.D.
EAST ORANGE, N. J.

It is the primary purpose of this paper to report a case of acute gonorrheal salpingitis cured by the injection of antigonococcic serum, but a few words regarding the ascension of gonorrheal infection in women will not, I trust be out of place. Extension to the appendages is estimated to occur in from 13 to 20 per cent. (Bunn). The ascent of infection from cervix to fundus, and fundus to the appendages, is usually favored by some contributing cause such as sexual excess (especially in close relation with the menstrual period), alcoholism; run-down system, abortion and labor, septic instruments, and continued cohabitation with an infected male. The vagina in adults is covered with thick stratified epithelium which resists the infection, making gonorrheal vaginitis a rather rare condition, although a secondary vaginitis may be caused by a virulent cervical discharge passing over the surface. I am not writing a treatise on the pathology of gonorrheal infection, however, but reporting the case from a therapeutic point of view only. I know of only a few cases in which the antigonococcic serum has been used in acute gonorrheal salpingitis, the latest case being that of Dr. Albert T. Tuttle in which he used the gonococcic vaccine. In old chronic cases, especially gonorrheal arthritis, it has been used with marked success.

*Patient.*—On February 28 I was called to see M. P., aged 20, white, single, who gave me the following history: On February 15 she had intercourse; five days later she experienced frequent and painful micturition, with a little burning in urethra and vulva. On February 22 the menses appeared and continued for three days; then they suddenly ceased for two days, then returned again and continued for one week. On February 26 the patient felt chilly and had severe pains in the head, left iliac fossa and over the pubic bone; with diarrhea, anorexia, nausea and vomiting.

*Examination.*—On March 5 I made a vaginal examination. The urethra showed a reddened and swollen mucous membrane; the meatus urinarius was red and congested and slightly everted. On pressing the urethra from the vaginal side I could express a few drops of whitish discharge; this I collected on a glass slide and examined for the gonococcus, which I found in large numbers. There was a vaginal discharge; the cervix was reddened and congested and painful to touch. Pain was present over both iliac fossæ but more on the left side; the left tube was enlarged.

*Treatment and Course of Disease.*—The patient was already in bed. I gave her massa hydrargyri gr. vii followed in the morning by magnesium sulphate. Ice-bag over left iliac fossa, and ordered a douche of tincture of iodin ʒi to a quart of warm water three times a day. On March 12 I injected under aseptic conditions 2 c.c. of the antigonococcic serum. The fever went up in the afternoon after the injection. Again on March 15 and 17 respectively, I injected 2 c.c. more under the same conditions. After the second injection the temperature dropped and has remained down ever since. There was not the least discomfort after any of the injections. I discharged the patient, feeling perfectly well on March 29. She has been in my office three times since for observation and has had no pain, no discharge from either uterus or urethra.

The patient became infected just prior to her menstruation, and, in view of the bacteriologic findings, I can have no doubt as to the diagnosis. She was cured by 6 c.c. of the antigonococcic serum in conjunction with warm iodin vaginal douches. We should give a patient suffering from gonorrheal salpingitis at least three months before thinking of operation. Epididymitis does not require castration. Why then should all cases of gonorrheal salpingitis call for a salpingo-öophorectomy?

51 William Street.

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# A CASE OF PRIMARY MASTOID PERIOSTITIS

WILLIAM PEARCE COUES, M.D.
Surgeon to the Boston Dispensary
BOSTON

Primary mastoid periostitis is so uncommon that the report of a case is of interest. Blake and Reik[1] say:

> The diseases of the mastoid, which are the most frequent and also the most important from a surgical point of view, are the acute congestions and inflammations secondary to similar processes in the middle ear. A careful study of the few cases of reported primary mastoid inflammations on record suggests, in the light of more recent experiences in this field of clinical investigation, the suspicion that there had been previous middle ear inflammations as the inceptor of a chronic quiescent mastoid disease which was later awakened to acute manifestations, while in others the implication of the mastoid cells possibly followed a superficial periostitis on the outer mastoid surface with pus formation denudation of bone and subsequent spontaneous perforation inward.

*History.*—F. D., single, aged 20, was seen at the surgical clinic, Boston Dispensary, May 27, 1909. Father and mother, three sisters and one brother, living and well. Patient has had scarlet fever, whooping-cough, measles and tonsillitis. There is no family history of tuberculosis and no history of ear trouble known to patient.

*Present Illness.*—About one month previous to patient's visit to the dispensary a swelling was noticed posterior to the right ear; it disappeared, but returned, with redness, and with tenderness which was felt at the back of the neck also. Pain extending up to the vertex was present. There was no marked constitutional disturbance.

*Examination.*—This showed a slight, fairly well-nourished and well-developed girl. The teeth were good; the throat slightly reddened. There was pediculosis capitis. Nothing abnormal was found in the examination of the heart and lungs. There was a rather extensive psoriasis of long standing. Directly over the right mastoid process was a brawny, reddened, infiltrated area, the size of one-half the palm. Posteriorly there seemed to be indistinct fluctuation. The swelling was moderately tender on pressure. No marked cervical adenitis was present. The patient was sent to the aural department of the dispensary for an examination, and the report sent back that the ear was perfectly normal. The case was regarded as one of postauricular abscess, possibly of glandular origin (pediculosis).

*Operation.*—May 29 ether was given and a slightly curved incision made over the most tender part of the swelling, carried down quite deeply, but not to the bone; no pus found; free bleeding; gauze drain; dressing. There was some relief from pain following the incision. Next day swelling was the same; no pus; redressed with hot boric gauze and drain replaced. The patient did not do well; the cervical part of the swelling, instead of becoming smaller, increased. There was constitutional disturbance.

*Second Operation.*—The incision was enlarged and a deep cervical abscess opened. A rubber tube was introduced, apparently draining the abscess perfectly. There was now some improvement, but it was not satisfactory. It was noticed at the dressing that pressure on the mastoid increased the flow of pus from the cervical incision, and the patient's consent to further interference was obtained.

*Third Operation.*—The first part of the former incision was deepened and carried down to the mastoid process; bare bone was seen and felt, but no softened areas were detected suggesting necrosis of mastoid cells. The incision was drained and tube kept in the neck. The patient was seen at home and dressed there. From this time on convalescence was rapid, the cervical abscess drained well, gradually closed and the induration disappeared. The wound over the mastoid cleaned up quickly and covered with granulations, the drain here being soon removed. The patient was discharged well June 22.

Five months afterwards the patient's mother stated that the girl had been well, but that lately the scar had been somewhat reddened. The patient was given instructions to report at the clinic again, and reported in April, 1910. She stated that there had been no recurrence of trouble and that she was perfectly well.

The possibility of a mastoid periostitis, even though two ear examinations showed the ear perfectly normal, should have been thought of and the third operation, which cured the patient, done earlier. No specific history was obtained, but it would have been of interest to have had a Wassermann reaction done in this case.

261 Beacon Street.

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[1] Blake and Reik: Surgical Pathology and Treatment of Diseases of the Ear, 1906.

# ANTITYPHOID VACCINATION

## RESULT OF 1,100 INOCULATIONS

FREDERICK M. HARTSOCK, M.D.,
Major, Medical Corps, U. S. Army
FORT WAYNE, MICH.

Antityphoid vaccination by means of the injection of dead typhoid bacilli is now destined to be a practical measure of prophylaxis and of value in the handling of typhoid epidemics.

The adoption of this method of prevention by various foreign military services, as well as our own, and its increasing popularity in the protection of nurses and interns in hospitals, is but a step toward the general use of the vaccine by practitioners at large, and the laity will, I believe, not be backward in seeking this preventive once its value is known and the immediate benign results of the inoculation established.

The method of using the killed bacteria has been placed on a definite and firm basis by Wright by his inoculations in the British Army and in the Boer War.[1] Sufficient time has now elapsed to secure definite statistics on which to base an opinion as to its effect on troops over a long period of time. Wright says:

> The latest statistics are those of Leishman. These statistics cover a period of three years and a half, from the beginning of 1905 to June, 1908. In 5,473 soldiers vaccinated against the disease, 21 took it and 2 died; in 6,610 soldiers practically under the same conditions, who were not vaccinated, there were 187 cases and 26 deaths; that is, among the vaccinated soldiers there were 3.8 cases per thousand, and among the non-vaccinated 28.3 per thousand.

The above difference in the ratios should be sufficient to induce the practitioner to adopt this as a general measure.

The vaccinations, I believe, should be generally adopted for the following classes:

1. All persons between the ages of 15 and 25. Osler states that the greatest susceptibility to typhoid is between these ages.
2. All persons exposed in time of an epidemic.
3. Nurses and physicians.
4. All persons in the military service, and more particularly in time of war, when troops are enrolled and concentrated in camps.

In promulgating this vaccination as a popular measure it is necessary to convince the patient as to its immediate benign effects. The layman must be assured that there will be no detention from business and that the injection is without harm. The military commander, in time of war, when troops are being mustered in, must be convinced that his forces will be ready for duty at any time. I believe that my series of 1,100 vaccinations will give sufficient evidence to assure affirmatively both the above.

Of this series there were 1,100 inoculations in 563 persons. The ages ranged from 15 years up, but mostly those of military age—from 21 to 35 years.

The vaccine used was furnished from the laboratory of the Surgeon-General's office, U. S. Army, and to most cases two doses were administered; first inoculation, 500,000,000 bacteria; second inoculation, 1,000,000,000 bacteria, and the third inoculation, the same number. Injection by means of the ordinary hypodermic syringe was employed, and given either at the insertion of the deltoid or in the flank. The latter is the more painful and should not be employed.

The classification of reactions is that adopted by the Medical Department, U. S. Army, as follows:

Reaction, none; mild, temperature up to 100; moderate, temperature up to 103; severe, temperature above 103.

To this I desire to add that in cases quoted as presenting no reaction all patients had a very slight local tenderness and redness at point of inoculation. In cases cited as mild the patients had slight general reaction; malaise and considerable local tenderness. In cases cited as moderate the patients had considerable general reaction; added to fever were nausea, rigor, muscular pains, headache and indisposition for about twelve hours; and in the severe local reaction causing disuse of arm for twelve hours, and all stated they were "very sick."

No untoward results were noted; all patients recovered promptly and in the severe cases the patients were able to attend to duty after twenty-four hours. A small percentage of patients had severe rigors, slight general erythema, diarrhea and vertigo, and one had epistaxis. The figures are as follows:

TABLE 1.—REACTION IN 562 CASES

| | First Dose. | | Second Dose. | | Third Dose. | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| None | 55 | 9.8 | 66 | 12 | 1 | 50 |
| Mild | 471 | 83.7 | 436 | 81 | 1 | 50 |
| Moderate | 31 | 5.5 | 29 | 6 | .. | .. |
| Severe | 6 | 0.1 | 4 | 1 | .. | .. |
| Total | 563 | | 535 | | 2 | |

In the 563 cases, 56 men stated that they had previously had typhoid fever. On these the percentage of reactions was as follows:

TABLE 2.—REACTION IN 56 CASES WITH A PREVIOUS TYPHOID

| | First Dose. | | Second Dose. | |
|---|---|---|---|---|
| | No. | % | No. | % |
| None | 10 | 17.8 | 9 | 16 |
| Mild | 41 | 73.3 | 42 | 79 |
| Moderate | 5 | 8.9 | 3 | 5 |
| Severe | None | | None | |
| Total | 56 | | 54 | |

Of the 1,100 vaccinations the reactions were as follows:

| | | |
|---|---|---|
| None | 122 or | 11 per cent. |
| Mild | 908 or | 83 per cent. |
| Moderate | 60 or | 05 per cent. |
| Severe | 10 or | .001 per cent. |

From the above it may be noted that the reactions differ but little between the first and second doses and that the typhoid cases react in no way differently than the non-infected.

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[1] Wright: Progressive Medicine, March, 1910.

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# INTEGUMENT ATROPHY: A SIGN OF DIAGNOSTIC IMPORTANCE IN EARLY PULMONARY TUBERCULOSIS

## PRELIMINARY REPORT

CLARENCE L. WHEATON, M.D.
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CHICAGO

Attention is called to a new sign which I believe to be of considerable diagnostic value in the examination of those afflicted with pulmonary tuberculosis. In a considerable number of tuberculous patients examined at the Rush Medical College it was observed that the integument or skin when picked or pulled away from the fascia was, over certain areas freely movable and not adherent to the muscle fascia. This phenomena was especially noticeable in cases of early unilateral involvement, and subsequent examination showed the tuberculous process to be on the side from which we could elicit the sign. Now if there is bilateral involvement the sign can be demonstrated on both sides but will be more pronounced over the original area of infiltration.

### METHOD OF ELICITING THE SIGN

The patient with hands resting in the lap faces the physician, looking straight to the front. The integument is then pinched between the thumb and index-finger and pulled away from the muscle fascia. It will be observed that over the area of infiltration the integument can be drawn from the chest wall with ease as compared with the side where there is healthy lung, and if now rolled between the fingers it will feel in consistency much thinner than a fold of skin taken from the sound side.

This condition or change in the integument of the chest wall has been observed in very early cases of tuberculous infiltration with little disentegration of the lung in both adults and children. Whether this is a true atrophy of the skin or due to muscle or nerve degeneration, or in some measure dependent on immobility of the chest wall I am at this time unable to say. It is suggested that this sign be sought as the first step in the examination of the patient, and the lesion within the lung then demonstrated by the usual methods. The value of the sign is in the fact that this atrophic change occurs early, and before there is extensive disintegration of the lung. Numerous colleagues having confirmed my findings, I now present this preliminary report, trusting that my observations may be found correct by others, and this contribution prove an aid in the early diagnosis of pulmonary tuberculosis.

2738 Pine Grove Avenue.

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# INJECTION OF PARAFFIN INTO THE APPENDIX IN AN ATTEMPT TO CURE INDIRECT INGUINAL HERNIA

## REPORT OF A CASE

A. C. STOKES, M.D.
OMAHA, NEB.

*History.*—Mr. V. was referred to me by Dr. Miller of Gibbon, Neb., Jan. 19, 1909. He was of German birth and a farmer by occupation. The family and personal history were negative, except that the patient had suffered with an indirect inguinal hernia for a few years. About ten days previous to visiting us he consulted an irregular practitioner in Omaha for his hernia. This physician agreed to cure him, without operating, by an injection method. The patient underwent the injection on Saturday and returned to his home, about 120 miles away, the same day. On Monday he was taken with severe pains in his right side, which were diagnosed by his home physician as due to appendicitis. He was referred to us for operation.

*Examination.*—The attack did not seem to be typical appendicitis and we kept him under observation for about two days before operating. He was running a temperature of about 99 to 100 F., no increase in pulse, slight rigidity over the right rectus, no gastric symptoms, and in fact no other symptoms which could be located. The blood-count was 7,200 whites, 4,200,000 reds, no polynuclear increase, and no signs of infection; but the pain and soreness continued. We therefore decided to operate.

*Operation and Course.*—We made the usual incision over the rectus muscle, found the appendix considerably inflamed, very hard, and the hardness extending over the cecum. We removed the appendix and cecal base of the appendix, suspecting that it was cancerous. On examination of the part removed it seemed to be filled with a hard wax-like substance. Microscopic examination showed the material to be paraffin. The presence of the paraffin in the appendix had caused the pain. The man made an absolutely uninterrupted recovery, and our pathologist, Dr. Wooley, now of Cincinnati, reported the appendix to be free from carcinomatous infiltration. The patient is still absolutely well after nearly a year and a half.

We could not tell exactly where the paraffin entered the appendix, whether immediately into its lumen, or, probably, beneath the serous covering.

In injecting the hernia the physician probably passed the needle below the canal into the appendix, or into the cecum about the appendix, and infiltrated this area.

It seems such an uncommon and unexpected occurrence that it is worth reporting.

Brandeis Building.

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# ALUM BATHS IN TYPHOID FEVER

## A PROPHYLACTIC AGAINST SKIN INFECTION

THOMAS R. BOGGS, M.D.
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BALTIMORE

Various forms of skin infection have been commonly associated with typhoid fever from the first recognition of the disease. In the older studies a very large proportion of all patients had boils, bed-sores or abscesses during the later weeks or in convalescence. With the advance in nursing methods and general hygiene in the past quarter century, the incidence of these complications has been greatly reduced, but there is still a rather constant percentage of skin infection in the very best hospitals where especial attention is given to the care of the skin. That is, in spite of alcohol rubs, frequent turning, and changing bed-linen, with liberal use of dusting powders, we still have more furunculosis and decubital sores than we should.

This constant appearance of skin complications has been attributed in part to the wide prevalence of the Brand treatment of bathing the patients in tubs. It is true that such bathing at frequent intervals (every three or four hours during the fastigium of the disease) does tend to soften the skin and render it less resistant. Again, the patients frequently void infected urine or feces in the tub during the bath, thus increasing the bacterial flora of the skin. Furthermore, the constant rubbing of the skin during the bath, which is essential to the best therapeutic results, leads to a certain amount of irritation, particularly about the hair follicles, and marked in proportion to the hairiness of the skin.

In the large typhoid experience in this hospital we have sought, in every way possible, to minimize the skin infection by the most scrupulous care, the skin of each patient being examined daily. In addition to the general measures for keeping the skin dry and smooth, we have covered the long rubber gloves worn by the nurse with a mitt of toweling in order to prevent the pulling of the body hairs by the wet rubber. Nevertheless, we have had, during the last ten years, a fairly constant percentage of skin infections, counting all furuncles, abscesses, folliculitis, dermatitis, and bed-sores.

It occurred to me that something might be accomplished by the use of antiseptics in the bath-water or some further means might be taken to increase the resistance of the skin. For this purpose a non-irritating and non-poisonous material must be chosen and one not too expensive. After some investigation, commercial alum (potassium aluminum sulphate) was selected. This substance is readily soluble, has fairly strong antiseptic properties (see Sternberg's tables) and, as is well known, tends to precipitate organic matter in water. In addition to these, it exerts some tanning, or hardening, influence on the skin—and, lastly, it is cheap.

For two years we have used it as a routine in our wards and, as the results seem encouraging, it is brought to the attention of the profession in the hope it may prove generally useful.

The procedure is very simple and is carried out as follows: One pound (500 gm.) of powdered alum is quickly dissolved in a little hot water and added to the tub during the filling. With the average tub of 450 to 500 liters, this makes approximately a 1 to 1000 solution. The alum is sent to the ward from the pharmacy in pound packages, so that the time for preparing the bath is not appreciably lengthened. The cost is about 4 cents per bath.

The patient is bathed in the alum solution just as in ordinary water and experiences no inconvenience from the presence of the drug. The only noteworthy changes in the skin are a slight increase in desquamation during convalescence and a decided diminution in the incidence of skin complications of all sorts (amounting to 50 per cent.) as shown by the tables appended. In these cases the care of the skin is the same in all except for the alum baths. It is not suggested that the alum baths can replace the rigid care of the skin in the ordinary way, but that with them the frequency of skin complications may be still further reduced.

RESULTS OF ALUM BATHS IN PREVENTING SKIN INFECTIONS IN TYPHOID

| Cases Treated. | Abscesses. | Furunculosis. | Bed Sores. | Dermatitis. | Folliculitis. | Total Skin Infections. | Percentage. |
|---|---|---|---|---|---|---|---|
| September, 1905 to September, 1908, without Alum | | | | | | | |
| 394 | 8 | 13 | 9 | 2 | 0 | 32 | 8.1 |
| September, 1908 to November, 1909, with Alum Baths | | | | | | | |
| 210 | 4 | 3* | 0 | 1 | 1 | 9 | 4.2 |

* Six cases are excluded in which patients received only sponge baths without alum.

## *Therapeutics*

### DIET IN GOUT

The relationship of gout to uric acid and uric acid to gout is of perennial interest and furnishes a subject for continued discussion. An increase of uric acid in the blood or uric acid derivatives in the blood during gout is generally understood to be a fact. Consequently, any diet that will diminish the amount of this substance in the blood should be of benefit in this disease.

Schittenhelm (*Therap. Monatshefte,* 1910, xxiv, 3, 113) believes that the first point of attack in the rational treatment of gout is the uric acid circulating in the blood, *i. e.,* the uricemia. He believes that just as it is necessary in diabetes to keep the patient on a non-sugar yielding diet for several months or even years, it is necessary to prevent a gouty patient from eating purin-yielding food. Schittenhelm believes that by prolonged care in the diet most cases of uricemia not complicated by diseased kidneys can be cured. Of course it should be remembered that some of the uric acid in the blood comes from the breaking down, within the body, of white blood cells and other nuclein containing tissues, but the purin-free diet must reduce the uric acid salts in the blood.

Meats and flesh of all kinds, even fish, contain purin bases, and to prevent uric acid from being formed from the diet, flesh of all kinds must be prohibited. It has long been known that foods that are rich in purins, such as liver, pancreas, thymus, brain, or other sweetbread titbits, shad roe or the roe of other fish, should be excluded from the diet of a gouty patient. It has now for several years been known that alcohol in any form taken with an ordinary meat meal would increase, probably by its action on the liver, the formation of uric acid. Consequently, alcohol in any form should not be allowed to patients with a meal which contains meat, even if alcohol is allowed between meals, or with other foods.

It has also been a question of discussion as to the fate in the body of methylpurins ingested with tea and coffee. The purin derivatives in these beverages are caffein, theobromin and theophyllin. Besser (*Die Therapie der Gegenwart,* 1909, l, 321) has recently published the results of investigations by him on the metabolism of these methylpurins in which he finds that the uric acid excretion by normal man is slightly increased after the administration of tea or of coffee.

These findings by Besser are contrary to the results of investigations by many others, they claiming that a part of these methylpurins are demethylated in the body with the production of monomethylxanthin. On account of these contradictory findings in regard to an increase of uric acid from tea and coffee, Schittenhelm made investigations both chemically and physiologically which seemed to prove that demethylation of these methylpurins was perhaps impossible, and secondly, that in dogs uric acid was increased by the administration of caffein and theobromin.

From these experiments it therefore would seem, that an increase of uric-acid combinations, and perhaps its progenitors, in the blood is an aggravator of gout, and that tea and coffee should be excluded from the dietary of gouty patients.

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**International Hospital in Turkey.**—An international hospital has been opened in Adana, Turkey, such an institution being the most pressing need after the massacre which entailed a great deal of sickness and suffering. The city has a permanent population of nearly 70,000, and this is the only hospital in the district, except one for the Turkish soldiers. Major Doughty-Wylie, the British consul, says: "Nothing in the way of charitable effort has been done in this country more worthy of generous support, nothing more acceptable to all races and creeds." There will always be private wards and special care for Americans and other foreigners. There are often cases of serious illness among tourists, or among foreign workmen sent out to set up new machinery, and the only accommodations for such patients are in the private homes of missionaries. A leading German firm, which has several of its own men in Adana, is actively interested in the hospital. The nurses are mainly British. The American Board, which has been at work in Turkey for more than half a century, will be responsible for outfit and traveling expenses if the right man can be found to be at the head of this important work, and an American woman has pledged one-quarter of such a man's salary for two years. If Adana were in the condition that it was before the massacre there would be a good revenue from fees, but the present desolation makes this source of income small.

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[*For other information see second page following reading matter*]

SATURDAY, JUNE 25, 1910

[The large amount of space occupied by the index this week makes it necessary to omit some departments and to curtail others.]

## THE INDEX

One of the important "features" of The Journal is the Index accompanying each semi-annual volume, which appears in this issue. By degrees the importance and great practical value of this index to those who desire to look up medical literature is being realized more fully; yet we fear that even now comparatively few of our readers appreciate its full value.

The work connected with preparing this index, from both the literary and the mechanical viewpoints, is enormous. We emphasize again the fact that this index is not only an index of the matter that appears in The Journal, and in that respect possibly no better than similar indexes in other weekly journals, but also an index to practically all the original articles published in the leading domestic and foreign medical journals during the preceding half year. It is, in fact, an index of the world's most important medical literature. To make it of value the articles are indexed not only under their titles, but also by cross-references to subjects.

In our Department of Current Medical Literature are listed more than 100 domestic journals, and nearly as many foreign. This includes 24 weeklies, 10 biweeklies, over 100 monthlies, 15 bimonthlies, 16 quarterlies and over a dozen periodicals published at irregular intervals. The special value of the index comes from the fact that it is up to date, so that, while it does not compare in detail with the *Index Medicus* or with the Index of the Surgeon-General's Library, it has the very great advantage of containing references to current literature.

To increase its usefulness and to make it easy of reference, the index is also published in pamphlet form, with the titles given. The advantage of this pamphlet, the "Guide to Current Medical Literature,"* is that references can be looked up without handling the large bound volumes or many single numbers.

## FOURTH-OF-JULY INJURIES AND PROPHYLAXIS

For seven years The Journal has been collecting statistics regarding deaths and injuries resulting from the celebration of the Fourth of July. These statistics are based on definite information obtained from reliable sources. From these, tabulations were made and published in such form as to be clearly understood by the public, as well as by the medical profession. For three or four years little attention was given to this matter by the press, and, consequently, it seemed as though the labor was in vain. Reprints of these tabulated statistics were made and their distribution was gradually made wider, so as to include not only the leading newspapers, but officials connected with most of the municipal governments. At first only the Chicago newspapers, especially the *Tribune*, made mention of the report, but during the last year or two these reports have been utilized in articles and editorials not only by the leading newspapers, but by all classes of magazines. Finally the public has become thoroughly aroused. A strong public sentiment has been created in opposition to the former inhuman methods of celebration, and in their place are being substituted pageants, parades, flag drills, picnics, and the like. Probably no single work undertaken by The Journal has resulted in so much direct good to the public as has this annual presentation of Fourth-of-July casualties. In the collection of the data each year, we have had the cooperation of an increasing number of physicians, and we hope that this cooperation will be still more extensive this year. We trust that every physician who has a case of Fourth-of-July injury will report it to us. All we want is a brief mention of the actual injury, the immediate cause and the result; we desire particularly to know the kind of cartridge or fireworks used. May we again take the opportunity of urging on physicians the importance of prompt and thorough treatment of these injuries, especially so that the harmful results of lockjaw may be avoided? We offer the following simple rules to be followed in the treatment of every blank-cartridge or puncture wound:

### TO PREVENT LOCKJAW

1. Inject subcutaneously 1,500 units of antitetanic serum and continue the injections if indications of possible tetanus arise.
2. Freely incise every wound.
3. Carefully and thoroughly remove from the wound every particle of foreign matter.
4. Cauterize the wound thoroughly with a 25 per cent. solution of phenol (carbolic acid) in glycerin or alcohol.
5. Apply a loose, wet boric acid pack.
6. In no case should the wound be closed. It should be allowed to heal by granulation. The dressing and packing should be removed every day, and fresh dressings applied.

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* See advertising page 20.

# Medical News

## CALIFORNIA

**Commencement Exercises.**—The commencement exercises of the Los Angeles Department of the College of Medicine of the University of California were held June 2, when a class of nine received degrees.——The fourteenth annual commencement exercises of the College of Physicians and Surgeons, San Francisco, were held May 19. The degree of doctor of medicine was conferred on a class of seven, and Dr. George Childs McDonald delivered the valedictory address, and the address to the graduates was made by Alden Anderson.

**Testimonials to Professors.**—A testimonal dinner was given in Los Angeles, June 2, in honor of Drs. Joseph Kurtz and George W. Lasher, who, after twenty-five years' service, are about to retire from the faculty of the Los Angeles Department of the College of Medicine of the University of California. A solid gold watch fob was presented to each from the faculty, alumni and students, by Dr. Edmond M. Lazard. Each of the guests was presented by Dr. John C. Ferbert with a handsome engraved set of resolutions, signed by each of the two hundred practitioners present.

**Personal.**—Dr. John E. Rodley, Chico, was thrown from his automobile, June 3, and seriously cut and bruised.——Dr. W. F. Lynch, Oakland, was stricken with paralysis in his office, May 21.——Dr. Charles A. Dukes, Oakland, has undertaken the duties of surgeon-general of California during the absence of Surgeon-General Winslow Anderson in Europe.——Dr. John C. King, Banning, who has been critically ill, is reported to be improving.——Dr. Clarence D. Dickey, San Bernardino, suffered a cerebral hemorrhage, May 8, while visiting in Los Angeles.——Dr. David B. Fields, Weaverville, has been reappointed physician of Trinity County.

## COLORADO

**Dinner for Medical Men.**—Dr. Kate Lindsay, Boulder, president of the Colorado Woman's State Medical Society, entertained eighteen members of the organization at a dinner at the Boulder Sanatorium, June 1.

**Personal.**—Dr. Lewis Lemen and family and Dr. Seymour D. Van Meter, Denver, are in Europe.——Dr. Laura L. Liebhardt, Denver, has started for the other side.—Dr. William T. H. Baker, Pueblo, has resigned as assistant chief surgeon of the Colorado Fuel and Iron Company and will practice in Pueblo.——Dr. L. J. Beebee, Georgetown, has been made surgeon for the Colorado Southern Railway for the Georgetown District.——Dr. Addison C. McCain, Ault, is reported to be critically ill at St. Luke's Hospital, Denver, with appendicitis.——Dr. William A. Packard, Lamar, is suffering from a Colles' fracture, received while cranking his automobile.

## ILLINOIS

**Personal.**—Dr. George A. Dicus, Streator, was operated on June 9, for appendicitis.——Dr. Vaclav H. Podstata, former superintendent of the Elgin State Hospital, has returned from a European trip.——Dr. Robert J. Burns, Freeport, has been appointed county physician.——Dr. Ralph M. Carter, Chicago, has been appointed on the medical staff of the Hinton Hospital, Hinton, W. Va.——Dr. John R. Sutter, Jr., Edwardsville, has been appointed county physician.——Dr. Daniel F. Duggan, Alton, has been appointed township physician.

### Chicago

**Alumnae Meet.**—The Alumnae Association of the Northwestern University Woman's Medical School held its annual meeting, June 14. The following officers were elected: President, Dr. Eliza H. Root; vice-presidents, Drs. Annette S. Mack and Nora Soule Davenport; secretary, Dr. Anna Ross Lapham; treasurer, Dr. Mary C. Hollister, and trustees, Drs. Rachel Hickey Carr, Rose Willard, and Louise Acres.

**Rush Class Reunion.**—The class of 1899 of Rush Medical College held its annual reunion and dinner at the Bismarck Garden on the night of June 16. Covers were laid for fifteen. The following officers were elected for the ensuing year: President, Dr. William D. Byrne, Chicago; vice-president, Dr. Thomas R. Thomas, Lima, Ohio; secretary-treasurer, Dr. John B. Ellis, Chicago; and historian, Dr. Benjamin H. Breakstone, Chicago.

**Program for Fourth of July.**—To give organized expression to the growing public sentiment in favor of a "safe and sane Fourth of July," to aid in the enforcement of all laws designed to prevent the disorder accidents and fires attending the celebration of Independence Day, and to endeavor to secure such type of celebration as shall promote true patriotism, the Chicago Sane Fourth Association has arranged for a patriotic celebration of that day in the form of a parade and a military tournament under the direction of the Commanding General of the Department of the Lakes of the United States Army. The parade will be a grand pageant in three divisions, the first representing the United States of America, with various emblematic floats and five thousand United States troops representing all branches of the service, the second representing the state of Illinois, with the governor and the military organizations representing various wars of the republic, followed by floats and representations of historic events, and the third division representing Chicago, with the mayor, his cabinet and the city council, together with floats and paraphernalia representing the history and progress of the city, labor unions and other organizations, and a parade of the different nationalities represented in the city. The military display by the United States troops is a part of a great military tournament beginning on the Fourth of July and lasting ten days, in which there will be exhibitions displaying every phase of the soldier's life and duties, with sham battles, cavalry charges, and all the movements, evolutions and methods employed in training the soldiers for actual war. A great arena with seats for thousands is now being constructed and many troops are now preparing Grant Park for the great spectacle. This year's celebration promises to be a great beginning of the new way of celebrating Independence Day and will be an example to be followed by this and other cities in future.

## KANSAS

**Personal.**—Dr. Charles M. Fullenwider, El Dorado, has returned from Europe.——Dr. Herbert G. Atkins, Kansas City, Mo., formerly intern in the German Hospital, has located in Pratt.

**Commencement.**—The twentieth anniversary of the Kansas Medical College, Medical Department of Washburn College, was celebrated June 3. Dr. Elmore S. Pettyjohn, Topeka, and Dr. John B. Tower, dean of the medical school, delivered addresses, and a class of fourteen received diplomas.

## MARYLAND

**State Health Board Appointments.**—The State Board of Health, June 16, appointed the following officers under the new law: Dr. W. Franklin Hines, head of department of vital statistics; Dr. Wm. Royal Stokes, head of bacteriologic department; Dr. Caleb W. G. Rohrer, assistant chief of bureau of communicable diseases.——Dr. Charles Caspari, commissioner of pure food and drugs, assumed his duties on the same date.——The State Pharmaceutical Association has taken action to have a pharmacist on the State Board of Health. At present the board consists of five physicians, one engineer and the attorney-general. The Association thinks it more equitable that there should be four physicians and one pharmacist.

### Baltimore

**Personal.**—Dr. Wm. Benjamin Dudley and Dr. Thomas R. Brown sailed for a tour of Europe.

**Fellowships Conferred.**—Johns Hopkins University has conferred the fellowship in pathology on Henry G. Barbour of Hartford, Conn., and the fellowship in psychology on John L. Ulrich, Baltimore.

**Prominent Physician Injured.**—Dr. George W. Dobbin, professor of obstetrics at the College of Physicans and Surgeons, was severely injured in an automobile collision on Thursday, June 2. He was taken to Mercy (city) Hospital where he was found to have a fractured skull and collar bone.

**Johns Hopkins Commencement.**—There were 64 medical graduates at the Johns Hopkins University thirty-fourth annual commencement June 14. Count Johann Heinrich von Bernsdorff, German Ambassdor to the United States, was the orator, his subject being: "The Development of the German Empire." Mr. Charles Chauncey Winsor Judd received the Lister prize of $150 for the best essay on "The Life and Work of Lister." Mr. Norman Harris Williams received the Joseph Kernochan Garr scholarship ($100) medical.

**Reorganization of Supervisors of City Charities.**—Dr. J. Hall Pleasants, president of the Board of Supervisors of City Charities, advocates the reorganization of medical supervision at the city hospital, Bayview. He proposes, independently of the medical schools, to get the best men for the positions. At present there is no right of selection. The Board of Estimates has endorsed Dr. Pleasants' proposition and authorized a change, to become effective on the completion of the new hospital. After January 1, the medical staff of the city hospital will consist of physician-in-chief, surgeon-in-chief, physician-in-charge of the tuberculosis hospital, physician in charge of the insane hospital, pathologist, and necessary associates and resident house officers. The five chief physicians, together with the superintendent of Bayview, will constitute the medical board of the city hospital, which is responsible to the city through the Board of Supervisors of City Charities. The medical board will be responsible for the discipline of the medical house officers, and each year will nominate the requisite number of candidates for appointments, to be selected after competition, to which graduates of any recognized medical school are eligible.

**Hospital Changes.**—Dr. Charles Bagley, Jr., superintendent of the Hebrew Hospital for the last four years, has resigned that position and will enter on private practice in Baltimore. He has been succeeded by Dr. Grover C. Ney, who has been the assistant physician for the last two years.——The Woman's Medical College of Baltimore, which closed its doors with the twenty-eighth annual commencement, held May 30, was founded with the hope that it would enlist the interest of many persons of means in this community who were interested in the professional education of women and would contribute to its endowment. They were destined to disappointment and the failure to secure endowment is responsible for the closing of the college. There was a movement here of Miss Garrett and her friends that promised well at one time, but it veered off to the Hopkins and was thus lost. This college was the first in Maryland to adopt preliminary and written examinations, a lengthened term, a three-year course, laboratory instruction, etc. Its standards were higher than most of the colleges in the country and it did a good work notwithstanding its small means. It was one of the founders and most ardent advocates of the American Medical College Association. It has had 116 graduates, of whom 30 have married and 90 per cent. are still in active practice. The remaining students will go next year to the Philadelphia school. The graduates of 1910 will mostly enter hospitals in the same city.——At the Baltimore Medical College the following changes are announced: Dr. Tilghman B. Marders becomes professor of biology, Dr. H. R. Kreider professor of chemistry, Dr. H. Raymond Spencer demonstrator of physiology. Dr. Reginald D. West demonstrator of anatomy. Dr. Edward L. Whitney has been reelected to the chair of physiological chemistry and pharmacology. The new members of the staff of the Maryland General Hospital, attached to the college, are: Drs. H. H. Cornforth, W. T. LaFortune, E. L. Bransford, H. F. Smith, J. J. Koarsak, D. Shack, P. Showalter and W. I. Neller.

## MASSACHUSETTS

**Grenfel Sails North.**—Dr. W. L. Grenfel sailed from Boston, May 26, with a cargo of supplies for the north, including furniture for the new hospital in Labrador.

**Catholic Physicians Found Guild.**—About one hundred physicians met at the call of the archbishop in the conference room of the Cathedral of the Holy Cross, May 14, and organized St. Luke's Guild. The object of the guild is to oppose paganism of the times, combat the arrogant claims of physical scientists and schools of materialism, idealism and Eddyism.

**Graduates.**—At the thirty-first annual commencement exercises of the College of Physicians and Surgeons, Boston, June 1, a class of thirty-three was graduated. Addresses were delivered by Drs. John H. Kellogg, Battle Creek, Mich., on "The Possibilities of Preventive Medicine," and by Rev. J. H. Crooker on "The Doctor's Outlook on Life." The degrees were conferred by Hon. Joseph Bennett, president of the college.

**Tuberculosis Board.**—The governor has appointed the following members of a commission to investigate and report on the care of tuberculosis patients by state and local authorities: Dr. Henry P. Walcott, Cambridge, chairman; Dr. Julian A. Mead, Watertown, and Charles H. Porter, Quincy, from the State Board of Health; A. C. Ratshesky and Ada Eliot, Sheffield, from the State Board of Charities, and Dr. Arthur T. Cabot, Boston, and George A. Dunn, Gardner, from the commission on consumptive hospitals.

**Personal.**—Dr. Samuel Crowell, Boston, has been appointed a member of the Valley Forge Memorial Commission.——The house of Dr. George E. MacArthur, Ipswich, was damaged by fire to the extent of $2500. June 6.——Ward physicians of Lawrence have been reelected by the overseers of the poor with the exception of Dr. Patrick J. Hughes, who succeeded Dr. Emile E. Cyr for ward six.——Dr. Frank A. Woods, Holyoke, has been appointed a member of the Board of Pension Examiners for Hampden and Hampshire county, Vice Dr. Arthur B. Wetherell, resigned.——Dr. Joseph O. Beauchamp, Chicopee Falls, has been appointed a member of the license commission.——Jerome B. Greene, secretary of the Harvard College Corporation, has resigned to accept the appointment of business manager of the Rockefeller Institute for Medical Research in New York City.——Dr. Harvey W. Cushing, formerly of Baltimore, has been appointed surgeon-in-chief of the Peter Bent Brigham Hospital, Boston, and Dr. Henry A. Christian, Boston, physician-in-chief.—Dr. Walter R. Brinckerhoff, who five years ago accepted a government appointment to make a bacteriologic study of leprosy at the lepper settlement in Molokai, H. I., has returned to the United States and has accepted a position as assistant professor of pathology in Harvard Medical School.

**District Societies Meet.**—The annual meeting of Worcester District Medical Society was held at Quinsigamond, May 11, and the following officers were elected: President, Dr. Albert C. Getchell, Worcester; vice-president, Dr. Charles A. Church, Millbury; secretary, Dr. Roy J. Ward, Worcester; treasurer, Dr. George O. Ward, Worcester; orator, Dr. John T. Duggan, Worcester; councilors, Drs. George E. Francis, Oliver H. Everett, Samuel B. Woodward, John T. Duggan, David Harrower, Homer Gage, Ray W. Greene, and Lemuel F. Woodward, Worcester; Edwin B. Harvey, Westboro; Ephraim W. Norwood, Spencer; Walter P. Bowers, Clinton, and Dr. William G. Reed, Southbridge; nominating councilor, Dr. Samuel B. Woodward, Worcester; censors, Drs. Ray W. Greene, Royal E. Watkins, and William J. Delehanty, Worcester, and Dr. Albert G. Hurd, Millbury, and Dr. James J. Goodwin, Clinton.——The one hundred and fifth annual meeting of Essex South District Medical Society was held in Salem, May 17, and the following officers elected: President, Dr. George H. Gray, Lynn; vice-president, Dr. George A. Stickney, Beverly; secretary, Dr. Walter G. Phippen, Salem; treasurer, Dr. George Z. Goodell, Salem; librarian, Dr. Carolus M. Cobb, Lynn, and councilors, Drs. Horace K. Foster, Peabody; Harry C. Boutelle, Danvers; Ralph E. Bicknell, Swampscott; Herbert J. Hall, Marblehead; Alfred T. Hawes, Lynn; William E. Tucker, Ipswich; Philip P. Moore, Gloucester; Edwin D. Towle, Salem; Augustine M. Tupper, Rockport, and John J. Hickey, Peabody; nominating councilor, Dr. Herbert J. Hall, Marblehead; alternate, Dr. Alfred T. Hawes, Lynn, and censors, Dr. Ara N. Sargent (supervisor) Salem, and Drs. Harry E. Sears, Beverly; George C. Parcher, Saugus; Philip P. Moore, Gloucester, and Frederick W. Baldwin, Danvers.——Hampshire District Medical Society met in Springfield, May 12, and elected the following officers: President, Dr. Bennis M. Ryan, Ware; vice-president, Dr. Nelson C. Haskell, Amherst; secretary, Dr. Arthur G. Minshall, Northampton; treasurer, Dr. Justus G. Hanson, Northampton; librarian, Dr. Frances L. Burnett, Northampton; censor, Dr. John S. Hitchcock, Northampton, and councilors, Drs. Frank H. Smith, Hadley; John S. Hitchcock, Northampton, and Edward D. Williams, East Hampton.

## MISSISSIPPI

**Degrees Conferred.**—The first annual commencement exercises of the Medical Department of the University of Mississippi, Vicksburg, were held May 20. Dr. Hugh H. Haralson presided in the absence of the dean. The commencement address was delivered by Rev. William Mercer Green, and degrees were conferred on a class of four by Chancellor A. A. Kincannon of the university.

**Society Meetings.**—Clarksdale and Six Counties Medical Society, at its annual meeting in Clarksdale, elected the following officers: President, Dr. Robert L. Mercer, Shelby; secretary, Dr. Lewis E. Pierce, Stovall; and treasurer, Dr. Luther D. Harrison, Clarksdale.——Physicians representing Lowndes, Clay and Oktibbeha counties met in Columbus recently and discussed the organization of a tri-county medical society. Dr. Walter R. McKinley, Columbus, presided.

## NEW YORK

**Improvements at Columbus Hospital.**—At the second anniversary of Columbus Hospital, Buffalo, Dr. Charles R. Borzilleri announced that plans were being prepared for the enlargement of the hospital to twice its present size. He also announced the following staff of the hospital: Consulting staff, internal medicine, Dr. Henry C. Buswell; surgery, Dr. Marshall Clinton; gynecology, Dr. Earl P. Lothrop; nose and throat, Drs. Max Keiser and James J. Mooney; nervous diseases, Dr. James W. Putman; ophthalmology, Dr. F. Park Lewis; orthopedics, Dr. Bernard Bartow; obstetrician, Dr. Peter W. Van Peyma; genito-urinary disease, Dr. Nelson W. Wilson; pediatrics, Dr. Irving M. Snow; dermatology, Dr. Grover W. Wende; pathology, Dr. Norman K. MacLeod, and radiographer, Dr. Alfred W. Bayliss. Attending staff: Internal medicine, Drs. Thomas J. Walsh, Horace LoGrasso and A. J. Getola; surgery and gynecology, Drs. Charles R. Borzilleri, Charles Battaglia and Edward E. Haley; nose and throat, Dr. Gianfrancisco; nervous diseases, Dr. F. Strozzi; orthopedics, Dr. Prescott LeBreton; obstetrics, Dr. L. Franklin Anderson; genito-urinary, Dr. Joseph J. Giambrone; pediatrics, Drs. John A. Ragone and Jacob W. Bayliss; dermatology, Dr. Grover W. Wende; pathology, Dr. Frank A. Valanti; anesthetist, Dr. L. Franklin Anderson; dental surgery, Dr. J. Panzica.

### New York City

**Personals.**—Dr. and Mrs. Hermann M. Biggs, Dr. Edward B. Dench, Dr. C. Stafford McLean, Dr. H. Holbrook Curtis, Dr. and Mrs. Dwight W. Hunter, New York, have sailed for Europe. ——Dr. and Mrs. Lucien L. Brainard, Little Falls, and Dr. and Mrs. William P. Faust, Schnectady, have also sailed. Dr. and Mrs. Richard Van Santvoord, New York, sailed on Saturday, June 18.

**Fordham University to Build.**—At the commencement exercises of Fordham University, Dr. James J. Walsh, dean of the medical faculty, announced that a new building for the medical department would be erected and ready for occupancy by next fall. The new building will be on the university grounds facing Pelham avenue. It is also planned to conduct a free clinic at the hospital. In the fall new schools of dentistry and pharmacy will be begun. Six students received the degree of M.D.

**Commencement Exercises.**—At the fifty-first annual commencement of the Long Island College Hospital, Brooklyn, June 1, a class of 68 was graduated. Dr. Joseph H. Raymond presented the candidates for graduation. Dr. John D. Rushmore, dean of the college, administered the Hippocratic oath, and Dr. John A. McCorkle presented the diplomas to the class. The twelfth annual commencement exercises of Cornell University Medical College were held at the college on Twenty-eighth Street and First Avenue, June 15.

**Cornell University Confers Degrees.**—The Cornell University Medical College graduated 68 students, seven of whom were women. President Jacob Gould Schurman addressed the graduating class on "Progress in Medical Education." He deplored the condition of medical education in the United States and emphasized the necessity of having hospitals under control of medical colleges. The best way to establish medical colleges and medical research on a higher plane was for the best hospitals to offer positions on their staffs to the professors in the best medical schools.

**Society Opposes Losing Funds.**—The Medical Society of the County of New York has issued a circular to its members urging each to write at once to the governor and mayor expressing his opposition to the bill which changes the existing medical law by adding at the end of the section, "Provided, however, that in the City of New York no fines shall be paid to any such societies, but shall belong to the said City of New York." Under the existing statute the medical society of the county receives the fines imposed on violators of the medical law whenever such violators are successfully prosecuted by the medical society.

**Children's Hospital Alumni Organized.**—At a meeting held May 26, the Association of the Alumni of St. John's Guild Hospitals for Children was organized with the object of maintenance of interest in the work of the hospitals in the guild, the consideration and discussion of matters pertaining to hygiene and diseases of infants and children, and for the promotion of friendly relations. The following officers were elected: President, Dr. Medwin Leale; vice-president, Dr. Russell Bayly; secretary, Dr. Carlisle S. Boyd; treasurer, Dr. William Ten Eyck Elmendorf; executive committee, the officers and Drs. W. Morgan Hartshorn, Harry D. Johnson and Phillip Smith.

## OHIO

**A Test of the Vital Statistics Law.**—Dr. J. J. Boone, a physician residing in Hardin county, after repeated violations of the vital statistics law in refusing to report births, was convicted in the common pleas court of that county. It is stated that, in taking the case up to the supreme court of the state, he solicited financial aid from a number of county societies belonging to the state organization, and received such aid from one or two. The House of Delegates of the Ohio State Medical Society, at its meeting in May, passed a resolution to the effect that no component society of the state organization could consistently give aid in the defense of any member violating the provisions of the vital statistics law of the state.

## PENNSYLVANIA

**Franklin County's Roster.**—The Quarterly Call and Roster of the Franklin County Medical Society will be enlarged. It is one of the many manifestations of activities shown by the various county medical societies throughout the state, in the contest for medical organization for the material betterment of practitioners.

### Philadelphia

**Organized Labor and Tuberculosis.**—At a meeting held at the Central Labor Union's headquarters, J. Byron Deacon, executive secretary of the Pennsylvania Society for the Prevention of Tuberculosis, asserted that the society was prepared to offer organized labor the use of 100 beds for tuberculosis patients, at a cost per capita of 20 cents per year. The society would do this until such time as organized labor could erect its own sanatorium. This offer was made following the report of a committee of eleven, appointed by the union at a previous meeting, for the purpose of cooperating with the Pennsylvania Society.

**University of Pennsylvania Commencement.**—The one hundred and fifty-fourth annual commencement was held at the Academy of Music on June 15. Secretary of State Philander C. Knox, delivered the annual address, taking for his subject, "The Spirit and Purpose of American Diplomacy." A sum of $10,000 has been raised by the four classes of the university to defray the cost of the erection of a life size bronze statue of Provost Charles C. Harrison. The statue will be placed at Thirty-sixth and Locust streets. The standard flag of the college, which is red and blue, was modified by the addition of the seal of William Penn in the center.

**Personal.**—Surgeon-General George H. Torney of the United States Army, Surgeon-General Charles F. Stokes of the United States Navy, and the medical officers of the Army and Navy stationed at Philadelphia were the guests of the Medical Club at a reception held at Bellevue Stratford, June 17.——Dr. A. M. Richards of Northwestern University was elected professor of pharmacology at the University of Pennsylvania, and Dr. K. F. Meyer of the Transvaal, Africa, was elected assistant professor of veterinary pathology.——Dr. Louis A. Duhring, professor of dermatology, resigned from the University Staff on account of ill health.——Dr. and Mrs. Louis Somers have sailed for Europe on a two months' trip.

## WISCONSIN

**Marquette Medical Graduates.**—The Medical Department of Marquette University held its graduation exercises, May 23. A class of forty-five was graduated.

**Personal.**—Dr. Mazyck P. Ravenel, Madison, has been appointed to represent the University of Wisconsin at the centennial celebration of the University of Berlin, October 10 to 13. He is also a delegate to the International Conference on Tuberculosis and the International Congress on Alimentary Hygiene and the Rational Feeding of Man which meets in Brussels.——The City Council of Milwaukee has confirmed the appointment of Dr. William Colby Rucker as health physician.——Dr. John M. Helgeson has been appointed health officer of Rice Lake.

## GENERAL NEWS AND COMMENT

**New Hospital.**—A contract has been awarded to build a new reinforced concrete hospital at Fort McKinley, P. I. It is proposed to add one wing to the hospital each year until it finally develops into a hospital available for a brigade post. A double set of quarters for hospital stewards at Fort McKinley is also to be constructed.

**Memorial Window Unveiled.**—On May 8 an interesting service was held in the Hospital Church of St. Luke the Beloved Physician, Ancon, C. Z., when windows erected in memory of those who had lost their lives during the construction of the canal were unveiled by Col. William C. Gorgas, Medical Corps, U. S. Army, chief sanitary officer of the Isthmian Canal Commission.

**Tuberculosis Sunday Results.**—The National Association on Tuberculosis reports that on Tuberculosis Sunday 4,000,000 people listened to 40,000 sermons and that 1,250,000 pieces of literature were distributed; one-eighth of all the church goers of the United States heard the gospel of health on that Sunday. Plans are under way to make Tuberculosis Sunday work more far-reaching next year.

**Library Wants Sanitary Reports.**—The New York Academy of Medicine is desirous of adding to its library the reports of the committees that have been appointed from time to time to investigate questions of public health, to the end that the results of their labors may be available to future workers. Among the topics on which information is desired are: Harbor pollution, the alcohol question, the prevention of tuberculosis, the prevention of occupational diseases, the sanitation of tenements and work-shops, the effects of prolonged hours of labor, the social evil and congestion of population. The Academy will be glad to receive copies of reports of this nature and also any information concerning the appointment, the name and work of committees or commissions engaged in this research. Communications may be addressed to Dr. Charles Mallory Williams, Executive Librarian, New York Academy of Medicine, 17 W. Forty-third Street.

**Federation for Sex-Hygiene.**—The American Federation for Sex-Hygiene was organized at St. Louis, June 6, by delegates from fifteen state and city organizations interested in the promotion of the education in sex matters. The following officers were elected: Honorary president, Dr. Charles W. Eliot, formerly president of Harvard University; president, Dr. Prince A. Morrow, New York City; vice-presidents, Rev. George R. Dodson, D.D., St. Louis, Prof. Charles R. Henderson, Chicago, Talcott Williams, Philadelphia, and Dr. Francis Green, California; executive committee, Drs. Robert N. Willson, Philadelphia, Donald R. Hooker, Baltimore, William F. Snow, Stanford University, Thomas N. Hepburn, Hartford, Edward Jackson, Denver, and Malone Duggan, San Antonio, Tex.; and Messrs. Wert W. Hallam, Chicago, Percy Warner, St. Louis, and Delavan King, Boston.

The purpose of the organization is "the education of the public in sex physiology and sex hygiene, and the study of every means, educational and sanitary, moral and legislative, for the prevention of certain sex diseases."

**Visit of American Surgeons to England.**—The following members of the American Society of Clinical Surgery sailed on the Mauretania Wednesday, June 22, for England; R. G. LeConte, G. G. Davis, J. P. Hutchinson, John Gibbon, C. H. Frazier, Edward Martin, Philadelphia; C. H. Peck, G. E. Brewer, J. A. Blake, New York; A. D. Bevan, L. L. McArthur, J. B. Murphy, M. L. Harris, Chicago: F. B. Lund, E. A. Codman, C. A. Porter, John C. Munro, Boston; Emmet Rixford, San Francisco; C. H. Mayo, Rochester, Minn.; G. W. Crile, Cleveland; Willard Bartlett, St. Louis, and J. M. T. Finney, Baltimore. The society will be entertained by the leading surgeons of England. The plan outlined is to spend ten days in the leading cities of England and Scotland, where a series of clinical demonstrations have been arranged by the leading surgeons of Great Britain. Among the social attentions to be tendered the surgeons are a visit to Oxford, where they will be entertained by Professor Osler, with a dinner at Christ church following, a cricket match at Lord's and a visit to the House of Commons. The tour is a unique one, but one that certainly will result, not only in bringing about a closer relationship between British and American surgeons, but also in an appreciation of the work that is being done that would not be possible under ordinary circumstances. Most of the party will return on the Lusitania, sailing from Liverpool July 9, although a few will extend their trip to the Continent.

**Distribution of Anti-Meningitis Serum.**—The Rockefeller Institute for Medical Research, which has been supplying the antimeningitis serum gratis for several years, has announced that it may discontinue, at any time after the expiration of the next six months, its preparation and distribution on a large scale. The consensus of medical opinion, based on the employment of the antimeningitis serum in widely separated epidemics of meningitis, is to the effect that it is of undoubted value in reducing the mortality and preventing the severe consequences of the disease. The serum is without effect in any other form of meningitis than that caused by diplococcus intracellularis (Weichselbaum) and its favorable action is most pronounced when it is applied early in the course of the disease. Hence it is desirable that state and municipal laboratories, engaged in the preparation of diphtheria antitoxin and allied products, should undertake the preparation of the serum and provide means for controlling the bacteriologic diagnosis of meningitis, as they now do diphtheria and some other diseases. Unless the bacteriological diagnosis is controlled by competent authorities, the serum will, undoubtedly, be applied in some cases of meningitis due to causes which are not subject to its action, and not a few cases of epidemic meningitis will be deprived of the benefits of its use. The serum is administered by being injected into the spinal canal by means of lumbar puncture, which operation is also required to secure the fluid for the bacteriological diagnosis; and several separate injections of the serum are required in treating a given case. The effective employment of the serum is likely, therefore, to be restricted on account of the experience and skill required in its administration and the high cost of the commercial product, unless the preparation, distribution and, when necessary, administration are undertaken by state and municipal authorities.

## LONDON LETTER

(*From Our Regular Correspondent*)

London, June 4, 1910.

### Physicians Oppose Even Moderate Use of Alcohol

The tendency of recent years has been to limit considerably the field of the utility of alcohol, and the amount consumed in the hospitals is a mere fraction of that consumed a few years ago. From time to time manifestos on the alcohol question signed by numerous and influential members of the medical profession have been published for the instruction of the public. They have generally been against the use of alcohol. A manifesto has just been issued by 101 doctors in North Wales, of whom 34 are health officers, to the following effect: "Recognizing the very serious injury to the national health caused by the present-day extensive over-indulgence in the various forms of alcoholic drink; recognizing also that the habit of over-indulgence is seldom if ever suddenly acquired, but grows gradually out of what is considered to be a moderate use, and generally in the belief that such moderate use promotes health, increases the power of work, prolongs life; convinced moreover that this belief is a dangerous delusion and one which prolonged observation and exact experiments of scientific men have conclusively proved to be so: We, the undersigned, appeal to all our medical brethren in North Wales to join us in an endeavor to discountenance the various popular errors that still largely prevail on this subject. We appeal to them especially not to give, or even seem to give, the sanction of their professional authority to any general employment of alcoholic drinks in cases of disease. We believe that these drinks are not necessary for the promotion of health; that they do not increase but on the contrary impair physical and mental efficiency, and that they do not prolong life."

### Great Scheme for the Providing of Dental Aid

A philanthropist who desires to remain anonymous has placed at the disposal of a prominent official of the British Dental Association the sum of $1,000,000 on "philanthropy and 5 per cent." terms for the establishment of a national dental aid organization for the benefit of the lower middle and poorer classes of the community willing to pay small fees for dental treatment and appliances, but who are unable to pay ordinary fees—in short, for the establishment of dental hospitals for paying patients—a much-needed bridge over the gap between the dentist and the ordinary dental hospitals. The problem is an old one and has been under the consideration of the authorities for many years but hitherto has been insoluble owing to the difficulty of obtaining capital. Suggestions of State assistance have been put forward but the obvious objection arose that the class to be catered to are unwilling to be the subjects of State or other charity. At present the benefits of conservative dentistry are confined to the well-to-do and the very poor, who are treated free at the hospitals, while individuals in the large intermediate class are unable to obtain them. The need for some such scheme is shown by the deplorable condition of the teeth of people in Great Britain. The mouths of the English have become a by-word in Europe. From 70 to 90 per cent. of school children suffer from defective teeth and start life badly crippled and unfit for the public service. Sixty-four recruits for the army per 1,000 are rejected for bad teeth (11 in excess of the next most frequent cause—"under chest measurement") and nearly 3 per 1,000 are rejected after enlistment for the same cause. During the late South African War 3,000 men had to be sent home as unfit for active service in consequence of defective teeth, in spite of the presence of army dentists. Subject to acceptance of the offer, a start will be made at once by starting a clinic in London. If successful this will be followed by similar establishments in every important town. To secure success it will be necessary to obtain the cooperation of the medical and dental professions, and the active support of many societies working in the interests of national health and hygiene. Though the provision of a national dental service will be the main object, a second mission will be the teaching of prophylaxis by the employment of paid visitors and lecturers on the principles of dental hygiene.

### The Dangers of Rag Flock

A government report just issued calls attention to a danger which has been discussed from time to time in the medical press without, however, the provision of any remedy. The substance known as rag flock which is used for the stuffing of the cheaper kinds of mattresses and upholstery is manufactured from all kinds of old rags. According to the report, the rags used are of the lowest grade and consist largely of cast-off clothing and strips of old carpet which may have been picked out from rubbish heaps. The rags are passed through a tearing machine termed a "devil." Although in this process much of the dirt is removed yet a large quantity remains. Dr. Farrar, one of the government inspectors, estimates that from 70 to 90 per cent. of the flock used for bedding and upholstery is neither washed nor sterilized, and the filthy nature of some of it is appalling. He states that old trousers often badly stained with urine and feces are among the commonest articles he has seen passed unwashed into the tearing machine. Some manufacturers purchase old beds and work up the contained flock, unwashed, with freshly torn material. Among other articles which are passed into the machine are surgical bandages and dressings, and stained towels. Another inspector, Mr. Warburton, reports that lice may pass through the machine without being crushed and though the adult animals would probably not survive any time in the bedding made from the flock their eggs would. Professor Nuttall and Dr. Graham-Smith have made pathologic experiments with flock and have by subcutaneous inoculation induced septicemia in mice. Dr. Farrar suggests that a standard of cleanliness for rag flock should be prescribed by law. He finds that there is no difficulty in discriminating between clean and dirty flock by chemical analysis. The average amount of chlorine in a liter of fluid prepared from washed flock he finds to be 6.5 milligrammes, and from unwashed flock 113 milligrammes. He suggests that 10 milligrammes of chlorin in one liter of wash prepared from the flock on regulated lines should be the permissible limit of impurity. Professor Nuttall and Dr. Graham-Smith agree that a bacteriologic standard is not feasible because the mere sterilization of flock would not remove the organic dirt.

### Alcoholism and Offspring

The doctrine that alcoholism in parents is injurious to the offspring has been submitted to the test of investigation in the Francis Galton Laboratory for National Eugenics. The investigation has been conducted by Miss Ethel M. Elderton, Galton Research scholar in the University of London, assisted by Prof. Karl Pearson, F.R.S. More than 3,600 school children were examined and a comparison was made between those who had parents addicted to alcohol and those who had not. A higher death-rate was found among the children of alcoholic than among the children of sober parents. This was higher when the mother was alcoholic than when the father was. It appeared to be due considerably to accidents and gross carelessness of the parents. The mean weight and height of the children of alcoholic parents were found to be not inferior to those of the children of sober parents. The startling observation was made that the general health of the children of alcoholic parents was on the whole slightly better than that of the children of sober parents. There were fewer delicate children among the former and cases of tuberculosis and epilepsy were markedly fewer. The explanation given is as follows: The physically strongest in the community have probably the greatest capacity and taste for alcohol. Further, the higher death-rate of the children of alcoholic parents probably leaves the fitter to survive. Epilepsy and tuberculosis, depending on inherited constitutional conditions, will be more common in the parents of affected offspring and probably, if combined with alcohol, are incompatible with any length of life or size of family. Parental alcoholism was found not to be a source of mental defect in offspring. The relation, if any, between parental alcoholism and filial intelligence was so slight that no numerical value could be assigned to it.

## PARIS LETTER

(*From Our Regular Correspondent*)

Paris, June 3, 1910.

### Epidemic of Acute Poliomyelitis in Paris

During the session of May 31 of the Academy of Medicine, Dr. Netter, physician of the Trousseau Hospital at Paris, read a paper on the epidemic of poliomyelitis observed in Paris following the summer of 1909, and again in last January owing to peculiar climatic conditions at the beginning of the year. In comparing this epidemic with those of New York City in 1909, of Sweden in 1905, of Norway in 1906, etc., Dr. Netter emphasized especially the fact that great epidemics are usually preceded and followed by smaller epidemics and that epidemic outbreaks in various parts of the world coexist or very closely follow each other. Like cerebrospinal meningitis, poliomyelitis is sometimes very contagious, sometimes scarcely contagious at all. The mortality exceeds 10 per cent. Aided by Levaditi, Netter has been able to prove that serum of patients who have had infantile paralysis presents neutralizing properties toward the virus of poliomyelitis.

### Election of Two National Correspondents to the Academy of Medicine

In its session of May 31 the Académie de Médecine elected as national correspondents Dr. Regis, adjunct professor in the clinic of mental diseases of the Bordeaux college of medicine, and Dr. Collignon of Cherbourg.

### The First Assembly of French Hospital Interns

The first Congrès Français de l'Internat des Hôpitaux (mentioned in The Journal, March 5, 1910, liv, 804) opened May 12 at Bordeaux. The following resolution was adopted: "In view of the fact that the internship is universally considered an incomparable school of medical and surgical education of which foreign physicians are justly envious, this meeting adopts the unanimous resolution to defend the institution of the internship, obtained competitively, against all the measures which would tend to suppress or to diminish its prerogative."

As for the method of recruiting, the assembly resolved in favor of the mode at present in force, that is to say by *concours*, with the necessity of passing through the externship. The sense of the meeting was that foreign candidates may be admitted to compete for the externship and the internship, provided they furnish all the diplomas and other conditions required of French students.

As for the scientific organization of internship, the assembly adopted two resolutions, one in regard to the creation of laboratories for scientific research in the internship and the other to the effect that during their service interns should, at their request, be given leave for a year to make a journey for scientific study among the university cities and abroad, and that competitions should be held for purses of travel, either in France or abroad, the beneficiaries being under obligation to make a scientific report on a question decided in advance by them.

The second assembly of hospital interns will take place in Paris next year.

### A New Regulation for the Sanitary Service of the Army in the Field

A new regulation for the sanitary service of the army in the field has just been prepared by a special commission, of which the medical inspectors-general Vaillard, Delorme, Claudet, and others, are members. This regulation is based on the following essential principles: (1) division of the regimental sanitary service into two parts, one of which is to follow the troops in action, while the other is to be stationed in the rear; (2) increase in the number and decrease in the weight of the ambulances, which are capable of being immobilized, or transformed into field hospitals by the addition of "sections d'hospitalisation;" (3) increase in the number of litter-bearers for the transportation of the wounded, under the command of physicians. Laws have previously made the sanitary service autonomous under the orders of the physicians; and according to these laws, everyone in the sanitary service was under the authority of the physicians. Physicians in the French army, however (unlike those in the German army, for instance), are not considered combatants although they have their designated place on the field of battle and in all wars many of them have been wounded by the enemy's fire. Not being combatants, their right to give orders and to exercise discipline over the members of the military transport service has been disputed. The new regulation grants to officers of the sanitary corps the necessary authority in this respect.

## BERLIN LETTER

*(From Our Regular Correspondent)*

Berlin, June 1, 1910.

### Details of the Death of Robert Koch

As you have already learned by telegraph, Robert Koch died May 27 at Baden-Baden. The apprehension which I already expressed in my first report of his illness many weeks ago was soon justified. A new attack of heart failure terminated his life. It goes without saying that one cannot adequately measure the importance of this gifted man in a letter and I may rightly assume that you will make a special tribute to the great master in your Journal. Surely in him we have lost one of the greatest physicians of the present time, indeed one may say without offense to anyone, the greatest, for no one has so impressed himself on the medicine of our time as Robert Koch. Since the present age of medicine may rightly be designated as the etiologic age, Robert Koch may be regarded as a creator of it. For while the foundation of modern bacteriology had already been laid by Pasteur and Lister, Robert Koch was the first to succeed by his investigations in securing a firm basis on which to build a system of infectious diseases in their etiologic relations. Inasmuch as his teachings also had secured the greatest results for public and social hygiene, the value of his lifework must receive a higher estimate than even that of a Rudolf Virchow. Sorrow at his death finds worthy expression in the entire civilized world as is shown by the dispatches. The two physicians who treated him, Professors Kraus and Brieger, of whom the latter, as is well known, is one of his most gifted pupils, make an extensive report in the *Deutsche medizinische Wochenschrift* regarding his last illness. In consideration of the interest that this clinical history possesses from a general scientific standpoint, I would like to give you an extensive abstract of it: Koch suffered from anginal symptoms since March, 1910, and for a year or more previous the pulse had been intermittent. The attacks which became steadily longer and severer, he overcame by his energy of will. Up to the last he worked daily from about 9 in the morning until 2 p. m. in the laboratory of the institute for infectious diseases and his ward in the Virchow hospital. Koch had for years considerable cough and occasional expectoration, but bacilli were never demonstrated. In the end of 1890 he passed through a severe left-sided pneumonia. During his tour in Japan, Africa and America he experienced no special difficulty.

Koch was never a heavy smoker nor addicted to the use of spiritous liquors, but he did not spare his body in any way during his travels and in his scientific work. He had once a severe attack of cholera and had repeatedly suffered from malaria and often had disturbances of the bowels. In the night of April 9, Koch without recognizable cause was attacked with heart failure of the severest kind. After a short sleep he awoke with a feeling of impending death, with heavy perspiration, severe dyspnea and vomiting. At the same time a sharp pain radiated from the precordium to the left shoulder. Immediately he noticed marked râles in the bronchi which were also evident to the bystanders. In this condition Brieger found him sitting on the edge of the bed with ice-cold extremities, in agonizing dyspnea, completely collapsed, but awaiting his end with a mind clear and composed. The pulse was thread-like with a frequency of about 80 (previously 58) and very irregular. An injection of morphin gave him relief after about fifteen minutes. He slept until 9 in the morning and then awoke with similar symptoms, specially the râles, the dyspnea and the heart weakness. Toward noon Brieger and Kraus examined Koch together. They found the condition better than in the night. The left ventricle of the heart was moderately hypertrophied. There was general edema of the lung with a frothy, serous and sanguinolent expectoration and a very frequent and irregular pulse. The heart tones were dull and faint. There was marked rigidity and contortion of all the palpable and visible arteries. The liver was slightly swollen, there was very slight increase of urine. It must be assumed that in consequence of disease of the coronary artery, a softening of the heart muscle had taken place. The next morning while the pain in the region of the heart had become especially severe a loud pericardial murmur could be heard. In addition there were marked hematuria and cylindruria. The temperature was somewhat raised one evening only. The friction sound disappeared after two days but a recognizable effusion of fluid did not occur. At the same time the urine regained its normal color, and was quite free from albumin and casts. At first the treatment consisted in the administration of digitalis, morphin and strong coffee, and the application of warm compresses to the region of the heart and to the feet and hands. Under this treatment a condition of comfort was secured which continued very satisfactorily for a week. The patient who at first had calculated that he would live three and later eight days acquired again a degree of courage, his appetite increased, the amount of urine rose to 1800 c.c. and the swelling of the liver was reduced. The pulse showed an average frequency of 60 and while the tension remained low the rhythm was good. The edema of the lung, however, was more obstinate and especially on the left side it continued and never fully disappeared. After the first week, the heart beat became for a few days unduly frequent, the pulse thin and very irregular and the edema increased. Treatment with digitalis also relieved this intermediate attack. After this the pulse rate was kept at 60, the tension of the pulse soon became much better and the blood pressure rose to 144 mm. Hg. The patient was able to be out of bed for days at a time. After May 14 he took several rides, received his friends and tried to read, to dictate and to carry on some literary work. Unfortunately the condition continued such that even with the moderate frequency of the pulse and a tolerable tension, the slightest emotion or light muscular effort, walking, etc., immediately produced marked acceleration of respiration.

A careful medical examination in the middle of May gave the following results: Arteriosclerosis, blood pressure 110-160 mm. Hg., normal rhythm (even with single ventricular extrasystoles), hypertrophy and dilatation of the left ventricle (as determined by the apex beat and the *x*-ray) enlargement of the left auricle. Murmurs in the heart were not again heard. The electrocardiogram showed a marked variation in the auricle and the "Nachschwankung" was markedly negative. The glands at the root of the lung appeared to be markedly enlarged on both sides, the tracing of the hilus was abnormally sharp and the left lung was insufficiently clear in the lower section. In the region of the apices there were no shadows (*x*-ray). Koch stated finally that he had had an old tuberculosis but for the moment he was more easy with regard to his dyspnea, for he had no fear of tuberculosis.

Koch was a quiet, uncomplaining and obedient patient. He did everything that the physicians directed, observed himself with greatest interest, discussed the progress in the findings and preserved always a stoic tranquility. He was pleased as a child when with increasing appetite the porridge which he had become so fond of in England tasted good again. So soon as the conversation turned on scientific matters he forgot immediately all his suffering, his eye sparkled under his high brow and only his dyspnea reminded him of the limits assigned to his physical powers. The prognosis from the very beginning was unfortunately bad. The little improvement in the findings which made possible a life in the arm chair and short promenades in his room deceived no one. Koch very earnestly desired to escape from the confinement of his room to Baden-Baden, where his friend, Libbertz, was staying. He stood the journey very well at which he was very much pleased. May 27 an aggravation of the condition suddenly occurred, and after an attack lasting for a few moments, death followed. Following his directions the body was cremated at Baden-Baden. According to his wish flowers were omitted and the funeral was strictly private. With reference to memorial services which are to be held at Berlin no definite arrangement has yet been made.

### Personal

Professor Hess, of Würzburg, has been called to Heidelberg as successor of Professor Leber in the chair of ophthalmology. Professor von Krehl is proposed as a successor of Curschmann. Whether Krehl, who is almost always called as successor when a chair for internal medicine is vacant in one of the German universities, will accept this call seems doubtful. He refused the proposal to become successor of v. Leyden, but possibly the chance to secure the position which his teacher formerly occupied may prove attractive to him.

### International Union Against Tuberculosis

On May 22 the managing committee of the international association against tuberculosis held its meeting here under the presidency of the head of the imperial health office. Besides Germany there were represented Austria, England, France, Sweden, Holland, and Denmark. The discussions were on the lines on which the international tuberculosis conferences in Brussels and Rome shall be organized; also the participation in the international exposition that is to take place in Dresden was taken under consideration. Further, the suggestion was made to communicate the results of investigation of consumptives in the form of a set of uniform signs and abbreviations, and thus to facilitate the mutual understanding between the different civilized nations. Also, the question of international tuberculosis statistics is to be further investigated.

### Discussion of Limitation of the Privileges Granted Foreign Students in the German Universities

Frequent complaint has been made of late years in the press that in consequence of the large ingress of foreign students, the native students at our universities and technical schools are deprived of the best places, and it has been urgently recommended that the excess of foreigners should be restricted. This subject was discussed a short time ago in the Prussian parliament. In this discussion the inconveniences that our native students suffer from the presence of foreigners, as well as the great value which the attendance at our universities possesses for foreign students, were thoroughly recognized. The Prussian minister of education expressed his opinion on this question, and it is well worth while for you and all those who desire to visit Germany for the purpose of study to learn the exact wording of the remarks which the minister made: "The Prussian universities have constantly regarded it as an agreeable duty imposed on them to assure hospitality to foreigners and to open to them as well as to our own youths the public lecture halls, so that they may draw from the wells of knowledge, learn German science, and return to their fatherland with the knowledge and impressions which they have acquired, where they have often become steady, true and valuable friends to us. To this policy we will still adhere, as it corresponds to the ancient tradition and to the high position which our universities, even today, still hold in the world." It is true that the minister added that in the case of institutions which demand considerable expense on the part of the state and where the question of room plays so great a rôle that it is possible to accommodate only a limited circle of hearers, it is probable that an increase of the fees for foreigners would be justified. This question will be investigated further by the department. In this matter a distinguished member of the parliament made the suggestion that an exchange of students might be arranged, similar to that which exists between the professors, and the desire was expressed especially that for German students who are studying in American universities the time that has been spent in Germany, and especially in Prussia, should be reckoned in the time required for attendance. The minister will give effect to this wish.

## VIENNA LETTER

(*From Our Regular Correspondent*)

VIENNA, June 3, 1910.

### Death of Professor Zuckerkandl

One of the most famous medical men of the old Vienna school passed away a few days ago in the person of Prof. Emil Zuckerkandl, the well-known anatomist, whose loss is felt keenly by his numerous friends and pupils. Zuckerkandl's name is known all over the world in connection with his researches on the anatomy of the nose and its accessory sinuses, as well as his work on the anatomy of the brain, the nervous system and topography of the human body. He continued the important investigations of his teacher, Hyrtl, on the circulatory system of the vertebrate animals. Nearly all the practitioners of the present generation were his pupils, and his animated style of lecturing with digressions on artistic motives in anatomy, as well as his splendid teaching qualities, caused students to throng his classes. A special feature in his method of teaching was the intimate personal contact with his students in the dissecting-room, where he spent all his free time teaching, demonstrating, investigating and explaining. Zuckerkandl's career was very brilliant. Born in 1849 he soon turned to medicine, and Hyrtl, then the leading anatomist, at once recognized the qualities of a scientist in the young student. Five years after graduation (1879) he was appointed extraordinary professor of anatomy in Vienna, after having been privat-docent in Utrecht, Holland, for a couple of years. In 1888, after having filled the post of ordinary professor in Graz, he was asked to succeed Karl Langer in Vienna, and thereafter he maintained the high position of the Vienna school which his predecessors had founded. The enumeration of his papers and publications is unnecessary here. It is sufficient to note that he was the recognized leader of anatomy in Central Europe.

### Postgraduate Instruction for Army Physicians in the Vienna Hospitals

The institution of postgraduate classes for practitioners has received the universal approval of all medical circles, and it has been resolved to make it a permanent feature of the teaching in our hospitals. The military authorities have also availed themselves of the opportunity thus offered to them by sending the medical officers of the home and the territorial force in turns to the postgraduate classes. Every military physician who has served at least 3 years is entitled to apply for 6 months' to 12 months' leave for the purpose of attending these classes. He is paid his full salary and the fees for the classes are paid for him by the government. He must satisfy the army board that he has profited by the teaching. He has to stay at least three months in one of the wards, taking his turn three or four times in different stations. For each year spent thus in hospital he has to remain at least 18 months longer in the army than the minimum time (6 years). These classes offer an excellent opportunity for the army physicians, and they flock to the hospitals. Surgery, ophthalmology, urology and rhino-otology especially are favored by them, while classes on bacteriology and sanitation, which are of such paramount importance for the army surgeon, are always crowded with these men. The facilities for learning are great, and the advantage of better promotion, increased knowledge and better pay are great inducements. Thus, in 1909, more than 260 regimental surgeons were enrolled in these classes.

## Correspondence

### The Layman's Reply to the Medical Freedom (?) League

The following is a copy of a letter sent to the leading newspapers of the country by Prof. Irving Fisher, president of the Committee of One Hundred on National Health. It will be interesting to see how many newspapers publish it:

*To the Editor:* Buying newspaper space appears to be the latest method of opposing a popular movement. Within a few weeks, three enormous advertisements, by a so-called "League for Medical Freedom," have appeared in newspapers throughout the country urging people to write their congressmen in protest against the Owen bill for a national department of health. Much to the amusement of congressmen, these advertisements have resulted in numerous telegrams, based on the absurd idea that the Owen bill aims to regulate the practice of medicine.

The result may be to aid, rather than hinder, the progress of the health movement. Already newspaper editorials—such as that which recently appeared in the *New York Times*—resent the buncombe of these advertisements.

But besides adding to the "gaiety of nations," this incident has created an appetite among the general public for more knowledge as to what this opposition signifies.

As president of the Committee of One Hundred on National Health, which was challenged in these advertisements, I wish to emphasize the following facts:

First: As the enclosed bulletin of the Committee of One Hundred indicates, the real strength of the opposition evidently comes from commercial interests, such as the quack medicine interests and others who have reason to fear the Food and Drugs Act. While Christian Scientists and other "drugless" cults are denouncing drug doctors and denouncing a "medical trust" which does not exist, these cults are themselves playing into the hands of a drug trust which does exist.

Second: Under our Constitution, the federal government could not, if it would, regulate the practice of medicine.

Third: The Owen bill contains no provisions aiming to regulate the practice of medicine.

Fourth: Section 8, in the Owen bill, the section authorizing the establishment of "chemical, biologic and other standards," has been eliminated entirely from the bill, although only a heated imagination could have construed this section as attempting to regulate the practice of medicine.

Fifth: Senator Owen did not prepare his bill at the instance either of the American Medical Association or of the Committee of One Hundred on National Health. It is true, however, that the American Medical Association and the Committee of One Hundred heartily endorse the bill in preference to any of the other numerous health bills now before Congress.

Sixth: The Committee of One Hundred on National Health is not a medical organization. It did not originate with the American Medical Association, but with the American Association for the Advancement of Science. It is allied with the American Medical Association only in the same sense that it is allied with labor organizations, farmer organizations, life insurance companies and various other agencies which are working to improve public health.

Seventh: While opposed to fraudulent quackery, which is always imposing "fake" medicines and cure-alls on the public, the Committee of One Hundred on National Health is not devoted to any particular school of medicine to the exclusion of others. Curiously enough, it was a Christian Scientist who moved the appointment of the Committee of One Hundred. Many members of our committee have been noted for their independence of conventional medicine, among them being ex-President Eliot of Harvard University; Mr. William H. Allen; Mr. Edwin Bok, editor of the *Ladies' Home Journal;* Mr. Horace Fletcher, Dr. Luther H. Gulick, President G. Stanley Hall, Mrs. John B. Henderson, Dr. J. H. Kellogg, Mr. S. S. McClure of *McClure's Magazine;* Dr. Richard C. Newton, who has called attention to some merits of osteopathy; and Mr. Nathan Straus. I may add that in my report on "National Vitality" to President Roosevelt, I put myself on record as favoring "medical freedom." I can endorse almost all of the position on that subject taken by Mr. Fowler.

Eighth: A department of health in America like the department of health in Germany, or anywhere else, will have better things to do than to regulate the practice of medicine. It will regulate the misbranding of foods and drugs (there's the rub!), the pollution of streams, the inspection of meats and quarantine and will obtain and distribute information in regard to health of human beings just as the Department of Agriculture does in regard to the health of hogs and cattle.

When the "League for Medical Freedom" suddenly appeared on the horizon, our movement had encountered substantially no opposition except among quacks and quack medicine proprietors. On the other hand, our movement has the support of the President, of both political parties, as expressed in their platforms, of scientific, philanthropic, medical and labor organizations and of the granges, as well as of the life-insurance companies, of Dr. H. W. Wiley of the Bureau of Chemistry and of General Walter Wyman of the Public Health and Marine-Hospital Service. The general public will find it hard to believe that these endorsements, especially the hearty endorsement of the life-insurance companies, can be in the interests of a "medical trust."

For further information, I would refer the reader to Bulletin 41 of the Committee of One Hundred about to be issued (address Drawer 45, New Haven, Conn.) to the Senate reports (Nos. 1 and 2) on hearings on S. 6049 (address Senate document room) to House reports of hearings on health bills, June 2-6 (address document room. House of Representatives) to Senator Owen's speeches (address Senator Owen) and to my report on National Vitality (Senate document 419).

Irving Fisher, President.

Committee of One Hundred on National Health.

### Letters of the Late Dr. N. S. Davis Wanted

*To the Editor:*—Will you kindly request your readers to send me any letters in their possession written by my father, Dr. N. S. Davis, or, if they are unwilling to part with the originals, to send me copies. Moreover, if any of your readers know where such letters are I shall deem it a favor if they will inform me. Original letters written by my father or other matter of biographic interest will be preserved and ultimately permanently cared for by the Chicago Society of Medical History.

N. S. Davis, Jr., Chicago.

# Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

### THUJA OIL IN CORNEAL OPACITIES

*To the Editor:*—Please give me information on thuja oil as used in corneal opacities, with especial reference to the amount of reaction it will cause, painfulness of the application and benefit from its use. One drop three times a day is recommended to be used. Is that too frequent? Will it be necessary to specify *Thuja occidentalis* in ordering, or is that the only variety used for oil? G. R. T.

Answer.—*Thuja occidentalis* is the only species of *Thuja* commonly used in medicine, and no doubt the oil from this species will be supplied when thuja oil is called for. The essential oil derived from *Thuja occidentalis* and other conifers (including the oil or spirits of turpentine) when dropped into the conjunctival sac sets up a sharp but transitory sclerocorneal congestion and thus stimulates absorption of certain opacities within the cornea itself. The effect thus produced is probably slight, and when the opacity is due to scar tissue, such oily irritants are of no value whatever. Indeed, the great majority of corneal opacities are not removed by this remedy, and it is certainly less valuable than massage with stimulating ointments, the use of thiosinamin and other remedies. If employed at all, thuja oil should be instilled once a day, one drop being put in every three minutes until three drops are used. If the pain and reaction are too great, the remedy should be diluted with sweet oil of almonds.

# The Public Service

## Medical Department, U. S. Army

Changes for the week ended June 18, 1910:

Holmes, T. G., M. R. C., Par. 2, S. O. 136, relieved from active duty in Medical Reserve Corps at expiration of 1 month leave of absence.

Brownlee, C. Y., major, Par. 3, S. O. 136, granted 3 months' leave of absence.

Siler, J. F., capt., Par. 6, S. O. 137, W. D., granted leave of absence for 1 month on or about July 1, 1910.

Pinquard, Jos., M. R. C., Par. 21, S. O. 137, W. D., relieved from duty at Fort Moultrie, S. C., and ordered to his home.

Pyles, W. L., capt., granted leave of absence for 3 months and 15 days on his arrival in the United States from the Philippine Islands.

Warriner, B. B., M. R. C., ordered to U. S. Military Prison, Alcatraz Island, Cal., for duty.

Buck, C. D., major, granted leave of absence for 1 month, to take effect on or about July 10, 1910.

Smart, W. M., capt., ordered from Fort Flagler, Wash., for duty,

Mills, F. H., M. R. C., ordered from Fort Flagler, Wash., to Fort Walla Walla, Wash., for duty.

Sheep, W. L., M. R. C., arrived at Fort Meyer, Va., for temporary duty.

Manly, Clarence J., major, ordered to accompany 25th Infantry from Fort Douglas, Utah, to Fort D. A. Russel Target and Maneuver Reservation, Wyo., for duty.

Morgan, N. D., cont. surgeon, ordered to accompany 4th Infantry from San Francisco to Fort Crook, Neb.

Pinkston, O. W., capt., ordered to proceed to Fort D. A. Russel, Wyo., for temporary duty.

Oliver, Robert T., E. & S. D. surgeon, relieved from duty at Fort Hamilton, N. Y., and ordered to the Philippine Islands, for duty.

Michie, H. C., Jr., M. R. C., ordered to Fort Myer, Va., for station and duty.

Eber, Albert H., M. R. C., on withdrawal of troops from Fort De Soto, Fla., will proceed to Fort Moultrie, S. C., for station and duty.

Clayton, Jene B., major, granted 14 days' leave of absence.

Dulin, Charles T., M. R. C., ordered to Army General Hospital, Fort Bayard, N. Mex., for observation and treatment.

## Medical Corps, U. S. Navy

Changes for the week ended June 18, 1910:

Heneberger, L. G., medical director, ordered to command the Naval Medical School Hospital, Washington, D. C.

Harmon, G. E. H., medical director, retired, detached from command of the Naval Medical School Hospital, Washington, D. C., and ordered home.

Richards, T. W., surgeon, detached from the Naval Dispensary. Washington, D. C., and ordered to continue other duties.

Neilson, J. L., detached from the bureau of medicine and surgery, Navy Department, and ordered to duty at the Naval Dispensary, Washington, D. C.

Thomas, G. E., asst.-surgeon, detached from the *Wabash* and ordered to the *Paducah* and to additional duty with a marine detachment.

## U. S. Public Health and Marine-Hospital Service

Changes for the seven days ended June 15, 1910:

Lavinder, C. H., P. A. surgeon, granted 1 day's leave of absence en route in Europe, under paragraph 189, Service Regulations.

Vogel, C. W., P. A. surgeon, leave for 10 days from June 1, 1910, amended to read 7 days.

Bahrenburg, L. P. H., P. A. surgeon, granted 4 days' leave of absence from June 2, 1910, on account of sickness.

Kolb, Lawrence, asst.-surgeon, granted 7 days' leave of absence from June 9, 1910, under paragraph 191, Service Regulations.

Branham, H. M., acting asst.-surgeon, granted 4 days' leave of absence from June 14, 1910.

Friedman, H. M., acting asst.-surgeon, granted 2 days' extension of annual leave from June 4, 1910, on account of sickness.

Rodman, J. C., acting asst.-surgeon, granted 12 days' leave of absence from June 13, 1910.

Schwartz, Louis, acting asst.-surgeon, granted 7 days' leave of absence from June 6, 1910, under paragraph 210, Service Regulations. Granted 14 days' leave of absence from June 14, 1910.

Storrs, H. R., acting asst.-surgeon, granted 7 days' leave of absence from July 5, 1910.

Walkley, W. S., acting asst.-surgeon, granted 3 days' leave of absence from June 20, 1910.

Board of medical officers convened to meet at the Bureau June 20, 1910, for the examination of candidates for admission to the service. Detail for the board: Surgeon W. P. McIntosh, chairman; Surgeon W. G. Stimpson; Passed Assistant Surgeon A. M. Stimson, recorder.

## Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

### Optometry Bill Vetoed in Ohio.

Evidently the governors of our states are having their eyes opened to the viciousness of the optometry bills which are occasionally passed by state legislatures. The bill passed in Maryland several weeks ago was promptly vetoed by the governor. In Massachusetts and New Jersey the bill was defeated in the legislature. The optometry bill which passed the Ohio legislature was vetoed by Governor Harmon in a message clearly stating his reasons for refusing to approve the measure. We commend Governor Harmon's message to the careful consideration of the governors in any other states in which such bills may be passed by the legislature. Governor Harmon says:

"Amended Senate Bill 51, entitled 'A bill to regulate the practice of optometry,' creates a board of five members to examine and license persons to practice 'optometry,' which it defines as 'measurement of powers of vision and adaption of lenses for the aid thereof by any means other than the use of drugs, medicine or surgery.'

"The express exemption of mere dealers in spectacles and eye glasses, and the requirement that the examination shall include 'anatomy and physiology of the eye,' as well as 'optics and such other subjects as said board may decide to be suitable and proper,' show that the proposed license is to cover something more than the mere commercial supplying of eye lenses to customers.

EYE PART OF SYSTEM

"That something is necessarily, from its nature, a part of the field covered by medical science. Our statute (G. O. 1286) includes in the definition of that field the prescribing, advising, recommending, administering or dispensing, for a fee or compensation, not only of drugs or medicines, but of appliances for the cure or relief of a bodily injury, infirmity or disease.

"It is beyond question that the eye is so connected with the general system that the subject of impaired or imperfect vision cannot properly be considered as though it were an independent function, and it is conceded that, especially with children, the condition and needs of the eye cannot, in a great many cases, be known without the application of drugs for dilation, as well as the examination of other bodily conditions.

LEADS TO GRAVE PERIL

"So to set men who have not themselves had medical education and stood the careful tests required by law in the interest of the public health to examine and license others to deal with one of the most delicate and important organs appears to me a step downward leading to grave peril. And if what may be called the mere mechanical treatment of defective vision is to be made a special branch of medical practice, it should be under the jurisdiction of the state medical board, so that the proper qualifications may be judged by men of approved education and training in the general science which dealt with the ills of the human body.

"But I know of no special branch of medical practice which is itself split up as is proposed here. All other special branches are complete in themselves, and no one is permitted to engage in them unless he is qualified to diagnose and deal with cases in all the aspects they may present.

GREAT SKILL NEEDED

"One who is not skilled in optical surgery and medicine surely cannot be safely trusted to tell whether these are not required instead of the mechanical treatment he is able to give, and the time lost in discovering the need of these will often make resort to them useless.

"Schools of optometry are mentioned in the bill, but it is shown by the evidence presented to me that such as there are generally, if not always, lack of requirements of proper education for so important an art as treating the human eye. Many of them are mere correspondence schools.

"It is true that dealing with vision ought to be strictly regulated, because, to common knowledge, much harm is done by itinerant and other persons who profess to supply the needs of the people. But I do not think this bill furnishes the proper means of regulation.

PUBLIC WOULD SUFFER

"On the contrary, by giving the authority of the state to many who lack the proper education and training, as this bill would, in my judgment do, the public would be misled as to their qualifications. Those so lacking would undoubtedly outnumber those who merely by special talent and practice would acquire a certain proficiency, as men do in all callings.

"Druggists often gain a knowledge of diseases and their remedies as extensive as some physicians have, yet they are not permitted to apply that knowledge in practice, because such cases are exceptional.

"For these reasons I herewith file the bill with the Secretary of State unapproved. Judson Harmon, Governor."

### Homeopathic Society Endorses Owen Bill

The following preamble and resolution in reference to the Owen bill were adopted by the Homeopathic Medical Society of the County of New York:

WHEREAS, In the public print representations have been made that the practitioners of the Homeopathic school of medicine are opposed to this bill, the Homeopathic Medical Society of the County of New York, at its regular meeting, June 9, 1910, passed the following resolution:

*Resolved*, That the Homeopathic Medical Society of the County of New York heartily endorses the proposed national Department of Health, feeling that such a department will increase the efficiency of state boards of health, and will produce a unanimity of action which is essentially lacking under the present conditions.

WILLIAM FRANCIS HONAN, M.D.,
President.
JOHN STROTHER GAINES, JR., M.D.,
Secretary.

## Marriages

HOWARD KAHN, M.D., to Miss Florence Ring, both of Baltimore, June 8.

MAX LOUIS MENDEL, M.D., Chicago, to Miss Marie Hughes of Vicksburg, June 8.

WILLIAM CARVER FORDER, M.D., to Miss Annie Laurie, both of St. Louis, Mo., June 6.

ARTHUR G. HYDE, M.D., to Miss Carrie L. Cook, both of Cleveland, Ohio, June 15.

NORMAN HAYES PROBASCO, M.D., to Miss Olive Koons, both of Plainfield, N. J., June 7.

WILLIAM MACKEE CROSIER, M.D., Alexis, Ill., to Miss Louise Lafferty of Chicago, June 8.

DANIEL SEWARD BROSNAN, M.D., to Miss Mary Ruth Davis, both of New Orleans, June 13.

MURRAY A. RUSSELL, M.D., Washington, D. C., to Miss Louise Joyce of Chicago, June 9.

ISIDORE CHARLES RESHOWER, M.D., to Miss Miriam Cardozo, both of New York City, June 15.

ALPHONSE M. BODDEN, M.D., Milwaukee, to Miss May Genevieve Riley of Portage, Wis., June 1.

WILLIAM HAROLD WICKETT, M.D., Anaheim, Cal., to Miss Chapman of Placentia, Cal., June 4.

ANDREW HAVEN CLEVELAND, M.D., Boston, and Aurelia Puderer, M.D., of Belleville, Ill., June 8.

GEORGE RILEY TUBBS, M.D., to Miss Bessie Florence Whitehead, both of West Point, Ind., June 7.

JOHN MONTGOMERY GELWIX, M.D., to Miss Mary Sherman Crall, both of Chambersburg, Pa., June 1.

FREDERICK OSCAR TONNEY, M.D., Chicago, to Miss Clara Evelyn Sanborn of St. Paul, Minn., June 4.

LAWRENCE KOLB, M. D., U. S. P. H. and M.-H. Service, to Miss Lillian H. Coleman, at Baltimore, June 9.

JULIUS LAWRENCE MOGULESKO, M.D., New York City, to Miss Dora R. Salzenstein of Chicago, June 12.

WILLIAM CHASE MUDGETT, M.D., to Miss Edith Cecilia Heizmann, both of Southern Pines, N. C., June 8.

WILLIAM EDWIN BAYLOR, M.D., Cedar Bluff, Va., to Miss Annie Sylvester Doughty, at Cedar Bluff, June 8.

HENRY C. MADDUX, M.D., M. R. C., U. S. Army, to Miss Katharine R. Oliver, at Charlottesville, Va., May 20.

JAMES GLEN REA, M.D., Wellington, Kan., to Miss Frank Kathryn Tucker of Fort Madison, Iowa, May 11.

## Deaths

**Louis Clark Pettit, M.D.** University of Pennsylvania, Philadelphia, 1883; formerly a member of the American Medical Association; American Medico-Psychological Association, and New York Academy of Medicine; for 23 years a member of the staff of the Manhattan State Hospital, Ward's Island, New York; a recognized authority on nervous diseases, and particularly paresis; died in St. Alexis Hospital, New York City, June 3, from arteriosclerosis, aged 52.

**Richard Crain Dean, M.D.** Jefferson Medical College, 1854; of Washington, D. C.; rear admiral U. S. Navy, retired on account of age limit, May 27, 1895, after ten years and nine months sea service and twenty-six years and two months shore duty; from 1870 to 1874 he was assistant chief of the Bureau of Medicine and Surgery; from 1876 to 1877 he was fleet surgeon of the North Atlantic Fleet; died at his home, June 9, aged 77.

**Edwin Wilson Rhea, M.D.** Jefferson Medical College, 1901; a member of the Medical Society of the State of Pennsylvania; one of the physicians in charge of the State Institution for the Feeble Minded of Western Pennsylvania, Polk; died in that institution, June 8, from speticemia, following appendicitis, aged 32.

**John Philip Henriques, M.D.** Yale University, Medical Department, New Haven, 1878, and valedictorian of his class; afterward graduated from the University of Heidelberg; died at his home in Edgewood, Providence, June 6, a year after an operation for gallstones, aged 53.

**A. D. James, M.D.** University of Louisville (Ky.) Medical Department, 1870; United States marshal for two terms, and congressman for two terms; died at his home in Penrod, Ky., June 7, from Bright's disease, aged 60.

**Charles M. Johnson, M.D.** University of Pennsylvania, 1850; a practitioner of St. Charles county, Mo., for more than fifty years and the oldest physician of the county; died at his home in St. Charles, June 7, aged 84.

**Benjamin Helm Peabody, M.D.** Cleveland Medical College, 1848; a surgeon in the Federal Army during the Civil War; died at the home of his daughter in Pittsburg, June 9, from heart disease, aged 85.

**James Holmes Wikoff, M.D.** New York University Medical College, New York City, 1854; a member of the Medical Society of New Jersey; of Princeton, N. J.; died at Atlantic City, June 8, aged 78.

**Edgar C. Rankin, M.D.** Kansas City Medical College, Kansas City, Mo., 1888; a member of the American Medical Association; of McLouth, Kan.; died at St. Mary's Hospital, Kansas City, June 1, aged 57.

**Edmund Stevens, M.D.** Albany (N. Y.) Medical College, 1898; deputy coroner of Ramsey county, Minn., of St. Paul; died at the City Hospital in that place, June 11, from pleuropneumonia, aged 34.

**Carl August A. Bruck, M.D.** Wisconsin College of Physicians and Surgeons, Milwaukee, 1896; a member of the State Medical Society of Wisconsin; died at his home in Milwaukee, June 10, aged 54.

**Frank T. Lindsay, M.D.** Howard University, Washington, D. C., 1875; a prominent colored practitioner of Xenia, Ohio; died in his office in that city, June 2, from heart disease, aged 54.

**Henry R. Maxson, M.D.** New York Homeopathic Medical College, 1880; of Nortonville, Kan.; a veteran of the Civil War; died at the home of his son in Cunningham, Kan., June 2, aged 71.

**Carl Schilling, M.D.** Missouri Medical College, St. Louis, 1880; a member of the American Medical Association; of Fort Wayne, Ind.; died at his home in that city, June 12, aged 56.

**Henry R. Field** (license, Mo., 1884); for 43 years a practitioner of medicine of Rockville, Mo.; postmaster in 1892; died at his home, May 19, from gastric ulcer, aged 72.

**Daniel Merritt Griffen, M.D.** College of Physicians and Surgeons, New York City, 1891; of Port Chester, N. Y.; died at Hot Springs, Va., June 3, from nephritis, aged 44.

**William Carpenter Comstock, M.D.** Hahnemann Medical College and Hospital, Philadelphia, 1896; died at Sudbrook Park, Baltimore, June 5, from heart disease, aged 38.

**Charles Frederick Moore, M.D.** Rush Medical College, Chicago, 1888; a member of the Illinois State Medical Society; died at his home in DeKalb, June 10, aged 48.

**Carl P. H. Buck, M.D.** Copenhagen, Denmark; a resident of California since 1854, and a Civil War veteran; died in Santa Rosa, May 19, from mixed sarcoma, aged 75.

**Edgar Martin, M.D.** Cleveland Medical College, 1856; a pioneer practitioner of Huron county, Ohio; died at Norwalk, Ohio, June 8, from pneumonia, aged 84.

**William H. Gibbs, M.D.** Medical College of Virginia, Richmond, 1862; a Confederate veteran; died at the home of a nephew in Richmond, June 5, aged 75.

**Warren Andrus James, M.D.** Bellevue Hospital Medical College, New York City, 1865; died at his home in Brooklyn, June 2, from heart disease, aged 71.

**Charles A. Burleigh, M.D.** California Eclectic Medical College, 1889; of Forest Hill, Cal.; died at that place, June 3, from pneumonia, aged 47.

**James Allman Dixon, M.D.** Hahnemann Medical College, Chicago, 1884; died at his home in Bellaire, O., June 10, aged 53.

**George W. Swartout** (license, Mich., 1900, twenty-three years' practice); of Aurelius, Mich.; died at Ann Arbor, June 9, aged 80.

**Charles Ferris, M.D.** Pulte Medical College, Cincinnati, 1895; died at his home in College Hill, Cincinnati, June 4, from hepatitis, aged 35.

**Lewis J. Fabian,** (license, Pa., 1884); died in Philadelphia, February 23, from epithelioma of the tongue, aged 70.

**Angus Macdonald, M.D.** Boston University, 1876; died at his home in Boston, June 1, from pancreatitis, aged 65.

**John R. Gardiner, M.D.** Rush Medical College, 1876; died at his home in Wichita, Kan., May 27, aged 62.

**Henry Thomas Simmons.** Dr. Henry Thomas Simmonds, Shamokin, Pa., advises us of an error in the death notices of June 11. The deceased was not a graduate of the University of Pennsylvania, Philadelphia, 1908, nor was he located at Altoona, but was a senior student in Western Reserve University, Cleveland. The similarity of both christian and surnames was the occasion for this error.

# Society Proceedings

## COMING MEETINGS

Maine Medical Association, Bar Harbor, June 29-30.
New Jersey Medical Society, Atlantic City, June 28-30.

## NEW HAMPSHIRE MEDICAL ASSOCIATION

*One Hundred and Nineteenth Annual Session, held at Concord, May 12, 1910*

The President, Dr. Frank Blaisdell, of Goffstown, presiding

### Officers Elected

A list of the newly elected officers appeared in The Journal, May 28, p. 1795. Concord was chosen the next meeting place for May 11 and 12, 1911.

### President's Address: Medicine in New Hampshire

Dr. F. Blaisdell reviewed the history of the association and gave a brief résumé of 120 years of New Hampshire medicine and the indebtedness of the state to the medical profession. He made special reference to Dr. Josiah Bartlett, the first signer of the Declaration of Independence after the President had signed it; Matthew Thornton, a member of the Continental Congress in 1776; David L. Morrill, United States Senator in 1824, also governor; Noah Martin, former senator and governor; the present governor, Henry B. Quinby; and United States Senator, Jacob H. Gallinger. He commended the work of the State Board of Health in securing the passage of a bill granting money to build a state sanatorium at Glen Cliff. He spoke of the need of more laboratories; also that its work should be extended to the prevention of loss of life by preventable accidents on railroads and in shops, to sweatshop methods, and poisoning while working with chemicals, the prevention of criminals and the physically unfit from marrying, and the sterilization of those whose children would only increase the criminal class. Reference was also made to Dartmouth College and its work for 112 years.

### Secretary's Report

Dr. D. E. Sullivan: One of the principal events of the year was the visit, early in October, of Dr. J. N. McCormack of Kentucky, Chairman of the Committee on Organization of the American Medical Association, and I do not know of any one thing in recent years that has left such a profound impression on the minds of both the profession and the laity as the sentiments he expressed. Addressing the doctors in the day and the public at night in his characteristic forceful manner, he delighted large audiences at Keene, Claremont, Woodsville, Berlin, Laconia, Concord and Manchester. Our only regret was that other sections of the state were not favored. As was anticipated, the realization of the radical changes in our constitution and by-laws has not been accomplished without some misunderstandings. To-day, however, most of the county officers and members have a fairly definite conception of the essentials. I would suggest that you advise the component societies to have more frequent meetings; to combine the offices of secretary and treasurer, with a salary commensurate to the duties; and to have January 1 the beginning of the fiscal year.

### The Owen Bill

On the recommendation of the Committee on Public Policy and Legislation, the following resolutions were adopted:

Whereas, Sanitary science has demonstrated its ability to protect and to prolong human life, we believe that the diversified federal activities for the public health interests of this great country, those now existing and those that could be inaugurated for the further protection of human life, should be assembled under a Department of Public Health; therefore

*Resolved*, That we approve the provisions of Senate Bill No. 6049, to establish a Department of Public Health, and we respectfully ask our senators and representatives in Congress to give due consideration to the voice of the New Hampshire Medical Society herein expressed.

*Resolved*, That the secretary of this society be directed to transmit a copy of the foregoing preamble and resolution to each of the New Hampshire senators and representatives in Congress.

### Report of the Committee on History

It was agreed that the written transactions of the society and of the council from the organization of the society in 1791 to the year 1854, inclusive, be printed, same to be in the original phraseology, spelling, punctuation, etc., of the manuscript records. The committee stated the desirability of authorizing the full and complete indexing of the work, and of giving them authority to include a list of the members of the New Hampshire Medical Society from its organization to the present time. The treasurer suggested that the names of the members of the society be included up to the time of 1854 and the names of those who have joined since omitted.

### Alcoholism

DR. HARRY E. MYGATT, Nashua: There is no greater evil, no more extensive and widely spread disease than that of alcoholism, with sociability one of the great causes. I do not believe that alcohol is a food. Alcoholism should be regarded as a disease producing vice and a vice-producing disease. It is a potent factor in the development of mental and nervous diseases, surpassing all other causes. Its treatment should be conducted along three lines, namely: Influences which incite or strengthen moral resolutions; medicinal; controlling enforced abstinence. The one *sine qua non* of genuine treatment is unconditional abstinence from everything intoxicant. The present treatment of inebriate offenders against the law is neither curative nor deterrent. He recommended the necessity of greater attention to neurotic and psychopathic indications, and advocated the enactment of laws providing their commitment to suitable institutions for scientific treatment.

### Asthma in Relation to the Nose

DR. THOMAS W. LUCE, Portsmouth: Some authors say asthma is never due to trouble within the nose, while some specialists claim all cases can be traced to the nose. Such extreme views are not accepted by the profession. In 1902 Dr. Alexander Francis of London, by cauterizing the septal mucous membrane, was able, in a large number of cases, to relieve asthmatic attacks. Cases with polypi constitute the least hopeful cases for permanent relief. In forty-two cases treated during the last three years results under this treatment were more satisfactory than any other ever employed. General treatment was not neglected and a number were given iodid of potash.

#### DISCUSSION

DR. CHARLES C. ROGERS, Farmington, commended the treatment.

DR. FRANK E. KITTREDGE reported cases of asthma cured, or greatly relieved, by operations on the nose, such as removal of polypi and correction of a deflected septum.

### Incipient Pulmonary Tuberculosis

DR. P. CHALLIS BARTLETT: It is apparent that the increased knowledge of this disease has made it a personal affair with everyone. It is, of course, needless to say that the earlier the diagnosis is made the greater the prospect of complete cure. Many cases of tuberculosis develop insidiously after an attack of pneumonia. Professor Fisher places the economic loss to a community for each death from tuberculosis at $8,000. The whole aim is to build up the body, thereby increasing the natural resistance, and only by the observance of the little details can this be done, with strict cooperation between the patient and physician. The patient should be told that there may be set-backs, but that by sticking to it most patients may look for a complete cure. We know that tuberculosis is preventable, and that education will reduce the number of cases very rapidly. The work that has been done in the last two decades has changed what was considered an incurable disease into a curable one.

#### DISCUSSION

DR. J. M. GILE: I wish to refer briefly to the broad features of the great battle that is now on against this disease that has so black and so fatal a history. The weapon with which we fight the disease from now on is knowledge, and that knowledge is based on the fact that we know the life history of the germ that precedes the disease. Suppose to-day you could quarantine and should quarantine every individual and every animal that has active tuberculosis as you would quarantine like cases of leprosy. One generation in the human race would practically wipe out tuberculosis. In regard to the state sanatorium, it is established as an institution for educational purposes and for the taking of incipient cases that should be curable; so please remember the principle of the institution and do not send incurable patients.

### Some Tendencies in Modern Medicine

DR. JOHN W. STAPLES, Franklin: It is in the rôle of preventive medicine that its greatest and most fruitful victories have been won. Every water supply and every milk supply must give an account in the laboratory of the work done in the body. This advancement in preventive medicine means that the valuable colleges must graduate less men and men better equipped. It means, without a rearrangement of value, a diminishing amount of income to take a strong stand in favor of adequate pay from town and city officers. I wish that conditions were such that no physician would do contract work, and I ask for a rigid examination as to the ability of patients entering hospitals to pay the physicians for his services. I wish to endorse the postgraduate course recommended by the American Medical Association.

#### DISCUSSION

DR. ABRAM W. MITCHELL, Epping: Without any question, medicine has so many tendencies that it would be impossible for a man to anticipate what a writer or speaker would take up. We are really in a stage of transition from methods ancient and methods modern. Medicine is now coming grandly and scientifically into its own as a more exact science, and I believe that our relations with each other and with our patients are changed and the change is not always due to us. I believe that the patient is learning to look on his doctor more as a pilot than a wrecker.

DR. JAMES B. WOODMAN, Franklin: Our public health officers will hold a more important place and will be better paid; will be given more authority, a broader scope and will be more efficient. All our state institutions will be given greater scope and will do more and better work. This means an enormous cutting down of disease and the gathering together of much of it that remains in large centralized institutions.

(*To be continued*)

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## CANADIAN MEDICAL ASSOCIATION

*Forty-third Annual Meeting, held in Toronto, Canada, June 1-4, 1910*

The President, DR. R. J. BLANCHARD, Winnipeg, in the Chair

Addresses of welcome were delivered by Dr. Rine, Minister of Education for Ontario, representing the Provincial Government; Mr. Ward, representing the City of Toronto; and Dr. R. A. Falconer, representing the University of Toronto. The president for the year, Dr. Adam H. Wright, Toronto, was then inducted into office.

### President's Address: Medical Education, the General Practitioner and the Surgeon

DR. ADAM H. WRIGHT, Toronto, stated that the medical student of the present day was overburdened with subjects in his curiculum and that in order to develop into a useful medical practitioner he needed to be taught less and to learn more. Dr. Wright believed that not infrequently the modern surgeon was rather inclined to exhibit his own swill than to attempt to impart his knowledge to the medical student and to the general practitoner.

### Report on Pasteurized Milk

Dr. Charles J. C. O. Hastings, Toronto, secretary of the milk commission appointed about two years ago by the Canadian Medical Association, presented the report. Dr. Hastings mentioned the large infant mortality in Ontario and in Canada generally and stated his belief, and the belief of the commission, in the merits of pasteurization, which he said, destroyed hurtful germs without impairing the nutritive qualities of the milk. The commission had cooperated with the milk dealers of Toronto so that a very considerable quantity of officially pasteurized milk and cream was now sold in that city. The outlook, he said, so far as a better milk-supply for Canada was concerned, was exceedingly hopeful.

Dr. Charles E. North, New York City, was also in favor of pasteurization. He said that out of 300 guinea-pigs he had inoculated with samples of New York milk, half of those inoculated with raw milk had died, one of those inoculated with commercially pasteurized milk, and none of those inoculated with certified milk.

Prof. A. McGill, Dominion Analyst, said that before any steps could be taken in the direction of legislating for a pure milk-supply, it was necessary that a specific definition should be made of pasteurized milk, which at present it was very difficult to correctly define.

J. G. Rutherford, Veterinary Director-General of Canada, emphasized the necessity of stamping out tuberculosis in cows if it were desired to eradicate the disease in the human species. Of course Dr. Rutherford is a firm upholder of the theory that bovine tuberculosis is transmissible to man and is an advocate of very drastic measures of prevention.

### Address in Medicine: Bright's Disease

Dr. W. P. Herringham, Physician to St. Bartholomew's Hospital, London, Eng., said that nephritis should be a subject of especial interest to physicians in America, as, according to statistics, it is rapidly increasing in the cities of this continent. He dwelt on the fact that acute nephritis was very rare in England and that the disease generally had an insidious course. He pointed out that the presence of albumin in the urine was not the only symptom, nor the lesions of the glomeruli the only lesions, but that the greatest harm wrought by an attack of nephritis was the delicacy of the parts affected as a result, and the liability to recurrence. With respect to the exciting cause, Dr. Herringham said that it was almost impossible to dogmatize. A patient afflicted with Bright's disease might be compared to a town of which the drainage system is out of order. Diet was a very important factor of treatment, but although the nitrogenous constituents of food should be largely avoided, Dr. Herringham was not in favor of the diet being restricted to fish or being regulated on hard and fast lines. He said that light ordinary diet was satisfactory; and he had found that patients did better on flesh than on milk. Strict moderation should be observed as to quality in diet, but considerable latitude might be allowed as to variety. Exercise and fresh air were beneficial but exposure should be guarded against and warm clothing worn, especially around the loins. The chief object in serious cases should be to avoid uremia by exciting the excretions of urine. Milk was sometimes effective for this purpose and he employed saline diuretics, cardiac stimulants and alkaloids as circumstances seemed to indicate. Dr. Herringham said that according to his experience hematuria was most difficult to control. For the edema so often present, the safest way, if possible, was to drain by cannulas. Deprivation of salt was useful in some of the milder cases. Regarding the high blood-pressure, in those suffering with Bright's disease, the speaker said that he looked on this symptom as one of compensatory action and in young persons as not serious. The arteries of the young were elastic and capable of much tension. In old people, and after 50, high blood-pressure was dangerous for the obvious reason that the arteries were brittle and frail. In certain cases venesection might be valuable, and might prevent the poison in the blood from passing the bounds of tolerance. The wonderful point in connection with renal disease, in the opinion of Dr. Herringham, was not that the patients died, but that some of them lived as long as they did live. Possibly the continued presence of the poison in the system established a certain degree of immunity of its own.

### Publication of Journal Recommended

The association council recommended that the association should bring out a journal of its own forthwith, with Dr. Andrew McPhail, of Montreal, as editor, which should absorb the *Montreal Medical Journal.* This recommendation was adopted.

### Dominion Registration

Dr. T. G. Roddick produced an amended bill on Dominion registration. In this the principal change was that the Dominion should not define the qualifications necessary for matriculation in the study of medicine and for obtaining the provincial license, this, as formerly, being regulated by the provincial authorities.

### Address on Surgery: Surgery of the Joints

Dr. John B. Murphy, Chicago, said that in joint injuries it was the capsule that gave the surgeon the most trouble. Considered from a pathologic standpoint, he said, the capsule was a non-vascular fibrous tissue, an inelastic structure difficult of dstruction and that its non-vascularity made inflammation of joints especially difficult to treat properly. Draining a joint was, as a rule, wrong because the endothelial layer was thereby destroyed. The object in order to save a joint from ankylosis was not to lay it open but to close it. By means of animal experimentation and by accurate observation of human subjects, Dr. Murphy thought that it had been demonstrated that inflammation of the joint was not rheumatic in character but metastatic, the rational treatment, therefore, was to relieve the condition which destroyed. Aspiration and not opening of joints was indicated. The aspiration should be done with formalin and glycerin or sometimes with turpentine. Treatment should be pursued promptly before pathologic processes had had time to effect their destructive work. He said that it might be taken as a surgical axiom that every acute infectious process in a joint could lead to ankylosis by pressure; to avoid this the limb should be kept extended. Formalin and glycerin should be injected seven or eight days before operative treatment of the patella and if this were done no effusion would occur.

### Symposium on Exophthalmic Goiter

Dr. S. P. Beebe, New York, pointed out that Graves' disease was not always a functional disturbance of the thyroid gland. The hypertrophied condition of the gland varied considerably in different cases; its secretions also altered in type with the progress of the disease. As a matter of fact, clinical conclusions often clashed with pathologic findings. Laboratory studies showed that the exact conditions of exophthalmic goiter could not be reproduced in animals although conditions could be reproduced resembling these in most respects. Dr. Beebe uttered the warning that iodin was readily taken up by the gland in Graves' disease and unless caution were observed the clinical results might be fatal. A serum for the treatment of exophthalmic goiter had been prepared by inoculating animals with proteids from human thyroid gland and Dr. Beebe was understood to say that the limited administration of the serum had been attended with satisfactory results.

Dr. A. McPhedran, Toronto, said that the disease was not prevalent in Canada. In the General Hospital, Toronto, during the past five years there had been 55 cases out of a total of 8,000 medical cases; of surgical cases there had been in the same hospital about 0.5 per cent. With regard to prognosis Dr. McPhedran was non-committal and he remarked that surgical writers were skeptical of the utility of medical treatment and statistics seemed to justify this attitude. Statistics, however, were naturally more favorable to the surgical side of the argument than to the medical.

Dr. F. H. Shepherd, Montreal, believed that surgical treatment of the disease was by no means ideal; he looked for a vaccine or serum treatment as the only rational mode of removing the cause. Surgical treatment, he said, often relieved and sometimes cured but physicians did not generally send patients to surgeons until the disease was too far advanced for operative measures to be wholly successful. He thought that the extremely excitable state in which sufferers from this malady were wont to be was the cause of many unsuccessful operations and he had tried, with some favorable results, the policy of operating without giving the patient a previous intimation of the decision to do so. When the operation is performed it should be done rapidly and the parathyroid should be left in position as nearly as possible.

In the discussion which followed the most important point brought out was that in a very large number of cases the tachycardia was not relieved by operation.

### Address in Gynecology: Old and New Gynecology

Dr. Henry C. Coe, New York, praised the giants of the past, such as Lawson Tait, Sims, Emmet and Thomas, and deplored many of the modern operative fads which American gynecologists and obstetricians in particular had so blindly taken up. He pointed out that most of these bizarre operations had died a natural death. With the marvelous increase in skill in abdominal surgery, he said, there had been but little decrease in the death-rate from puerperal sepsis. Of course, this was more a question of aseptic surroundings than of surgical skill and was due to the fact that the housing of the poor in all large cities was still very defective. Prophylaxis should be the keynote of general medicine. Dr. Coe stated that he believed that marriage would one day be subject to state control. He said that this was no fanciful dream but well within the realms of practical politics.

### Medical Education and Inspection

Dr. J. C. Connel, Kingston, Ont., proposed the appointment of a committee to deal with the subject of medical education. This was agreed to and a committee was formed. A report advocating the adoption of a system of medical inspection in all the schools of Canada was presented by Dr. John Stewart of Halifax and as a result a special committee was appointed to consider the question.

### Election of Executive Council and Appointment of Officers

The following were elected for the ensuing year to the Executive Council: I. C. Fagan, Vielorid, B. C.; D. Ingersoll, Olmsted, Hamilton; George E. Armstrong, Montreal; A. I. Shillington, Ottawa; James Bell, Montreal; F. N. G. Starr, Toronto; J. T. Fotheringham, Toronto; J. H. Elliott, Toronto; John Stewart, Halifax; R. A. Reeve, Toronto; A. McPhedran, Toronto; Murray Maclaren, St. John, N. B.; Alex. McNeill, Charlottetown; J. D. Lafferty, Calgary; and F. G. Finley, Montreal.

The following officers of the Association were appointed for the coming year: President, Dr. George E. Armstrong, Montreal; general secretary, Dr. E. W. Archibald, Montreal; treasurer, Dr. H. B. Small, Ottawa; vice-president for Quebec, Dr. Simord, Quebec; local secretary, Campbell Howard, Montreal; finance committee: Dr. James Bell, Montreal; Dr. J. L. Fotheringham, Toronto, Dr. Murray Maclaren, St. John, N. B., Dr. S. J. Tunstall, Vancouver, B. C., Dr. F. N. Starr, Toronto, Dr. F. J. Blanchard, Winnipeg, and Dr. F. B. Finley, Montreal.

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# Current Medical Literature

## AMERICAN

Titles marked with an asterisk (*) are abstracted below.

### New York Medical Journal

*June 11*

1 Reconstruction of the Elbow After Fractures of the Lower End of the Humerus. J. B. Roberts, Philadelphia.
2 Pathology, Treatment and Prophylaxis of Gastric and Duodenal Ulcers. W. H. Thomson, New York.
3 *Importance of Blood-Pressure in the Toxemia of the Latter Half of Pregnancy. J. C. Hirst, Philadelphia.
4 *Recent Psychologic Tendencies in Psychiatry. W. A. White, Washington, D. C.
5 The More Common Forms of Uterine Bleeding, and Their Treatment. S. W. Bandler, New York.
6 *The Injection of the Salts of Mercury and Arsenic During the Reaction Period Following Tuberculin Injections as a Treatment for Tuberculosis. C. A. Penrose, Baltimore.
7 The Immediate Repair of Injuries to the Pelvic Soft Parts Following Labor. J. O. Polak, Brooklyn.
8 *Appendicitis Associated with a Fetal Position of the Cecum in the Subhepatic Position. C. B. Ingraham, Denver.
9 Primary Tuberculosis of the Nose. S. Oppenheimer, New York.
10 Education and Instruction in Sexual Relations as a Prophylaxis Against Venereal Diseases. A. Ravogli, Cincinnati.

3. **Blood-Pressure in Pregnancy.**—In order to establish a standard of normal blood-pressure from which the deviations could be noted, Hirst has taken the blood-pressure of 100 non-pregnant women, showing no signs of any kidney or heart lesion likely to give misleading results. The average blood-pressure, according to Faught's instrument which was used, was 112 mm. The blood-pressure of 100 normally pregnant women was then taken, who at no time showed albumin or any constitutional sign of toxemia, and this pressure was found to be 118 mm. These figures hold good up to approximately seven and one-half months, past which date there is a gradual rise, so that in the middle of the last month of pregnancy, a fairer average is 124 mm. The blood-pressure increases slightly until subsidence of the uterus takes place, and from then there is no further increase, and frequently a slight fall.

In women showing symptoms of toxemia, however, the picture changes. The blood-pressure in 39 women with eclampsia and 18 who did not have eclampsia but had marked albuminuria at the time the first examination was made, was at its lowest, 142 mm. The highest blood-pressure recorded in a woman without eclampsia was 192 mm.; the highest in an eclamptic was over 320 mm., so high that the mercury ran out of the top of the tube before the pulse was shut off.

4. **Psychology and Psychiatry.**—White says that the greatest change that has come over psychiatric conceptions in recent years is the recognition of the necessity for individual psychologic analysis. As a result of this analysis there has been found a region of mind which is out of the field of complete conscious awareness. In the normal process of mental development constellations of ideas corresponding to frequently repeated adaptations are relegated to this region where they act more or less automatically thus leaving the upper strata free for new and unusual types of reaction. The field of full and clear personal consciousness is this field of new and unusual necessities for adaptation. The field of clear personal consciousness conditions relatively few of our mental states. The complex is a pathologic constellation which is repressed from full expression by the censor of consciousness. The compromise between the effort of the complex to gain expression and the censor to repress produces the phenomena of the psychoneuroses and of dreams. Dreams therefore become the royal road to the subconscious. It is no longer possible to dismiss a mental symptom by recording it or to dismiss a case by simply observing the obvious. Every symptom requires to be analyzed and traced to its ultimate and efficient cause. Only by such methods can it be hoped to help the patient by the application of a rational therapy.

6. **Mercury and Arsenic in Tuberculosis.**—With the hope that antiseptics would enable one to use larger doses of tuberculin without risk, and that the larger doses of tuberculin by their action on the tuberculous areas would insure better penetration of these antiseptics into such places, Penrose gave his patients from one-fifth to one-third of a grain of succinimid of mercury, hypodermically, every other day, until 30 injections had been taken and then started them in with small doses of tuberculin (old tuberculin) hypodermically until a good tolerance dosage was obtained, and then gave this usually every other day, alternating with mercury injections for fifteen days. After a variable period of rest from treatment, from fifteen to thirty days, he gave another course of the mercury alone, etc. He now finds it best to get the tolerance dose of tuberculin first in the untreated case and then he has a gauge as to the amount of tuberculin best to use after the mercurial course. This, he has usually found, is three to four times as large as the initial dose of tuberculin used before the administration of the mercury. In one case especially, Penrose was surprised to find that such a dose every other

day gave no general reaction, although one-fourth of this dose every four or five days before the mercury was started shot the temperature persistently up to 102° F. and more.

8. **Subhepatic Appendicitis.**—In Ingraham's case the patient first had uneasiness and fairly acute pain in the region of the stomach which shifted into the right side of the abdomen and became quite severe. There was some nausea, but no vomiting. The abdomen was rigid in the upper quadrant and soft in the lower. There was moderate tenderness just below the ninth and tenth cartilages, no tenderness whatever at or below the line from the navel to the anterior superior spine of the ileum. Because of the typical onset and pain in the epigastrium, shifting to the right side, the diagnosis of appendicitis was made, with the suggestion that the position of the rigidity and tenderness might be accounted for by the appendix pointing high or due to a high fetal position of the cecum. Operation was decided on.

A high right rectus incision was made, and after a fruitless search for the appendix in the right iliac fossa, the incision was prolonged upward and by following the transverse colon, the cecum was found lying over the right kidney and just below the liver margin. The appendix with a darkened swollen tip pointed upward and outward, arising from a point on the cecum anteriorly and toward the right. The cecum was attached and could not be brought out of the incision.

### Medical Record, New York

*June 4*

11 Actinomycosis (Streptothricosis) in Man with Pulmonary Involvement. A. C. Wood and A. A. Eshner, Philadelphia.
12 Actinomycosis of the Cheek Following Injury by a Dental Instrument: Recovery. A. Stengel, Philadelphia.
13 *Diabetes Mellitus—A Sympathetic Neurosis Rationally Treated with Electricity. J. M. Liebermann, New York.
14 The Principles and Technic of the Wassermann Reaction. G. Gillman, San Francisco.
15 *The Treatment of Progressive Scoliosis. M. Strunsky, New York.
16 Three Years of Rabies in Indiana. J. P. Simonds, Indianapolis.

13. **Diabetes Mellitus.**—Liebermann regards diabetes mellitus as a neurosis dependent on disturbance of the nerve energy supply to the digestive system. There is a vasomotor paralysis of the splanchnic area, causing hyperemia of vessels about the liver. This is induced by injury or irritation of some nerve of the cerebrospinal system, or injury or irritation of the filaments and ganglia of the sympathetic system. Electricity properly applied will relieve this hyperemia. The high potential and high frequency currents are the proper ones to use. The indirect positive static spark or brush, with negative insulation, or the same polarity in high frequency effleuve is applied over the epigastric region and celiac plexus. It has a sedative, pleasant effect and causes sleep. The symptoms subside gradually and sugar disappears.

15. **Treatment of Progressive Scoliosis.**—Strunksky advocates a system of treatment of scoliosis which dispenses with the corset or other support as not only unnecessary, but harmful, and makes use of exercises in the horizontal position, with prolonged rest on the back. In this position deformity disappears, while in the upright posture it is present. At the same time everything is done to increase the tone of the nervous system and the general condition. He allows creeping exercises, and exercises of the shoulders and trunk in the horizontal position, with pelvis or body strapped to the table. There is a wider range of excursion for the vertebræ, a wider amplitude of muscular contraction, a tendency to restore the muscles to their normal length, and relief for the vertebræ from the superincumbent weight.

### Boston Medical and Surgical Journal

*June 9*

17 Surgery in London at the Beginning of the Nineteenth Century as Observed by an American Surgeon of the Old School. J. C. Warren, Boston.
18 Frederick Irving Knight, M.D. E. F. Otis, Boston.
19 Charles Burnham Porter, M.D. J. G. Mumford, Boston.
20 The Teaching of Pathology by the Case System, Supplemented by Gross and Microscopic Specimens. T. Ordway, Albany, N. Y.
21 The Height of Flat-Foot Plates. H. O. Feiss, Cleveland, Ohio.
22 *Technic for Taking Casts for Flat-Foot Plate. H. Fitzsimmons, Boston.

22. **Taking Casts for Flat-Foot Plates.**—In Fitzsimmons' method the patient is placed seated or in dorsal recumbency on a table, the edge of which reaches to mid-calf. Two 5-inch plaster bandages enveloped in the original newspaper covering, with the free end of the bandage folded back for about one inch are placed in a dish of warm water, deep enough to cover it, and left there until no bubbles of air arise to the surface. The bandage is then taken out of water and the paper removed. The free end for about 3 inches is unrolled and allowed to hang while the plaster is loosely held in one hand (right). With the other hand (left) the strip is grasped at the middle and placed on the dorsum of the foot over an imaginary line passing down the dorsum of the foot from midway between the two malleoli to the space between first and second toes. This strip is now fastened to the foot by circular turns of plaster, rapidly but smoothly, from the terminal joint of the toes to malleoli. When the bandage has been fastened it should be molded to the foot gently, without undue pressure, and the foot held at right angles to leg with toes neither flexed nor crumpled. This can easily be done by just holding the palm of the hand flat against the sole of the foot so that both the heel and the metatarsal pad and the toes are just lightly touched. The plaster thus applied will harden rapidly, and in a few minutes with a sharp knife, by exerting slight traction on the upper end of the folded strip, the plaster shoe may be split.

The second foot is now done in the same way, during which time the first shoe is left in place. After the second has been cut, the first is removed carefully, the cut edges approximated, and the mold sealed by taking the strip which has just acted as a director on which to cut, spreading it out, wetting it and passing it longitudinally down the dorsum of the mold over the split and over the opening where the toes had been and back to the heel. This strip is long enough and has retained plaster enough to effectually seal the mold. The second is now likewise treated. Thus a light, inexpensive mold, the materials for which are easily transported, may be made easily and accurately, one which holds its shape and does not break if dropped.

The cast is made by mixing about 2½ cups of good dental plaster with 1½ cups of cold water, which, when well mixed, is poured in through the ankle opening. If the sealing strip has been started at the proper level (about 1 inch below the level of the malleoli) the mold will have a broad, flat base, which is preferred by the plate makers.

## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### British Medical Journal, London

*May 28*

1 Treatment of Injuries of the Heart. J. Bland-Sutton.
2 Probable Ovarian Pregnancy. B. Whitehouse.
3 *One Thousand Cases of Instrumental Labor, with Four Deaths in a Colliery Practice. I. Crawford.
4 Large Simple Ovarian Tumor Removed from a Girl. G. McMullen.
5 Spinal Analgesia and Pituitary Extract for Forceps Delivery During Acute Pneumonia. J. A. H. White.
6 Ophthalmic Conditions Caused or Influenced by Diseases of the Upper Respiratory Tract. A. S. Cobbledick.
7 An Intraneural Cyst of the Eighth Cervical Nerve. R. B. Etherington-Smith and E. H. Shaw.
8 Tracheotomy During the Administration of Nitrous Oxid Gas. H. Relph and F. Rood.
9 The Preparation of the Skin for Operation by Means of Dichlorid of Ethylene and Iodin. A. J. Wallace.
10 Exophthalmic Goiter. F. P. Sturm.

3. **Instrumental Labor in Colliery Practice.**—Crawford gives in this article a summarized report of 1,000 cases of labor, practically consecutive, in which instrumental interference was necessary. He had four deaths in the series; thirty craniotomies; two face presentations, both of the favorable type; one brow presentation, requiring craniotomy; twelve transverse presentations, three of which occurred consecutively in the same patient and one anencephalic monster requiring forceps, as what represented the head would not engage in the pelvis. In discussing the frequency with which instrumental interference

is indicated among this class of patients, he states that there are two curious opinions current among the older midwives: (1) that if you have to attend a patient who by reason of her occupation has been "chained to a chair" you always get a badly ruptured perineum; (2) that instruments are undoubtedly called for more often now than formerly. The last opinion is based on the assertion that the babies are larger now than formerly, and that the parents get better food and take life more easily than of old.

### Lancet, London

*May 28*

11 Lymphatic Edema of the Leg and Foot with Cyanosis and Drop-foot. H. Morris.
12 Evolution of the Pelvic Floor in the Non-Mammalian Vertebrates and Pronograde Mammals. R. H. Paramore.
13 Two Cases of Poisoning by Coal-gas from a "Geyser," one of which Ended Fatally with Mental Symptoms. A. J. Hall.
14 Unruptured Tubal Pregnancy of Thirteen Months' Duration: Operation and Recovery. J. Morris.
15 Intracranial Complications of the Middle-Ear Disease. A. J. Hutchinson.
16 *The Specificity of Cancer and the General Principles of its Treatment and Prophylaxis. A. T. Brand.
17 The Demonstration and Study of Spores in the Schizomycetes. A. F. S. Kent.
18 Cephalic Tetanus (Kopf-tetanus of Rose). C. V. Kebbell.

16. **Specificity of Cancer.**—Believing that "no disease more plainly bears on itself the impress of specificity than cancer," Brand is of the opinion that the successful attack on cancer can be made only by specific means. He maintains that as syphilis yields to internal specific treatment so will cancer when once the specific parasiticide or vaccine, as the case may be, for cancer has been discovered. He submits that the proper treatment of cancer will consist in the removal by surgical means of accessible tumors, especially those which threaten life from mechanical causes, combined with the internal administration of specific remedies—when discovered. The latter will be relied on to check the further spread of the disease and to neutralize that already existing by destroying the causal parasite. No less important, he believes, than the curative treatment of cancer is the prophylactic. This he considers to consist in cremation of cancerous cadavers, the destruction of all dressings from cancerous wounds, and of all discharges and dejecta from cancerous patients, preferably by fire; thorough disinfection of all rooms and houses inhabited by those suffering from, or who have died of, cancer; avoidance of intimate personal contact so far as possible and possibly total abstinence from all uncooked fruits and vegetables. Finally he would have enforced the notification of all cases of cancer.

### Sémaine Medicale, Paris

*May 25, XXX, No. 21, pp. 241-252*

19 Xanthoma Result of Excess of Cholesterin in the Blood. (Pathogénie du xanthelasma.) A. Chauffard and G. Laroche.

### Berliner klinische Wochenschrift

*May 9, XLVII, No. 19, pp. 869-912*

20 *Diagnosis and Treatment of Syphilis on Basis of Latest Researches. A. Buschke.
21 Appearance of Large Mononuclear Non-granulated Cells in the Blood in Chronic Myelemia after Roentgen Treatment. N. v. Jagic and P. Neukirch.
22 Comparison of Technics for Determination of Tubercle Bacilli in the Sputum. (Vergleichende Untersuchungen über den Wert der Antiformin-Ligroin- und der Doppelmethode von Ellermann-Erlandsen zum Nachweis von Tuberkelbacillen im Sputum.) E. Bierotte.
23 Retention of Vitality of Tubercle Bacilli in Flowing Waters. (Zur Frage der Vernichtung von Tuberkelbacillen durch Flussläufe.) F. Jessen and L. Rabinowitsch.
24 *The Meiostagmin Reaction in the Service of Surgery. S. d'Este.
25 Experimental Research on the Influence of Various Local Therapeutic Measures on Inflammation. (Einfluss der lokalen Behandlung auf die Entzündung.) J. Schäffer. Commenced in No. 18.
26 Danger from Tuberculous Animals Comparatively Slight in Comparison to the Danger from Tuberculous Human Beings. (Welche Gefahr droht dem Menschen durch das tuberkulöse Tier?) B. Möllers.

20. **Syphilis in Light of Recent Research.**—Buschke concludes this postgraduate lecture with the statement that the most important element for the diagnosis and prognosis of syphilis is still as of yore careful clinical observation; the results of modern research have only made the foundation for this a little more solid. Treatment to date has not profited by recent research. Mercury and iodid are still the sole reliance in treatment of existing manifestations and their value in prophylaxis of tardy developments is still dubious.

24. **The Meiostagmin Reaction in Surgical Disease.**—This reaction was discussed recently in an editorial in The Journal, May 28, page 1790; d'Este here describes its application for differentiation of surgical tuberculosis, cancer, hydrocele, hernia, etc. He tabulates the details in about 35 cases, with the controls. They seem to show that this reaction can be counted on in the diagnosis of active tuberculous lesions but that it is not observed with merely latent processes. The findings were invariably positive in the cancer cases.

### Mitteilungen aus den Grenzgebieten der Med. und Chir., Jena

*XXI, No. 4, pp. 557-728. Last indexed April 30, p. 1487*

27 *Inflammatory Tumors of the Sigmoid Flexure. L. Arnsperger.
28 *Tumor in Spinal Cord, in Cerebellum and in Arm, Studied from Neurologic and Surgical Standpoints. S. Auerbach and S. Brodnitz.
29 *Purulent Pneumococcus Bursitis and Tendovaginitis in Young Children. (Paraartikuläre Pneumokokkeneiterungen im frühen Kindesalter.) L. Kaumheimer.
30 Extrapleural Thoracoplastics in Treatment of Bronchiectasia. H. Luxembourg.
31 *Congenital Megacolon. (Hirschsprungsche Krankheit.) R. de J. de Jong and A. L. M. Muskens.
32 *Clinical and Experimental Research on Chronic Intoxication from Perverted Thyroid Functioning. (Ueber chronische Thyreotoxikosen.) S. Kostlivy.
33 The Motor Functioning of the Stomach, Especially after Pylorectomy and Gastroenterostomy. (Ueber die motorische Funktion des Magens.) J. Schoemaker.

27. **Inflammatory Tumors at the Sigmoid Flexure.**—Arnsperger states that in these tumors operative treatment is indicated if for no other reason than that they simulate cancer so deceptively. He operated in a case of the kind on assumption of carcinoma of the sigmoid flexure, but the lesion proved to be merely a simple, chronic, inflammatory process in the subserous tissue leading to partial dissection of the layers of the bowel wall, with signs of a more acute process in the serosa, mucosa and muscularis. Another case of the kind came to autopsy. The lesions are distinguished by the sharp demarcation from sound tissue and their hard consistency with tendency to adhesions. The mucosa may remain intact and free from stenosis.

28. **Operations on the Nervous System.**—The history, the differentiation of the lesion, the operative findings and the complete recovery are analyzed both from the neurologic and surgical standpoints in the case of intradural fibroma reported. The fibroma was in the upper dorsal and lower cervical segments of the spinal cord and had caused paralysis of the legs, with some retention of urine and tonic spasms as violent as in tetanus. Intermittent neuralgic pains in the region of the tumor had been noted with increasing severity for six years but there was no local tenderness. The operation was done in two sittings with four days' interval; it was followed by flaccid paralysis for six weeks, but this gradually subsided and by the end of the year there was no trace of the former disturbances. The writers describe further their experiences with a glioma in the left half of the cerebellum of a girl of 12. As the operation was attempted there was profuse hemorrhage from an aneurism, and it was arrested only by plugging with wax a defect in the bone. Vomiting, Cheyne-Stokes breathing and stupor developed later and the patient succumbed in the course of eleven hours. It is possible that the loss of blood permitted the large tumor to press on the medulla oblongata, inducing the vomiting and abnormal breathing, the condition thus comparable to the mishaps after lumbar puncture in case of brain tumors. In another case reported, a neurofibroma was removed from the upper arm of a young man, leaving a defect 5 cm. long in the ulnar nerve, and yet there were no symptoms of impaired motor functioning afterward; collateral nerve routes must have developed during the gradual growth of the tumor.

29. **Pneumococcus Bursitis and Tendovaginitis.**—Kaumheimer reports four cases in which abscesses developed in the bursa of the shoulder and knee and, in one case, in the tendon sheaths of the wrist and ankle. The joint itself was not involved, and pneumococci were cultivated from the pus in each case. The patients were infants one and two years old; one giving a positive tuberculin skin reaction succumbed to measles not long after, the others promptly recovered. Kaum-

heimer was able to find on record only four similar cases of pure para-articular pneumococcus suppuration, and in each the bursa of shoulder or knee was the first affected, especially the subdeltoid bursa. There had been preceding pneumonia in only one of his cases, but there was a history of recent otitis media in another case.

31. **Congenital Megacolon.**—The features of the three cases described indicate that the trouble was the result of a congenital valve-like protrusion of the wall of the large intestine into the lumen, two such protrusions overlapping and closing the lumen completely at times. In 58 cases on record in which an operation was done only 25 of the patients survived, but the operation had generally been delayed until pronounced ileus had developed. In the cases reported, the autopsy or operative findings confirmed the above assumption of the cause of congenital megacolon.

32. **Chronic Intoxication from Abnormal Thyroid Functioning.**—Kostlivy has been conducting extensive research to ascertain whether the true and incomplete forms of exophthalmic goiter are different entities, and has examined 42 patients with thyroid disturbances, including 9 with pronounced exophthalmic goiter, recording the blood picture, the hemoglobin percentage, leucocytosis and coagulating time, dilatation of the pupil after instillation of epinephrin, also testing the blood serum for epinephrin content, with experimental work. His conclusions are that there seem to be two distinct types of chronic intoxication from perverted thyroid functioning, one depending on the sympathetic system and the other on the vagus system. In exophthalmic goiter the two types may be combined; the vagus type predominates during the remissions and the sympathetic type predominates during the exacerbations. The sympathetic hyperthyroidism is the primary, the vagus type being more of a secondary compensating process, but it may assume the preponderance in time. The morbid functioning of the thyroid which entails this modification in the tone of these antagonistic nerve systems may be the result of infectious or bacteriotoxic influences. There may be isolated patches in the thyroid in which the secretion is perverted while the balance may be sound; this assumption would explain the cases in which, after removal of part of the enlarged thyroid, severe acute symptoms of hyperthyroidism develop. The sound parts had been removed by the operation, leaving merely the islands of abnormally functioning tissue. Such cases have been reported by Kocher and others, and two of Kostlivy's cases were of this type, the acute postoperative exophthalmic goiter symptoms proving rapidly fatal. In 3 of his other cases a similar acute and severe postoperative predominance of the sympathetic element was observed but gradually subsided. In 4 others an acute postoperative predominance of the vagus element was unmistakable. The postoperative predominance of the vagus element is not so dangerous as that of the sympathetic; he advises abstention from surgical measures in all cases of exophthalmic goiter in which extreme lymphocytosis and slight epinephrinemia indicate that the thyrotoxic poisoning is the work of small patches of abnormal tissue in the gland while the main part of the thyroid is in a vagotropic compensating hypertrophy. Strumectomy in such a case is liable to be followed by serious acute Basedow symptoms, almost inevitably fatal. This assumption of a disturbance in the coördination of the vagus and sympathetic elements as the basis of the "thyrotoxicoses" suggests the possibility of successful serotherapy, giving a hypothyroidism serum or hyperthyroidism serum as indicated in the individual case. This individualized serotherapy might prove useful also as a supplement to operative treatment. In conclusion he urges not to restrict operative measures to the severest cases, and postpone them until after failure of all internal treatment. The incipient thyrotoxic disturbances are most amenable to surgical treatment and give the best results as the primarily affected parts are removed before they have had a chance to do irreparable damage. Later than this, the outlook is far less encouraging on account of the changes induced by compensating processes not only in the thyroid itself but in the other ductless glands coordinated with the thyroid or antagonistic to it.

### Gazzetta degli Ospedali e delle Cliniche, Milan

*May 12, XXXI, No. 57, pp. 601-608*

34 Kala-Azar in Italy. (Di una nuova tripanosomiasi dell' uomo.) P. Barabaschi.

*May 15, No. 58, pp. 609-624*

35 Primary Sarcoma of the Spermatic Cord. (Sarcomi primitivi del funicolo spermatico.) T. Celso.
36 Accessory Causes in Homicides. (Della cosi detta "concausa" in tema di omicidio.) L. Borri.

*May 17, No. 59, pp. 625-632*

37 Woody Phlegmon. (Contributo allo studio del flemmone ligneo di Reclus.) A. Duse.

### Hospitalstidende, Copenhagen

*April 6, LIII, No. 14, pp. 385-416*

38 *Typhoid Bacillus-Carriers. (Tyfusbacilbærerne.) T. Madsen.
39 Tuberculin in Treatment of Pulmonary Tuberculosis. (Nogle Resultater af Tuberkulinbehandling ved Lungetuberkulose.) E. R. Schneider. Commenced in No. 13.

38. **Typhoid Bacillus Carriers.**—Madsen emphasizes the importance of keeping typhoid patients in the hospital until they are entirely free from bacilli. He adds that if they could be reexamined six or twelve months afterward, especially the adult women patients, much would be gained. If bacilli are discovered, the carrier should be instructed in prophylactic measures but with great care not to inform others of the positive findings, as most serious results may follow the knowledge in the environment. Only when the carrier refuses to submit to prophylactic measures should more drastic steps be taken. He urges search for the source of infection in every case of typhoid fever, and that the district physician should be informed when a known carrier is in his jurisdiction, so that he can keep him under supervision. The carriers that have proved most dangerous are women engaged in household work. In one such case recently, the mistress of the house in the course of years had infected a number of persons in turn, mainly newly arrived servants.

### Ugeskrift for Læger, Copenhagen

*May 12, LXXII, No. 19, pp. 533-566*

40 Experiences with Empyema at the Copenhagen Hospital. (Empyemer paa Kommunehospitalets I. Afdeling.) E. A. Tscherning.

## *Books Received*

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

A Manual of Midwifery. For Students and Practitioners. By Henry Jellett, M.D., King's Professor of Midwifery in the School of Physic, Trinity College, Dublin. With the Assistance in Special Subjects of W. R. Dawson, M.D., H. C. Drury, M.D., T. G. Moorhead, M.D., and R. J. Rowlette, M.D. Second Edition. Cloth. Price, $6 net. Pp. 1210, with 557 illustrations. New York: William Wood & Co., 1910.

Diseases of Infancy and Childhood: Their Dietetic, Hygienic and Medical Treatment. A Text-Book Designed for Practitioners and Students in Medicine. By Louis Fischer, M.D., Attending Physician to the Willard Parker and Riverside Hospitals of New York City. Third Edition. Cloth. Price, $6.50 net. Pp. 980, with 303 illustrations. Philadelphia. F. A. Davis Company, 1910.

Essentials of Laboratory Diagnosis. Designed for Students and Practitioners. By Francis Ashley Faught, M.D., Director of the Laboratory of the Department of Clinical Medicine, Medico-Chirurgical College, Philadelphia. Second Edition. Cloth. Price, $2 net. Pp. 336, with illustrations. Philadelphia: F. A. Davis Company, 1910.

Handbook of Anatomy. Being a Complete Compend of Anatomy, Including the Anatomy of the Viscera and Numerous Tables. By James K. Young, M.D., Professor of Orthopedic Surgery, Philadelphia Polyclinic. Third Edition. Cloth. Price, $1.75 net. Pp. 402, with 172 illustrations. Philadelphia: F. A. Davis Company, 1909.

Hygiene and Morality. A Manual for Nurses and Others, Giving an Outline of the Medical, Social and Legal Aspects of the Venereal Diseases. By Lavinia L. Dock, R.N., Graduate of Bellevue Hospital Training School. Cloth. Price, $1.25 net. Pp. 200. New York: G. P. Putnam's Sons, 1910.

Introduction to the Analysis of Drugs and Medicines. An Elementary Handbook for the Beginner. By Burt E. Nelson, Chemist to the New York State Hospitals. First Edition. Cloth. Price, $3 net. Pp. 384, with 31 illustrations. New York: John Wiley & Sons, 1910.

Age Incidence, Sex, and Comparative Frequency in Disease. By James Grant Andrew, Bachelor of Medicine and Master of Surgery. Cloth. Price, $4.20 net. Pp. 439. New York: Paul B. Hoeber, 69 E. 59th St., 1909.

# GENERAL INDEX

All *reading matter* in The Journal from January to June, 1910, inclusive, is indexed here. (For Current Medical Literature Index see pages 2174 to 2228). "Deaths," "Book Notices" and "Society Proceedings" are indexed under those titles at the ends of the letters "D," "B" and "S." Matter pertaining to the Association is under "American Medical Association." With the above exceptions, all matter is indexed under the most important word of the heading that was used in The Journal, and also under the subject heading. For instance, "abscess of brain" will be found indexed under "abscess" as well as under "brain." Such titles as "ocular manifestations, etc.," have been indexed under "eye." Cross references have been made wherever this was possible. It is well to remember that, in looking up a certain subject, related words should be consulted, for example, testes, testicle; skull, cranium; bowel, intestines. The letters used to explain in which department the matter indexed appeared are as follows: "E" editorial; "O" original article; "C" correspondence; and "ab" denotes an abstract of an article that has appeared in full elsewhere. *Names of Authors* of original articles appearing in The Journal are not given in this index, but are included in the Index of Authors.

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## SOCIETIES

*Abbreviations:*

*Acad.—Academy.*
*Am.—American.*
*A.—Association.*
*Conf.—Conference.*
*Cong.—Congress.*
*Internat.—International.*
*M.—Medical, Medicine.*
*Pharm.—Pharmaceutical.*
*S.—Society.*
*Surg.—Surgical, Surgery, Surgeons.*

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# CURRENT MEDICAL LITERATURE

## INDEX OF SUBJECTS

Explanation: This index refers to the titles and the subjects of original articles published in the leading medical journals of the world, including The Journal, during the past six months. The reading matter which appeared in The Journal is not indexed here, except the original articles and the abstracts of original articles. The titles of the articles and the names of the journals in which they appeared were listed weekly in the Department of Current Medical Literature, and it is to them that references are here made. The figure in parenthesis refers to the paragraph; the number following, to the page in The Journal. For instance, "Acne bacillus, (11) 78—ab," refers to page 78 of The Journal, on which is found, in paragraph numbered 11, the title of the paper and the name of the author, viz., "Bacillus of Acne, H. F. Hartwell and E. C. Streeter." This title is listed under the journal in which the article appeared, the *Boston Medical and Surgical Journal*, Dec. 16, 1909. When "ab" follows a page number it indicates that the article was abstracted in The Journal; for instance, "Abdominal cavity, pus in, (92) 1581—ab." On page 1581, paragraph 92, will be found an abstract of this article, which appeared in *Annals of Surgery*, April, 1910. Titles of articles which appeared originally in The Journal are indicated in the index by an asterisk (*) before the page number; for instance, "Abdominal drain, new, *1499," refers to page 1499 of The Journal, on which is found the complete original article. The index *to authors* of all articles, both original and those listed under Current Medical Literature, appears separately on pages 2229 to 2244 of this index.

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# PROGRESSIVE THERAPEUTICS

## LOCAL ANESTHESIA IN HERNIA WITH REPORT OF TEN CASES

### BY A. C. STOKES, M.D., OMAHA, NEBR.

Abstract from Iowa Medical Journal, July, 1909.

General anesthesia is necessarily fraught with some danger. Although by giving ether by open method we have reduced the mortality to almost nothing and the immediate operative mortality to absolutely nothing, yet, one must believe that any agent which produces so powerful a toxemia as to paralyze all sensation, except that of respiration and the heart, must be fraught with certain dangers. Either the heart, the lungs or the kidneys must at some time be overworked in their attempts at recovery. Therefore, if any or all operations can be done without such a powerful poison it is the duty of the surgeon to do so.

Local regional anesthesia is an aid in part at least, and its place in surgery should not be overlooked by the surgeon.

Local anesthesia has its most distinct usefulness in those cases in which general anesthesia is contraindicated. There is a great reduction of shock, and in gastric and respiratory changes after the operation.

With local anesthesia rapidity of work is not necessary and thus careful handling of the tissues and minute dissection is possible.

According to Braun a good local anesthetic should present the following characteristics: (1) It must, in proportion to its local anesthetizing power, be less toxic than cocain; (2) it must not irritate or damage the local tissues to the smallest extent; (3) it must be fairly stabile, soluble in water, and should be capable of sterilization by heat without change or alteration of its action; (4) it should be capable of combination with suprarenal extract without interference with the action of the latter; (5) it should be capable of being rapidly and completely taken up by the mucous membrane.

Local anesthesia is produced by two distinct physiological methods: (1) Anesthesia of the nerve bulbs; (2) blocking nerves themselves (Cushing); (a) directly injecting into nerve; (b) pressure on nerve trunk; (c) circulatory changes.

The next valuable addition to the evolution of local anesthesia was that of suprarenal capsule extract and afterwards its active principle. This maintained the contraction of the arteries somewhat longer, prevented the rapid return of the blood stream, and, therefore, the rapid diffusion of the anesthetic solution.

With the advent of Novocain, Braun made a great many experiments and still farther perfected solutions for local anesthesia. Novocain as a definite chemical compound has two decided advantages. It can be boiled in aqueous solutions without decomposition and is greatly more anesthetic according to Arnold than is cocain or eucain.

Braun's original formula is as follows:

| | |
|---|---|
| Novocain ............................ | 7½ grains. |
| Sodium chlorid ...................... | 14 grains. |
| Suprarenin borate ................... | .01 grain. |
| Distilled water ..................... | 3 2/5 ounces. |

Much work has been done under local anesthesia, and little by little, with the perfection of the solution, its usefulness has been extended. It is now a common thing to open the abdomen under local anesthesia and many major operations have been done with local anesthesia. Gall bladders have been drained, appendixes have been removed, goiters removed, limbs amputated, intestines opened and joints drained.

We have used various combinations and methods. Schleich's solutions of cocain and water, and finally the Novocain and Suprarenal solution of Braun. This last solution we regard as the best and it is really an almost ideal one. The patient is given ¼ grain of morphin and 1/100 of hyoscin one hour before the operation is to begin. After arriving at the operating-room the field of operation is prepared, as usual, and the local anesthetic injected along the proposed line of incision endodermically, catching as many nerve endings as possible. Incision is then made through the skin and deep fascia to the aponeurosis of the external oblique. The external ri
laid bare and the area about it is anesthetized. Search is
for the hypogastric branch of the ilio-hypogastric, which
its exit about three-quarters of an inch inward and on
upward from the inner and upper angle of the externa
Having found this nerve, it is blocked at its exit fro
aponeurosis of the external oblique. All the skin fibe
thus cut off and sensation in and around the external
aponeurosis is to a certain degree under control. It
necessary to use a slight amount of the anesthetic
aponeurosis of the external oblique, after which it
according to an approved method and separated fr
internal oblique; the ilio-inguinal nerve is seen to m
exit from the internal oblique a short distance ab
border of the internal abdominal ring. This nerve
loosened and one may either dissect it out in its passa
the inguinal canal to the external ring in front of t
or if time is an element, the nerve may be blocked at
and the operation continued. If it is dissected out it
laid aside and the operation continued without blockin
method is the most scientific but also the most tedio
ilio-inguinal traverses the inguinal canal and makes it
the external ring where it supplies the integument o
area and a part of the scrotum.

The third and last nerve to be dealt with is the ge
branch of the genito crural. This nerve pierces the transv
salis fascia, and makes its exit into the inguinal canal, enter
the cremasteric fascia, supplies the structure of the cord and continues through the inguinal canal posterior to the cord to supply the posterior portions of the scrotum and the infundibulaform fascia. This nerve is often difficult to find, but the discovery of the same and the blocking of it is the most necessary part of the operation for hernia. When this is done the dissection of the sac and the removal of the same is accomplished without much pain, and without disturbing the patient in any way.

Occasionally it has been necessary to infiltrate the neck of the sac before removing same.

I would recommend that Braun's original solution be somewhat changed; that a larger percentage of Novocain be used, i. e., up to about 2 per cent. The anesthesia is then more perfect and lasting. My experience with these cases has so far been very gratifying, and I am now recommending local anesthesia in nearly every hernia case. In addition to hernias we have removed floating bodies from knee joint, in one case, and do our cases of variocele and hydrocele almost entirely with local anesthesia. We have opened the abdomen several times and done numerous other things of like character with local anesthesia. While we have not gone quite to the point of our friend Mitchell, of Washington, D. C., in this work, yet, we feel with past experience we are now in a position to go even farther with its application to our major surgery.

The advantages of local anesthesia may be summarized as follows:

1. It removes any possibility of anything like danger in the anesthetic.
2. It does away with all the post anesthetic symptoms.
3. It converts the operation for hernia from a major to a minor operation.
4. It requires a more accurate dissection.
5. In strangulated hernia where there is much shock.
6. It demands a more careful handling of tissue.

The disadvantages:

1. It requires more time.
2. It is limited in its application. (a) To adults. (b) To those cases in which there is not a great amount of omentum in the sac and where it is not adherent to the sac. (c) In certain early cases of strangulated hernia it is impracticable. (d) It is not practical in postoperative hernias where a great amount of dissection is necessary. (e) In certain nervous women.

The elements of time and pain are the two things upon which the opposition to this procedure must base their arguments.

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# *Progressive Therapeutics*

## REPORT ON THE LOCAL ANESTHETICS RECOMMENDED AS SUBSTITUTES FOR COCAIN.

By C. N. LeBROCQ, B.A., M.D.

From the Pharmacological Laboratory, Cambridge.

Abstracted.

The British Medical Journal, March 27, 1909.

The substances which have been investigated are: Stovain, Novocain, tropacocain, beta-eucain, alypin, beta-eucain lactate, Holocain hydrochlorid, Orthoform (new), Anæsthesin.

The points to which special attention have been paid are those laid down by Professor Braun as essential in estimating a local anesthetic action. They are:

1. A lower degree of toxicity than cocain in proportion to its local anesthetic power.

2. Sufficient solubility in water. The solutions should be stable, that is, they should keep without deterioration and be capable of sterilization by boiling.

3. Absence of any sign of irritation. There should be no injury to the tissues; the local anesthetic should be easily absorbed without causing any after effects, such as hyperemia, inflammation, infiltrations, or necrosis.

4. Compatibility with adrenalin.

5. Rapid penetration of the mucous membrane, and suitability for medullary anesthesia.

The only exception I would make to these postulates of Braun is that dealing with absorption. It is not obvious that easy absorption is desirable. If the drug is absorbed slowly it remains longer in contact with the nerve fibrils and produces a more prolonged action. It has been stated that by delaying absorption, as by local vaso-constriction, we are giving the anesthetic a longer time for action, and it is for this reason that adrenalin is injected with these substances.

If a drug can be obtained which fulfils the above conditions it can be safely said that it will supersede cocain.

To arrive at a satisfactory conclusion it is necessary to deal with each drug separately, and to discover how closely each approaches the conditions specified by Braun.

Solubility in water is essential for subcutaneous and intraspinal injections. If a drug is not soluble in water to the extent of forming a 2 per cent. solution, I have regarded it as unworthy of competing with cocain. By examining the solubility of these drugs, the list is considerably diminished, for Holocain hydrochlorid, Anæsthesin, Orthoform (new), beta-eucain, are all more or less insoluble, and for this reason alone unsuitable for producing local anesthesia by injection. Beta-eucain is not completely soluble in cold water to the extent of forming a 2 per cent. solution, but if the solution is warmed a 2 per cent. solution is readily obtained. As dusting powders, these drugs may, of course, still prove useful, but I am not here concerned with that point.

Cocain, stovain, Novocain, tropacocain, beta-eucain lactate, alypin, are freely soluble in water; their solutions are stable, and as a 2 per cent. solution they will keep for a short time without deterioration.

Cocain cannot be boiled, as decomposition occurs, and the drug loses its activity and is gradually destroyed. Stovain, Novocain, beta-eucain lactate, tropacocain, alypin, can be sterilized at 115° C. if necessary, undergo no change, and the drug is as active after as before sterilization.

The determination of the local anesthetic action is not easy, as it is not practicable to work with accuracy on the lower animals on account of the difficulty in determining when sensation is absent or merely blunted. The method I adopted was to take cocain as the standard and to compare each drug with it separately.

By numerous experiments on frogs, rabbits and human beings, which will be described in detail elsewhere, I arrived at the following conclusions:

Stovain has a more powerful anesthetic action, weight for weight, than any of the other local anesthetics. Alypin, beta-eucain lactate, Novocain and tropacocain have anesthetic properties about equal to cocain.

Having determined the relative anesthetic actio
mained to estimate the toxicity of these drugs. The
employed was to find the minimal lethal dose—the
dose which will kill the animal.

As the toxic action of these drugs is to paralyze the
system, and so the respiratory center, the toxicity in m
must be regarded as the correct reading, for when res
ceases the animal dies.

If the toxicity of cocain be represented as 1, then

The toxicity of alypin will represent 1
The toxicity of cocain will represent 1
The toxicity of stovain will represent 0.
The toxicity of tropacocain will represent 0.
The toxicity of Novocain will represent 0.
The toxicity of Beta-eucain lactate will represent 0.

Alypin has anesthetic powers equal to cocain, but a
toxicity and so does not comply with the conditions enun
by Braun.

From this it will be seen that only four drugs, nam
stovain, Novocain, tropacocain, and beta-eucain lactate, hav
complied with the first two conidtions. With these four drugs further experiments were performed to discover how they fulfil the other conditions laid down for the "perfect local anesthetic."

Irritant action on the tissues: Very little is known of the action of the local anesthetics on the tissues with which they come in contact. This effect is, however, extremely important, for it has been stated that gangrene and sloughing of the tissues have followed the use of certain of these drugs. It is well recognized, however, that they are all generally protoplasmic poisons, that whilst having a special predilection for nervous structures they depress and ultimately destroy every form of living tissue.

In these, as in previous experiments, cocain was taken as the standard. Cocain is generally recognized as having a slight irritant action on the tissues, and occasionally after instillation into the eye, produces considerable conjunctivitis.

For these experiments rabbits weighing about 1 kilogram were used. The abdomen was shaved and the skin washed and made aseptic, after which 10 minims of a 10 per cent. solution of the drug was injected subcutaneously. The drug was carefully sterilized, and all antiseptic precautions were observed.

After injection the part was kept under immediate observation for several hours, and then inspected daily for one week more.

Cocain caused slight swelling and hyperemia soon after the injection. The part completely recovered.

Stovain caused intense hyperemia and dilatation of the blood vessels followed by sloughing of the part.

Beta-eucain lactate caused swelling and thickening about the seat of injection, followed by sloughing.

Novocain showed no swelling and no hyperemia. The part was perfectly normal after injection, and remained so.

In the above experiments, where sloughing and necrosis occurred there were no signs of pus formation.

It is seen that a comparative investigation into the action of these drugs on the general tissue is of the utmost importance, for most of them possess a decided irritant effect; so much so that they will produce sloughing and necrosis of the tissues with which they come in contact.

A 10 per cent. solution is a stronger solution than is generally used therapeutically, yet this strength is still employed; moreover, 10 minims of a 10 per cent. solution roughly represents 1 grain, a quantity which is far exceeded when weaker solutions are injected. And even if it be objected that it is not fair to infer from a 10 per cent. solution what will occur in a strength of 1 per cent. or 2 per cent., yet the present experiments still show the relative irritant action of these drugs. A drug which is only mildly irritant as a 1 per cent. solution, will presumably be the more irritant as a 2 per cent. solution, until, as the strength is increased, a stage is reached when destruction of the tissues and necrosis is obtained.

The irritant action of stovain, beta-eucan lactate, and tropacocain is far greater than that of cocain; Novocain is the only drug which is superior to cocain in this respect.

All the local anesthetics are compatible with adrenalin if the solutions are fresh and kept only for a short time. After a day or two the adrenalin decomposes unless it is kept in stoppered opaque bottles.

*(Continued on next page)*

ng which of these four drugs is the most suit-
for cocain, it is necessary to compare them
er.

ınd tropacocain be first compared, their toxicity
properties are, roughly, equal; but the irritant
cocain is far greater than that of Novocain; in
their actions are similar, therefore Novocain is
drug than tropacocain.

g Novocain with beta-eucain lactate, it is seen
anesthetic value is roughly about equal, the
a-eucain lactate is slightly less than that of
the irritant action of beta-eucain lactate is far
hat of Novocain. It appears, then, that while
tate has only a slight degree of toxicity to
n preference to Novocain, its irritant action far
shadows any such slight advantage, and Novo-
zed as undoubtedly the better drug of the two.

ly remains to compare Novocain with stovain.
ug is less toxic and much less irritant; indeed
on on nerve fibers is so great that it has prac-
ructive effect on the other tissues; stovain is
considerably more irritant.

nite advantage which stovain possesses over all
anesthetics is its greater injurious action on
shown by anesthesia. Nevertheless, the specific
in on nerve fibers is less than that of Novocain,
destroys other tissues besides nerve fibers. If stovain and Novocain be given in doses so that their anesthetic action is the same, both the irritant and toxic effect of the former drug, even in the smaller dose in which it is administered, are greater than the relatively larger doses of the latter.

I come to the conclusion, therefore, that of the drugs which have been investigated, Novocain is most satisfactory for general use. Its anesthetic action is equal to that of cocain, and its toxicity and general destructive power on the tissues are very much less.

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# PROGRESSIVE THERAPEUTICS

## ANESTHETIZATION OF THE UPPER AIR PASSAGES IN TUBERCULOSIS.

By DR. ELEMER POLLATSCHEK, of Budapest.

Reprint from Die Therapie der Gegenwert, 1903, v, No. 9

The alterations of the upper air passages and especially of the larynx are of great importance in reference to the course of pulmonary tuberculosis. Aside from the unpleasant consequences of insufficiency of nasal respiration, we see many alterations in the pharynx and larynx, which if not of the same origin of the pulmonary affection are yet unable to influence the latter unfavorably. Among the pharyngeal affections pharyngitis sicca, granulosa and the thickening of lateral pharyngeal folds are those most frequently encountered. Of the laryngeal affections, aside from those of specific origin, catarrhal laryngitis and especially laryngitis posterior (the superficial inflammation of the mucosa of the arytenoid cartilages and vocal processes) cause diagreeable symptoms analogous to those of pharyngeal origin. The alterations in the pharynx call forth especially the sensation of dryness and of foreign body, while the changes in the larynx are responsible for the often fearfully harrassing itching which is unbearable to the patient. This paresthesia contributes essentially to the production of one of the characteristic symptoms of pulmonary tuberculosis, to-wit, the cough, the suppression of which is so necessary for the well-being of the patient.

The specific affections of the larynx are often disagreeable by reason of the pain. This may arise either during eating or drinking (painful swallowing) or independently thereof during the night or in the morning hours. Painful swallowing is caused especially by lesion of the epiglottis or arytenoid cartilages, and pain during the night most frequently by the same conditions or from alterations in the cricoarytenoid articulation. The tuberculous processes elsewhere in the larynx seldom cause pain and we oftentimes find astonishing changes without any unpleasant sensations on the part of the patient aside from slight hoarseness.

It is at once evident that the disturbances of deglutition must be combated. These make nutrition more difficult, and the patient often starves himself in order to avoid those pains which swallowing ushers in. These disturbances have an extremely depressing effect on the patient's temper. Finally the healing of the inflammatory processes is prevented. Swallowing pains set in especially in those alterations of the epiglottis and arytenoids which are touched directly or indirectly by the bolus of food. Such patients swallow more frequently than is necessary for the disposition of the saliva which accumulates in the mouth. These swallowing movements have a more irritating action on the musculature of the pharynx and corresponding portions of the larynx than do the movements which are actually required for swallowing food. I wish therefore to ascribe the unfavorable influence of the pain upon the healing of the laryngeal process to mechanical irritation produced by swallowing as already described.

How now can the practicing physician without a great armamentarium mitigate the symptoms just depicted?

Most physicans treat the cough of consumptives with narcotics, the doses of which must gradually be increased. But according to my conviction the cause of the cough in at least 70 per cent. of all cases lies in the upper air passages. The disturbances of nasal respiration, the secretion formed in the naso pharynx or which flow into the same from the nose, the most varied alterations in pharynx and larynx are not influenced by the usual therapy; while the causal treatment of the patient is often freed from marked disagreeable phenomena and the possibility of recovery is greatly promoted. The Director of the Queen Elizabeth Sanatorium, Dr. Desider von Kutley, never omits to investigate the coughing patient with these points in mind. In inspissation of nasal discharge the nose is douched with warm 2 per cent. sodium bicarbonate solution; in pharyngitis sicca vaseline oil is instilled into the nose in order to keep the pharynx moist during the night. Better results are often obtained in this manner than when heroin is given. In pharyngeal affections it is further necessary to paint twice daily with astringent lotions (tan zinc sulph., iodin glycerin); this may be done at first by physician and eventually by the patient himself after suita practice.

The dryness and itching sensations in the larynx are to treated with local anesthesia. The anesthetic may be appli as a brush application, injection or inhalation, the latter bein the most important because the patient can apply them himself whenever the pain sets in. We use also one hour befor each meal cold compresses over the larynx, renewing them every five minutes; or a Lester's coil may be applied instead. This resource is often enough to diminish the pain.

Very recently von Noorden has introduced a new anesthetic, *Anæsthesin*, which belongs to the Orthoform group (p-amidobenzoic acid ester), with the external as well as internal application of which he has obtained good results and which seemingly possesses no toxic action whatever. For a year I have been making investigations with the remedy with the most varied mixtures, and I employ it now constantly for anesthetizing the pharynx and larynx and with very good results. Self evident exception occurs in operative procedures, where the anesthesia from anesthesin cannot displace that from cocain. According to statements in the literature, Anæsthesin, a white powder, is soluble in fatty and ethereal oils, but I could not effect such solution. The drug does dissolve in warm oil but is precipitated on cooling. I succeeded, however, in making an emulsion which is adapted both for injection and inhalation.

℞. Menthol .............................. 1|50
Pulv. gummi arab.
Ol. amygd *dulc.*
Aqua dest., āā .............................. 10
M. Ft. emulsio. add:
Anæsthesin ..............................3-4-5
Sp. vini conc. .............................. 40
Aqua dest. .............................. 65

I often had occasion to note the slight astringent action of menthol, so that I thought it necessary to combine the anesthetic and astringent actions. The result is satisfactory and often striking. Of this solution 1 c.cm. = 3-4 cgms. Anesthesin when applied in the most obstinate cases of dysphagia brought about anesthesia in from 5 to 8 minutes, and the action persists from 3 hours up to 24 and even 30 hours. If we dilute the emulsion with water it is well adapted for inhalation and asserts a distinct anesthetic action. The unpleasant sensation of itching is very often removed by these injections.

We obtained a very satisfactory result from the injections in cough of laryngeal origin. The latter was quieted invariably for 5 or 6 hours, and often for as long as 2 days. These injections are readily carried out by the physician, and may often enough be replaced by inhalations. Narcotics are for the most part rendered quite superfluous.

Anæsthesin in powder form I do not care to employ, for it is not suitable for insufflation, being itself insoluble in conditions like pulmonary tuberculosis where much secretion is formed. It clumps with the latter and then irritates the larynx. Further, when blown into the larynx, it gives an unpleasant sense of suffocation.

I never saw intoxication follow the use of Anæsthesin although I used it in 350 cases (some of them in Prof. Irsai's clinic). In a case in private practice of a consumptive near the terminal stage of his disease I used during the last 12 days of life for anesthetizing the extremely painful pharyngeal ulcers 30 grams without producing the slightest toxic symptoms.

At the first internal clinics there were given *per os* in many cases doses of 3 or 4 gms. daily with good success and without untoward consequences.

I wish to mention that in two cases of dysmenorrhea, instead of cocain, the emulsion was applied to the nose, and that the cramps originally present disappeared, just as happens when cocain is used.

By reason of my observations and curative results I regard Anæsthesin as a certain and harmless resource for anesthetizing the larynx, for mitigating dysphagia and especially for suppressing laryngeal cough in consumptives.

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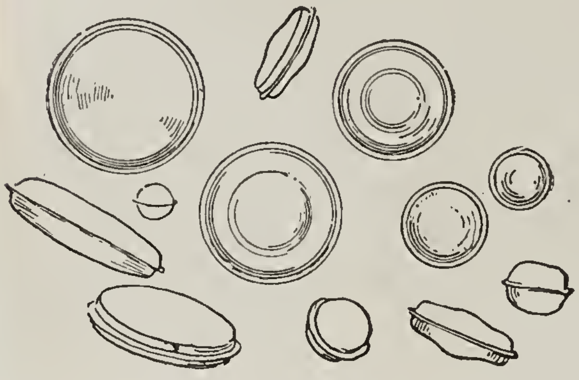

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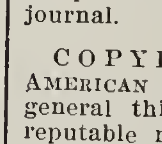

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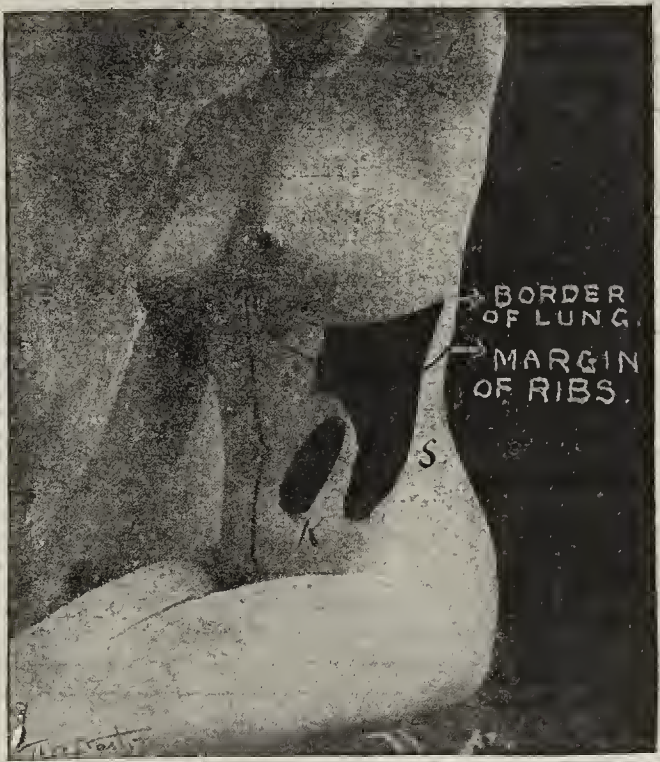

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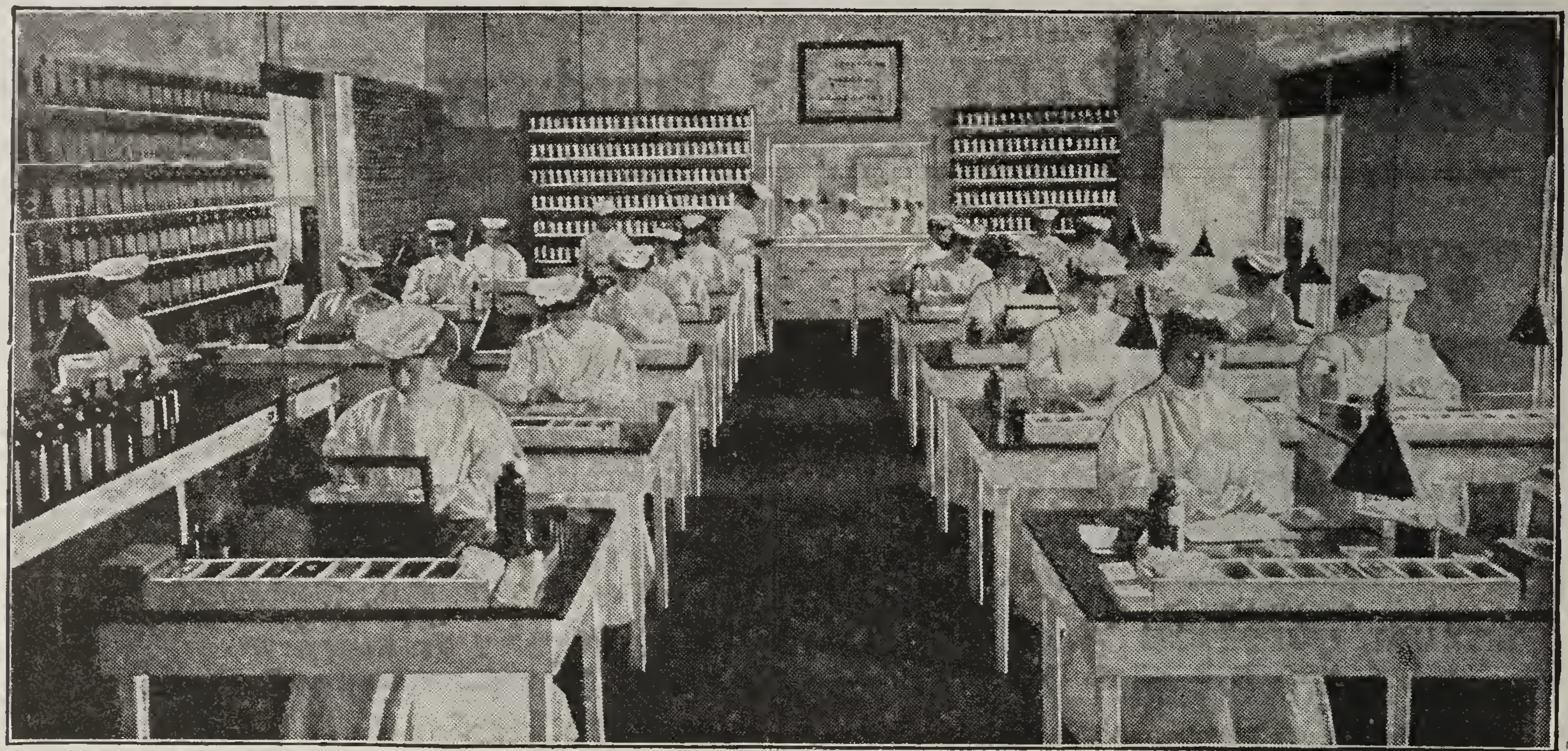

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MEDICAL DEPARTMENT OF THE

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1765 **SCHOOL OF MEDICINE** 1910

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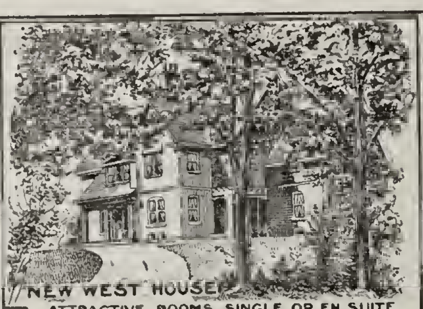

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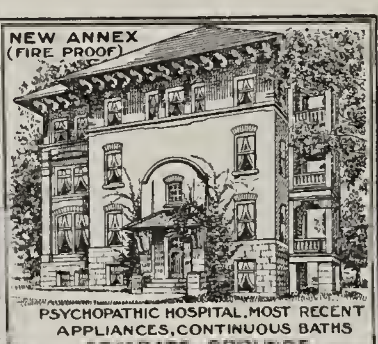

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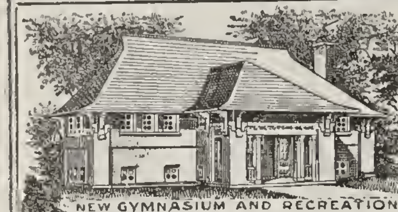

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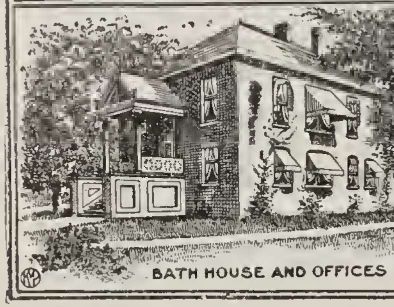

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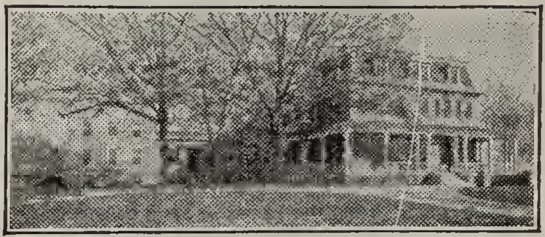

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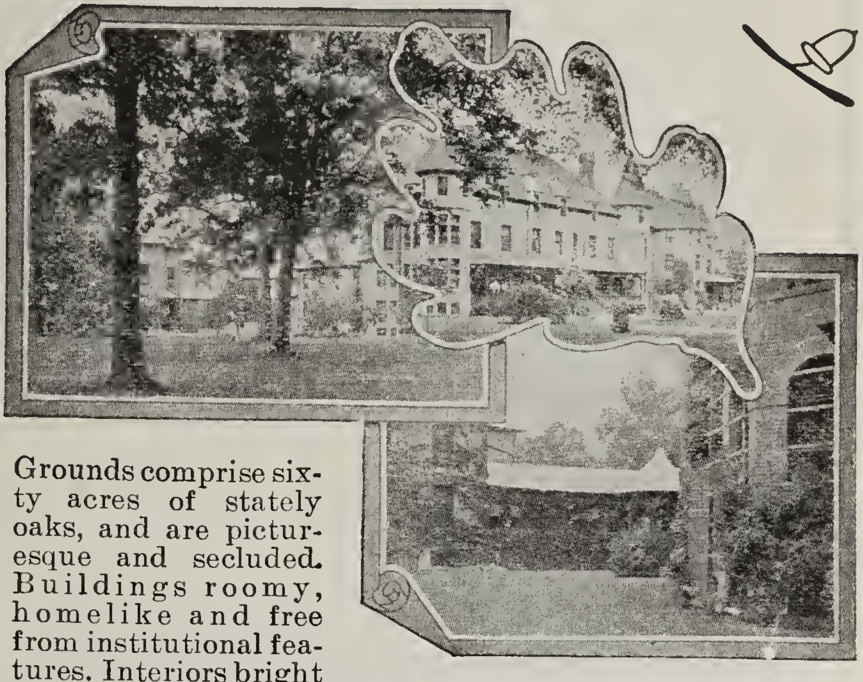

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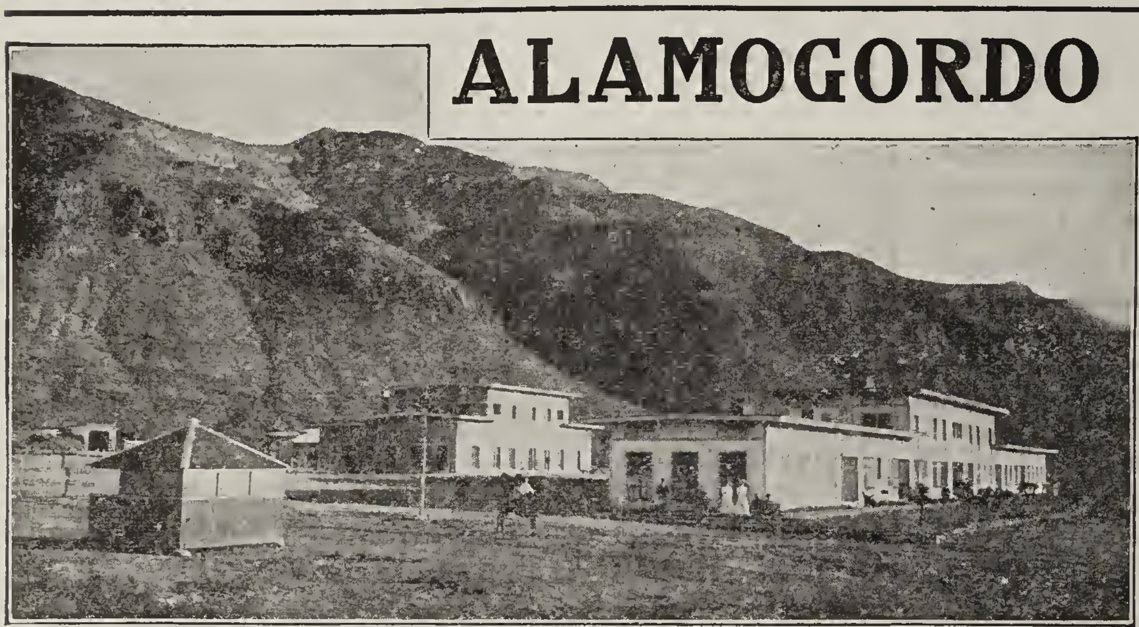

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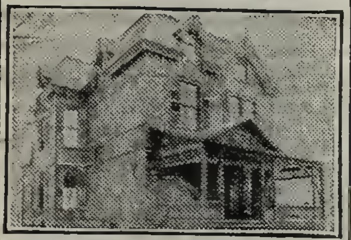

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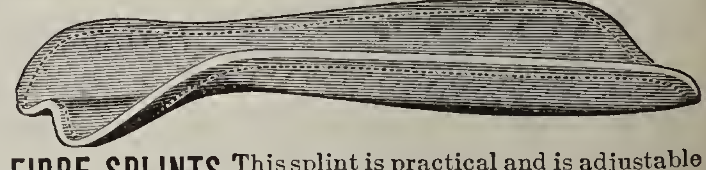

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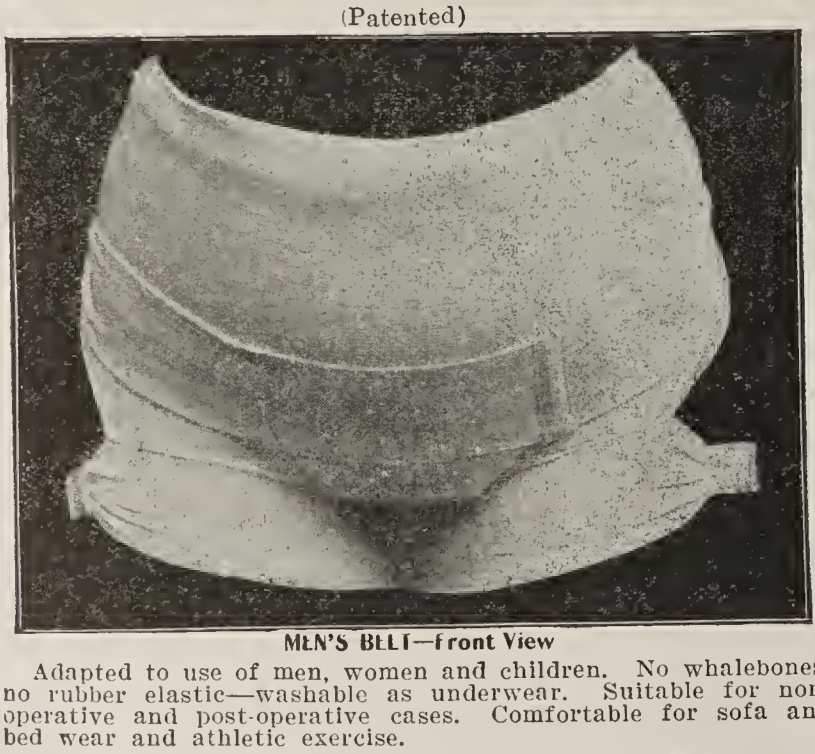

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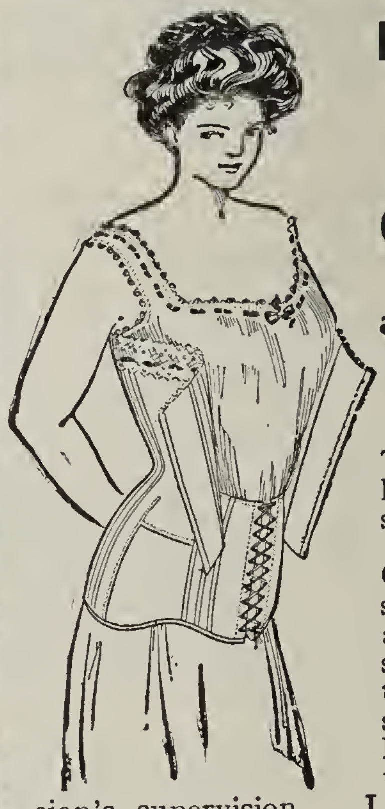

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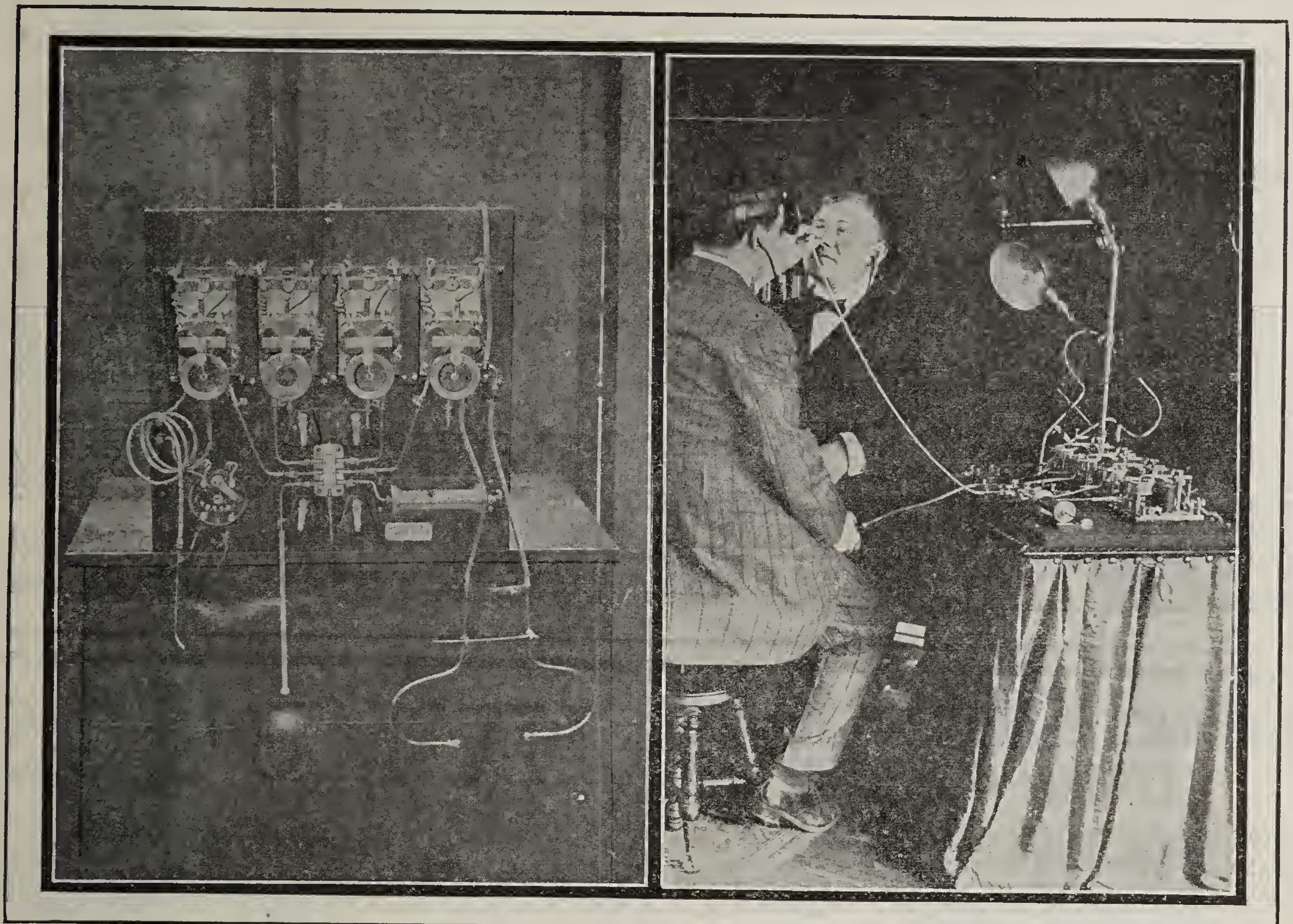

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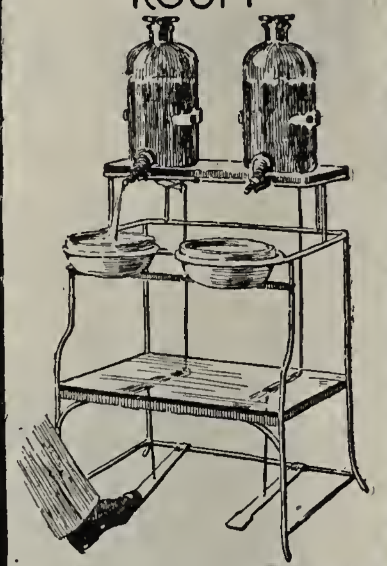

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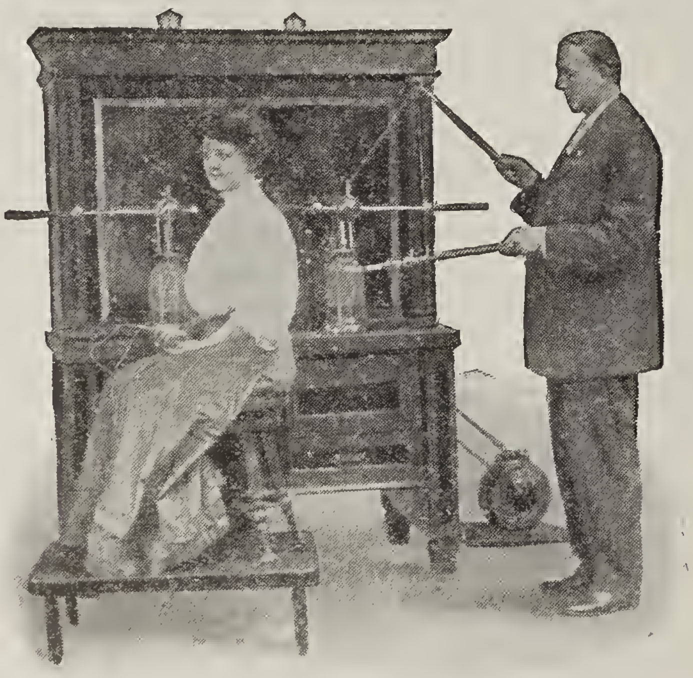

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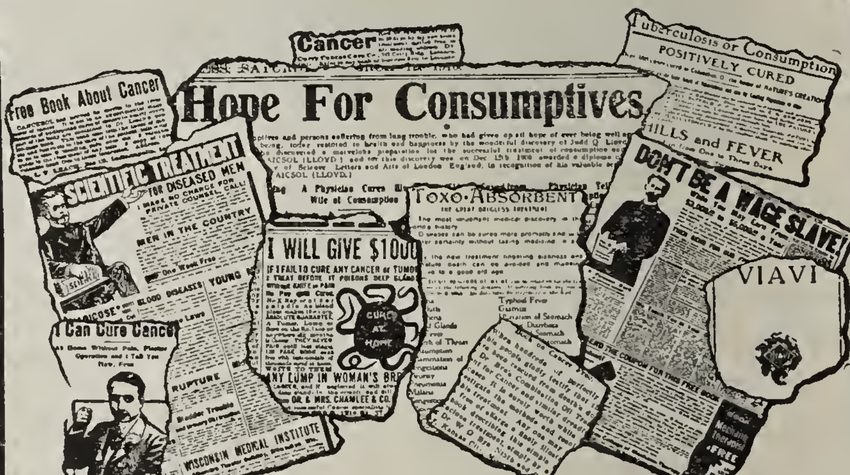

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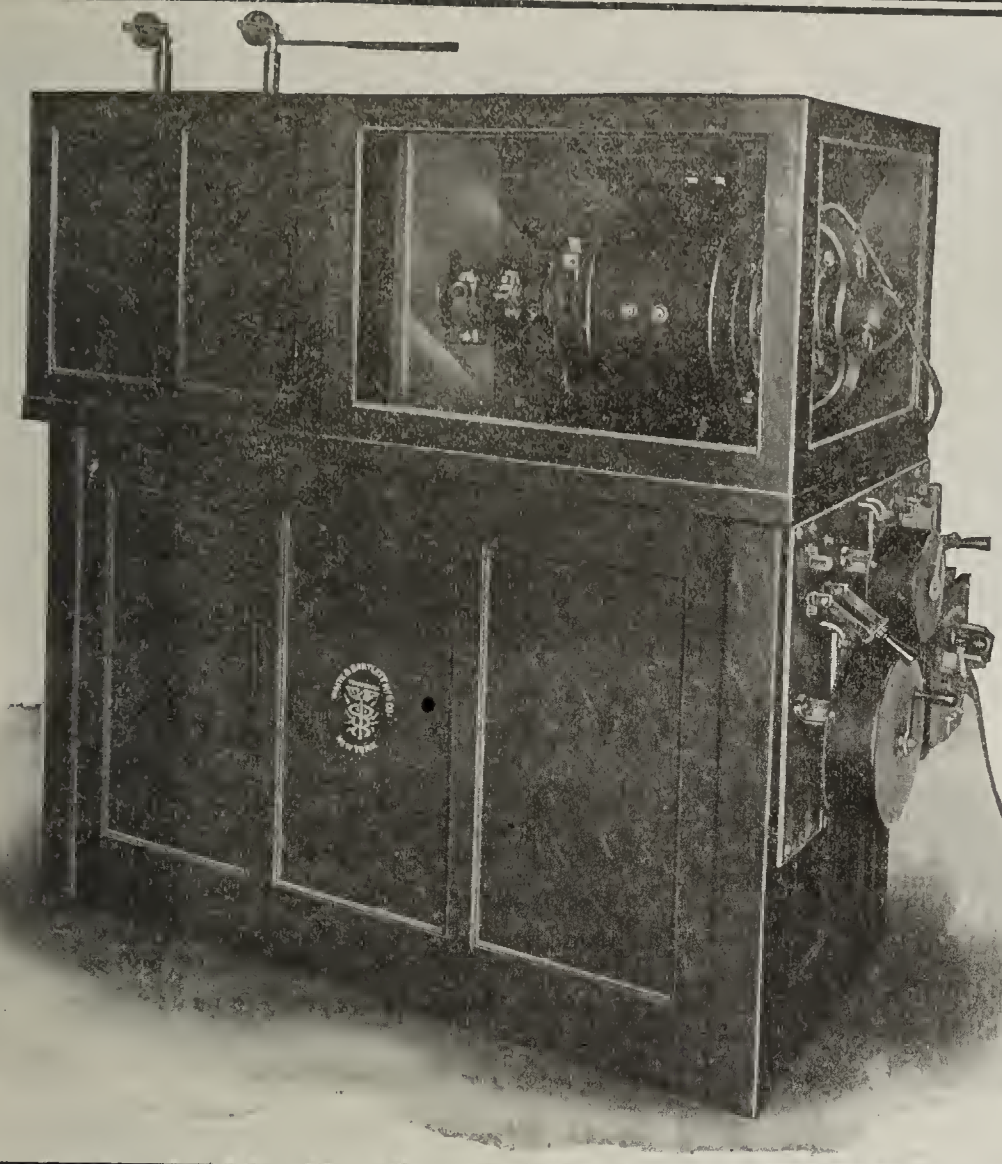

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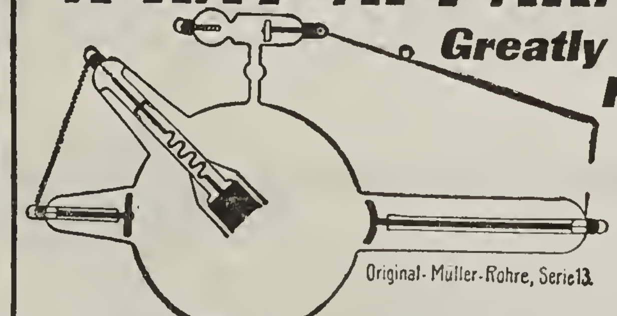

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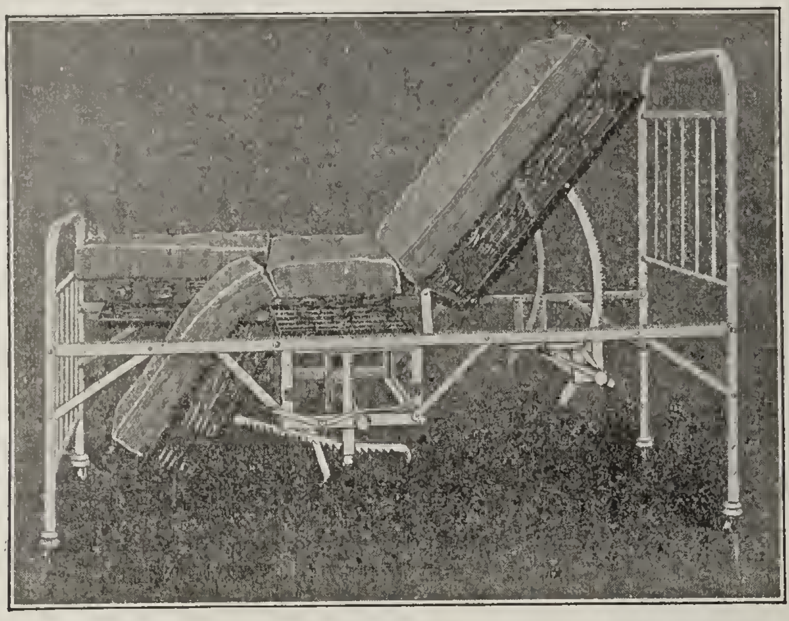

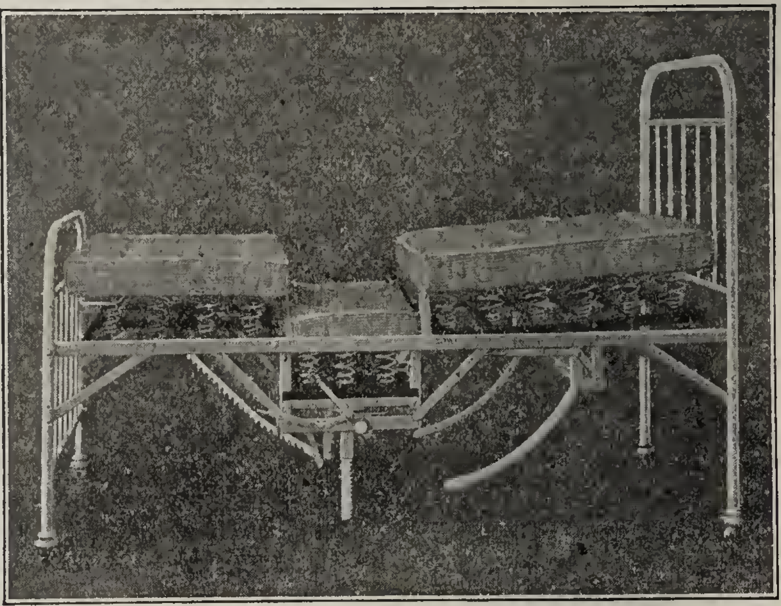

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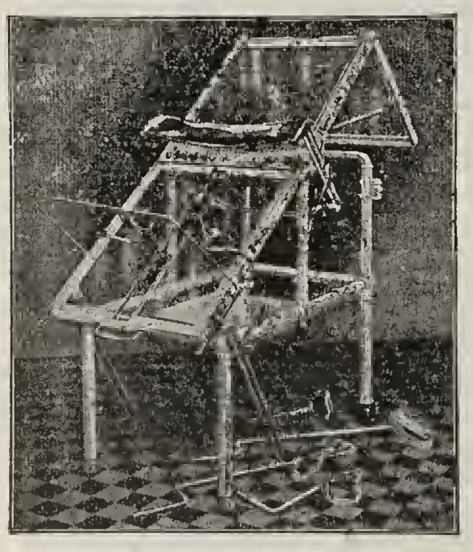

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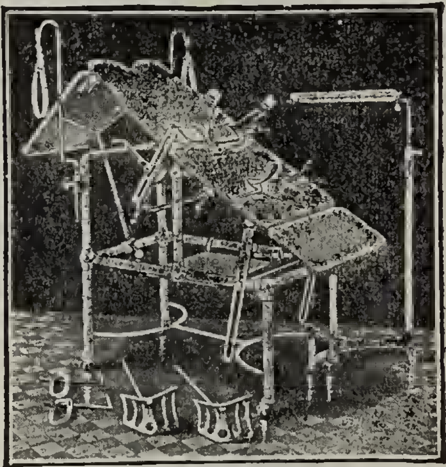

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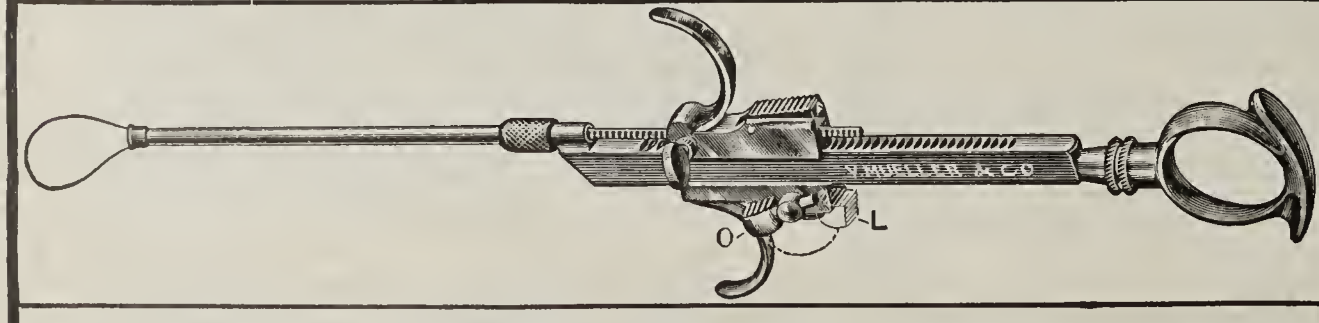

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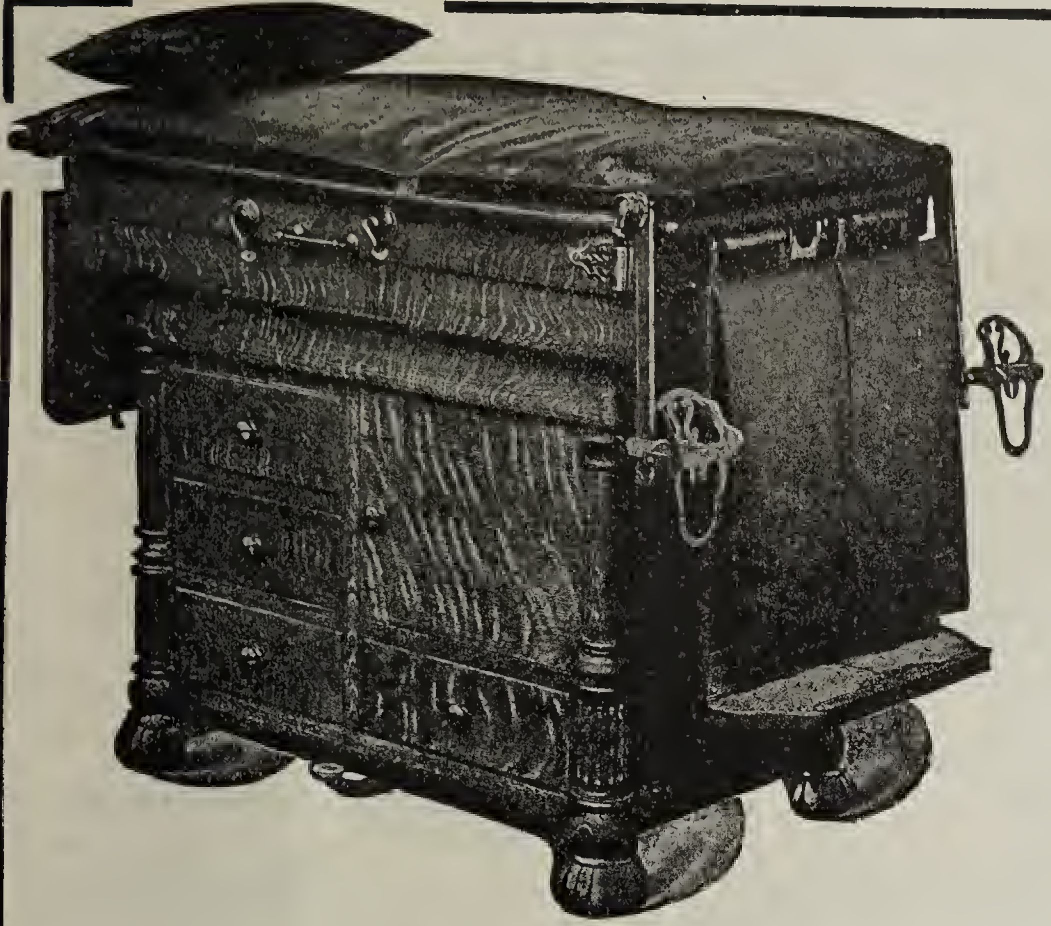

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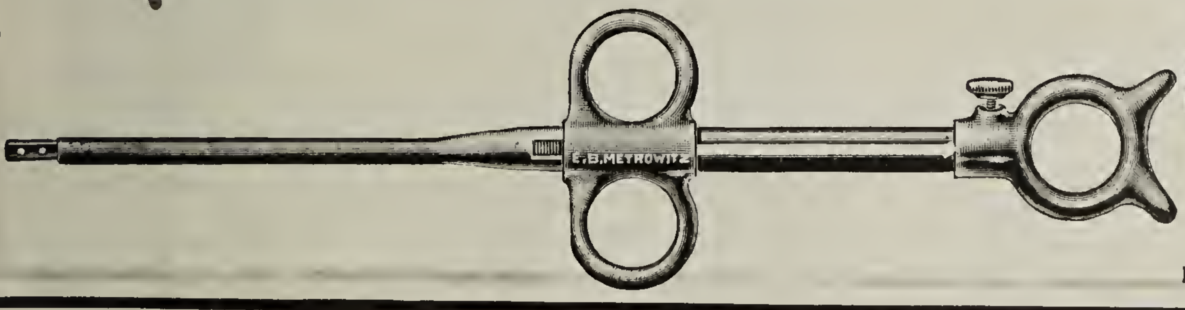

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# LIST OF STATE MEDICAL SOCIETIES

This information is correct to date of going to press, so far as we have been able to obtain it from the various secretaries. Officers or others are requested to notify us of any errors or required changes. For further information concerning any society address the secretary.

| SOCIETY. | PRESIDENT. | SECRETARY. | NEXT ANNUAL MEETING. |
|---|---|---|---|
| Alabama, Medical Assn. of the State of | Wyatt H. Blake, Sheffield | J. N. Baker. 602 So. Perry St., Montgomery | Montgomery, 1911. |
| Arizona Medical Association | John W. Foss, Phoenix | John W. Flinn, Prescott | Bisbee. |
| Arkansas Medical Society | James H. Lenow, Little Rock | Morgan Smith, 108 Louisiana St., Little Rock | |
| California, Medical Soc. of the State of | John C. King, Banning | Philip M. Jones, Butler Bldg., San Francisco | Santa Barbara, April 18, 1911. |
| Colorado State Medical Society | Leonard Freeman, Denver | Melville Black, Majestic Bldg., Denver | Colorado Springs, Oct. 11. '10. |
| Connecticut State Medical Society | F. H. Hallock, Cromwell | Walter R. Steiner, 4 Trinity St., Hartford | Hartford, May 24, 25, 1911. |
| Delaware State Medical Society | Presley S. Downs, Dover | G. W. K. Forrest, 1000 Jackson St., Wilm'ton | Wilmington, Oct. 11, 1910. |
| District of Columbia, Medical Assn. of | Noble P. Barnes, Washington | L. H. Reichelderfer, 1721 Conn. Ave., Wash. | |
| Florida Medical Association | James T. Love, Jacksonville | J. D. Fernandez, Jacksonville | Tallahassee, 1911. |
| Georgia, Medical Association of | Edw. C. Davis, Atlanta | Wm. C. Lyle, Augusta | |
| Hawaiian Territorial Medical Society | D. G. Wallers, Honolulu | V. E. Collins, Honolulu | Honolulu, Nov. 26-28, 1910. |
| Idaho State Medical Association | J. M. Taylor, Boise | Ed. E. Maxey, Boise | Boise, Oct. 6-7, 1910. |
| Illinois State Medical Society | Alfred C. Cotton, Chicago | Edmund W. Weis, Ottawa | Aurora, May, 1911. |
| Indiana State Medical Association | T. C. Kennedy, Indianapolis | F. C. Heath, Newton Clayp. Bldg.,Indianap's. | Fort Wayne, Sept. 29, 30, 1910. |
| Iowa State Medical Society | Mathew N. Voldeng, Cherokee | V. L. Treynor, Council Bluffs | Des Moines, 1911. |
| Kansas Medical Society | O. P. Davis, Topeka | Chas. S. Huffman, Columbus | |
| Kentucky State Medical Association | I. A. Shirley, Winchester | Arthur T. McCormack, Bowling Green | Lexington, Sept. 27-29, 1910. |
| Louisiana State Medical Society | E. J. Graner, New Orleans | Joseph D. Martin, New Orleans | Shreveport, 1911. |
| Maine Medical Association | Galen M. Woodcock, Bangor | W. Bean Moulton, 622 Congress St., Portland | Bar Harbor, June 29-30, 1910. |
| Maryland, Medical and Chir. Faculty of | Franklin B. Smith, Frederick | John Ruhräh, 1211 Cathedral St., Baltimore | Baltimore, April 25-27, 1911. |
| Massachusetts Medical Society | S. D. Presbrey, Taunton | Walter L. Burrage, 282 Newbury St., Boston | |
| Michigan State Medical Society | J. H. Carstens, Detroit | Wilfred Haughey, 15 E. Main St., Battle Creek | Bay City, Sept. 28-29, 1910. |
| Minnesota State Medical Association | W. A. Jones, Minneapolis | Thos. McDavitt, 210 Lowry Arcade, St. Paul. | Minneapolis, Oct. 6-7, 1910. |
| Mississippi State Medical Association | J. W. Young, Grenada | E. F. Howard, 2134 So. Cherry St., Vicksburg | |
| Missouri State Medical Association | Herman E. Pearse, Kansas City | E. J. Goodwin, 607 Met. Bldg., St. Louis | Jefferson City, May 16-18, '11. |
| Montana State Medical Association | Wm. F. Cogswell, Livingston | Herbert D. Kistler, Murray Hospital, Butte | |
| Nebraska State Medical Association | J. P. Lord, Omaha | A. D. Wilkinson, 513 Sec. Life Bldg., Lincoln | |
| Nevada State Medical Association | Geo. W. McKenzie, Reno | S. K. Morrison, Reno. | Lake Tahoe, Cal., Sept., 1910. |
| New Hampshire Medical Society | A. S. Wallace, Nashua | D. E. Sullivan, 7 No. State St., Concord | |
| New Jersey, Medical Society of | B. A. Waddington, Salem | W. J. Chandler, 65 S. Orange Av., So. Orange | Atlantic City, June 28-30, 1910. |
| New Mexico Medical Society | John W. Elder. Albuquerque | G.S.McLandress, Whiting Bldg., Albuquerque | Albuquerque, 1910. |
| New York, Med. Soc. of the State of | Chas. Jewett, Brooklyn | Wisner R. Townsend, 17 West 43d St., N. Y. | Albany, April 18, 1911. |
| North Carolina, Med. Soc. of the State of | Edward J. Wood, Wilmington | David A. Stanton, High Point | Wrightsville Beach, June 21,'10. |
| North Dakota State Medical Association | Henry H. Healy, Grand Forks | H. J. Rowe, Casselton | |
| Ohio State Medical Association | Arthur J. Skeel, Cleveland | J. H. J. Upham, 186 E. State St., Columbus | |
| Oklahoma State Medical Association | David A. Myers, Lawton | Claude A. Thompson, Muskogee | |
| Oregon State Medical Association | E. A. Pierce, Portland | Wm. House, Oregonian Bldg., Portland | Portland, Sept. 7-9, 1910. |
| Pennsylvania, Med. Soc. of the State of | Theodor B. Appel, Lancaster | Cyrus Lee Stevens, Athens | Pittsburg, Oct. 3-6, 1910. |
| Philippine Islands Medical Association | W. E. Musgrave, Manila | Paul Clements, Manila | Manila. |
| Rhode Island Medical Society | Eugene Kingman, Providence | S. A. Welch, 253 Washington St., Providence | |
| South Carolina Medical Association | James H. McIntosh, Columbia | Edgar A. Hines, Seneca | Charleston, April 8, 1911. |
| South Dakota State Medical Association | Thomas B. Smiley, Mount Vernon | R. D. Alway, 212 Main St., Aberdeen | Hot Springs, Oct., 1910. |
| Tennessee State Medical Association | John A. Witherspoon, Nashville | Geo. H. Price, 146 N. 8th Ave., Nashville | Nashville, April 11-12, 1910. |
| Texas, State Medical Association of | John T. Moore, Houston | W. A. Harper, Austin | |
| Utah State Medical Association | Joseph S. Richards, Salt Lake City | W. Brown Ewing, Salt Lake City | Salt Lake City, Sept., 1910. |
| Vermont State Medical Society | Walter L. Havens, Chester Depot | C. H. Beecher, Burlington | St. Albans, Oct. 13-14, 1910. |
| Virginia, Medical Society of | Elliott T. Brady, Abingdon | Landon B. Edwards, Richmond | Norfolk, Oct. 25-28, 1910. |
| Washington State Medical Association | Wm. D. Kirkpatrick, Bellingham | C. H. Thomson, Seattle | |
| West Virginia State Medical Association | Thos. W. Moore. Huntington | A. P. Butt, Davis | Parkersburg, October, 1910. |
| Wisconsin, State Medical Society of | Edward Evans, La Crosse | Charles S. Sheldon, 251 Langdon St., Madison | Milwaukee, June 22-24, 1910. |
| Wyoming State Medical Society | Neil D. Nelson, Shoshone | W. H. Roberts, Sheridan | Casper, Sept. 27, 1910. |

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| SOCIETY. | PRESIDENT. | SECRETARY. | NEXT ANNUAL MEETING. |
|---|---|---|---|
| AMERICAN MEDICAL ASSOCIATION | William C. Gorgas, Ancon, Panama | Geo. H. Simmons, 535 Dearborn Ave., Chicago | |
| American | | | |
| Academy of Medicine | James H. McBride, Pasadena, Cal. | Charles McIntire, Easton, Pa | |
| Academy of Ophthal. and Oto-Laryng. | Wendell Reber, Philadelphia | Geo. F. Suker, 103 State St., Chicago | Cincinnati, Sept. 19-21, 1910. |
| Anatomists, Association of | J. P. McMurrich, Toronto, Canada | G. Carl Huber, Ann Arbor, Mich. | |
| Association of Genito-Urinary Surgeons. | Hugh H. Young, Baltimore | E. L. Keyes, Jr., 109 E. 34th St., New York | |
| Association of Obstetricians and Gyn. | Aaron B. Miller, Syracuse, N. Y. | Wm. W. Potter, 238 Delaware Ave., Buffalo. | Syracuse, N. Y., Sept. 20-22, '10. |
| Assn. of Pathologists and Bacteriologists | F. B. Mallory, Boston | H. C. Ernst, Harvard Med. School, Boston | |
| Association of Railway Surgeons | H. C. Fairbrother. East St. Louis, Ill. | Louis J. Mitchell, 67 Wabash Ave., Chicago | Chicago, Oct. 19-21, 1910. |
| Climatological Association | John W. Brannan. New York | Guy Hinsdale, Hot Springs, Va. | Montreal, Can., June, 1911. |
| Dermatological Association | D. W. Montgomery, San Francisco | James M. F. Winfield, Brooklyn | |
| Electro-Therapeutic Association | T. D. Crothers, Hartford, Conn. | J. W. Travell, 27 E. 11th St., New York | Saratoga, 1910. |
| Gastro-Enterological Association | Julius Friedenwald, Baltimore, Md. | C. D. Aaron, 32 W. Adams Ave., Detroit | |
| Gynecological Society | Reuben Peterson, Ann Arbor, Mich. | LeRoy Broun, 148 W.77th St., New York | Atlantic City, N. J. |
| Laryngological Association | Jas. E. Logan, Kansas City, Mo | Jas. E. Newcomb, 118 W. 69th St.,New York. | |
| Laryn., Rhin. and Otol. Society | Chevalier Jackson, Pittsburg | Thos. J. Harris, 117 E. 40th St., New York | |
| Medico-Psychological Association | William F. Drewry, Petersburg, Va. | Charles G. Wagner, Binghamton, N. Y. | |
| Neurological Association | Morton Prince, Boston | Alfred R. Allen, 111 So. 21st St., Philadelphia | |
| Ophthalmological Society | Emil Gruening, New York City | W. M. Sweet, 1205 Spruce St., Philadelphia, | New London Conn., July 11, '11. |
| Orthopedic Association | A. H. Freiberg, Cincinnati | R. R. Fitch, 209 East Ave., Rochester, N. Y. | |
| Otological Society | Frederick L. Jack, Boston | James F. McKernon, 62 W. 52d St., New York. | |
| Pediatric Society | Henry D. Chapin, New York | S. S. Adams, 1 Dupont Circle, Wash., D. C. | L. Mohawk, May 31-June 2,'11. |
| Physicians, Association of | F. Forchheimer, Cincinnati | Geo. M. Kober, 1819 Q St., Washington, D. C. | |
| Physiological Society | W. H. Howell, Baltimore | Reid Hunt, Hygienic Laboratory, Wash., D. C. | |
| Proctologic Society | Dwight H. Murray, Syracuse, N. Y. | L. H. Adler, Jr., 1610 Arch St., Phila., Pa. | |
| Public Health Association | Chas. O. Probst, Columbus, Ohio | Wm. C. Woodward, Washington, D. C. | Milwaukee, Sept. 5-9, 1910. |
| Society of Tropical Medicine | W. C. Gorgas, Ancon, C. Z. | John M. Swan, 3713 Walnut St., Philadelphia | |
| Surgical Association | Richard A. Harte, Philadelphia | Robt. G. LeConte, 1530 Locust St., Phila. | |
| Therapeutic Society | H. W. Wiley, Washington, D. C. | N. P. Barnes, 212 Maryland Av., Wash., D. C. | Boston, May, 1911. |
| Urological Association | Eugene Fuller, New York | Hugh Cabot, 87 Marlborough St., Boston | |
| Assn. of Military Surgeons of the U. S. | Joseph K. Weaver, Norristown, Pa. | Charles Lynch, Washington, D. C. | Richmond, Va., 1910. |
| Congress Am. Phys. and Surgs. | Edw. L. Trudeau, Saranac Lake, N. Y. | W. H. Carmalt, 87 Elm St., New Haven, Conn. | |
| Con. of State and Prov. Bds. of N. A. | J. Y. Porter, Jacksonville, Fla. | H. M. Bracken, St. Paul, Minn. | |
| Med. Association of the Southwest | G. H. Moody, San Antonio, Tex. | Fred H. Clark, El Reno, Okla. | Wichita, Kans., Oct., 1910. |
| Mississippi Valley Medical Association | Frank P. Norbury, Hospital, Ill. | Henry Enos Tuley, Louisville, Ky | Detroit, Sept. 13-15, 1910. |
| Missouri Valley, Medical Society of the | A. B. Somers. Omaha, Nebr. | Chas. Wood Fassett, St. Joseph, Mo. | Council Bluffs, Sept. 1-2, 1910. |
| Nat. Assn. for Study and Prev. of Tuber | Wm. H. Welch. Baltimore | H. B. Jacobs, 11 Mt. Vernon Pl., Baltimore. | |
| Nat'l Assoc. for Study of Epilepsy | M. M. Perry, Parsons, Kans. | J. F. Munson, Sonyea, N. Y. | |
| Southern Medical Association | W. W. Crawford, Hattiesburg, Miss. | Oscar Dowling, Shreveport, La. | Nashville, Tenn., Nov. 8-10,'10. |
| Southern Surgical and Gyn. Association | William O. Roberts, Louisville | W. D. Haggard, Jr., Nashville. Tenn. | Nashville, Oct. 13-15, 1910. |
| Western Surgical and Gyn. Association | John P. Lord, Omaha, Neb | Arthur T. Mann, Donaldson Bldg., Minneapolis | Chicago, 1910. |

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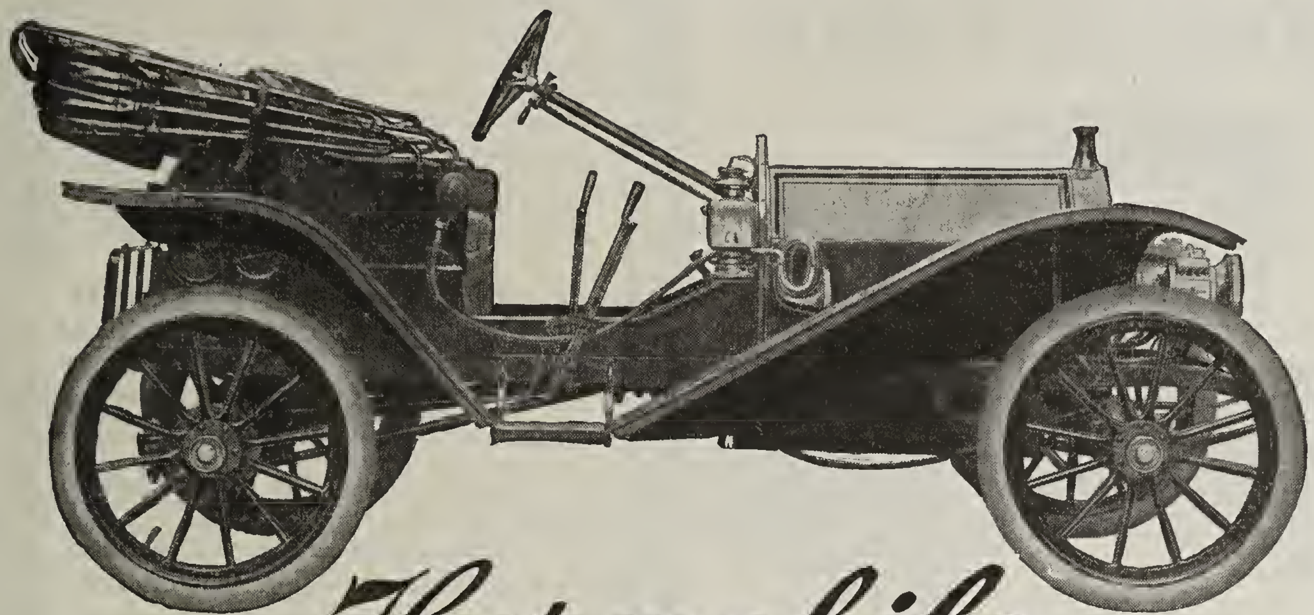

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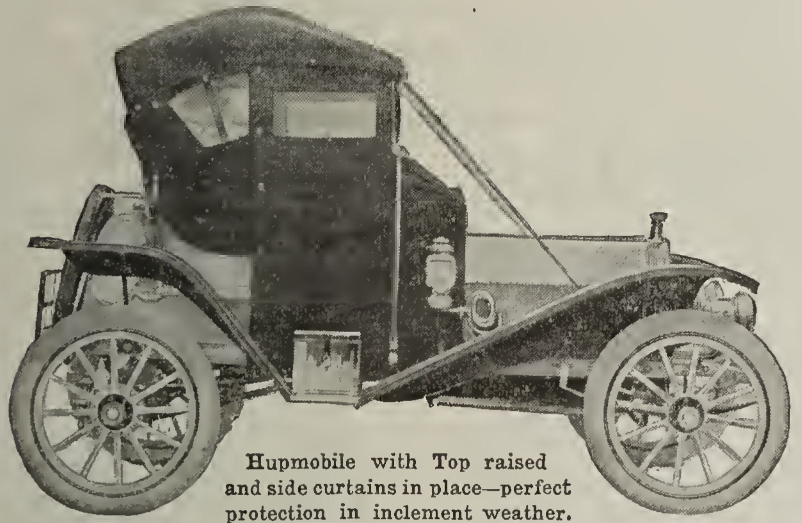

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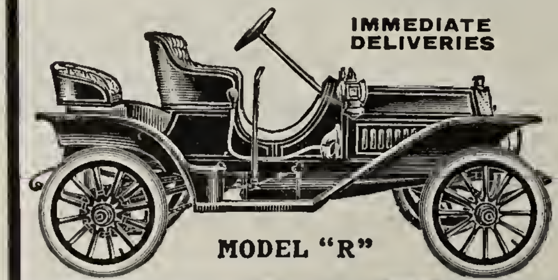

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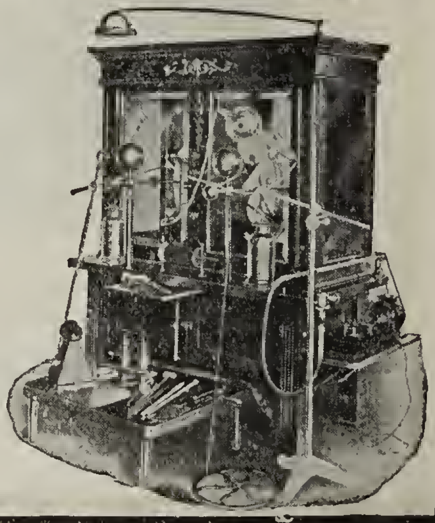

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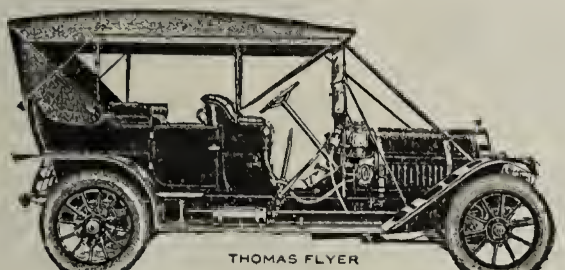

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as a thoroughly dependable and satisfactory substitute for mother's milk. The successful results that have been obtained during all this period in converting weak, puny infants into healthy, robust children tell in no uncertain way that the physicians who "pinned their faith" to this trustworthy food made no mistake. In simple words, the place held by Nestlé's Food today in infant dietetics is simply the result of its exceptional utility.

**Samples on Request**

**HENRI NESTLÉ**
**99 Chambers Street**
**New York, . . N.Y.**

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# "MASTER" ELASTIC STOCKINGS

WRITE FOR CATALOGUE

**POMEROY COMPANY**
**34 E. 23rd Street :: New York**

OTHER OFFICES AT
330 Lenox Avenue - - - - NEW YORK
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# CLASSIFIED ADVERTISEMENTS

Advertisements under the following headings cost **$1.50 for 50 words or less,** additional words 3c. each.

| WANTED | FOR SALE |
|---|---|
| ASSISTANT | APPARATUS |
| APPARATUS | LOCATION |
| BOOKS | PRACTICE |
| INTERNE | SANITARIA |
| LOCATION | SURGICAL INSTR. |
| LOCUM TENENS | FOR RENT |
| PARTNER | EXCHANGE |
| PARTNERSHIP | MISCELLANEOUS |
| SITUATION | |

**RESULTS** are better when an advertisement receives several consecutive insertions, and to those who remit $6 ($6.25 if answers are to be sent through this office) for four insertions of a 50-word advertisement we will give *free two more insertions* provided the first four do not consummate a deal. Notice for free insertions must be received within two weeks from date of last insertion.

For the following classifications the rate is **$1.50 for 30 words or less**—additional words 5c. each. No gratuitous insertions given under these headings.

ABSTRACTING AND TRANSLATING
AUTOMOBILES AND CARRIAGES
AUTOMOBILE ACCESSORIES
COLLECTIONS AND MEDICAL BROKERS
OFFICE FURNITURE AND SUPPLIES
PUBLISHERS AND PRINTERS
DEALERS AND MANUFACTURERS
SALESMEN WANTED
SUBSCRIPTION BUREAUS
MISCELLANEOUS COMMERCIAL ADVTS.

**SPECIAL NOTE—An extra fee of 25c. is** charged those advertisers who have answers sent % AMA and in such cases we are not permitted to furnish name or address. To reach these persons, place the number on the envelope, send it to us and we will reforward it free of charge. Have your return address on envelope.

To avoid opening numerous small accounts we require that *Remittance must accompany order.*

For current issue, ad. should reach us Monday.

**Journal A.M.A. 535 Dearborn Ave., CHICAGO**

N. B.—We exclude from our columns all known questionable ads. and appreciate notification from our readers relative to any misrepresentation.

## APPARATUS WANTED

WANTED—LEUCODESCENT LAMP — 500 candlepower; also large static machine; must be in perfect order; state make, size, number and diameter of plates; lowest cash price. Add. 9171 A, % AMA.

WANTED—THERAPEUTIC ARC LAMP made by the Modern Med. Co., Battle Creek, Mich.; do not want rheostat or screen; cheap for cash; quote cheapest price in first letter. Add. E. N. Martin, M.D., Clay Center, Kan. A

## ASSISTANTS WANTED

WANTED—ASSISTANT — YOUNG MAN 1910 graduate preferred, to assist in general practice in Montana, near the mountains; must be single and of good habits; hunting and fishing the very best and time allowed for both; a salary of $700 per year and living will be paid, with chance for a much better offer. Add. 9155 B, % AMA.

## INTERNS WANTED

WANTED—INTERN—A WOMAN PHYSICIAN is wanted to serve as intern in a summer sanitarium for children July and August. Rare opportunity to acquire experience in pediatrics; applicant should state in detail previous education and training. Add. 9175 D, % AMA.

## PARTNERS WANTED

WANTED — PARTNER IN A CHICAGO sanatorium; must be up to date, of good habits and capable of doing minor and plaster surgery; must live in building; $5,000 cash required; large fees and quick returns. Add. P. O. Box 363, Rock Island, Ill. G

WANTED—PARTNER—EYE, EAR AND nose throat specialist wishes to correspond with physician qualified in this specialty; want to form a partnership with him and locate in a city to build a practice; I have a good proposition for the man with whom I can work. Add. 9144 G, % AMA.

## State Board ARMY and NAVY QUIZ

Physicians prepared for the U. S. Army, Navy and Marine Hospital Services, and State Medical Examining Boards. Candidates instructed individually. For full particulars, address

**H. LYONS HUNT, M.D., L. R. C. S. Edin.**
**412 West End Ave. NEW YORK CITY**

## SCHOOL OF PATHOLOGY AND OPERATIVE SURGERY

Offers the most complete Operative Courses on the Cadaver to Post-Graduates only. The courses are most comprehensive, embracing every operation in General and Special Surgery. The courses continue throughout the entire year.

For full particulars, address

**DR. JOHN McALLISTER, 259 West 43d St., New York City**

## STATE BOARD QUIZ

**NORTHWEST QUIZ MASTERS' ASSN.**

**Prepares Physicians for Washington**

and other state medical examining boards. Four experienced quiz masters.. For particulars address

DR. CHARLES A. WARHANIK, SECY.
EITEL BLDG. :: SEATTLE, WASH.

## Wassermann Laboratory

**2159 West Madison St., CHICAGO, ILL.**

**Phone West 1117**

Serum Diagnosis Syphilis, Opsonic Index made. Bloods examined, Vaccines, Luetic Liver extract, Amboceptor and Specific Sera furnished.

Courses in Anatomy, Pathology and Operative Surgery of the

## Ear, Nose and Throat

*Classes limited. For dates and information address*

Albert H. Andrews, M.D., 100 State Street, Chicago

**The next bi-monthly course begins July 5, 1910**

## The Post-Graduate School of the Manhattan Eye, Ear and Throat Hospital

This Hospital offers especial advantages, having 150 beds and six clinics daily, excepting Sundays and legal holidays. In these clinics last year were treated over 27,000 patients. In the Hospital over 9,000 operations on the eye, ear, nose and throat were performed.

The instruction is exclusively clinical and personal. Students may matriculate at any time, and for any length of time. Special operative courses given.

For further particulars address

Secretary Post-Graduate School, 210 E. 64th St., New York City.

## Army, Navy and State Medical Board Quiz

Physicians prepared for U. S. and other American Medical Examinations.

**R. G. SCHROTH, M.D.**
**546 Garfield Avenue Chicago, Illinois**

## Southern State Board Quiz

**PHYSICIANS PREPARED FOR**

Alabama, Mississippi, Texas, Louisiana and other State Board of Examinations.

*FOR INFORMATION ADDRESS*

**J. GEO. DEMPSEY, M.D., Sec.**
**617 Macheca Bldg., New Orleans, La.**

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|---|---|
| A. B. Brown, M.D. | J. Geo. Dempsey, M.D. |
| Adolph Henriques, M.D. | T. R. Rudolf, M.D. |

## WASHINGTON.

**QUIZZING** for this and other State Medical and Dental Examining Boards. Medical law recently changed. Write for new requirements. Oral quiz begins June 1st and December 1st of each year. Mail quiz may be taken at any time. Information given about all State Boards upon application. *Address*

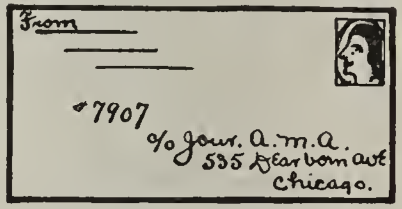
**DR. ARTHUR JORDAN, SEATTLE, WASH.**
**Nos. 301-302 Oriental Block**

## THIS ILLUSTRATION

represents one day's mail received for advertisers who had answers to their advertisements sent in care of THE JOURNAL.

Occasionally we receive a complaint from some one who has answered an advertisement stating that he has had no reply to his communication and asking if his letter was transmitted. Letters sent in our care are forwarded promptly, but, while it would be more satisfactory, we cannot compel an advertiser to send answers to all replies he receives.

Frequently, also, we receive requests to this effect: "Please send me the address and particulars regarding ads. No.——, No.——, and No.——." We are not permitted by advertisers who have their mail sent % A.M.A. to furnish inquirers information of any kind, hence when you wish to correspond with such an advertiser, address the envelope in this manner.



## LOCATIONS WANTED

WANTED—LOCATION — PREFERABLY unopposed, in central or western Ohio; will consider nothing but good community with improved roads; will rent or buy moderate-priced real estate; full information in first letter. Add. Dr. E. W. Grubb, Payne, Ohio. E

WANTED — LOCATION, PARTNERSHIP or position; two years intern in large charity hospital; three years' private practice; B.S. and M.D.; well qualified; habits excellent; best references; Indiana, Kansas or reciprocating states preferred; will invest small amount in paying proposition; no real estate in beginning; give full information first letter. Add. 9129 E, % AMA.

## SITUATIONS WANTED

WANTED—POSITION BY A GRADUATE registered nurse of eight years' experience, as superintendent of a hospital or superintendent of training school for nurses. Add. 8910 I, % AMA.

WANTED — SITUATION AS LOCUM tenens, or position with eye, ear, nose and throat specialist. Best of references. Ten months experience in one of the largest eye hospitals in the U. S. Add. 9093 I, % AMA.

WANTED—BY A RECENT GRADUATE AN internship in a hospital or sanitarium; can go any place in the United States; give full particulars in first letter. Add. Dr. L. R. Browne, 1619 East 17th Ave., Denver, Colo. I

WANTED—POSITION AS LOCUM TENENS, traveling physician or companion; a tough or chronic case to nurse by physician; good standing and experience in hospital and private practice. Dr. Henry P. P. Thompson, Hamilton, Va. I

WANTED—A SALARIED POSITION OF most kind in a sanitarium, state or general hospital, or as an assistant to a physician by a woman physician experienced in general practice and having passed two state boards. Add. 8925 I, % AMA.

WANTED—ASSISTANTSHIP — A YOUNG German physician, speaking English fairly well, wants to become assistant to a well-established laryngologist and otologist; applicant was assistant of Geheimrat Passow, director of throat and ear clinic of University of Berlin for 1 year, and held the same position for 2 years to Professor Voss, in the City Hospital, in Frankfort on the Main; applications will be received by Dr. H. Berlin, Chattanooga, Tenn. I

*(Continued on next page)*

WANTED—SITUATION AS LOCUM TENENS, assistant or paving institutional work; graduate of a Philadelphia college; one year in hospital and one year in practice; best of references as to ability and character; will go anywhere; registered in Illinois and Iowa. Add. 9104 I, % AMA.

WANTED—SITUATION AS LOCUM TENENS—Any physician in Iowa desiring to take a vacation of from three months to one year can make arrangements in writing me; I am prepared to look after his practice, whether in town or country; references furnished. Add. 9154 I, % AMA.

WANTED—BY YOUNG PHYSICIAN AND his nurse wife, both skilled anesthetists and assistants, to locate in city and do this kind of work for several surgeons, or to associate with busy surgeon; work in city or out; have auto runabout for quick service; now running small hospital; references if required. Add. 9075, % AMA.

WANTED — SITUATION, CONTRACT practice or country location by experienced physician; five years' successful practice; married; references the best; prefer states reciprocating with Virginia and West Virginia; do not want to buy property now; member of state and A. M. A. associations. Add. 9153 I, % AMA.

WANTED—SITUATION — HOSPITAL SUPERINTENDENT; a refined, well-educated physician of four years' successful experience as superintendent of a hospital desires similar position; careful administrator; skilful surgeon; highest references as to character, ability and integrity. Add. Dr. B., 68 Brookside Ave., Newtonville, Mass. I

WANTED—ASSISTANTSHIP—WANT TO assist busy eye, ear and nose specialist; salary first six months, $75 per month; will guarantee to add more than salary asked to the business; salary after six months in proportion to growth of business; want no more than I am worth; will not enter anything but a high-class office; well qualified in this specialty. Add. 9145 E, % AMA.

WANTED — WOMAN PHYSICIAN WHO has had several years' experience in eye and ear work, also hospital and laboratory experience, desires to become associated with oculist; would consider assistantship with surgeon if portion of time could be given to special work; excellent references as to ability and professional standing. Add. 9131 I, % AMA.

WANTED—BY A COMPETENT PHYSICIAN, surgeon and druggist, position with mine or lumber company, or something similar; anything with a future; have had 5 years' contract work; habits and character good; references excellent; not afraid of work; will go anywhere; young, healthy; guarantee satisfaction. Add. 9063 I, % AMA.

WANTED—BY COMPETENT PHYSICIAN and surgeon; salaried position, hospital or sanatorium—mining or assistant to physician or surgeon; 16 years' experience; age 40; graduate regular college; experience conducting hospital and cure liquor and drug addiction; married, temperate, ethical and honest; licensed in Wisconsin and Iowa; will consider states reciprocating. Add. 9098 I, % AMA.

WANTED—SITUATION — ANATOMY INSTRUCTOR—A teacher of four years' successful experience as instructor in anatomy seeks similar work; skilled in didactic lecturing, blackboard illustrating and wet aud dry demonstrations; maker of original charts, plates and models; graduate M.D.; also P.G.; member of scientific societies; best of references. Temporary address A. B., 568 Main St., Woburn, Mass. I

WANTED—GRADUATE OF REGULAR AS well as homeopathic school, with hospital training in New York, besides four years' private practice, wishes to relieve retiring practitioner, or will assist general practitioner who wishes assistant of one who is well grounded in general surgery; would consider mining surgery in any western state; am 32 years old and single; can talk French. Add. 9146 I, % AMA.

## MISCELLANEOUS—WANTED

WANTED — A SUPERINTENDENT FOR the sanatorium of the Jewish Consumptives' Relief Society, Edgewater, Colo.; one who speaks Yiddish or German preferred. For particulars add. Dr. C. D. Spivak, Secretary, 1421 Court Pl., Denver, Colo. J

(*Continued on next page*)

# High Frequency Treatment in Sterility

**Dr. Tousey in his latest work on Medical Electricity cites several cases treated with the most satisfactory results.**

Dr. S. Sloan, President of the Electro Therapeutical Section of the Royal Society of Medicine, says in his address: "As bearing on this matter of sterility, I may relate a recent interesting case—Number 134. The lady came to me in May of last year. She suffered from toxæmia due to septic endometritis and complained of general weakness and pelvic pain, but especially of sterility. She was 29 years of age and her previous confinement had been three years before. She came to me with the the expectation that I would curette her, but I asked her to permit me to treat her without operation. After eleven applications of galvanic treatment, her general health was completely restored, and she had lost her pelvic distress, whilst the uterus and cervix had become perfectly aseptic. She returned a few months after still perfectly well in every way. I then administered on five occasions intra-uterine mono-polar HIGH FREQUENCY treatment as a uterine tonic, after which I dismissed her, stating that she required no further treatment. Six weeks later she became pregnant. Writing to inform me of this she adds: 'I am very well indeed, and have felt ever so much better, ever since the first course of electricity I had.'"

NAME ....................................

ADDRESS ....................................

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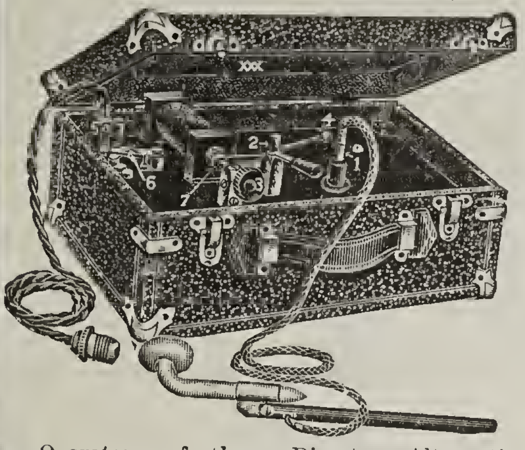
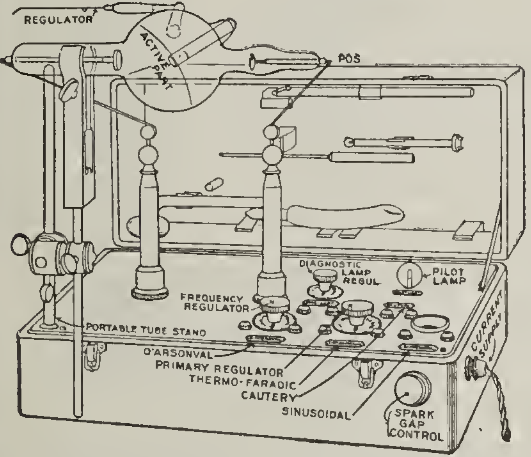
CUT ALONG THIS LINE

**FREE**: Copy of High Frequency Treatment. Special Introductory Offer on No. 1 High Freqeuncy Coil. Complete catalogue and Electricity in the Office Treatment of the Commoner Diseases of Women.



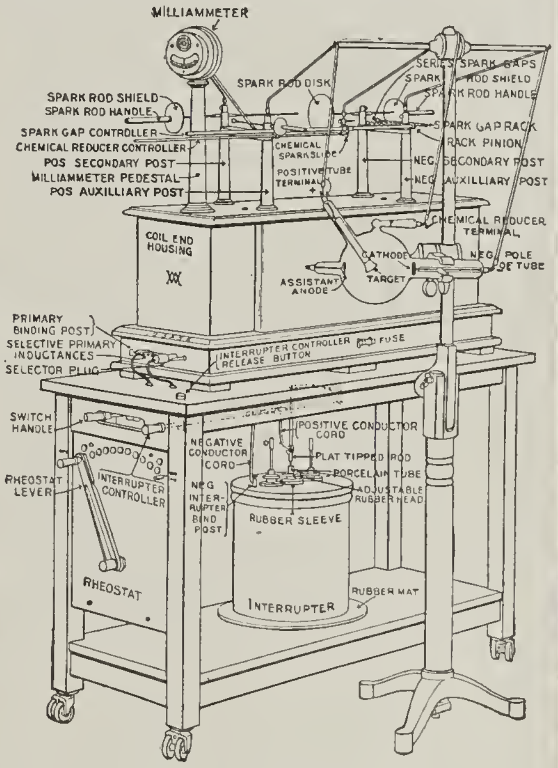
Operates perfectly on Direct or Alternating Current. Price, complete with 6 Standard Electrodes and Universal Handle, **$30.00**

This outfit is 25% more efficient than the standard by which others are judged. SEE SPECIAL OFFER.



The above cut shows the most perfect portable High Frequency and X-Ray Apparatus obtainable at any price. The price is **$180.00**

We have a SPECIAL OFFER if you are interested.



## Meyer Universal X-Ray Coils

**Received the Highest Award, a Gold Medal.**

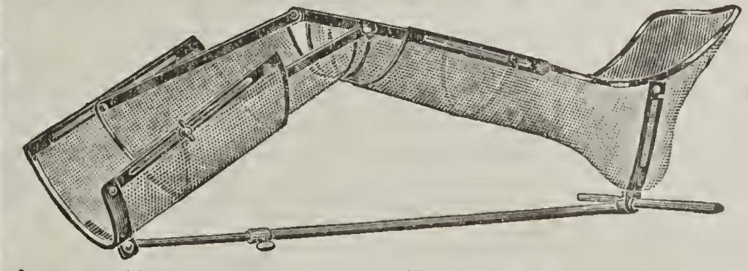
We have just issued a booklet describing the advantages of this apparatus for Radiography. It also contains information valuable to the radiographer who desires to bring his equipment up to date at a reasonable price. Many old type coils can be converted at small cost. Detailed estimate on application.

**THE WM. MEYER CO.**

**12-18 S. Clinton St.,** **Chicago, Illinois**

TRADE MARK

# YOU HAVE FRACTURE TROUBLES



These may be easily done away with by using the **DEPUY COMBINATION LEG SPLINT** and at the same time give comfort and satisfaction to your patient. On account of its great adaptability it is largely used in private and hospital practice. In this one single splint you have the well known Bucks, Hodgens and McIntyre. We make two sizes, large size No. 65 and the small size No. 66. They are ten dollars each with express charges prepaid. It will give us pleasure to send our little booklet, also our price list of our full line of splints.

**DEPUY MFG. CO. :: 401 Center St. :: WARSAW, INDIANA**

**An Advertisement in The Journal will Sell Your Practice**

WANTED—DOCTOR AT LYNNVILLE, ILL. —Inland town, fine farming country; wealthy people; a snap for a young man; nearest competition 8 miles; make money from the start; write Gibbs & Ranson, merchants, Lynnville, Ill. J

WANTED—WORKMEN'S CIRCLE SANATORIUM for the treatment of pulmonary tuberculosis; position is open for junior physician; board, room and nominal salary; good opportunity for the study of clinical and physical diagnosis, and modern methods of treatment; German or Yiddish speaking preferred; application should be made in writing, stating age, college and year of graduation, etc. Add. Dr. Charles Rayevsky, Liberty, Sullivan County, N. Y. J

WANTED — ILLINOIS CIVIL SERVICE Commission—Examinations will be held Thursday, July 7, in Chicago, Elgin, Kankakee, Watertown, Springfield, Lincoln, Peoria, Jacksonville, Quincy, Golconda, Marion, Anna, Harrisburg, Cairo, Mt. Vernon, Vandalia and Belleville for the following positions: Assistant Physician in Hospitals for the Insane and Lincoln State School and Colony. Open to men between 25 and 40 and women between 25 and 50. Scope and weights: Nervous and mental diseases, 2; surgery, 2; medicine, 2; pathology, 1; experience, 3. Physician in other institutions than the insane: Open to men and women between 25 and 50. Surgery, 3; medicine, 3; experience, 4. All applications must be on file in the office of the Commission by 5 o'clock July 1, 1910. Joseph C. Mason, Chief Examiner, Springfield, Ill. J

## APPARATUS, ETC., FOR SALE

FOR SALE—NEW WAITE & BARTLETT 24-plate static machine (12 horizontal and 12 circular), all accessories, including Pifford's high-frequency apparatus, cheap for cash. Add. 8982 K, ℅ AMA.

FOR SALE — 24-PLATE STATIC MACHINE, vibrator and galvanic and faradic battery, large size; no reasonable offer refused; intend to retire. Add. 8898 K, ℅ AMA.

FOR SALE — A 24-PLATE COLUMBIA static machine, made by the Electro-Therapeutic Mfg. Co., Indianapolis, Ind., with all accessories complete; high frequency electrodes; 3 *x*-ray tubes and *x*-ray tube stand; will sell for $90 f. o. b. Add. 8938 K, ℅ AMA.

FOR SALE—AN UP-TO-DATE PORTABLE high frequency outfit (Victor) with full set vacuum electrodes; splendid hard and good medium tubes; fluoroscope; pyrographic set (never used), stand, tube holders, electrical fixtures, etc.; for sale cheap. Add. 9149 K, ℅ AMA.

## LOCATIONS FOR SALE

FOR SALE—ILLINOIS—PRACTICE FOR price of property; 7-room residence and barn; $4,000; in city of 3,000, with good hospital and $4,000 cash practice; reason for selling, must take rest. Add. 9161 L, ℅ AMA.

FOR SALE—ILLINOIS—$3,000 PRACTICE in one of the finest sections of state; will sell for actual value of property; half cash, balance in 2 years at 5 per cent.; city 1,200; electric lights, water works, good school, 2 railroads; large territory; light competition. Add. 9069 L, ℅ AMA.

FOR SALE—SPLENDID LOCATION FOR a wide awake doctor; not one in the neighborhood; two-story brick house, south and east frontage; detached; ten large rooms, large basement; two-story brick barn, cement floor; entrance on paved street; no agents. 2034 W. Monroe St., Chicago, Ill. L

FOR SALE — RHODE ISLAND — LOCATION and lucrative practice, witb household goods and office furniture; situated in the beautiful city of Providence; ideal educational advantages; exceptional opportunity for married physician to step into paying practice; best of reasons for selling; correspondence solicited and invited. Add. 9168 L, ℅ AMA.

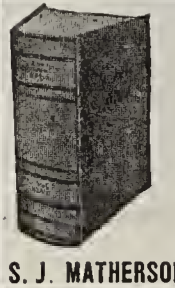
FOR SALE—ILLINOIS—$2,000 PRACTICE relinquished. and good will to the purchaser of my property, consisting of residence, office and barn; located in a small railroad town, near central Illinois; collections good; a rare opportunity; reason for leaving, desire to give up country practice and locate in a larger town. Add. 8997 L, ℅ AMA.

**PRINTING**

**Better than Ordinary, at an Ordinary Price**

**FOR $5.50** We will print to your order and ship to you, charges prepaid, any three of the following items: 500 Envelopes, 500 Note Heads, 500 Receipts, books of 100; 500 Bills, 500 Cards, 1000 Prescription Blanks, books of 60; 300 Announcement Cards and Envelopes; 1000 Drug Envelopes, 250 Letter Heads or 2000 Gummed Labels. This work is printed on fine linen paper and looks like high priced engraved work.

There are no strings to this proposition. Pick out the three items you want and send us your copy: we will get the work out promptly and ship to you, charges prepaid. Examine it—if you find it satisfactory in every way mail us a check; if not, return at our expense. We assume all risk of pleasing you. Send for our samples; they are of good taste and style and we guarantee to make your job the same.



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**Medical State Boards**

By Robert B. Ludy, M.D.

Third Edition. 8vo, 709 pages, Net $3.50.

*Only Original* *No Imitator*

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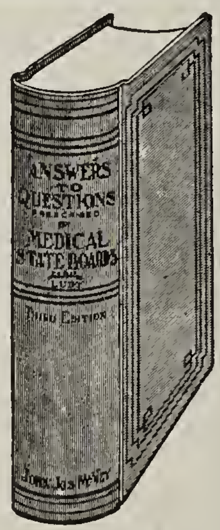

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Photography of Blood, Bacteria, Microscopical and Medical Specimens of all kinds, Culture Tubes, etc. Lantern Slides and Drawings made.

Illustrations for Scientific Books.

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**THE BOOK SHOP BINDERY**
**Tel. North 633. 314 W. Superior St., Chicago**

**Do You Want to Sell Your Practice ?** **The Journal's PRACTICE FOR SALE Columns will probably find you a PURCHASER**

FOR SALE—INDIANA — INTRODUCTION to man taking my property in one of the best farming communities of northeastern Indiana; good roads; collections good; inland town 200; $1,800 takes property; can make $1,600 up per year. Add. Dr. E. D. Smith, Grabill, Ind. L

FOR SALE — INDIANA — $3,500 PRACTICE; town 1,000; fine place for young man; price low; introduction; office fixtures and residence if desired; good insurance appointments; town health office; a golden opportunity for some one. Add. 9179 L, ℅ AMA.

FOR SALE—ILLINOIS—MY RESIDENCE in the center of an old established village and country practice; last twelve months' work, $2,470; extra good collections; no competition; 10 miles east of Quincy: price, $2,600, for quick sale; easy terms if desired. Dr. Lierie, Quincy, Lil., Star Route. L

FOR SALE—ILLINOIS—A PRACTICE AVERAGING $3,300; established 25 years; collections 98 per cent.; central Illinois; large territory; town 600; one competitor; will sell with or without real estate; $650, includes drugs and office outfit and introduction. This apears but once. Add. 9160 L, ℅ AMA.

FOR SALE—KENTUCKY — UNOPPOSED established $2,000 to $2,500 village and country practice in rich farming community, for price of property, consisting of 8-room residence and large new office; price, $2,000; terms; reason, going West for health; a paying business from start; collections good. Add. 9169 L, ℅ AMA.

FOR SALE—VERY REASONABLE ON ACCOUNT of retiring, a well located drug business. Stock and building. In Central Illinois. Established 17 years. Good opening for physician. Solid oak fixtures all up to date. Fine six-room flat up stairs. Good business. Invite closest inspection. Add. L. H. Wikoff, Emington, Ill.

FOR SALE — NEBRASKA—$9,000 PRACTICE; town 500; nearest competition, 35 miles; driving fee, $1 per mile; office, residence, hospital and drug store in same building; elegant garage in rear; for sale at cost, about $5,400; will introduce; reason for selling, ill health. Add. 8972 L, ℅ AMA.

FOR SALE — MISSOURI — $2,500 BUYS my 5-room residence and driving outfit in a thriving town of 2,600; railroad terminal; good roads, electric lights, etc.; collections 95 per cent.; country people, mostly German; 3 churches, good schools; competition light; terms $1.000 cash, balance on time. Add. 9176 L, ℅ AMA.

FOR SALE — GEORGIA — $4,000 PRACTICE, unopposed, in a North Georgia manufacturing town; surrounded by a fine truck growing country; 8 miles from city; fine pike roads; 3 years established; will sell house, lot, office outfit and practice and introduce purchaser for $2,000 cash; reasons for selling. Add. 9090 L, ℅ AMA.

FOR SALE—KANSAS—$5,000 PRACTICE; town of 1,200; light competition; 75 miles south of Kansas City; fine new modern residence; large barn; every thing first-class; will sell for less than cost of real estate; good large territory; collections 90 per cent; price complete, $3,250; cash deal. Add. 9148 L, ℅ AMA.

FOR SALE—IOWA—OLD-ESTABLISHED practice; yields $5,000 yearly; town 1,200; 2 other doctors; rich territory, fine roads; to purchaser fine 10-room strictly modern home; fine grounds and stable; $2,500 cash, balance long time; sickness in family; chance of lifetime; plenty of surgery. Add. 8902 L, ℅ AMA.

FOR SALE—KANSAS—TO THE DOCTOR who purchases my 5-room dwelling, barn and office building, I will turn over a $3,000 unopposed country and village practice; price, $2,500; terms, $1,000 cash, balance to suit purchaser; no better place to make and save money; I got mine; am going to city. Add. 9099 L, ℅ AMA.

FOR SALE—ILLINOIS—$6,000 BUYS MY modern 9-room house, new 1910 automobile, and up-to-date office in the best location in a city of 7,500 inhabitants; cash collections for 1909, $4,900; will introduce purchaser; do not answer unless you mean business; going to city; will guarantee purchaser $300 cash business first month. Add. 9170 L, ℅ AMA.

(*Continued on next page*)

FIRST MORTGAGES — ABSOLUTELY safe, on choice improved city properties, worth fully twice amounts loaned; will net investors 3½ per cent. Interest every 6 months, for 5 years. J. F. Wellington, Fort Worth, Texas. (Responsibility, $50,000.) L

FOR SALE—IOWA — GOING TO TAKE postgraduate work; I offer my home, office and stock of drugs with an unopposed established $2,600 practice in rich community; population 200; write for description of property; possession in 30 days, or will hold longer if necessary; price, $3,300; cash, $1,800; mortgage, $1,500. Add. 8955 L, % AMA.

FOR SALE—OHIO — $4,000 BUYS MODern 8-room residence, 3-room office, barn, two lots on main street, in interurban town; 30 minutes' ride to capital; population 1,200; practice amounts to $3,000; first-grade school; reason for selling, am going to the city; will take mortgage of $2,000; practice established 14 years; a bargain. Add. 9110 L, % AMA.

FOR SALE—IOWA—$5,000 UNOPPOSED practice to purchaser of my modern residence; hot and cold water, bath, steam heat, 3-room office, attached, steam heat from house, fixtures, furniture, drugs, cement floor auto house, barn, etc., $3,500; $2,000 cash; don't answer unless you want to look it over; German-Bohemian population; collections A-1. Add. 9177 L, % AMA.

FOR SALE—NEW YORK STATE—LONG-established practice, yielding cash income approximating $4,000 yearly; village of 2,500; terms, $1,500; property worth $3,000; may be purchased if desired; good schools, churches, roads, climate; no foreigners; splendid opportunity; do not trouble to write unless you have the cash. Add. 9173 L. % AMA.

FOR SALE—IOWA—UNOPPOSED PRACtice; town of 200; residence, driving outfit, office equipment and drugs; residence optional; country well settled; nearest competition 10 miles; collections 100 per cent.; good roads, good schools, 3 churches; good reasons for leaving; price right; fine chance to make money from start. Add. 9062 L, % AMA.

FOR SALE—OKLAHOMA — RAILROAD town 400; best farming section; unopposed $1,600 practice, six-room office and residence; $100 worth drugs; large territory; good roads, good school, rural telephones; 8 miles to nearest competition; excellent opening; paying practice assured from start; will bear investigation; price, $1,000; terms. Add. 8995 L, % AMA.

FOR SALE—WISCONSIN—$2,500 PRACtice; established 9 years; combination modern dwelling and office; also barn in thrifty town of 1,000; rich farming community; telephone service over entire practice; price, $3,000; good schools, churches and roads; light competition; auto, horses, buggy optional; reason for selling, postgraduate course. Add. 8912 L, % AMA.

FOR SALE — LOUISIANA — WELL-IMproved home and office property on best residence street in town; private waterworks for bath, flush toilet and kitchen sink; plenty of barns, stables, orchard, gardens, etc.; cheap and easy terms; doctor who is capable can easily hold well-established and excelent practice. Add. 530 Boyd Ave., Baton Rouge, La. L

FOR SALE—NEBRASKA—REAL ESTATE and practice established twelve years, averaging between $4,500 and $5,000 annually; collections 95 to 98 per cent.; no competition closer than 8 miles; this is certainly a snap for sober, industrious hustler; thorough introduction; price, $5,000, including some office fixtures; good reasons for selling; terms, part payments. Add. 8928 L, % AMA.

FOR SALE—FLORIDA—$4,000 TO $5,000 annual practice; one 6-room cottage, with bathroom, electric lights, city water, etc.; within two blocks of center of city; also a new 9-room cottage within five blocks of center of city; this also has all modern improvements; one farm of 80 acres with 3 miles of city; office furniture and drugs; will sell all or part; price for whole, $10,000; one-third cash, rest terms to suit the purchaser; Live Oak, a city of 8,000 people, situated at the crossing of two railway lines; four other lines coming into the city; reasons for selling, wish to go to New Mexico. Add. 9167 L, % AMA.

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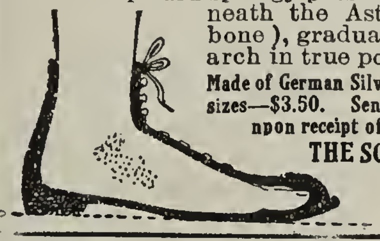

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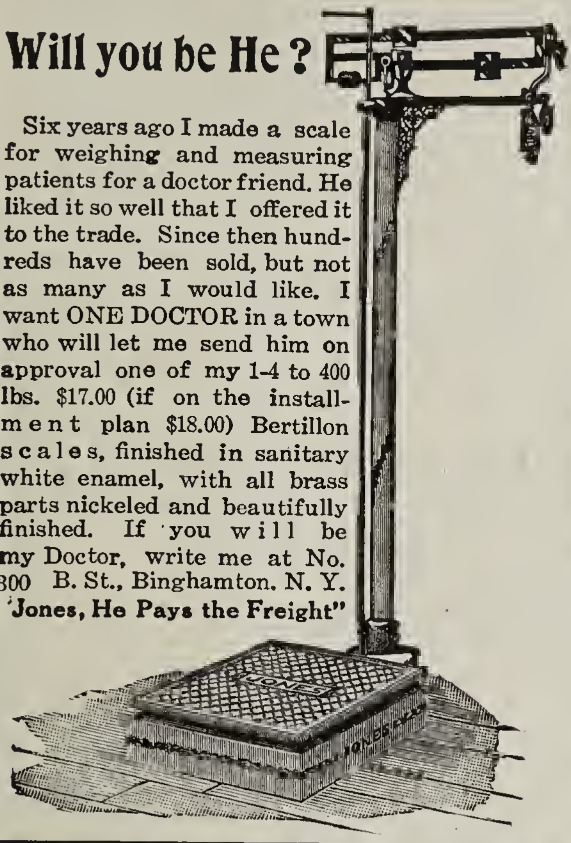

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The book shows the youth how he may overcome temptations when they come to him, and in order to impress on him the serious and sometimes fatal consequences that may follow venereal diseases, explains in plain words the course of such sexual diseases as gonorrhea, chancroid and syphilis, and how he may avoid the danger of getting such diseases from sources other than bad sexual habits.

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FOR SALE—ILLINOIS—I WILL RELINquish my $2,000 practice to purchaser of new modern 6-room residence and drug stock; prosperous business town of 3,500; best railroad and interurban facilities; first-class schools and churches; good roads and best of farmers; public library; splendid opening for a Swede; will bear investigation; good reasons for selling. Add. 9163 L, % AMA.

FOR SALE—NORTHWESTERN PENNSYLvania; $2,000 general practice in an educational village with thrifty agricultural surroundings; practice can be increased one-half; collections 95 per cent.; location very pleasant and central; opposition slight; price, real estate, $2,800; personal property for sale; good will and introduction gratis; reasons, want to locate in city. Add. 9115 L, AMA.

FOR SALE—MISSOURI — UNOPPOSED $2,200 yearly practice; country village; fine country; collections 98 per cent.; closest doctor 9 miles; cash collections, 1909, $2,229.56; new 4-room house, 3-room office; large barn; 1 acre land and outhouses; doctor can make money from the start as I have done; price, $2,000; $1,450 down; going to city. Add. Geo. H. Cassity, M.D., Centralia, Mo., R. F. D. No. 2. L

FOR SALE—ILLINOIS—MY $4,000 UNOPposed practice in town of 300 in central Illinois; rich farming community; collections 95 per cent.; going to take postgraduate work and locate in city; large stock of drugs, office furniture, buggies, harness; $1,000; good driving team and modern cottage optional; will introduce; vacate by August 1; don't write unless you mean business. Add. 9113 L, % AMA.

FOR SALE—CHICAGO—GENERAL AND eye, ear, nose and throat practice, established 10 years, two offices, free for best offer on $9,000 equity in $18,000 3½ story stone and brick modern building at north end of Lincoln Park; 5 flats, 6 porches, hot water heat, hardwood and mahogany finish; yearly rental $2,250; expenses $1,150; must sell at once; going to Europe. Add. 9180 L, % AMA.

FOR SALE—NORTHERN OHIO — HOME and practice in particularly desirable residence town of 2,000; unusual educational opportunities; house and office, brick, steam heated; best equipped and located in town; price, $5,000, includes driving and office outfit; situation here makes unusual opportunity; good man only introduced; half cash; details and satisfactory reasons given. Add. A. B. Smith, Wellington, Ohio. L

FOR SALE — IOWA — PRACTICE AND office outfit, consisting of static machine with *x*-ray outfit, high frequency and ozone outfits, galvanic and Faradic batteries, 3 hot-air apparatus, surgical instruments, sterilizer, medicines, surgical chair, books and book cases, safe, tables, runabout automobile; also a 9-room house; will sell all together, or office outfit without residence; reason, failing health. Add. J. C. Edgar, M.D., Holstein, Iowa. L

FOR SALE—PENNSYLVANIA, NORTHeastern Part—In rich dairy district; $2,000 country and village practice free to purchaser of my beautiful modern home, consisting of 8-room house, large barn, $200 coal and wood house, granary, chicken house, etc.; all neat, well painted and in splendid condition; 3½ acres of land, good orchard, nice lawn and shade; excellent spring water in house and barn; no opposition; nearest physician 6 miles; telephones to nearly all patrons; collections 95 per cent.; good roads; good community, all Americans; established 19 years; going to a large town; a rare bargain; price, $3,000; $1,000 down, balance easy; will bear close investigation. Add. 9087 L, % AMA.

FOR SALE—MICHIGAN—HAVING BEEN appointed on the surgical staff of a large hospital, I will turn over to the purchaser of my complete office outfit a large well-established general practice in one of the finest little cities of Michigan; city 2,000, county seat, electric lights, waterworks, main line railroad; high school on university list; large tributary country, thickly settled by prosperous farmers; practice and competition such that absolute transfer can be made to first-class man; a very fine opportunity for young man who wishes to do large general and surgical practice; no real estate unless desired; will introduce; interested parties will be asked to investigate. Add. 9132 L, % AMA.

(*Continued on next page*)

## BOOKS WANTED AND FOR SALE

WANTED — BACK VOLUMES OF THE Journal American Medical Association; Volumes 1, 18, 19 and 25 will pay $2 per volume, or will pay 25 cents each for No. 6, Volume 1: No. 19, volume 18; No. 19, Volume 19; No. 15, Volume 25. American Medical Association, 535 Dearborn Ave., Chicago. M

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## PRACTICES FOR SALE

FOR SALE — MASSACHUSETTS — TOWN of 14,000; $3,000 general practice; collections good; not crowded; do not answer unless you mean business. Add. 9178 N, % AMA.

FOR SALE—OHIO — WOULD YOU BUY new equipment for eye, ear, nose and throat work in Toledo, invoicing $500, if cash practice averaging $200 monthly was included? Ill health causing retirement. Add. 9134 N, % AMA.

FOR SALE—MISSOURI—CENTRAL PART —$2,000 unopposed practice in one of the most progressive and prosperous communities of the state, for the price of real estate; collections good; will bear investigation. Add. 9114 N, % AMA.

FOR SALE—WISCONSIN—CASH PRACtice of $3,500 yearly in town of 2,000; this is about 90 per cent. of practice; $1,500 takes practice, full dispensing stock, office furniture, instruments, *x*-ray and electrical outfit; will introduce purchaser. Add. 9000 N, % AMA.

FOR SALE—NORTH DAKOTA—A FINE opening for a woman physician in a town of 15,000; practice established for six years; wish to dispose of office equipment; give possession and introduction about August 15; family leaving state. Add. 9151 N, % AMA.

FOR SALE—NORTH DAKOTA—PRACtice located on the Pacific coast extension of C., M. & St. P.; county-seat town, two years old; population 800; good reasons for selling; good opening to man doing surgery; thorough introduction. Add. Box 223, Bowman, N. Dak.

FOR SALE—ILLINOIS—$2,500 TO $3,000 practically unopposed practice; can be increased; free to purchaser of office outfit and drugs; town of 500; thickly settled country; main line railroad; 33 miles from Chicago; good pay; German; driving outfit if wanted. Add. 9121 N, % AMA.

FOR SALE — GEORGIA — $3,000 UNOPposed practice and drug business; nearest competition 9 miles: good roads main line A. C. L.; reasons for selling, returning to my old home; $750 buys all; don't write unless you mean business. Add. J. E. Knight, Hoboken, Ga. N

FOR SALE—ILLINOIS—$215 CASH WILL buy complete stock of drugs, practice and office furniture in town of about 1,500; competition very easy; going abroad to live; fine paying practice for the last 16 years; driving outfit optional; enclose stamped-addressed envelope. Add. 9118 N, % AMA.

FOR SALE—TEXAS—ON ACCOUNT OF ill health I will surrender $2,500 salaried practice to qualified, reputable physician purchasing for cash property ($2,000) well worth the price; doctor, if you can make good, are temperate and can come at once, write fully of yourself first letter (otherwise save stamp). Add. 9152 N, % AMA.

FOR SALE—KANSAS—CHANCE OF A life-time; $4,500 practice in town of 500; one other physician; large territory; fine roads; collections 99 per cent.; good high school, three churches; mixed population; rich farming country; located in north central Kansas, on main line of Rock Island railway; will sell office fixtures, some instruments, drugs, automobile, practice, etc., for $3,000; will sell or rent fine 7-room residence; do not answer unless you have the money and can come soon; going to city. Add. 9147 N, % AMA.

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FOR SALE—NORTHERN NEW JERSEY—$500 cash buys complete office equipment, with drugs and good will, of $3,000 practice; main line railroad; 45 minutes from New York City; $35 month leases large stucco house, offices, barn; every possible improvement; cost over $8,000; strict investigation invited. Add. 9172 N, % AMA.

FOR SALE—MINNESOTA—$3,000 CASH practice in largest city in state; big German and Irish Catholic community working class; income can be increased by one competent in surgery; have automobile and real estate, but taking real estate is optional; about $500 cash required for auto and office equipment. Add. 9156 N, % AMA.

FOR SALE — IOWA—$2,500 GROWING practice free to purchaser of driving outfit, drugs and office equipment; no real estate; good town of 400 in northern Iowa; 2 railroads; rich farming country; German community; collections 98 per cent.; can make money from the start; want to specialize. Add. 9158 N, % AMA.

FOR SALE—EASTERN INDIANA—$3,500 practice in town of 1,400; good farming country; will sell office outfit with practice for $1,000; will rent or sell 2-story dwelling with office attached; am going to city in August; will take purchaser in at once and introduce him thoroughly. Add. 9142 N, % AMA.

FOR SALE—MY $2,850 PRACTICE, UP-to-date office fixtures and good stock of drugs in town of 300, for price of fixtures and drugs, $700; large territory; collections good; American people; good churches and schools; up-to-date little place; am going abroad; want competent man to take location. Dr. R. L. Smith, Raymond, Neb. N

FOR SALE—SOUTH DAKOTA—AN UNOPposed practice of $3,000 in a town on the main line of the C. M. & St. P. railroad; practice goes for price of entire household goods, including new piano, office furniture, stock of medicines; price, $700; terms easy; going to city; a snap for some one. Add. 9004 N, % AMA.

FOR SALE—NEBRASKA—$500 BUYS A good well-established eye, ear, nose and throat practice, records, good will, test case, optical goods, nebulizer, electrical apparatus, microscope, etc.; live town of 3,000 in prosperous farming community; no competition; fees good; immediate possession; this is an exceptional opportunity: Write now; this appears but once. Add. 9162 N, % AMA.

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FOR SALE—MICHIGAN—ONE OF THE best opportunities in southern part—railroad village—$3,000 a year; splendid community; good collections; will transfer to purchaser of drugs, office and driving outfit for $500; don't write unless you have the money and mean business; will sell or rent residence and office. Add. 9136 N, % AMA.

FOR SALE — IOWA — $2,000 GROWING practice in small railroad town; rich farming community; nearest competition 7, 11 and 15 miles; good schools and churches; practice can be greatly increased by one doing surgery; fine opening; collections 98 per cent.; practice and office equipment $250; reason for selling, going into hospital work. Add. 9046 N, % AMA.

(*Continued on next page*)

FOR SALE—IOWA—$3,000 UNOPPOSED practice, located in inland town; best farming community; large territory; money from start; collections 100 per cent.; free to purchaser of drugs, office equipment, horse, buggy; at invoice price, $350; a two-room office can be rented at $3 per month, or purchased for $250. Add. 8944 N, % AMA.

FOR SALE — WISCONSIN, NORTHERN Part—50 miles from city on C. & N. W.; must leave by July 15; practice averages $225 monthly; no competition; town 500; good churches; graded school built last summer, cost $10,000; keep my own drug store; will sell drugs and office furniture for invoice price of goods, $500. Add. 9100 N, % AMA.

FOR SALE—ILLINOIS—INLAND TOWN of 300—$1,700 to $2,000 cash practice; can be increased; good school up to tenth year; two churches; rich farming community; Americans; only doctor in town; one doctor over 60 years of age three-fourths of a mile out on farm; good modern 9-room house with bath, cellar, fruit garden, etc.; $1,7000, on easy terms; would lease. Add. 9164 N, % AMA.

FOR SALE—WESTERN PENNSYLVANIA —$4,000 to $6,000 practice, mostly office work; established 20 years; county seat; population 20,000; large offices, 3 rooms and toilet, first floor, large corner building; offices well furnished, including static machine, *x*-ray outfit, surgical chair and instruments; rent $40 per month; price, $1,500 cash; don't write unless you mean business. Add. 9150 N, % AMA.

FOR SALE—EASTERN PENNSYLVANIA —$3,000 practice; rent house or two offices cheap; mining and manufacturing; four railroads; trolley; 7,000 people; gas, electric light, excellent water, climate and roads; established 12 years; will introduce; money from start; town and country telephones; going to larger town for surgery; price, $500 cash; answer quick. Add. 9166 N, % AMA.

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FOR SALE—NORTHERN ILLINOIS—$1,800 cash practice in town of 800 free to purchaser of $1,000 worth of personal property including complete office outfit, large stock drugs, etc. Driving outfit including beautiful pair 7-year-old thoroughbred Morgan mares. Beautiful town, 3 churches, splendid school, two railroads, prosperous people. Good roads; large prosperous territory. Add. 9097 N, % AMA.

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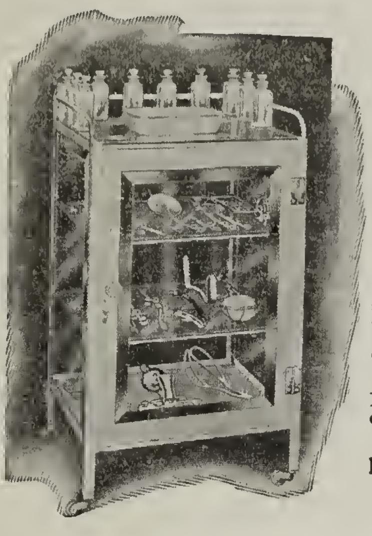

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FOR SALE — NORTH CENTRAL OHIO— $2,000 practice; town of 1,200; for practice; part of office fixtures; railroad and insurance appointments; $500; 3 steam and 1 electric railroad; two churches; two manufacturing establishments; first grade high school; 2 other physicians; rich surrounding country; am going to city; a fine chance for a physician; come at once and investigate; this ad. appears but once. Add. 9122 N, % AMA.

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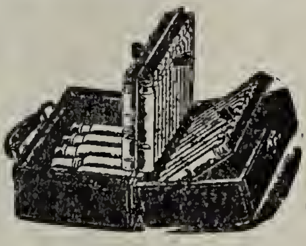

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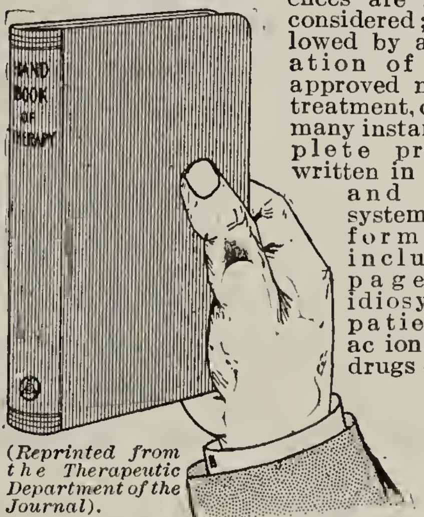

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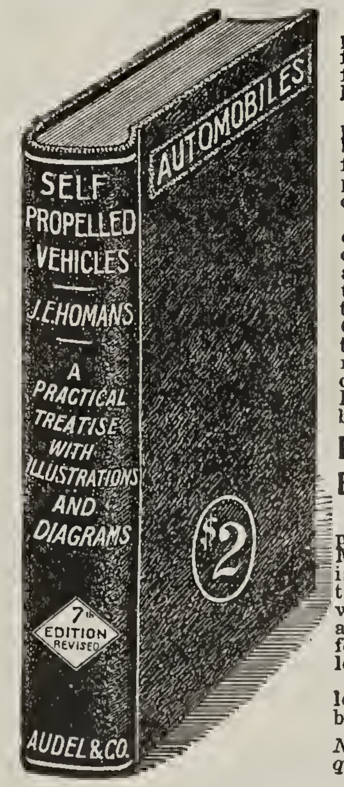

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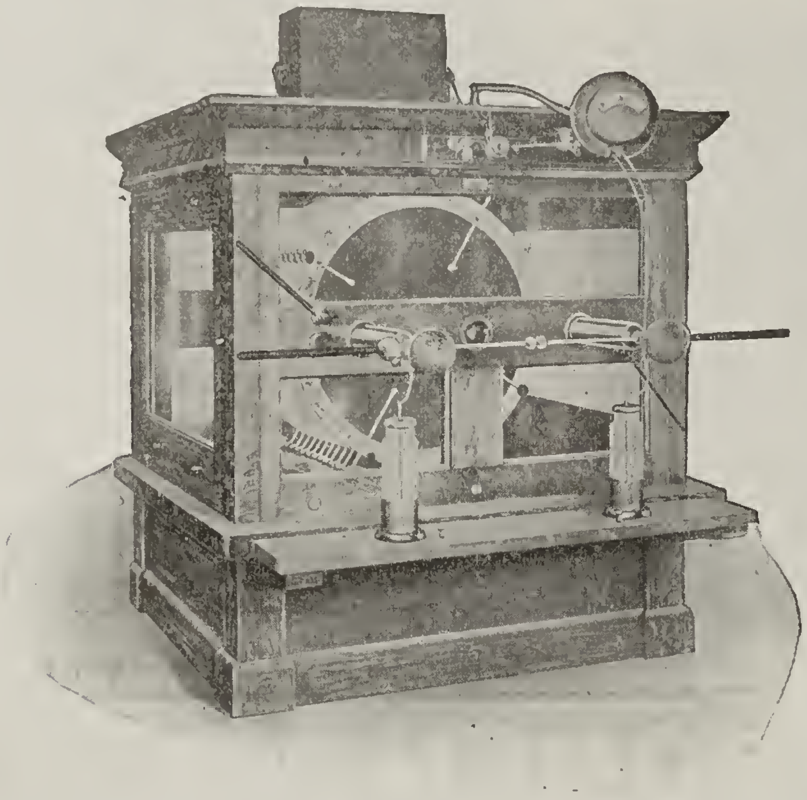

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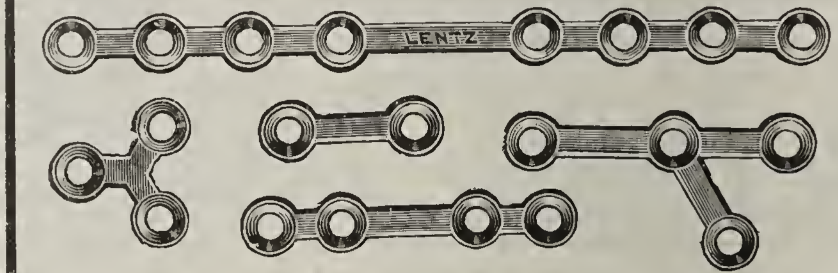

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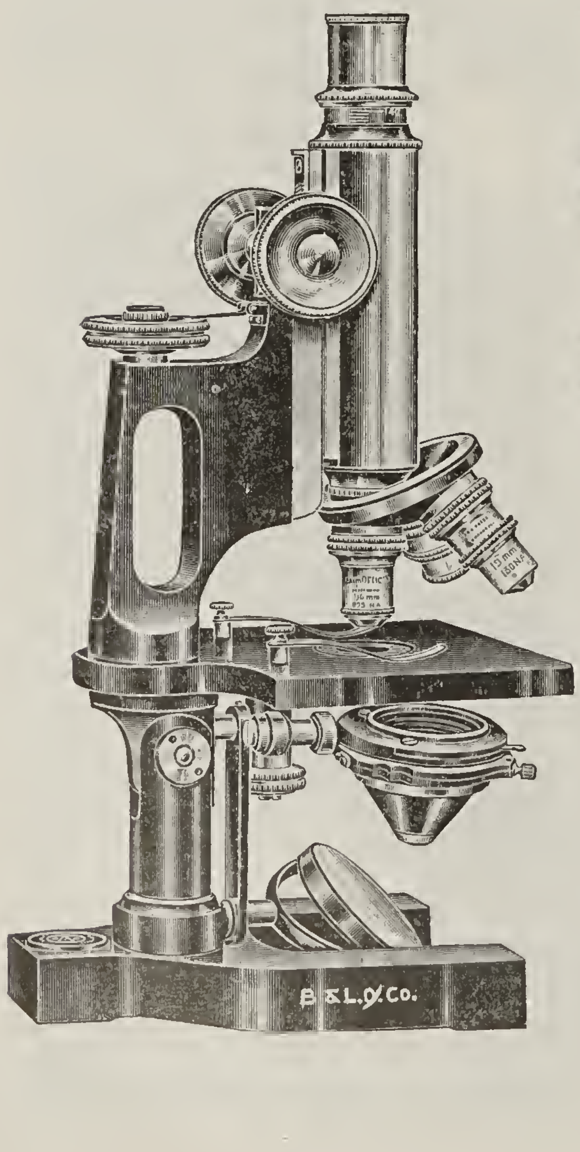

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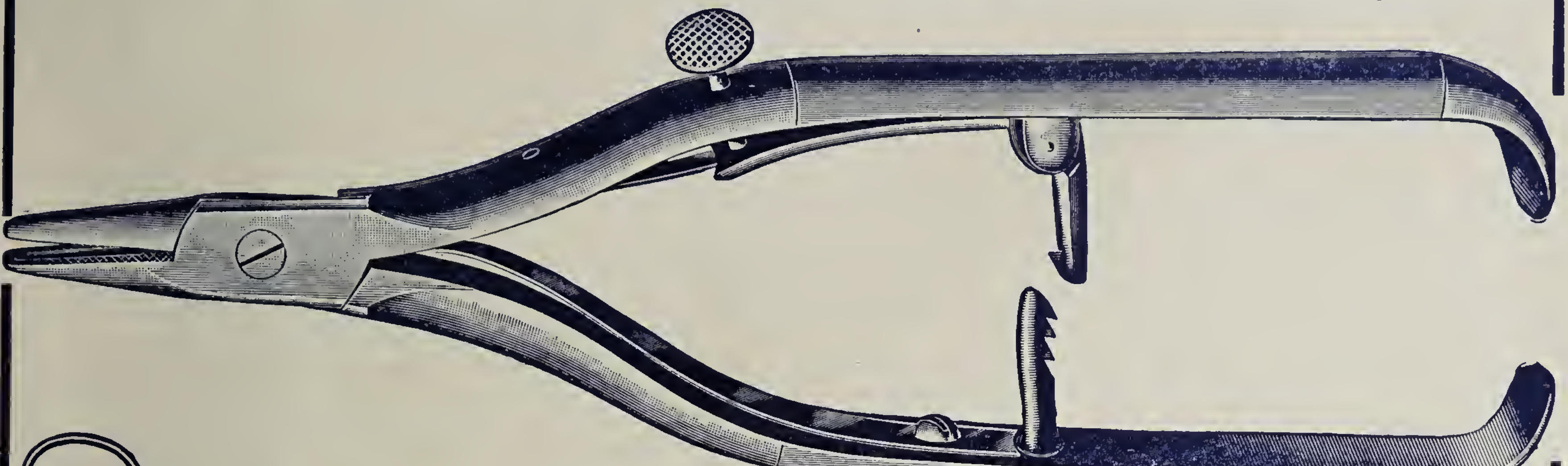

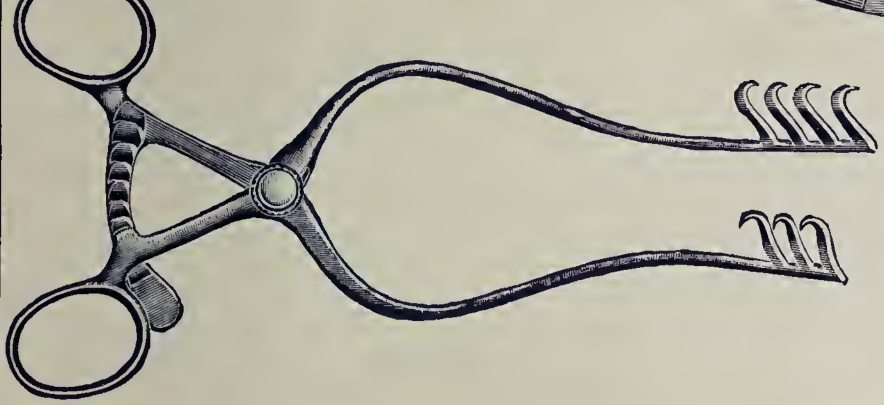

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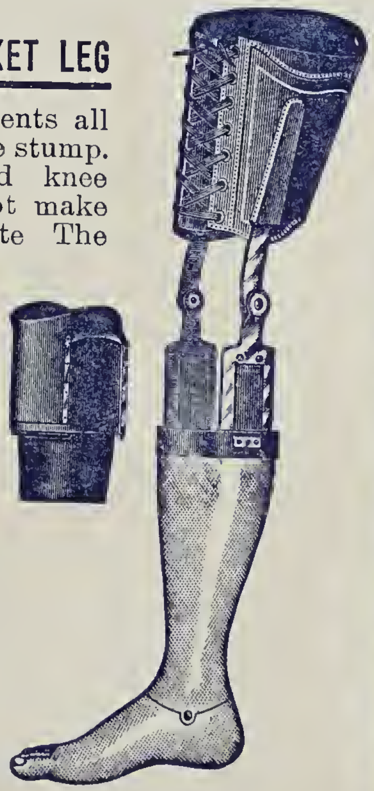

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